

~~SECRET~~  
CENTRAL INTELLIGENCE GROUP

2430 E STREET NW. WASHINGTON 25, D. C.

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S A

BEST COPY AVAILABLE

MEMORANDUM TO Captain Bosquet N. Wev, USN, JIOA, 2D267, Pentagon

Subject: Intelligence Value of German Scientists in the Atomic Energy Field.

1. With reference to discussions between ~~\_\_\_\_\_~~ CIA and Colonel Rosamus of JIOA, it is believed a clarification of the U. S. position on ~~\_\_\_\_\_~~ German scientific personnel in the field of atomic energy is in order.

1, 3(a) (4)

2. Heretofore the emphasis in dealing with German scientific personnel has been on denial of their talents to potential enemies and exploitation of their talents by the U. S. or friendly powers. Other considerations which exist may now be of greater importance than the previous objectives. These considerations are (1) that of their educational value to Germany and, (2) that of their positive intelligence value. It is believed that the consensus now is that these Germans could be of little assistance to the U. S. in the field of atomic energy though they might, within a certain range of possibilities, contribute materially to a foreign program. But even in the latter case, they could not advance such a program beyond a certain minimum time limit. Also, from a political and economic standpoint they could, it seems, be of great value to the U. S. in its long-range objective of building up a self-sufficient Germany. Consequently I would recommend that more emphasis be placed upon them primarily as potential

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sources of positive intelligence and in reconstitution of German science and economy, [REDACTED]

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[REDACTED]

[REDACTED] If this course is adopted the question of restraint becomes subordinated, and attractiveness of a possible foreign contract largely disappears.

3. Considering only the field of atomic energy and limiting the number of individuals to the minimum to reduce the work load and enhance security, the attached list is submitted. The individuals named appear to be the best intelligence leads for a combination of reasons: political tendencies, age, scientific ability, degree in which they will attract friends, correspondence, etc. It will be noted that a number of the individuals were not included in the JIOA Objective List, Revision II, of 8 October 1947. Also, a few individuals of the group which was collected during and immediately after the collapse of Germany are not included.

4. [REDACTED]

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[REDACTED]

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1, 3(a)(3) (4)

5. [REDACTED]

*Walter C. Ford*

WALTER C. FORD  
CAPTAIN, USN  
EXECUTIVE DIRECTOR

Incl.  
List

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~~SECRET~~ THIS DOCUMENT CONSISTS OF 2 / PAGES  
NO. 2 OF 6 SERIES A  
CENTRAL INTELLIGENCE GROU.  
2430 E STREET NW.  
WASHINGTON 25, D. C.

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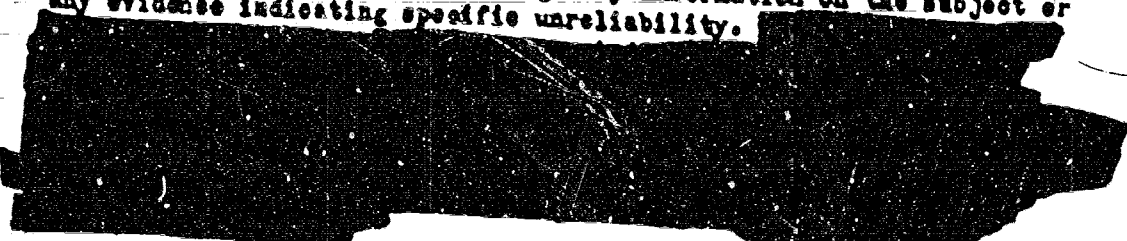
29 August 1947

MEMORANDUM TO Captain Bosquet N. Nev, USN, Joint Intelligence Objective  
Agency, Room 2D270, Pentagon, Washington, D. C.

SUBJECT: Siegfried Flügge

1. Confirming telephone conversation with you and Lt. Colonel  
Walter J. Rosamms, I have no derogatory information on the subject or  
any evidence indicating specific unreliability.

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2. As noted in our previous discussions the reliability of  
German scientific people as a class is always a matter of doubt, but  
responsibility for decision regarding security is outside my province.



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cc: Lt. Gen. Lewis R. Brereton, MLC  
Maj. Gen. Leslie Groves, AFSNP

FILE DIST:  
383.7 FLUGGE, Siegfried  
383.7 Micro-Cover Central-Intell. Agency

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Date 7 NOV 1985

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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

2 July 1947

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SUBJECT Return of German Scientists to Russian Zone; Prof. Scheuer (CIA)

1. Professor Scheuer, leading German vitamin research specialist originally from Jena University, was evacuated with his assistants by U.S. forces in 1945. Before his evacuation he was promised an institute, apartment, food, literature, and favorable research conditions in the U.S. Zone. Upon arriving in the U.S. Zone he was held in a camp in Wuerttemberg for about 1½ years. It was reported that the food he received was bad, literature and any other aid was simply not forthcoming. It is understood that Professor Scheuer was a member of NSDAP. Later Professor Scheuer was moved to Goettingen where he had 9 sq. meters of living and working space with his wife and two children, but otherwise no improvement in his situation.
2. Several weeks ago information was received that Professor Scheuer planned to return to the Russian Zone. This information is now confirmed. Professor Scheuer has moved to Rehbruecke in Potsdam with all his assistants. He has there received a complete institute, with all material necessary, including all the furniture he wants, and more than adequate living quarters. It is reported that the institute, with 20 assistants, is beginning to work very well. Professor Scheuer has now taken up contact with former colleagues of his in Stuttgart, who suffered from the same difficulties and who will probably now join him. The Russians have bent over backward to fill any and all of Professor Scheuer's needs. Glass, for instance, which apparently he needed in considerable amount in the beginning, has been made available at once.
3. Professor Scheuer is still not pro-Russian but he feels that at his time of life he cannot afford to sit idle for so many years and it is more important that he work, rather than for whom he works.

(Washington Comment: Facts similar to the above are beginning to be very well known in Berlin scientific circles. As discussed between German scientists, the general comment is made that the Western Powers are much nicer but actually are still following a strong tendency not to let research grow too important in Germany. In spite of being informed repeatedly what the Western Powers have done for the reestablishment of German research, German scientists feel that individual scientists are still unable to obtain decent living quarters, decent research space, or enough help in the way of foreign publications and other necessary material. Such things as the reestablishment of the Max Planck Society are appreciated but do not solve the questions just mentioned. More positive steps to aid individual scientists will be necessary if the entire group of highly intellectual Germans are to remain as favorably disposed to the U.S. as seems desirable.

The case mentioned in the report is not the first instance in which this sort of thing has happened, but is of enough significance and importance to be brought to the attention of appropriate authorities in Washington. It may be recalled that a great number of scientists were taken out of the State of Thuringia and Saxony-Anhalt at the time this territory was turned over to the Russian forces. These scientists have been in the West ever since, but no great attention was given to their employment, feeding and housing. They

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are included on the denial list but the whole policy towards them has been negative, rather than positive, in caring for them and seeing that they are fully occupied. Added to this list are some 200 top scientists in the American Zone which are included under the denial list recently published by the War Department. Although all these scientists can be included in the category which would make it undesirable for them to work for the Russians, there is nothing to stop them from crossing the zonal boundary and accepting Russian employment as happened in the case of Professor Scheuer.)

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393.7 Central Intelligence Agency

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20 May 1948

MEMORANDUM FOR: Joint Intelligence Group  
Joint Staff, Room 2E 283, The Pentagon  
Washington 25, D.C.  
Attn: CIA Liaison

SUBJECT: Transmittal of Intelligence Material

REFERENCE: a. CIA Requirement Directive No. 3880  
b. Your request dated 29 March 1948

1. The inclosures are forwarded, herewith in partial completion of reference b.

2. Inclosure No. 1 indicates the last reported scientific occupation of the individuals concerned in clear text. The remaining significant information is set up in machine codes, the keys to which are included in enclosure 2 as follows:  
Education (Tab A, encl No. 2)  
Function (Tab B, encl No. 2)  
Geographical Locations (Tab C, encl No. 2)

3. It is pointed out that a number of individuals are shown simply as "scientist" or "Occupation unknown". These are persons of scientific training or occupation who have been identified [redacted] but for whom no additional data has been received.  
[redacted]

4. CIA is engaged in preparing additional biographical data on all persons in the list for whom additional facts exist. This material will be forwarded as soon as it has been processed and edited.

FOR THE ASSISTANT DIRECTOR FOR COLLECTION AND DISSEMINATION

CHARLES-RALPH NEWTON  
Special Assistant.

Incls. (2)

[redacted]

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Date 7 NOV 1985

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CENTRAL INTELLIGENCE GROUP  
2430 E STREET N.W.  
WASHINGTON 25, D.C.

RECEIPT IS ACKNOWLEDGED OF [REDACTED] SECRET, [REDACTED] DOCUMENT FROM THE  
CENTRAL INTELLIGENCE GROUP, BEARING THE IDENTIFYING NUMBER \_\_\_\_\_

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DATED 20 May 48 ABBREVIATED SUBJECT Transmittal of Intell. Material  
Incl. 1- [REDACTED] (Pt. 1)  
Incl. 2- [REDACTED] WITH 2 ENCLOSURES.

PLEASE RETURN THIS RECEIPT  
IMMEDIATELY TO:  
Col. Halverson, OSC  
Room 2E-283

\_\_\_\_\_  
SIGNATURE  
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POSITION  
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DEPARTMENT OR AGENCY  
\_\_\_\_\_  
TIME DATE

CENTRAL INTELLIGENCE GROUP  
2430 E STREET N.W.  
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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

JIOA 1883

25 May 1948

MEMORANDUM FOR: Director, Joint Intelligence Objectives Agency  
Joint Chiefs of Staff

SUBJECT: Request for Information Concerning German Specialists

REFERENCE: Memorandum from Director, JIOA, dated 29 April 1948,  
subject as above

1. Transmitted herewith in response to request contained in reference, above, is a summary of the information reported to this Agency on the following named individuals:

- FIEDLER, Willy A.
- IUSSER, Robert
- WEINBLUM, Dr. Paul G.
- LAVES, Dr. Fritz

2. CIA has no record of Heina WASSHAUSEN.

*Kenneth K. Addicott*

KENNETH K. ADDICOTT  
Executive Assistant Director  
Office of Collection and Dissemination

*50000-1498, 29 April 1948 to CIA*

Encl: 1

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383.7 Central Intelligence Agency  
383.7 Escape Clause



Approved for Release  
Date 1 NOV 1985

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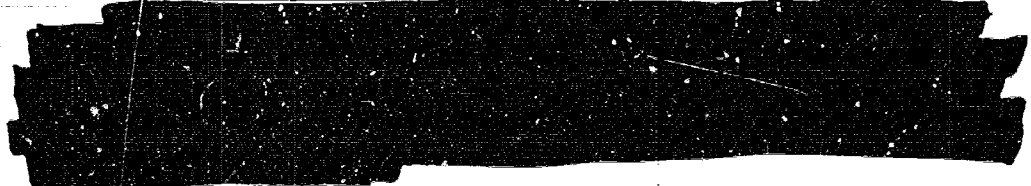
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## GEOGRAPHIC INTELLIGENCE REGISTER

FIEDLER, Willy A.

Dipl. Ing. Willy Fiedler lives in Natern, Wuerttemberg. In May 1945 he spent three weeks in Paris in American detention. His family at Waldsee, Lake Constance, was visited and questioned by French troops in his absence. Fiedler has since gone into business for himself. He does not desire to work for the French because he dislikes their political aims and anticipates American intervention in the French airplane construction program.



Fiedler claims that Dipl. Ing. Lusser, Friesing, Post Nussdorf, bei Rosenheim, Bavaria, is the inventor of the V-1.  
IAC Agency, Washington, D. C. 16 February 1946

LUSSER, Robert

According to Dipl. Ing. Willy A. Fiedler (see above) Lusser is the inventor of the V-1. Lusser is reported living with this family at Friesing, Post Nussdorf, bei Rosenheim, Bavaria. None of the Allies has made any effort to contact him.

IAC Agency, Washington, D. C. 16 February 1946

Dipl. Ing. Lusser of Messerschmitt, working on V-1 in the French Zone.

Development of an improved steering device for V-1's, particularly to give greater accuracy of steering to the types constructed by Dipl. Ing. Lusser, which reach 950 Km/h (590 mph), one of the jobs assigned to a French plant to be developed by Dipl. Ing. Jarsen.

IAC Agency, Washington, D. C. 17 July 1946

WEINBLUM, Dr. Paul G.

Specialist in construction of ships, ship propulsion, marine engineering.

IAC Agency, Washington, C. D. 24 June 1946

LAVES, Dr. Fritz

Prof. of Chemistry,; X-ray crystallography; publications in scientific journals. Wife, 2 daughters, age 42. Author "Atomabstände in Kristallen", Naturwissenschaften 1937.

IAC Agency, Washington, D. C. 24 June 1946

Left Marburg to accept a professorship at Univ. of Munich, September 1946.

German Press Report

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JIOA 14980K 1883

25 May 1948

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- LUSSEK, Robert
- MEINLUM, Dr. Paul G.
- LAVES, Dr. Fritz

2. CIA has no record of Heinz WASSHAUSEN.

HELEN K. ANDERSON  
Executive Assistant Director  
Office of Collection and Dissemination

Encl: 1

FILE DIST:  
383.7 Central Intelligence Agency  
383.7 Escape Clause

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Date Nov 1985

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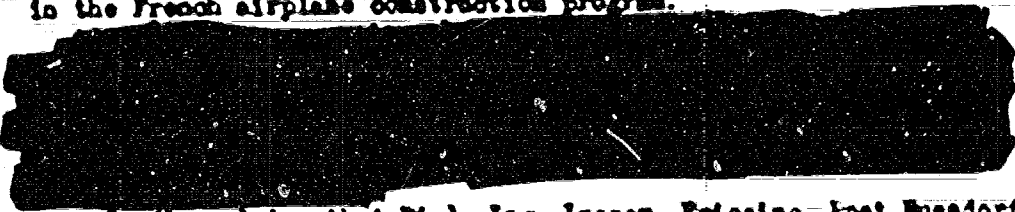
83402-153

~~SECRET~~  
BIOGRAPHIC INTELLIGENCE REGISTER

FIEDLER, Willy A.

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German Press Report

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CLASSIFICATION

CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

REPORT NO.

CD NO.

COUNTRY Germany/Europe

APR 7 1949

DATE DISTR. 7 Apr 1949

SUBJECT Biography of I G Farben Executives

NO OF PAGES 10

PLACE ACQUIRED Nurnberg

AF57963

NO. OF ENCLS. (LISTED BELOW)

DATE ACQUIRED BY SOURCE Jul 47 to Aug 48

SUPPLEMENT TO REPORT NO.

DATE OF INFORMATION

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COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A	B	C	D	E	F	1	2	3	4	5	6
					X	X					

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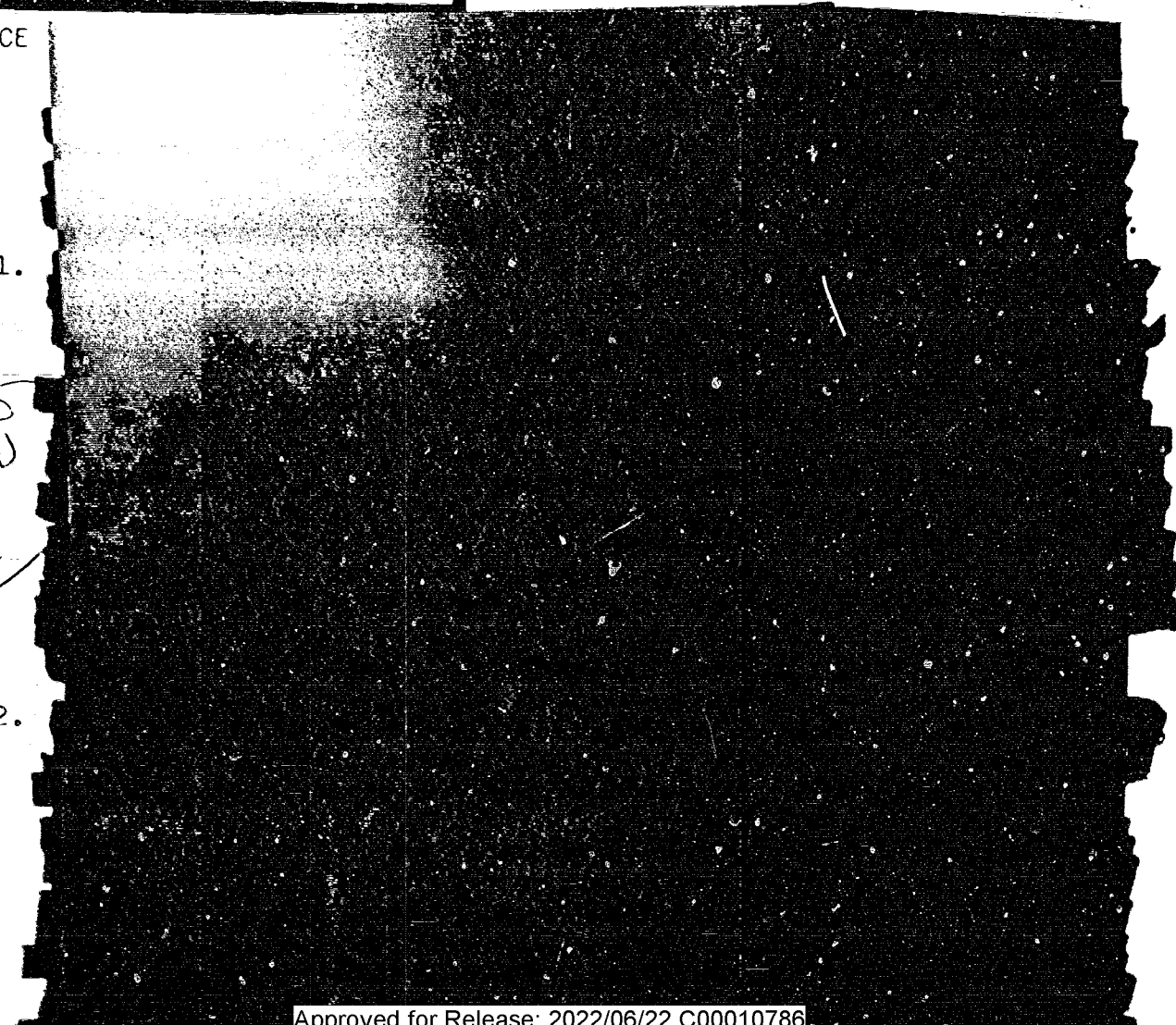
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SOURCE

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GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A	B	C	D	E	F	1	2	3	4	5	6
					X	X					

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT SO U. S. C. 51 AND 52 AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE

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it would have been impossible for Hitler to have waged any successful aggressive warfare without the active and willing assistance and collaboration of the ranking executives of I G Farben.

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CLASSIFICATION

STATE	<input checked="" type="checkbox"/>	NAVY	<input checked="" type="checkbox"/>	NSRB								
ARMY	<input checked="" type="checkbox"/>	AIR	<input checked="" type="checkbox"/>	F&I								

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[REDACTED]

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3.

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[REDACTED]

[REDACTED]

each one [REDACTED] not only possesses a wealth of war potential information, but is acquainted with all the other important European scientists who possess a like knowledge. This list is as follows:

1.3 (a) (4)  
Drap

(a) Carl Krauch, Chairman of the Supervisory Board of Directors of I G Farben and General Plenipotentiary for Chemical Production on Goering's staff. One of the top industrial scientists of Germany. [REDACTED] Member of the Managing Board of Directors and of the Central Committee; Chief, Division 1; Chief, Liaison Office W; Member, NSDAP, NSFK, and German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Member, Advisory Council, Economic Group Chemical Industry; Chief, Reich Office for Economic Development; Chief, Research and Development Department, Office for German Raw Materials and Synthetics, Four Year Plan; Member, German Academy for Aviation Research; Senator, Kaiser Wilhelm Society; Honorary Member, Association of German Chemists; Member, Directorate, Reich Research Council; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises, within Germany and the occupied countries.

1.3 (a) (4)

(b) Hermann Schmitz, Chairman of the I G Farben Managing Board of Directors. [REDACTED] Chairman of the Central Committee; Member, Reichstag; Military Economy Leader; Member, Goering Committee of Experts on Raw Materials Questions; Member, Select Advisory Council, Reich Group Industry; Member, Board of Directors, Bank of International Settlements, Basle; Chairman, Currency Committee, Reichsbank; Member, Academy for German Law; Member, Committee for Corporate Law; Chairman, Board of Directors, House of German Art; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises, within Germany and the occupied countries and elsewhere.

1.3 (a) (4)

(c) Georg von Schnitzler, Chief of the Commercial Committee of the Managing Board of Directors. [REDACTED]

[REDACTED] Member of the Central Committee; Chief, Sales Combine Dyestuffs; Chief, Sales Comb [REDACTED] Dyestuffs Committee; [REDACTED] Captain. SA!

each one [redacted] not only possesses a wealth of war potential information, but is acquainted with all the other important European scientists who possess a like knowledge. This list is as follows:

(a) Carl Krauch, Chairman of the Supervisory Board of Directors of I G Farben and General Plenipotentiary for Chemical Production on Goering's staff. One of the top industrial scientists of Germany.

*Drop*  
1.3(a)(4)

[redacted] Member of the Managing Board of Directors and of the Central Committee; Chief, Division 1; Chief, Liaison Office W; Member, NSDAP, NSFK, and German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Member, Advisory Council, Economic Group Chemical Industry; Chief, Reich Office for Economic Development; Chief, Research and Development Department, Office for German Raw Materials and Synthetics, Four Year Plan; Member, German Academy for Aviation Research; Senator, Kaiser Wilhelm Society; Honorary Member, Association of German Chemists; Member, Directorate, Reich Research Council; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises, within Germany and the occupied countries.

(b) Hermann Schmitz, Chairman of the I G Farben Managing Board of Directors.

*Drop*  
1.3(a)(4)

[redacted] Chairman of the Central Committee; Member, Reichstag; Military Economy Leader; Member, Goering Committee of Experts on Raw Materials Questions; Member, Select Advisory Council, Reich Group Industry; Member, Board of Directors, Bank of International Settlements, Basle; Chairman, Currency Committee, Reichsbank; Member, Academy for German Law; Member, Committee for Corporate Law; Chairman, Board of Directors, House of German Art; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises, within Germany and the occupied countries and elsewhere.

(c) Georg von Schnitzler, Chief of the Commercial Committee of the Managing Board of Directors.

*Drop*  
1.3(a)(4)

[redacted] Member of the Central Committee; Chief, Sales Combine Dyestuffs; Chief, Sales Combine Chemicals; Chairman, Dyestuffs Committee; Chairman, Chemicals Committee; Member, NSDAP; Captain, SA; Member, German Labor Front; Member, NSKK; Military Economy Leader; Member, Greater Advisory Council, Reich Group Industry; Chairman, Permanent Committee for Exhibitions and

[redacted]

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Fairs, and Committee for Economic Propaganda of Industry, Reich Group Industry; Member, Committee for Foreign Trade, Reich Group Industry; Deputy Chairman, Economic Group Chemical Industry; Chief, Sub-Group 16, Tar Dyes and Tar Dye Intermediates, Economic Group Chemical Industry; Chairman, Council for Propaganda of German Economy, Ministry of Propaganda; Representative of German Group in Dyestuffs Four-Party Cartel; Chairman, Interstate German-Belgian Committee; Vice President, Court of Arbitration, International Chamber of Commerce; Vice Chairman, German-Italian Studies Foundation; Member, German-Spanish Society; Member, German-French Society; Member, Directorate, German Group of International Chamber of Commerce; and chairman, vice chairman and/or board member of other industrial firms, combines, and enterprises within Germany, the occupied countries and elsewhere.

- (d) Fritz Gajewski, Plant Leader of Wolfen Film Plant and Manager of "AGFA" Plants located at Wolfen Filmfabrik, Berlin-Lichtenberg, Premnitz, Landsberg, Munich-Camerawerk, Bobingen, Rottweil, 1931-1945, which produced photographic materials, artificial silk, synthetic fibers, cellulose wool, cellulose, all kinds of cellulose products and ozalid.

1.3 (a) (4)

Member of the Managing Board of Directors and of the Central Committee; Chief, Division 3; Deputy Chairman, Technical Committee; Member, NSDAP; Member, German Labor Front; Member, National Socialist Bund of German Technicians; Member, Reich Air Raid Protection Bund; Military Economy Leader; Member, Advisory Council, Economic Group Chemical Industry; Member, Sub-group for Chemical Production of Artificial Fibres, Economic Group Chemical Industry; Member, Artificial Fibres Committee, Economic Group Textile Industry; Member, Sub-group for Cellulose Production, Economic Group Paper, Cardboard, Cellulose and Wood Pulp Production; Member, Chamber of Industry and Commerce, Halle/Saale; Chairman, Pension Fund of Agfa of Employees of I G Farben A G, Wolfen-Bitterfeld; Member, Managing Board of Directors, Plant Savings Association, Ludwigshafen; Chief, Section V, Trade Association of Chemical Industrie, Leipzig; Deputy Member, Saxony Country Union of the Reich Union of Industrial Trade Associations, Dresden; Member, Board of Trustees, Central European Economic Diet; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

- (e) Heinrich Hoerlein, Plant Leader of the Elberfeld Plant, 1933-1941, and Manager of the Elberfeld Plant, 1931-1941, which produced pharmaceuticals, organic intermediates, insecticides, biologicals, and research in pharmaceuticals and chemicals for plant protection and pest destruction.

1.3 (a) (4)

Member of the Managing Board of Directors and of the Central Committee; Chairman, Pharmaceuticals Main Committee; Member, NSDAP; Member, German Labor Front; Member, National Socialist Bund of German Technicians; Chairman, Julius Liebig Society; Treasurer, German Chemical

ical Group Industry; Deputy Chairman, Economic Group Chemical Industry; Chief, Sub-Group 16. Tar Dyes and Tar Dye Intermediates; Approved for Release: 2022/06/22 C00010786; Chairman, Council for Propaganda of German Economy, Ministry of Propaganda; Representative of German Group in Dyestuffs Four-Party Cartel; Chairman, Interstate German-Belgian Committee; Vice President, Court of Arbitration, International Chamber of Commerce; Vice Chairman, German-Italian Studies Foundation; Member, German-Spanish Society; Member, German-French Society; Member, Directorate, German Group of International Chamber of Commerce; and chairman, vice chairman and/or board member of other industrial firms, combines, and enterprises within Germany, the occupied countries and elsewhere.7

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[REDACTED]

834021-241

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(f) August von Knieriem, Chief Counsel of I G Farben. [REDACTED]  
 1.3(a)(4) [REDACTED] Member of the Manag-  
 ing Board of Directors and of the Central Committee; Chairman,  
 Patent Committee; Member, NSDAP; Member, German Labor Front;  
 Member, National Socialist Lawyers Association; Member, German  
 Society of Nobles; Member, Committee for Patents and Trade-  
 marks, Reich Group Industry; Member, Committee for Market Reg-  
 ulation and Business Economics, Reich Group Industry; Member,  
 Law Committee, Reich Group Industry, and of the following  
 special sub-committees: Corporation Law, Law for Limited Com-  
 panies, and Law of Conditional Transfer of Property; Member,  
 Board Committee for Cartel and Tax Policies, Business Economics  
 Questions, and Market Problems, Reich Group Industry; Member,  
 Academy for German Law; Chairman, Committee for the Law of  
 Copyright; Member, Working Association for German-Hungarian  
 Legal Relations, Academy for German Law; Member, Working  
 Association for Four Year Plan Questions within Framework of  
 Patent Committee; Member, Patents and Trademarks Law Committee;  
 Member, Patent Law Committee; Member, Trademarks and Competi-  
 tion Committee; Member, German Working Association for Legal  
 Protection of Industry and Patent Law; Full Member, Inter-  
 national Chamber of Law; Chairman, Section "Industrial Legal  
 Protection", International Chamber of Law; Member, Committee  
 for Questions of Industrial Legal Protection, International  
 Chamber of Commerce; Member, Committee for Questions of Inter-  
 national Cartels, International Chamber of Commerce; Member,  
 Kaiser Wilhelm Society; Board Member, International Hydrogen-  
 ation Patents Co, The Hague, Holland; Board Member, Interna-  
 tional Hydrogenation Engineering and Chemical Co, The Hague,  
 Holland; and chairman or board member of other industrial  
 firms, combines, and enterprises within Germany and the  
 occupied countries.

(g) Fritz Ter Meer, Chief of the Technical Committee of the  
 1.3(a)(4) Managing Board of Directors, and Chief of the Directional  
 Group in charge of production of synthetic rubber, poison  
 gas, dyestuffs, various chemicals, light metals, and pharma-  
 ceuticals. [REDACTED]  
 [REDACTED] Member of the Central Committee; Chief, Divi-  
 sion 2; Member, NSDAP; Member, German Labor Front; Military  
 Economy Leader; Commissioner and Armament Commissioner of  
 the Commissioner for Italy of the Reich Ministry for Armament  
 and War Production; Member, Economic Group Chemical Industry;  
 Member, Advisory Council, Economic Group Chemical Industry;  
 Chief, and Chairman, Production Committee, Sub-group 1, Other  
 Inorganic Products, Economic Group Chemical Industry; Member,  
 Advisory Council, Chamber of Industry and Commerce, Rhein-  
 Main Region, Frankfurt; Chairman, Trade Association of Chemical  
 Industry, Berlin; Member, Advisory Council, Reich Union of  
 Industrial Trade Associations, Berlin-Wilmersdorf; Member,  
 House of Technology, Gau Hessen-Nassau; President, Emil  
 Fischer Society; Chairman, Administrativ Committee of the  
 Kaiser Wilhelm Institute for Chemistry; Member, Scholarship  
 Committee, Justus Liebig Society; Treasurer, Chemical Group,  
 National Approved for Release: 2022/06/22 C00010786 and chairman.

Patent Committee; Member, NSDAP; Member, German Labor Front; Member, Approved for Release: 2022/06/22 C00010786ation; Member, German Society of Nobles; Member, Committee for Patents and Trademarks, Reich Group Industry; Member, Committee for Market Regulation and Business Economics, Reich Group Industry; Member, Law Committee, Reich Group Industry, and of the following special sub-committees: Corporation Law, Law for Limited Companies, and Law of Conditional Transfer of Property; Member, Board Committee for Cartel and Tax Policies, Business Economics Questions, and Market Problems, Reich Group Industry; Member, Academy for German Law; Chairman, Committee for the Law of Copyright; Member, Working Association for German-Hungarian Legal Relations, Academy for German Law; Member, Working Association for Four Year Plan Questions within Framework of Patent Committee; Member, Patents and Trademarks Law Committee; Member, Patent Law Committee; Member, Trademarks and Competition Committee; Member, German Working Association for Legal Protection of Industry and Patent Law; Full Member, International Chamber of Law; Chairman, Section "Industrial Legal Protection", International Chamber of Law; Member, Committee for Questions of Industrial Legal Protection, International Chamber of Commerce; Member, Committee for Questions of International Cartels, International Chamber of Commerce; Member, Kaiser Wilhelm Society; Board Member, International Hydrogenation Patents Co, The Hague, Holland; Board Member, International Hydrogenation Engineering and Chemical Co, The Hague, Holland; and chairman or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

(g) Fritz Ter Meer, Chief of the Technical Committee of the Managing Board of Directors, and Chief of the Directional Group in charge of production of synthetic rubber, poison gas, dyestuffs, various chemicals, light metals, and pharmaceuticals.

1,3 (a) (4)

Member of the Central Committee; Chief, Division 2; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Commissioner and Armament Commissioner of the Commissioner for Italy of the Reich Ministry for Armament and War Production; Member, Economic Group Chemical Industry; Member, Advisory Council, Economic Group Chemical Industry; Chief, and Chairman, Production Committee, Sub-group 1, Other Inorganic Products, Economic Group Chemical Industry; Member, Advisory Council, Chamber of Industry and Commerce, Rhein-Main Region, Frankfurt; Chairman, Trade Association of Chemical Industry, Berlin; Member, Advisory Council, Reich Union of Industrial Trade Associations, Berlin-Wilmersdorf; Member, House of Technology, Gau Hessen-Nassau; President, Emil Fischer Society; Chairman, Administrativ Committee of the Kaiser Wilhelm Institute for Chemistry; Member, Scholarship Committee, Justus Liebig Society; Treasurer, Chemical Group, National Socialist Bund of German Technicians; and chairman, deputy chairman, or board member of other industrial firms, combines, and enterprises within Germany, the occupied countries and elsewhere.7

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- (h) Christian Schneider, Plant Leader of Ammoniakwerk, Merseburg (Leuna), 1936-1938; Full Manager of Ammoniakwerk, Merseburg (Leuna), 1938-1945; Deputy Manager, Ammoniakwerk, Merseburg, and Manager of Leuna Plant, 1928-1936; these plants produced inorganics and nitrogen, organic intermediates, solvents, plasticisers, methanol, dyeing and printing auxiliaries, detergent, raw materials, gasoline, and lubricating oils.
- 1.3(a) (4) [REDACTED] Member of the Managing Board of Directors and of the Central Committee; Chief, Division 1; Chief, Central Personnel Department; Chief Counter-Intelligence Agent, OKW-Abwehr; Chief of Plant Leaders; Member, NSDAP; Supporting Member, SS; Member, German Labor Front; Member, Advisory Council, Economic Group Chemical Industry; Member, Committee for Supervision of Health, Reich Group Industry; Member, Advisory Council, Chamber of Economics of the Central Elbe Region; Member, Experts Committee, Reich Trustee of Labor, Economic Territory Central Elbe, Magdeburg; Member, Advisory Council, Industrial Department of the Chamber of Economics, Magdeburg; Vice-Chairman, Chamber of Industry and Commerce, Halle/Saale; Member, Committee of Reich Institute for Professional Training in Commerce and Industry; Member, Managing Board of Directors, Trade Association of Chemical Industry; Member, Labor Chamber, Halle/Saale; Member, Advisory Council of Gau Leader of NSDAP, Gau Administration Halle-Merseburg; Member, Working Committee of German Labor Front, Gau Administration Halle-Merseburg; Member, Association of Employers of the Gau Administration Halle-Merseburg of the NSDAP; Assistant, Gau Economic Advisory of NSDAP, Gau Administration Halle-Merseburg; Member, Prussian Provincial Council; Honorary Member, Finance Court of the Country Treasury, Magdeburg; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

- (i) Otto Ambros, Member of the Managing Board of Directors. Manager of the following plants: Schkopau (Buna I), 1935-1945; Ludwigshafen-Oppau (Organic, Intermediates and Dyestuffs Plants and Laboratories), 1938-1945; Huels (Buna II), 1938-1945; Ludwigshafen (Buna III), 1941-1945; Auschwitz (Buna IV), 1941-1945; Gendorf (Inorganic), 1941-1945; Dyhernfurt, 1941-1945; Falkenhagen, 1942-1945; which produced synthetic rubber, inorganics and nitrogen, organic intermediates, solvents, plasticisers, methanol, plastics, accelerators, dyestuffs, dyeing and printing auxiliaries, detergent raw materials, poisonous gas and intermediates. Ambros is one of Germany's most brilliant industrial chemists. He was in charge of plant expansions and supervised the synthetic rubber industry (Buna) in which synthetic rubber was produced and stockpiled for the German war machine, using as raw materials air, water, and an inferior grade of coal. He is an expert on the terrain and industrial capacity of Poland and could give detailed information on the I G Farben Buna Plant at Auschwitz. In fact, he could give invaluable information on industrial conditions and plants.
- Drop

(Leuna), 1938-1945; Deputy Manager, Ammoniakwerk, Merseburg, and Manager, approved for Release: 2022/06/22 C00010786 plants produced inorganics and nitrogen, organic intermediates, solvents, plasticisers, methanol, dyeing and printing auxiliaries, detergent, raw materials, gasoline, and lubricating oils.

1.3 (a) (4)

Member of the Managing Board of Directors and of the Central Committee; Chief, Division 1; Chief, Central Personnel Department; Chief Counter-Intelligence Agent, OKW-Abwehr; Chief of Plant Leaders; Member, NSDAP; Supporting Member, SS; Member, German Labor Front; Member, Advisory Council, Economic Group Chemical Industry; Member, Committee for Supervision of Health, Reich Group Industry; Member, Advisory Council, Chamber of Economics of the Central Elbe Region; Member, Experts Committee, Reich Trustee of Labor, Economic Territory Central Elbe, Magdeburg; Member, Advisory Council, Industrial Department of the Chamber of Economics, Magdeburg; Vice-Chairman, Chamber of Industry and Commerce, Halle/Saale; Member, Committee of Reich Institute for Professional Training in Commerce and Industry; Member, Managing Board of Directors, Trade Association of Chemical Industry; Member, Labor Chamber, Halle/Saale; Member, Advisory Council of Gau Leader of NSDAP, Gau Administration Halle-Merseburg; Member, Working Committee of German Labor Front, Gau Administration Halle-Merseburg; Member, Association of Employers of the Gau Administration Halle-Merseburg of the NSDAP; Assistant, Gau Economic Advisory of NSDAP, Gau Administration Halle-Merseburg; Member, Prussian Provincial Council; Honorary Member, Finance Court of the Country Treasury, Magdeburg; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

- (1) Otto Ambros, Member of the Managing Board of Directors. Manager of the following plants: Schkopau (Buna I), 1935-1945; Ludwigshafen-Oppau (Organic, Intermediates and Dyestuffs Plants and Laboratories), 1938-1945; Huels (Buna II), 1938-1945; Ludwigshafen (Buna III), 1941-1945; Auschwitz (Buna IV), 1941-1945; Gendorf (Inorganic), 1941-1945; Dyhernfurt, 1941-1945; Falkenhagen, 1942-1945; which produced synthetic rubber, inorganics and nitrogen, organic intermediates, solvents, plasticisers, methanol, plastics, accelerators, dyestuffs, dyeing and printing auxiliaries, detergent raw materials, poisonous gas and intermediates. Ambros is one of Germany's most brilliant industrial chemists. He was in charge of plant expansions and supervised the synthetic rubber industry (Buna) in which synthetic rubber was produced and stockpiled for the German war machine, using as raw materials air, water, and an inferior grade of coal. He is an expert on the terrain and industrial capacity of Poland and could give detailed information on the I G Farben Buna Plant at Auschwitz. In fact, he could give invaluable information on industrial conditions and plants in general in all of Western Europe, and particularly the Ludwigshafen plant of I G Farben in the French Zone. The French were extremely interested in Ambros, wanted him to rebuild the Ludwigshafen plant.

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1.3 (a) (4)  
C

[REDACTED] in addition, he is an expert on poison gas, and the tremendous poison gas program of the Nazis during the war was under his immediate

[REDACTED]

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supervision. In particular, the two new extremely deadly poison gases developed by the Nazis during the war, tabun and sarin, were under his personal supervision. It was Ambros who personally persuaded Hitler not to use these gases during the war. It is also probable that Ambros would have a rather detailed knowledge of the Norskhydro Norwegian heavy water plant, which was destroyed during the war, but in which I G Farben was the largest single stockholder.

1.3 (a)(4)

Member, Technical Committee; Member, Chemicals Committee; Chairman, Plastics and Rubber Committee; Chairman, Detergent Raw Materials Committee; Chairman, Intermediates Committee; Member, NSDAP, Member, German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Chief, Special Committee Plastics, Reich Ministry of Armaments and Munitions; Special Consultant to Chief, Research and Development Department, Four Year Plan; Chief, Special Committee C, Chemical Warfare; Chief, Sub-group Textile Auxiliaries, Economic Group Chemical Industry; Expert for buna, Economic Group Chemical Industry; Chairman, Production Committee, Sub-group Carbide Chemistry, Methanol and Charcoal, Economic Group Chemical Industry; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

(j) Max Brueggemann, Secretary of the Managing Board of Directors and an expert on pharmaceuticals.

1.3 (a)(4)

Deputy General Manager, Leverkusen; Deputy Chief, Sales Combine Pharmaceuticals and Plants Protective Agents; Director, Legal, Patent, and Personnel Departments, Works Combine Lower Rhine; Member, NSDAP; Member, German Labor Front; Vice-Chairman, Chamber of Industry and Commerce, Solingen; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

(k) Ernst Buergin, Plant Leader of Bitterfeld-Wolfen Plants, 1938-1945, which produced inorganics and nitrogen, organic intermediates, plastics, magnesium and aluminum, dyestuffs, dyeing and printing auxiliaries, detergent raw materials, insecticides, light metals.

1.3 (a)(4)

Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Central Germany; Chairman, Chlorine Sub-Committee; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Collaborator of Krauch in Four Year Plan; Chairman, Technical Committee, Sub-group Soda, Caustic Alkalines, Chlorine, Hydrochloric Acid and Related Products, Economic Group Chemical Industry; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

(l) Heinrich Bueteffisch, Technical Chief of Leuna Works, Merseburg, 1933-1945

Ambros who personally persuaded Hitler not to use these gases during the war. Approved for Release: 2022/06/22 C00010786 that Ambros would have a rather detailed knowledge of the Norskhydro Norwegian heavy water plant, which was destroyed during the war, but in which I G Farben was the largest single stockholder.

1.3 (2) (4)

[redacted] Member, Technical Committee; Member, Chemicals Committee; Chairman, Plastics and Rubber Committee; Chairman, Detergent Raw Materials Committee; Chairman, Intermediates Committee; Member, NSDAP, Member, German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Chief, Special Committee Plastics, Reich Ministry of Armaments and Munitions; Special Consultant to Chief, Research and Development Department, Four Year Plan; Chief, Special Committee C, Chemical Warfare; Chief, Sub-group Textile Auxiliaries, Economic Group Chemical Industry; Expert for buna, Economic Group Chemical Industry; Chairman, Production Committee, Sub-group Carbide Chemistry, Methanol and Charcoal, Economic Group Chemical Industry; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.

(j) Max Brueggemann, Secretary of the Managing Board of Directors and an expert on pharmaceuticals.

1.3 (2) (4)

[redacted] Deputy General Manager, Leverkusen; Deputy Chief, Sales Combine Pharmaceuticals and Plants Protective Agents; Director, Legal, Patent, and Personnel Departments, Works Combine Lower Rhine; Member, NSDAP; Member, German Labor Front; Vice-Chairman, Chamber of Industry and Commerce, Solingen; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.

(k) Ernst Buerger, Plant Leader of Bitterfeld-Wolfen Plants, 1938-1945, which produced inorganics and nitrogen, organic intermediates, plastics, magnesium and aluminum, dyestuffs, dyeing and printing auxiliaries, detergent raw materials, insecticides, light metals.

1.3 (2) (4)

[redacted] Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Central Germany; Chairman, Chlorine Sub-Committee; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Collaborator of Krauch in Four Year Plan; Chairman, Technical Committee, Sub-group Soda, Caustic Alkalines, Chlorine, Hydrochloric Acid and Related Products, Economic Group Chemical Industry; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

(l) Heinrich Bueteffisch, Technical Chief of Leuna Works, Merseburg, 1931-1945; Deputy Manager, Ammoniakwerk, Merseburg, 1934-1945; and Chief - (Syn. gasoline), Auschwitz, 1941-1945; which produced nitrogen, gasoline, lubricating oil, methanol, mersol, organic intermediates and suet acid.

1.3 (2) (4)

[redacted] Member, Managing Board of Directors; Member, Technical Committee; Military Economy Leader; Holder of Knight's Cross

[redacted]

[redacted]

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of the War Merit Cross; Member, Himmler Circle of Friends; Member, NSDAP; Lieutenant Colonel, SS; Member, German Labor Front; Member, NSKK; Member, NSFK; Member, National Socialist Bund of Technicians; Collaborator of Krauch in Four Year Plan; Chief, Committee for Oil, Reich Ministry of Armament and Munitions; Production Commissioner for Oil, Ministry of Armaments; Chief, Economic Group Liquid Fuel Industry; Chief, Working Association for Hydrogenation, Synthesis and Smoldering, Economic Group Liquid Fuel Industry; President, Technical Experts Committee, International Nitrogen Convention; Chairman, Working Association Fertilizers; and chairman, deputy chairman, and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

- (m) Paul Haefliger, Member of the Managing Board of Directors and an expert on light metals.

1.3(a)(4)

[REDACTED] Member, Commercial Committee; Vice-Chairman, Central Management, Sales Combine Chemicals; Member, Chemicals Committee; Member, Southeast Europe Committee; Member, East Asia Committee; Member, East Committee; Member, Propaganda Committee; Member, German Labor Front; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.

- (n) Max Ilgner, Member of the Managing Board of Directors and a director of intelligence, espionage and propaganda activities.

1.3(a)(4)

[REDACTED] Chief, Berlin NW7 Departments, including WIPO (Economic Policy Department), VOWI (Economic Research Department), and ZEFI (Central Finance Administration); Member, Commercial Committee; Member, NSDAP; Member, German Labor Front; Member, NSKK; Member, National Socialist Reich Soldiers' Bund; Member, Reich Film Chamber; Member, Reich Colonial Bund; Military Economy Leader; Member, Circle of Foreign Trade Experts, Ministry of Propaganda; Member, Circle of Foreign Trade Experts for Foreign Economic Questions; President, Carl Schurz Association; Vice President, Central European Economic Diet; Member, German-American Economic Association; Member, Managing Board of Directors, Economic Association for Central and South America; Deputy Chairman, Board of Directors, German-Bulgarian Chamber of Commerce; Member, German-Norwegian Chamber of Commerce; Member, Committee for Foreign Trade and Currency Questions of the International Chamber of Commerce, Paris; Deputy Member, Council of Trustees, Institute for Market Analysis, Berlin; Chairman, Southeast Committee, Reich Group Industry; Chairman, Hungary Committee, Reich Group Industry; Chairman, German Group of the German-Roumanian Experts Committee for Questions of Financing Industry, Southeast Committee, Economic Group Chemical Industry; Member, Working Committee for Foreign Trade Questions; Member, miscellaneous German political and public agencies and international propaganda associations; and chairman and/or board member of other ind[ustries] within Germany,

Front; Member, NSKK; Member, NSFK; Member, National Socialist Bund of Technicians; Collaborator of Krumpholtz in Four Year Plan; Chief, Committee for Oil, Reich Ministry of Armament and Munitions; Production Commissioner for Oil, Ministry of Armaments; Chief, Economic Group Liquid Fuel Industry; Chief, Working Association for Hydrogenation, Synthesis and Smoldering, Economic Group Liquid Fuel Industry; President, Technical Experts Committee, International Nitrogen Convention; Chairman, Working Association Fertilizers; and chairman, deputy chairman, and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

(m) Paul Haefliger, Member of the Managing Board of Directors and an expert on light metals. [REDACTED]

1.3(a)(4)

[REDACTED] Member, Commercial Committee; Vice-Chairman, Central Management, Sales Combine Chemicals; Member, Chemicals Committee; Member, Southeast Europe Committee; Member, East Asia Committee; Member, East Committee; Member, Propaganda Committee; Member, German Labor Front; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

(n) Max Ilgner, Member of the Managing Board of Directors and a director of intelligence, espionage and propaganda activities. [REDACTED]

1.3(a)(4)

Chief, Berlin NW7 Departments, including WIPO (Economic Policy Department), VOWI (Economic Research Department), and ZEFI (Central Finance Administration); Member, Commercial Committee; Member, NSDAP; Member, German Labor Front; Member, NSKK; Member, National Socialist Reich Soldiers' Bund; Member, Reich Film Chamber; Member, Reich Colonial Bund; Military Economy Leader; Member, Circle of Foreign Trade Experts, Ministry of Propaganda; Member, Circle of Foreign Trade Experts for Foreign Economic Questions; President, Carl Schurz Association; Vice President, Central European Economic Diet; Member, German-American Economic Association; Member, Managing Board of Directors, Economic Association for Central and South America; Deputy Chairman, Board of Directors, German-Bulgarian Chamber of Commerce; Member, German-Norwegian Chamber of Commerce; Member, Committee for Foreign Trade and Currency Questions of the International Chamber of Commerce, Paris; Deputy Member, Council of Trustees, Institute for Market Analysis, Berlin; Chairman, Southeast Committee, Reich Group Industry; Chairman, Hungary Committee, Reich Group Industry; Chairman, German Group of the German-Roumanian Experts Committee for Questions of Financing Industry, Southeast Committee, Economic Group Chemical Industry; Member, Working Committee for Foreign Trade Questions; Member, miscellaneous German political and public agencies and international propaganda associations; and chairman and/or board member of other industrial firms, combines, enterprises within Germany, the occupied countries and elsewhere.7

(o) Friedrich Jaehne, Member of the Managing Board of Directors and Chief Engineer in charge of construction and physical plant development. [REDACTED]

1.3(a)(4)

[REDACTED] Chairman, Engineering Committee; [REDACTED]



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[REDACTED]

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Chief, Engineering Department, Hoechst; Deputy Chief, Works Combine Main Valley; Member, Technical Committee; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Member, Greater Advisory Council, Reich Group Industry; Member, Finance Committee, Hesse Regional Trustee Agency for Plant Air Raid Protection, Reich Group Industry, Frankfurt; Vice-Chairman, and Chief, Industrial Department, Gau Chamber of Economics, Hesse, District Office Hesse, Reich Group Industry; Member, German Standardizing Committee; Member, Managing Board of Directors and Advisory Council, Reich Union of Technical Supervisory Associations; Member, Advisory Council, Managing Board of Directors, and Chief, Technical Committee, Trade Association of the Chemical Industry; Regional Plenipotentiary for Business Transport of the Reich Railway Management, Frankfurt; Member, Board of Trustees, Reich X-ray Agency of the Government Office for Testing of Materials, Berlin; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

113 (u) (4) (p) Hans Kuehne, Plant Leader of Leverkusen, 1933-1943, which produced inorganics, organic intermediates, buna, plastics, pharmaceuticals, insecticides, acetylcellulose, synthetic fibres. [REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Inorganic Committee; Chief, Works Combine Lower Rhine; Member, NSDAP; Member, German Labor Front; Member, Advisory Council and Industrial Department, Chamber of Economics, Duesseldorf; Member, Advisory Council, Chamber of Commerce, Munich-Gladbach; Member, District Labor Chamber, Essen; Manager, Ostmark Branch Office, Economic Group Metalware and Related Industrial Products; and chairman, deputy chairman, vice-chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

113 (a) (4) (q) Carl Lautenschlaeger, Plant Leader at Hoechst Plant, 1938-1945, which produced inorganics, solvents, organic intermediates, plastics, pharmaceuticals, compressed gases, welding and cutting equipment and oxygen. [REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Main Valley; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Member, Managing Board of Directors, Koch-Institut, Frankfurt; Member, Managing Board of Directors, Behring-Institut, Marburg; Member, Research Council, Kaiser Wilhelm Society for Psychiatry, Munich; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

113 (a) (4) (r) Wilhelm Mann, Member of the Managing Board of Directors. [REDACTED] Member, Commercial Committee; Member, East Asia Committee; Chairman, East Committee Approved for Release: 2022/06/22 C00010786 Committee; Member.

Member, Greater Advisory Council, Reich Group Industry; Member, Finance Committee, Hesse Regional Trustee Agency for Plant A; Approved for Release: 2022/06/22 C00010786  
Member, Finance Committee, Hesse Regional Trustee Agency for Reich Group Industry, Frankfurt; Vice-Chairman, and Chief, Industrial Department, Gau Chamber of Economics, Hesse, District Office Hesse, Reich Group Industry; Member, German Standardizing Committee; Member, Managing Board of Directors and Advisory Council, Reich Union of Technical Supervisory Associations; Member, Advisory Council, Managing Board of Directors, and Chief, Technical Committee, Trade Association of the Chemical Industry; Regional Plenipotentiary for Business Transport of the Reich Railway Management, Frankfurt; Member, Board of Trustees, Reich X-ray Agency of the Government Office for Testing of Materials, Berlin; and chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

1.3 (a) (4) (p) Hans Kuehne, Plant Leader of Leverkusen, 1933-1943, which produced inorganics, organic intermediates, buna, plastics, pharmaceuticals, insecticides, acetylcellulose, synthetic fibres. [REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Inorganic Committee; Chief, Works Combine Lower Rhine; Member, NSDAP; Member, German Labor Front; Member, Advisory Council and Industrial Department, Chamber of Economics, Duesseldorf; Member, Advisory Council, Chamber of Commerce, Munich-Gladbach; Member, District Labor Chamber, Essen; Manager, Ostmark Branch Office, Economic Group Metalware and Related Industrial Products; and chairman, deputy chairman, vice-chairman and/or board member of numerous industrial firms, combines, and enterprises within Germany and the occupied countries.7

1.3 (a) (4) (q) Carl Lautenschlaeger, Plant Leader at Hoechst Plant, 1938-1945, which produced inorganics, solvents, organic intermediates, plastics, pharmaceuticals, compressed gases, welding and cutting equipment and oxygen. [REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Main Valley; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Member, Managing Board of Directors, Koch-Institut, Frankfurt; Member, Managing Board of Directors, Behring-Institut, Marburg; Member, Research Council, Kaiser Wilhelm Society for Psychiatry, Munich; and chairman, deputy chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

1.3 (a) (4) (r) Wilhelm Mann, Member of the Managing Board of Directors. [REDACTED] Member, Commercial Committee; Member, East Asia Committee; Chairman, East Committee; Member, Pharmaceutical Main Committee; Member, Pharmaceutical Scientific and Technical Central Committee; Chief, Sales Combine Pharmaceuticals and Plant Protective Agents; Member, NSDAP; Lieutenant, SA; Member, German Labor Front; Reich Economic Judge; Member, Greater Advisory Council, Reich Group Industry; Chairman, Colonial Economy Committee, Reich Group Industry; Member, Council for Propaganda

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of German Economy, Ministry of Propaganda; Member, Committee for General Affairs and Committee for Foreign Propaganda, Council for Propaganda of German Economy; Member, Advisory Council, Research Institute for Science of Propaganda, Berlin; Member, Permanent Advisory Council, Economy Office of the Reich Union of German Newspaper Publishers, Berlin; President, Society for Consumer Research, Berlin; Member, Institute for Economic Observation of German Finished Goods, Nuernberg; and chairman, deputy chairman and/or board member of other industrial firms, combines, enterprises within Germany, the occupied countries and elsewhere.7

(s) Heinrich Oster, Member of the Managing Board of Directors and Manager of the Nitrogen Syndicate. [REDACTED]

113(a)(4)

[REDACTED] Member, Commercial Committee; Member, East Asia Committee; Chief, Sales Organization Nitrogen and Oil; Member, NSDAP; Supporting member, SS-Reitersturm; Member, German Labor Front; Chief, Sub-department Nitrogen, Economic Group Chemical Industry; Member, Labor Chamber, Berlin-Brandenburg; Member, Sub-Committee Fertilizers and Explosives, Gau Berlin; Member, Main Committee Chemistry, Gau Greater Berlin; and chairman, manager and/or board member of other industrial firms, combines, enterprises and banks within Germany, the occupied countries and elsewhere.7

(t) Karl Wurster, Plant Leader at Ludwigshafen-Oppau during World War II, and Technical Director of Ludwigshafen-Oppau, 1938-1945, which produced inorganics, organic intermediates, Buna, plastics, solvents, synthetic rubber, tanning extracts, dye-stuffs, detergent raw materials and ethylene oxide. [REDACTED]

713(a)(4)

[REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Upper Rhine; Member, Chemicals Committee; Chairman, Inorganic Committee; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Collaborator of Krauch in Four Year Plan, Office for German Raw Materials and Synthetics; Acting Vice-Chairman and member, Praesidium, Economic Group Chemical Industry; Chief, and Chairman, Technical Committee, Sub-Group for Sulphur and Sulphur Compounds, Economic Group Chemical Industry; Member, Advisory Council, and District Chairman, Saarpfalz, Economic Group Chemical Industry; Member, Advisory Council, Chamber of Economics Westmark, Saarbruecken; President, Chamber of Economics, Ludwigshafen; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany, the occupied countries and elsewhere.7

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(u) Walter Duerrfeld, Director and Construction Manager of the I G Farben Auschwitz Plant and the Monowitz Concentration Camp. Chief Engineer at the Leuna Plant; [REDACTED]

113(a)(4)

[REDACTED] Member, NSDAP; Member, German Labor Front; Captain, NSFK; District Chairman, upper Silesia, Economic Group Chemical Industry.7

(v) Heinrich Cottmann, Member of the Southeast Europe Committee. [REDACTED] Director: [REDACTED]

Council, Research Institute for Science of Propaganda, Berlin; Member, Permanent Advisory Council, Economy Office of the Reich Union of German Newspaper Publishers, Berlin; President, Society for Consumer Research, Berlin; Member, Institute for Economic Observation of German Finished Goods, Nuernberg; and chairman, deputy chairman and/or board member of other industrial firms, combines, enterprises within Germany, the occupied countries and elsewhere.7

(s) Heinrich Oster, Member of the Managing Board of Directors and Manager of the Nitrogen Syndicate. [REDACTED]

1.3(a)(4)

[REDACTED] Member, Commercial Committee; Member, East Asia Committee; Chief, Sales Organization Nitrogen and Oil; Member, NSDAP; Supporting member, SS-Reitersturm; Member, German Labor Front; Chief, Sub-department Nitrogen, Economic Group Chemical Industry; Member, Labor Chamber, Berlin-Brandenburg; Member, Sub-Committee Fertilizers and Explosives, Gau Berlin; Member, Main Committee Chemistry, Gau Greater Berlin; and chairman, manager and/or board member of other industrial firms, combines, enterprises and banks within Germany, the occupied countries and elsewhere.7

(t) Karl Wurster, Plant Leader at Ludwigshafen-Oppau during World War II, and Technical Director of Ludwigshafen-Oppau, 1938-1945, which produced inorganics, organic intermediates, Buna, plastics, solvents, synthetic rubber, tanning extracts, dye-stuffs, detergent raw materials and ethylene oxide. [REDACTED]

7.1.3(b)(4)

[REDACTED] Member, Managing Board of Directors; Member, Technical Committee; Chief, Works Combine Upper Rhine; Member, Chemicals Committee; Chairman, Inorganic Committee; Member, NSDAP; Member, German Labor Front; Military Economy Leader; Holder of Knight's Cross of the War Merit Cross; Collaborator of Krauch in Four Year Plan, Office for German Raw Materials and Synthetics; Acting Vice-Chairman and member, Praesidium, Economic Group Chemical Industry; Chief, and Chairman, Technical Committee, Sub-Group for Sulphur and Sulphur Compounds, Economic Group Chemical Industry; Member, Advisory Council, and District Chairman, Saarpfalz, Economic Group Chemical Industry; Member, Advisory Council, Chamber of Economics Westmark, Saarbruecken; President, Chamber of Economics, Ludwigshafen; and chairman and/or board member of other industrial firms, combines, and enterprises within Germany, the occupied countries and elsewhere.7

*Drop*

(u) Walter Duerrfeld, Director and Construction Manager of the I G Farben Auschwitz Plant and the Monowitz Concentration Camp. Chief Engineer at the Leuna Plant. [REDACTED]

1.3(a)(4)

[REDACTED] Member, NSDAP; Member, German Labor Front; Captain, NSFK; District Chairman, upper Silesia, Economic Group Chemical Industry.7

(v) Heinrich Gattineau. Member of the Southeast Europe Committee. [REDACTED] Director:

Chief, Economic Policy Department; Deputy Liaison Officer of the I G Divisions for Austria; Member, NSDAP; Colonel, SA; Member, German Labor Front; Member, Council for Propaganda of German Economy, Ministry of Propaganda; Member, Committee for Southeast Europe, Economic Group Chemical Industry; and acting director, chairman and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

[REDACTED]

834021-247

[REDACTED]

- 10 -

57963

(w) Erich von der Heyde, Deputy to the Chief of Intelligence Agents, and SS Captain. [REDACTED]

1.3 (a) (4)

[REDACTED] Member, Economic Policy Department; Chief, Liaison Office, Nitrogen and Gasoline, Berlin NW 7; Member, NSDAP; Member, German Labor Front; and Member of Military Economics and Armament Office of OKW.7

(x) Hans Kugler, Chief of Sales Department in Dyestuffs for Hungary, Rumania, Yugoslavia, Greece, Bulgaria, Turkey, Czechoslovakia and Austria. [REDACTED]

1.3 (a) (4)

[REDACTED] Director; Member, Commercial Committee; Second Vice-Chairman, Dyestuffs Committee; Member, Dyestuffs Steering Committee; Member, Dyestuffs Application Committee; Member, Southeast Europe Committee; Member, NSDAP; Member, German Labor Front; Deputy Chief, Sub-Group 16, Tar Dyes and Tar-Dye Intermediates, Economic Group Chemical Industry; Member, Advisory Council for Export Questions of the Supervisory Office Chemistry; and acting manager and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

- end -

1.3 (S) (U)

Member, Economic Policy Department, Chief, Liaison Office. Nitrogen and Gasoline, Berlin NW 7; Member, Approved for Release: 2022/06/22 C00010786; and Member of Military Economics and Armament Office of OKW.7

(x) Hans Kugler, Chief of Sales Department in Dyestuffs for Hungary, Rumania, Yugoslavia, Greece, Bulgaria, Turkey, Czechoslovakia and Austria.

1.3(a)(4)

[REDACTED] Director; Member, Commercial Committee; Second Vice-Chairman, Dyestuffs Committee; Member, Dyestuffs Steering Committee; Member, Dyestuffs Application Committee; Member, Southeast Europe Committee; Member, NSDAP; Member, German Labor Front; Deputy Chief, Sub-Group 16, Tar Dyes and Tar-Dye Intermediates, Economic Group Chemical Industry; Member, Advisory Council for Export Questions of the Supervisory Office Chemistry; and acting manager and/or board member of other industrial firms, combines, and enterprises within Germany and the occupied countries.7

- end -

[REDACTED]

[REDACTED]

[REDACTED]

884021-248



~~SECRET~~

CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

12 April 1949

MEMORANDUM FOR: Director, Joint Intelligence Objectives Agency,  
Joint Chiefs of Staff

SUBJECT: Biographic Information Concerning German Specialists

REFERENCE: Memo from Chief, Exploitation Division, JIOA,  
dated 6 Mar 49, JIOA No. 876.

1. Forwarded herewith in answer to your request contained in reference above, is a summary of the information on file in this Agency on the following German scientists.

CHRISTOPH, Walter, Dr.  
ROBER, Charles, Dr.  
MELKUS, Herald

NEUBERT, Heinz  
QUICK, August  
ZUSE, Konrad

2. A check of the files of this Agency revealed no information on the other individuals listed in your request.

3. A complete report on Dr. Erik Traub has been forwarded under separate cover.

4. It is sincerely hoped that this information will prove to be of value.

*James H. Murphy*  
JAMES H. MURPHY  
Deputy Chief, BR/CIA

Encl: Summary of Info.

FILE DIST:  
~~CIA~~ Escape Clause  
Extra Copies

Approved for Release  
Date Nov 1963

1400

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88498 -303

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CIA BIOGRAPHIC REGISTER

SUMMARY OF INFORMATION

CHRISTOPH, Dr. Walter

A report of June 1948 indicates that at that time Christoph, a specialist in magnetic units, and a researcher on pressure units, was located in Leipzig and reportedly was working on mines.

KOBER, Charles

Kober, former chief of the development section of Gema, and a centimeter wave specialist, was last reported (Aug 47) as under contract to the French at St. Raphael Institute, Cote d'Azur.

At Gema-Kober had worked in collaboration with Professors Aigner and Blenk on plans to install an electric steering control to correct all deviations of a V-2 projectile away from a high frequency beam. He designed a mechanism which would use a 12 megawatt transmitter and which was considered interference-proof. In addition to his work on high frequency apparatus and V-2 steering devices, Kober did research on the utilization of shorter wave lengths and in the construction of transmitters with maximal output.

MELKUS, Herald

Melkus, an aerodynamics and statics specialist, and a former member of the Volkenrode project was last reported (Jan 47) as a consultant

1.3(a)(3)(4)  
C

NEUBERT, Heinz

Dr. Heinz Neubert was born 22 November 1906 in Stetten, Germany. He was last reported (Oct 47) as professor of technical mechanics (Physics) at the Institute of Technology in Dresden.

QUICK, August (Wilhelm)

A former aerodynamics specialist at DVL in Berlin where he worked on piston engines for aircraft, August Quick was last reported (June 48) with Schneider-Creusot in France.

1.3(a)(3)(4)  
C

In Oct 1947 he reportedly was with the Atelier Aeronautique Cestrich group in Decize, France and later moved to Paris.

ZUSE, K.

The only information on file on K. Zuse indicates that in Feb 1948 he was interrogated concerning the Zuse Binary Computer, an extremely useful research machine for small sequence control, which he has invented.

~~SECRET~~

83402-304

CLASSIFICATION

FEDERAL INTELLIGENCE AGENCY

REPORT NO. [REDACTED] (1)

**INFORMATION REPORT**

CD NO.

COUNTRY: Germany (Western Zones/Russian Zone)

DATE DISTR. 23 DEC 49

SUBJECT: Recruitment of Western Scientists for the Russian Zone

NO. OF PAGES 1

PLACE ACQUIRED [REDACTED]

113 (a) (4)

NO. OF ENCLS. (LISTED BELOW)

DATE OF INFO October 1949

SUPPLEMENT TO REPORT NO.

GRADING OF SOURCE					COLLECTOR'S PRELIMINARY GRADING OF CONTENT						
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	CONFIRMED BY OTHER SOURCES	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A.	B.	C.	D.	E.	F.	1.	2.	3.	4.	5.	

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THIS IS UNEVALUATED INFORMATION

**SOURCE**

1. The present difficult financial situation of German scientists in the Western Zones is now causing them to be increasingly tempted by offers and invitations to work in the Russian Zone. This is especially true of those scientists in fields requiring academic or institutional backing who now find themselves unable to obtain university positions because of the small staffs with which the universities in Western Germany are operating. Even scientists with academic or government positions receive such low pay in the West that many who politically oppose Communism have been enticed into the Eastern Zone by the promise of four to five times the salary which they currently receive. Directors of research institutes in the Eastern Zones have recently been observed to be intensifying their attempts to exploit this situation and to procure the unused or underpaid talents of the Western Zones.
2. At the recent Physics Congress in Bonn in the latter part of September, Professor Robert Rompe, Director of the Physics Institute of the University of Berlin and Scientific Adviser to the government of the Russian Zone, approached former colleagues with offers of jobs in Leipzig and Dresden. Similarly, at the Congress of Mineralogists recently held in Freiburg i. Breisgau, Professor Leutwein of the Mining School at Freiburg in Saxony extended invitations to work with him and Professor Lange at Freiburg in the field of uranium research. In the latter case it is known that the offers made amounted to 2,000 Eastern marks monthly and that the majority of persons contacted were earning no more than 200 D-marks monthly, most of them in jobs set up by the Baden government.

FILE DIST: CIA Misc.

Approved for Release Date Nov 1985

Approved for Release: 2022/06/22 C00010786

GRADING OF SOURCE						COLLECTOR'S PRELIMINARY GRADING OF CONTENT					
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A.	B.	C.	D.	E.	F.	1.	2.	3.	4.	5.	
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THIS IS UNEVALUATED INFORMATION

SOURCE

- The present difficult financial situation of German scientists in the Western Zones is now causing them to be increasingly tempted by offers and invitations to work in the Russian Zone. This is especially true of those scientists in fields requiring academic or institutional backing who now find themselves unable to obtain university positions because of the small staffs with which the universities in Western Germany are operating. Even scientists with academic or government positions receive such low pay in the West that many who politically oppose Communism have been enticed into the Eastern Zone by the promise of four to five times the salary which they currently receive. Directors of research institutes in the Eastern Zones have recently been observed to be intensifying their attempts to exploit this situation and to procure the unused or underpaid talents of the Western Zones.
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Date NOV 1985

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ARMY	<input checked="" type="checkbox"/>	AIR	<input checked="" type="checkbox"/>	FBI	<input checked="" type="checkbox"/>	AGCIX	BJOAC

834021-310

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JUN 1950

MEMORANDUM FOR: THE DIRECTOR OF INTELLIGENCE  
DEPARTMENT OF THE AIR FORCE

SUBJECT: Proposed Immigration of German Specialists

1. Reference is made to your memorandum of 6 June 1950 concerning the above subject.

2. The files [redacted] reflect no derogatory information concerning any individuals who can be identified with any of the specialists mentioned in your memorandum. [redacted]

1.3 (u) (4)  
(all)

[redacted]  
Massmann's address was given as 28 Bayernring, Berlin/Tempelhof and Hornauer's as 40 Schuette-Lanzstrasse, Berlin/Lichterfelde-Ost. Patin was said to have been taken to the United States by the U. S. Navy.

3. The above constitute all the data available [redacted] on any of the individuals in reference request.

FOR THE DIRECTOR OF CENTRAL INTELLIGENCE

[redacted]  
Assistant Director

[redacted]

A TRUE COPY

*Richard O'Dell*  
CAPT, USAF

Approved for Release  
Date NOV 1985

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

19 April 1950

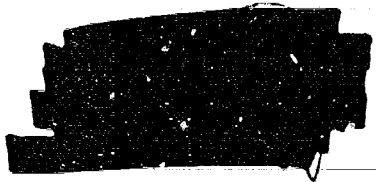
MEMORANDUM FOR: COLONEL DANIEL E. ELLIS, DIRECTOR  
JOINT INTELLIGENCE OBJECTIVES AGENCY  
JOINT CHIEFS OF STAFF

SUBJECT: Case of Richard Theodor Otto SCHEERWAG 

1, 3(a)(4)  
C

1. This will acknowledge receipt of your memorandum dated 13 April 1950, (JIOA 929) regarding the above subject, and requesting information which might effect a decision in the case.

2. This is to advise that at the present time there is no information available in this Agency on subject which would effect the decision involved.



FILE DIST:  
~~SI~~ Denial  
SCHEERWAG, Richard Theodor Otto

Approved for Release  
Date ? NOV 1985

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

JAN 4 1950

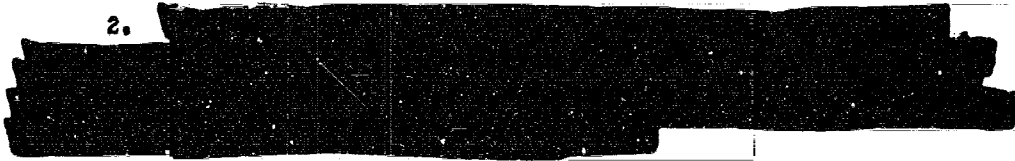
MEMORANDUM FOR THE JOINT CHIEFS OF STAFF

ATTENTION: Director, Joint Intelligence Objectives Agency

SUBJECT: Case of Colonel F. K. DUDZINSKI (File: JIOA 4416)

1. Returned herewith are papers concerning the above subject which were forwarded to this Agency by your memorandum, dated 8 December 1949. The case has been circulated within this Agency and has been subjected to extensive scrutiny. However, we find that at the present time we have no interest in the case.

2.



13(a)(4)  
C

3. We regret the length of time necessary to screen this case, but we felt it was desirable to give it most careful scrutiny.

FOR THE DIRECTOR OF CENTRAL INTELLIGENCE:

*C. L. Wineoff*  
C. L. WINECOFF  
Captain, USN  
Executive

Encl:  
Ltr ref above, w/  
encl

FILE DIST:  
~~CIA Misc.~~  
DUDZINSKI, Col. F. K.

Approved for Release  
Date 1985

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834021-802

**SECRET**

241850

## CIA BIOGRAPHIC REGISTER

Name: WIRTZ, Dr. Karl  
Variant:

Case No. 8061649  
Date: 11 August 1948

Present Position: Section Leader, KWIP,  
Göttingen

Birthdate: 1910, 24 April  
Birthplace:

Location: Göttingen, Germany

Nationality: German

Gen. Occupation: Physicist

Race: White

Sex: Male

Education: Ph.D.

Marital Status: Married

Name of Spouse:

Languages:

Children:

Honors:

Religion:

Publications:

Political Affiliation: (See below)

Dr. Karl Wirtz, German theoretical and experimental physicist, is presently (August 1948) a member of a group of nuclear physicists working at the University of Göttingen under the program for the control of scientific research, which is being administered by the Control Commission in Germany. 1/

Based on a survey of his prewar work only, Wirtz had been rated by U.S. sources at the beginning of the war as close to the top in his field, 2/ and since that time has been judged as one of the top German physicists both by our own scientists 3/ 4/ and by Werner Heisenberg, foremost German physicist. 5/

An experimental specialist, Wirtz did research on the application of the "separation tube" isotope separation method to liquids, and on neutron diffusion at the Kaiser Wilhelm Institute for Physics at Berlin-Dahlem in the early days of the war 6/ and in a 1942 conference spoke on the production of heavy water. 7/ In September 1943 he was at Hechingen (Hohenzollern) where he worked on pile development under Heisenberg. 7/

**SECRET**

884021-1361



SECRET

WIRTZ, Dr. Karl contd.

[REDACTED] 2/

[REDACTED] 10/

Noted at one time as outspokenly anglophobe, to such an extent that he indicated a preference to work in Germany regardless of conditions there, 11/ Wirtz is nevertheless reported to be the type that would accept any position he considered attractive. 14/ At one time it was reported that Wirtz was considered too unstable to bring to the U.S. 12/

During the 1947-1948 winter semester at the University of Göttingen, Wirtz lectured on "Introduction to the Theory of Chemical Compounds" in the Theoretical and Experimental Physics Department. 13/

In addition to contributing to the FIAT Review of German Science, 1939 - 46, Wirtz is the author of many works, some of which are listed below:

- \*Hydrogen Bond Structure & Energy Transference with Proteins"
- \*German Preparation for Construction of a Uranium Pile" read at the 5 - 7 September 1947 meeting of the German Physical Society in Göttingen.
- \*Theory of Liquid Thermal Diffusion" 1939, 1940, 1941, 1943.
- \*Separation of Hydrogen Isotopes" 1939 in collaboration with Korsching.
- \*Separation of Liquid Mixtures"
- \*Thermal Diffusion in Crystal Lattices"
- \*Kinetic Theory of Liquid Thermal Diffusion" in collaboration with Hlby
- \*Report on the 1st Experiments on the Apparatus Set Up at the KWI for Physics. 1940, in collaboration with others.
- \*Report on the Experiments with Layer Arrangements of Uranium & Paraffin at the KWI for Physics, Berlin-Dahlem. 1941, in collaboration with others.

SECRET

834021-1362

**SECRET**WIRTZ, Dr. Karl (Contd)

- \* "Preliminary Report on the Results from a Layer-construction Sphere of Uranium Metal and Paraffin." 1942; in collaboration with others.
- \* "Measurements of Layer Arrangements of Uranium Metal and Paraffin" 1942 in collaboration with others.
- \* "Tests with New Layer Arrangements of Uranium Metal and Paraffin" in collaboration with others.
- "Corrosion in the Uranium Heavy Water Pile & Its Prevention", in collaboration with W. Borchardt & W. Ramm.

Bericht II. A 10-Step Electrolysis Plant for Producing Heavy Water. 1940.

Report III. Investigation of the Heavy Water Content of a Few Electrolyzers in Germany. 1940.

Theoretical Considerations for the Production of Heavy Water by Electrolysis. 1940.

Water Tests from the Water Gas Process (for the deuterium content). 1942.

Specific Gravity and Concentration of Heavy Water. 1942.

Report on Visit to Rjukan from 13-15 Nov 42.

The Remarkable Comparison of the Mol Volume and Other Properties of Light & Heavy Water. 1944.

Slowing Down of Ra-Be Neutrons in Heavy Water. 1944.

Electrolysis Equipment for Producing Heavy Water. 1944.

Experiment with 1.5 tons D<sub>2</sub>O and U and a 40 cm Carbon Reflector. 1945.

Slowing Down of Neutron in Graphite. 1945.

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<u>1/</u>	IAC Agency, Washington, D.C.,	2 August 1948
<u>2/</u>	" "	Undated
<u>3/</u>	" "	21 February 1945
<u>4/</u>	" "	22 June 1946
<u>5/</u>	" "	7 Sept 1945
<u>6/</u>	" "	22 July 1946
<u>7/</u>	" "	12 February 1945
<u>8/</u>	" "	May 1945
<u>9/</u>	" "	July 1945
<u>10/</u>	" "	7 Sept. 1945
<u>11/</u>	" "	3 December 1945
<u>12/</u>	" "	Undated
<u>13/</u>	Physikalisch Blatter Copy 10, 1947	
<u>14/</u>	IAC Agency, Washington, D.C. 1946	

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GERMANY before 1946  
WIRTZ, KARL B. 1910  
Ph D. Physicist  
BIR 1948 CIA P-463

88-021-1364

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241850

## CIA BIOGRAPHIC REGISTER

Name: BAGGE, Dr. Erich  
Variant:Case No. 8030628  
Date: 24 August 1948Present Position: Member Max Planck Institute  
AVA Göttingen  
Location: — Business: Max Planck Institute  
— Private: Bunsenstrasse, 16, Göttingen  
Gen. Occupation: Experimental physicistBirthdate: 1912  
Birthplace:Education:Nationality: GermanLanguages:Race: White  
Sex: Male  
Marital Status: MarriedHonors:Name of Spouse:Publications:Children:Religion:Political Affiliation:  
Nazi Party Member

Dr. Erich Bagge, German experimental physicist, is presently a member of a group of nuclear physicists working at the University of Göttingen under the program for the control of scientific research which is being administered by the Control Commission in Germany. 1/

Described as fairly young and reasonably competent, 2/ Bagge is mainly an experimentalist and does very little theory. 4/ He did considerable work on isotope separation at Leipzig University in 1940 and later, in collaboration with Martin and Hoyer, wrote one of the Secret Nuclear Physics Reports for the "Reichsforschungsrat" (German National Research Council.) In 1944 at the Kaiser Wilhelm Institute for Physics in Berlin he worked on deuterium cross sections and later went to Hechingen where he worked on normal nuclear physics reactions and attempted to develop isotope separation methods. He is credited with the invention of the isotope lock. 3/ Recently (December 1947) Bagge has been reported as the plodding type, a competent experimenter and routine theoretician but of no particular value to the U.S., the U.K., or other nations. 9/

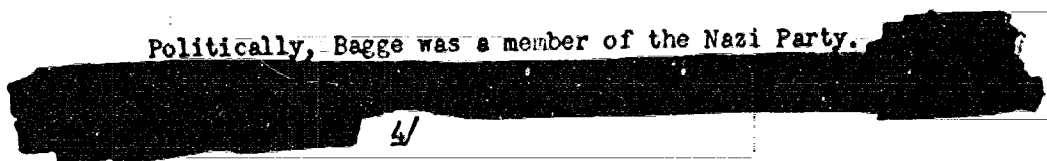
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Date 6 NOV 1985~~SECRET~~

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BAGGE, Dr. Erich

Politically, Bagge was a member of the Nazi Party.



4/

In 1945 it was understood that Bagge evidenced a hearty dislike for the Allies and at times indicated slightly pro-Russian sentiments. 5/

In collaboration with Dr. Korsching, and as one of the assistants to Heisenberg, Bagge is presently doing research work on radio activity in the Physics Institute at Gottingen. 8/

- 1/ IAC Agency, Washington, D.C., 9 Aug. 48.
- 2/ " " " " 28 Mar 46.
- 3/ " " " " undated.
- 4/ " " " " 15 Sep 45.
- 5/ " " " " May 1945.
- 6/ " " " " 22 Aug 45.
- 7/ " " " " 2 Aug 45.
- 8/ " " " " 12 Feb 48.
- 9/ " " " " 17 Dec 47.

~~SECRET~~

83-031-1366

PUBLICATIONS OF ERICH RAGGE

"The Destruction of Deuterons by Fast Neutrons," 1940

"Enrichment of the Light Silver Isotope" in collaboration with  
the "Isotope Lock," 1943.

"Papers on Cosmic Radiation; Isotope Separation," 1941, 1943.

"Secret Nuclear Physics Report for 'Reichsforschungsrat'" in colla-  
boration with Martin and Hoyer.

"Possibility of Enrichment of the Light Ur. Isotope" in collaboration  
with the "Isotope Lock," 1942.

"Mechanica as influenced by Nuclear Physics," 1945.

"An Extension of Present Day Mechanics Brought About by Nuclear  
Physics Experience," 1945.

"Nuclear Disruptions & Heavy Particles in Cosmic Radiation" 1946  
(cy in Naval Res. Lab. Libr)

83402 -1367



GERMANY before 1946  
BAGGE, ERICH Dr.  
B. 1912 Ph D. Experi-  
mental physicist  
BIR 1948 CIA P-464

83-01-1368

~~SECRET~~

241850

## CIA BIOGRAPHIC REGISTER

Name: FISCHER, Dr. Erich Case No: 8010579  
Variant: Date: 2 September 1948

Present Position: Research, Kaiser Wilhelm Birthdate: 3 July 1910  
 Institute for Physics, Hechingen (French zone) Birthplace:  
Location: Hechingen Nationality: German

Gen. Occupation: Physicist Race: White  
Education: Ph.D Sex: Male  
Languages: Marital Status:  
Name of Spouse:

Honors: Children:

Publications: Religion:

Political Affiliation:

Dr. Erich Fischer, German nuclear physicist, was last reported (August 1947) at the Kaiser Wilhelm Institute for Physics in Hechingen in the French zone of Germany doing research on problems of nuclear physics.

1/

Formerly with the KWI for Anthropology at Berlin, 2/ Fischer was later associated with KWI for Physics at Berlin-Dahlem under Heisenberg. A member of a team that worked on a number of exponential piles, 3/ Fischer accompanied the group to Hechingen (Halgerloch) where in collaboration with Heisenberg he continued his research on pile theory and neutron physics until the end of the war. 4/

1/ IAC Agency, Washington, D.C., 5 August 1947  
 2/ " " " " 13 June 1947  
 3/ " " " " 15 June 1945  
 4/ " " " " undated

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804021-1369



**SECRET**

241600

## CIA BIOGRAPHIC REGISTER

Name: STRASSMAN, Dr. FritzCase No. 8061554Variant:Date: 25 August 1948Present Position: Research, Chemical  
Institute, Wilhelm Outenberg  
University, Mainz.  
Location: MainzBirthdate: 22 February 1902  
Birthplace: Boppard-RheinNationality: GermanGen. Occupation: Nuclear ChemistRace: White  
Sex: MaleEducation: Ph.D.Marital Status:  
Name of Spouse:Languages:Children:Honors:Religion:Publications:Political Affiliation: (See below)

Dr. Fritz Strassman, well-known German nuclear chemist, 1/ is presently Acting Director, in the absence of Dr. Josef Mattauch, of the Kaiser Wilhelm Institute for Chemistry at Mainz University 2/ in the French zone. 3/

Scientifically, Strassman has been very well-known, especially for his work in collaboration with Dr. Otto Hahn as co-discoverer of uranium fission. 1/ Based on a survey of his prewar work only, he was rated by U.S. sources at the beginning of the war at the very top in his field. 4/ A further indication of Strassman's importance is shown in a report that stated in 1943 a meeting was called by Mr. Speer, German Minister of Armaments and War Production, to discuss the problem of nuclear physics and Strassman was one of the scientists invited to attend. 5/ The German press stated in 1943 that Dr. Strassman had collaborated with Dr. Hahn on additional articles on the further breaking down of uranium 6/ and it was also reported that he had worked with Maurer during the war years on the disintegration of molybdenum and uranium. 1/

Politically, Strassman has never been reported as a member of the Nazi Party. [REDACTED]

Following the German defeat Strassman was at the KWIC at Tailfingen where it was reported that, in collaboration with Dr. Mattauch, he was

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Date 7 NOV 1985

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83-021-1370

~~SECRET~~STRASSMAN, Dr. Fritz

directing the continuation of the work of Hahn and Heisenberg. 8/  
 Later Prof. Strassman was given the Chair of Chemistry at the University  
 of Mainz 8/ and the KWIC was slated to be moved there in the spring of  
 1948. 2/

As Otto Hahn's right-hand man in his best experimental period at  
 Berlin, Dahlem and with his subsequent experimental background 2/ Strassman  
 has recently (Sept. 1947) been rated as a potentially valuable man 2/ and  
 reportedly would fit well into any team engaged in radio chemistry research  
 in the United Kingdom, the United States or elsewhere. 3/

---

1/	IAC Agency, Washington, D.C.	undated.
2/	" " " "	" 5 Aug 47.
3/	" " " "	" 19 Dec 47.
4/	" " " "	" undated.
5/	" " " "	" 19 Aug 45.
6/	" " " "	" 26 Jan 44.
7/	" " " "	" 3 Jul 47.
8/	" " " "	" 17 Feb 48.
9/	" " " "	" 24 Sep 47.

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884021-1371



Publications by Fritz Strassman, contd

"Did a Caesium isotope of long half-life exist? A contribution to the interpretation of unusual lines in mass-spectroscopy?" in collaboration with Hahn, Mattauich & Ewald, 1943.

"Determinations of geological age by the stontium method" 1942 (According to investigations by O. Hahn, F. Strassmann, J. Mattauich & H. Ewald)

"On the fission of heavy nuclei" 1941

"The completion & extension of the Periodic System" 1941

"R-Active Strontium Yttrium Isotopes Resulting from U Fission," 1943

834021-1373

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241850

## CIA BIOGRAPHIC REGISTER

Name: DIEBNER, Dr. Kurt  
Variant:

Case No. 8061123  
Date: 31 August 1948

Present Position: Physicist, Haas & Cie

Birthdate: 13 May 1905  
Birthplace:

Location: Business - Hauptstrasse 66  
Hamburg-Blankenese

Nationality: German

Private - West End 5 Hamburg  
Grossflottbek

Race: White  
Sex: Male  
Marital Status: Married  
Name of Spouse:

Gen. Occupation: Physicist

Education: Degree in Physics, Halle University

Children:

Languages:

Religion:

Honors:

Political Affiliation: Nazi  
Party Member

Publications:

Dr. Kurt Diebner, wartime Deputy Director under Gerlach of the German nuclear physics research project, 1/ was last reported (December 1947) as a physicist in the firm of Haas & Cie at Hamburg-Blankenese, Germany. 2/

Originally a student under Hoffman at Halle University, he later did research on neutron physics at Charlottenburg Technisches Hochschule. 1/ From the very beginning of the war Diebner was associated both administratively and scientifically with the German nuclear physics research project. 1/ When the war broke out and the Army Ordnance Department was responsible for some financial and administrative control of nuclear physics research, Diebner was made a consultant to Schumann who was head of the Army Research Group (WaF). Later in 1942 when there was a reorganization placing responsibility under Esau of the RFR (Reichsforschungsrat-National Research Council), the Army managed to keep partial control and started a research group under Diebner's direction to work on pile experiments. When a further reorganization was made in 1943 placing Goering in overall charge, Esau was made deputy for the nuclear physics field and Diebner went with Esau. Finally in 1944, when Gerlach succeeded Esau as head of the RFR, Diebner became Gerlach's Deputy. 2/

In addition to these administrative positions Diebner was also an experimenter working on a team with Pose and Czulus. This team, more or less a Nazi Party sponsored group, ran somewhat in competition with Heisenberg's KWI group 1/ and from 1942 until the closing days of the war Diebner directed the pile experiments at Gottow. 2/ After the fall of Paris in 1940 Diebner interrogated Joliot in his laboratory regarding his work on uranium and he was also present at a meeting in Berlin in January 1942 to plan increased heavy water production at Norsk Hydro. 1/

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Date 7 NOV 1985

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~~SECRET~~DIEBNER, Dr. Kurt

Diebner was picked up by US forces in the closing days of the war and shortly after V-E day was sent to England with other German personnel. 4/ At that time he was described as outwardly friendly but an unpleasant personality and could not be trusted. 5/

Politically Diebner was a member of the Nazi Party. 1/ He claimed he only stayed in the Party as, if Germany had won the war, only Party members would be given good jobs. 6/ In 1945 he reportedly intended to send in a formal request that he be reinstated as a civil servant and hoped the fact that he was a member of the Party would be forgotten. 6/ Reportedly anti-democratic, 9/ Diebner also evidenced an interest in 1945 in the possibility of going to the Argentine to work with uranium and also considered the possibility of contacting some of his former colleagues who were working for the Russians. 7/

Scientifically, Diebner was recommended by Gerlach for a War Service decoration because of his work on pile arrangement and was given a very high rating by U.S. sources in the closing days of the war. This rating, however, was made as an intelligent target for his overall knowledge of the German nuclear energy project rather than for scientific preeminence. 8/ Since that time he has been described as a fourth-rate physicist who appeared as good second-rate while in wartime company. 2/ Repeatedly reported as of no value scientifically, 2/, 9/, his present activities are stated to be harmless. 2/ It has been recommended that he not be permitted to come to the U.S. in any case. 1/

1/	IAC Agency, Washington, D.C.,	undated
2/	" "	" " 19 Dec 47
3/	" "	" " 15 June 48
4/	" "	" " May 45
5/	" "	" " 6 Aug 45
6/	" "	" " 19 Jul 45
7/	" "	" " 27 Jul 45
8/	" "	" " 21 Feb 45
9/	" "	" " 24 Feb 47

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83-02-1375

PUBLICATIONS OF KURT DIEBENER

"Artificial Radioactivity", 1936 - 1940 in collaboration with  
Grassmann

"Scattering of Alpha Particles by H-Nuclei", 1934

"Ionizing Power of Artificial H-Rays", 1932

"Resonance Penetration of Alpha Particles into the Aluminum Nucleus",  
1932

Reports with collaborators on Gottow Experiments, Ur, Ox & Paraffin  
G-1, G-2, G-3, unpublished 1942 & 1943.

Reports on U-Metal Cube — Heavy Ice Experiments

- \* Report on Cube Experiments with U<sub>2</sub>O<sub>8</sub> & Paraffin at Gottow, in  
collaboration with Berkei, Czulius, Hartwig, Hermann, Bormann,  
Höcker, Pose, Rexer, 26 Nov. 42.
- \* Progress Report on Experiments with Cubes & Heavy Ice, April 1943,  
in collaboration with Hartwig, Hermann, Westmeyer, Czulius, Berkei,  
Höcker.
- \* Report on Experiments with Uranium Metal & Heavy Ice, July 1943, in  
collaboration with Hartwig, Hermann, Westmeyer, Czulius, Berkei,  
Höcker.
- \* Report on Neutron Increase of an Arrangement of Uranium Cubes &  
Heavy Water, Dec. 1945, in collaboration with Hartwig, Hermann,  
Westmeyer, Czulius, Berkei, Höcker.

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\*Unpublished.

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GERMANY — before 1946  
DIEBNER, KURT Ph. D.  
Nuclear Physicist  
BIR 1948 CIA P-466

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## CIA BIOGRAPHIC REGISTER

Name: WEIZSÄCKER, Prof. Dr. Carl Friedrich  
Freiherr (Baron) von  
Variant: WEISSAECKER, Karl Freidrich von

Case No. 8010581  
Date: 13 September 1948

Present Position: Member, Max Planck  
Institute, Göttingen

Birthdate: 23 June 1912  
Birthplace: Kiel

Location: Business - Max Planck Institute,  
AVA, Göttingen  
Private - Bunsenstrasse 16, Göttingen  
Phone - 3653

Nationality: German  
Race: White  
Sex: Male  
Marital Status: Married  
Name of Spouse: (Swiss wife)  
(née Wille)

Gen. Occupation: Physicist

Education: Ph.D., University of Leipzig, 1933

Children:

Languages:

Religion: Protestant

Honors:

Political Affiliation: (See below)

Career

-- -- Lecturer, University of Berlin  
1936 - 1939 Research physicist, Kaiser Wilhelm Institute for Physics,  
Berlin-Dahlem  
-- -- "War work" at KWIP, Berlin-Dahlem after one month in Army.  
1941 - -- Wrote report on America's advantage over Germany in the field of  
nuclear physics (September).  
1942 - -- Prof. of Theoretical Physics, Strasbourg (October)  
1943 - -- Director of Institute for Theoretical Physics, Strasbourg, (January)  
1944 - -- Research on "war work."  
1946 - date Research, Max Planck Institute.

Prof. Dr. Carl Friedrich Freiherr von Weizsäcker, well known German physicist, 1/ was reported in December 1947 as a member of a group of nuclear physicists working at the University of Göttingen on the program of scientific research conducted under the authority of the Allied Control Commission in Germany. 2/ A more recent report indicates that he was in Switzerland in January of this year attempting to get the Chair at the University of Zurich occupied at that time by Gregor Wentzel. 3/ Von Weizsäcker is well known in Switzerland as his father was once Ambassador to that country, 4/ and his recent efforts to locate there have been handled through his father-in-law, Gen. Wille. 3/

Approved for Release  
Date 7 NOV 1985

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~~SECRET~~WEIZSÄCKER, Prof. Dr. Carl

Son of the last German Ambassador to the Vatican, Von Weizsäcker comes from an aristocratic and cultured German family with wide connections. 4/ His studies took place in the Hague, Basel, Copenhagen, Berlin, Stuttgart, and Leipzig where he was awarded his Ph.D. in 1933. 5/ Captured German documents reveal that he was granted the final "Habilitation" degree in theoretical physics by the University of Heidelberg in 1936, after having made outstanding original contributions in that field while still a student. From 1936 he was employed as an assistant at the Kaiser Wilhelm Institute for Physics at Berlin-Dahlem and in 1937 had, in addition, an appointment as Dozent at the University of Berlin. On 29 August 1939 he was called to active duty in the Wehrmacht but was released and recalled to the Kaiser Wilhelm Institute one month later on the ground that his services were required for "scientific work of military importance." According to these German documents Von Weizsäcker was occupied largely with the normal activities of a university professor while at the Kaiser Wilhelm Institute and the University of Berlin. These include the writing of several scientific and philosophical papers for publication and visits to various universities and research centers to take part in discussions and to give lectures. After 1938 his scientific interests seem to have shifted from the active problems of theoretical physics to matters of a more philosophical and speculative nature and several of his published articles are along that line. 4/

Prewar acquaintances described Von Weizsäcker as an intelligent "dilettante," not especially energetic and rather easy going. Often arriving at work between ten and eleven and usually meeting friends for lunch, it was not unusual for him to carry on discussions with his associates far into the night. Among his cultural interests, literature took precedence and to a slightly lesser degree, philosophy. He was also interested in youth movements and spiritualism before the war. Referred to as the "Bohemian" type, Von Weizsäcker was a great lover of music, drank beer and wine and reportedly could be induced to drink anything else as well. 13/

From 1939 to 1941 Von Weizsäcker made several trips to Switzerland and two to Denmark where he gave two lectures in Copenhagen. He was appointed Professor of Theoretical Physics at the University of Strasbourg in 1942 but continued his connections at the Kaiser Wilhelm Institute for Physics in Berlin-Dahlem. He came to be increasingly in demand as a lecturer on scientific-philosophical subjects and his lecture activities were put under the supervision of the Minister for Science, Education and Training. His mission was to combat the general impression that German science was in decline. These culture-disseminating and goodwill-building activities extended first to people reached through industrial and educational organizations in Germany and later to foreign countries under German influence. In addition to many universities and academies of

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88-102-1379

~~SECRET~~WEIZSÄCKER, Prof. Dr. Carl

science in Germany itself Von Weizsäcker, under the sponsorship of the German Research Foundation, Foreign Division, lectured in Paris, Riga, Rome, Rouen, Madrid, Lisbon, Helsinki, Vienna, Sofia, Bucharest, Debrecen (Hungary). 4/

Von Weizsäcker's lectures, however, did not take up all his time and he did considerable research on uranium theory in the summer of 1940. In September 1941 he found time to write a report to Reichsminister Rust of the German National Ministry for Science, Education and Training, on America's advantage over Germany in the field of nuclear physics. In October 1942 as Professor of Theoretical Physics at the University of Strasbourg and later in January 1943 as Director of the Institute of Theoretical Physics there, he gave courses in Philosophy, Mechanics and Physics. In 1944 he published a book on theoretical physics and was considered for the Directorship of the Bohr Institute in Copenhagen but reportedly did not want the job. Associated with matters related to uranium fission from the very beginning of the war in Germany, Von Weizsäcker frequently visited Hechingen where pile experiments were conducted by the Kaiser Wilhelm Institute for Physics, partially evacuated from Berlin. He moved there in September 1944 with apparatus and equipment. 1/

Picked up by US forces in the closing days of the war, Von Weizsäcker was sent to England with other German personnel shortly after V-E day. 6/ At this time he was described as outwardly very friendly and genuinely cooperative. The son of a diplomat, he showed he was somewhat of a one himself. 7/ He was outspokenly opposed to the idea of working for the Allies either in Germany or elsewhere but indicated also that he had no intention of working for the Russians. 8/

Based on a survey of his prewar work only Von Weizsäcker was rated by US sources at the beginning of the war at the very top in his field. 9/ Other reports have described him as a brilliant scholar, 5/ a valuable man, 11/ with a very high rating as a physicist and astro-physicist 1/ and one of Germany's best theoretical physicists. 10/ More recently it has been stated that Von Weizsäcker is a fitfully brilliant scientist, the level of whose work is usually dependent on his associates and environment. This same report states that he could be of value to the US or the United Kingdom but would be of little value to other nations in view of his temperament. 12/

Politically, only one report has stated that Von Weizsäcker was a Nazi, 2/ and while his background was sensitive in that his father was last Ambassador to the Vatican and for years Under Secretary in the Foreign Office, 13/ other reports have described him as either politically indifferent, 11/ sincerely opposed to the Nazi regime, 5/ 7/ or not a Nazi, but considered somewhat of an opportunist. 1/

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WEIZSÄCKER, Prof. Dr. Carl

Rated high as an astro-physicist, 1/ Von Weizsäcker was reported in December 1947 as interested in the problems of cosmology and lectured during the winter semester at the University of Göttingen on the "Quantum Theory of Electrons and Light." 14/

1/	IAC Agency, Washington, D.C.,	undated
2/	"	" 9 Aug 48
3/	"	" 27 Jan 48
4/	"	" 18 Dec 44
5/	"	" 28 Mar 44
6/	"	" May 45
7/	"	" 6 Aug 45
8/	"	" 22 Aug 45
9/	"	" undated
10/	"	" Sep 44
11/	"	" 24 Sep 47
12/	"	" 19 Dec 47
13/	"	" Sep 44
14/	Physikalische Blatter, # 10, 1947	

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83-102-1381



GERMANY before 1946  
WEIZSACKER, CARL F. v  
B. 28 June 1912 Ph D  
Univ. of Leipzig 1933  
Physicist  
BIR 1948 CIA P-462

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PUBLICATIONS OF PROF. DR. C.F. von WEIZSACKER

## I. Books

1. Die Atomkerne, A.V.G. 1937
2. Zum Weltbild der Physik 1944
3. Book on theoretical physics, Jan. 1944

## Original Works

1. Ortsbestimmung eines Elektrons durch ein Mikroskop, 1931
2. Grenzfragen der Philosophie und modernen Physik, 1932
3. Durchgang schneller Korpuskularstrahlen durch ein Ferromagnetikum, 1933
4. Ausstrahlung bei Stossen sehr schneller Elektronen, 1934
5. Moore, Isaac Newton, 1935
6. Zur Theorie der Kernmassen, 1935
7. Thomson, Atomie Physies, 1929, 1935
8. Die durch den Bau der Atomkerne massgebenden Kräfte, 1935
9. Sir Isaac Newton's Mathematical Principles, 1936
10. Über Elementarumwandlungen im Innern der Sterne F, 1936
11. Metastabile Zustände der Atomkerne, 1936
12. Über die Spinabhängigkeit der Kernkräfte, 1936
13. Fortschritte in der Theorie des Atomkerns, 1936
14. Über die Möglichkeit eines dualen
15. Neuere modellvorstellungen über den Bau der Atomkerne, 1938
16. Über Elementarumwandlungen im Innern der Sterne, 1938
17. Methode der Physik, 1939
18. Der zweite Hauptsatz und der Unterschied von Vergangenheit und Zukunft, 1939
19. Zum Wefelmeierschen Modell der Transurane, 1939
20. Die Physik der Gegenwart und das Physikalische Weltbild, 1942
21. Die Moderne Atomlehre und die Philosophie, 1942
22. Die Atomlehre der modernen Physik, 1942
23. Zur Deutung der Quantenmechanik 1941
24. Die Auswirkung des Satzes von der Erhaltung der Energie in der Physik
25. Deutung einer Auswahlregel für Neutronen- und Protonen-emission aus Kernen ungerader Ladung, 1943
26. Über die Entstehung des Planetensystems, 1944
- \* 27. Report on the Experiments with Layer Arrangements of Uranium and Paraffin at the KWI for Physics, Berlin-Dahlem, 1941, in collaboration with others.
- \* 28. "Preliminary Report on the Results from a Layer-construction Sphere of Uranium Metal and Paraffin." 1942, in collaboration with others.
- \* 29. "Measurements of Layer Arrangements of Uranium Metal and Paraffin," in collaboration with others, 1942

83-000-1383

Publications of Weizsacker (contd)

- \* 30. "Tests with New Layer Arrangements of Uranium Metal and Paraffin,"  
in collaboration with others.
- 31. The Production of Neutrons in Heavy Water by the Process D  
(n, 2n) H., 1940
- 32. The Disintegration of Deuterons, 1940.
- 33. The Possibility of Obtaining Energy from U-238, 1940
- 34. Calculation of the Energy Production in the U Machine, in collabora-  
tion with Muller, Hocker, 1940
- 35. Temperature Effect of Layer Type Pile, 1941
- 36. Remarks on the Calculation of Layer Arrangement, 1941
- 37. Improved Theory of Resonance Absorption in the Machine, 1942
- 38. B Decay of Potassium, before 1939
- 39. Nuclear Transformation in the Interior of Stars, before 1939
- 40. Selection Rule for Neutron & Proton Emission from Nuclei of Odd  
Charge, 1943

\* Unpublished

28-02-1384

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241850

CIA BIOGRAPHIC REGISTER

Name: HAHN, Dr. Otto  
Variant:

Case No. 8061152  
Date: 17 September 1948

Present Position: President, Kaiser Wilhelm  
Gesellschaft  
Location: Business - Max Planck Institute  
AVA, Göttingen  
Private - Herzbergerlandstrasse 44, Göttingen  
Gen. Occupation: Nuclear chemist (Tel:2878)  
Education: Ph.D. 1901  
Languages: English, fluent  
Honors: Nobel Prize in Chemistry, 1944

Birthdate: 8 Mar 1879  
Birthplace: Frankfurt/Main  
Nationality: German  
Race: White  
Sex: Male  
Marital Status: Married (1913)  
Name of Spouse: Edith Funghams  
Children: One son  
Religion: Protestant  
Political Affiliation:  
(See below)

Career

1902 - 04 Assistant Professor, University of Munich  
1904 - 05 Member, Ramsay Laboratory, University College, London  
1905 - 06 Member, Lord Rutherford Laboratory, McGill University, Montreal  
1906 - Kaiser Wilhelm Institute for Chemistry, Berlin-Dahlem  
1907 - Private Dozent, University of Berlin;  
Isolated mesothorium 1  
Isolated mesothorium 2  
1908 - 38 Collaborated with Lise Meitner and discovered protoactinium  
1910 - Professor of Chemistry, Berlin  
1912 - 28 Professor Kaiser Wilhelm Institute for Chemistry, Berlin-Dahlem  
1924 - Member, Prussian Academy of Sciences  
1928 - 45 Director, Kaiser Wilhelm Institute for Chemistry, Berlin-Dahlem  
- - - Member, Swedish Academy of Sciences  
1932 - - Lectured at Cornell University  
1938 - - In collaboration with Strassmann discovered neutron induced  
fission of uranium and thorium (Dec)  
- - - Lectured in England, Canada, Sweden and the U.S.  
1941 - - Visited Rome  
1943 - - Lectured in Stockholm and Budapest  
1944 - - Evacuated laboratories to Tailfingen.  
1946 - Awarded Nobel Prize for Chemistry for 1944;  
Headed group of German scientists who attended the reopening  
of the Gmelin Institute for Inorganic Chemistry  
1946 -date President, KWG  
1947 - Lectured at meeting of Society of German Chemists of the  
British Zone (May)  
1948 - Invited to attend Nuclear Physics Conference in Birmingham,  
England, 14 - 18 September 48.

Approved for Release

Date 7 NOV 1985

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~~SECRET~~Hahn, Dr. Otto

Dr. Otto Hahn, world-renowned German scientist and Nobel Prize winner, was last reported as President of the Kaiser Wilhelm Gesellschaft (British Zone) 1/ and a member of a group of scientists working at the University of Göttingen on the program of scientific research conducted under the authority of the Allied Control Commission in Germany. 2/

Prewar data reveals that Hahn is from a well-known Frankfurt middleclass family of reportedly democratic leanings. His father had a retail panel glass business which one of Hahn's brothers developed into a reputable firm of interior decorating and antiques. His other brother was Studienrat at the Goethe-Gymnasium in Frankfurt and a renowned numismatist. 3/

An officer in the first World War, 3/ Hahn had been associated with scientific research since 1904 when he was a member of the Ramsay Laboratory, University College, London. 4/ From 1908 he contributed steadily to the advance in specialized chemical techniques needed for pioneering in the field of heavy radio-active elements and in collaboration with physicist Lise Meitner discovered protoactinium. Later (Dec 38), while working with Fritz Strassman, Hahn discovered neutron induced fission of uranium and thorium for which he received the Nobel Prize for Chemistry, 1944. 5/

During the war Hahn worked as head of the Kaiser Wilhelm Institute for Chemistry in Berlin-Dahlem on the German atomic energy program which was supervised by the Nuclear Physics Division of the German National Research Council and toward the end of the war evacuated to Tullingen, Württemberg 5/ where he was picked up by US forces. Shortly after V-E day Hahn was sent to England with other German personnel, 6/ and at that time was described as having a sense of humor and definitely friendly disposed to England and the U.S. 6/ When the atom bomb was announced in August 1945 Hahn reportedly felt responsible for the lives of so many people in view of his discovery and claims that originally he had contemplated suicide when he realized the terrible potentialities of his discoveries. 7/

Based on a survey of his prewar work only, Hahn was rated by U.S. sources in the beginning of the war at the very top in his field 8/ and in 1945 was given a very high rating both for his scientific preeminence and as an intelligence target. 9/ Further indication of Hahn's importance was shown in a German report which stated that in 1943 a meeting was called by Mr. Speer, German Minister for Armaments and War Production, and Hahn was one of the scientists invited to attend. 10/ Though prewar reports describe him as one of the world's greatest scientists in nuclear physics 3/

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~~SECRET~~HAHN, Dr. Otto

and an outstanding scholar in the field of physical chemistry, 11/ and more recent reports have stated that he is the most expert of German chemists and a highly valuable man, 12/ he is considered by other intelligence sources as past his prime, 5/ of negligible value scientifically to the US or the United Kingdom, and in view of his age of comparatively little value to other nations. 1/

Politically, while prewar reports describe Hahn as a democrat and a strong anti-Nazi 3/, 11/, 13/ who went out of his way to help victims of Nazi persecution 11/ and other US sources since V-E day have considered him democratic, 12/ Hahn has also been reported as a good German, who though not a strong Nazi, went along. 5/ Though he has been referred to as definitely friendly disposed toward the U.S. and England, 6/ he nevertheless vehemently opposed the Paperclip Project and wrote a severe criticism entitled, "Invitation to USA," which appeared in the Göttingen University News, 21 February 1947. 14/ At that time Hahn felt, and claimed to have the backing of many other German professors, that pressure was put on German scientists in order to persuade them to go to the U.S. and stated that his group was convinced that the official American way was to crush German science. With reference to the former he claimed there were instances where men lost their jobs and were then invited to work in the U.S. and he pointed to the proposed dissolution of the Kaiser Wilhelm Gesellschaft in the American Zone as indicative of the latter. 14/ Hahn continued to criticize British and American activities in his recent (May 1948) lecture tour in Switzerland at the Federal Institute of Technology and in Berne and Basel. 15/

A United States request for the allocation of Hahn was refused by the British on the grounds, according to the Daily Express, that "unless the drainage of scientific and technological talent from the British Zone was stopped, Germany would never become self-supporting." 19/ However, Hahn himself believes that it is a German scientist's duty to remain in Germany and aid in the reconstruction 18/ and in view of this attitude, it is doubtful that he would have considered coming to the U.S. for scientific work. 5/

Hahn's attitude toward the USSR was indicated in 1945 when he reportedly was very much afraid of Russia and felt a profound distrust of Stalin. He believed that if conditions were to get very bad in Germany even the British and American controlled zones would be driven into the arms of Stalin. He reportedly preferred to have Germany lean toward the West and expressed the hope that the Allies would help to such an extent with food, etc. that such conditions would not arise. 16/ a Further indication was given in December 1947 when Hahn stated he no longer considered

- 3 -

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~~SECRET~~Hahn, Dr. Otto

returning to Berlin, as two of his consultants, who both knew a great deal about uranium, and who recently returned there, had disappeared, having, it was known, departed in an easterly direction. 17/

Prof. Hahn, at the time he gave his Nobel lecture at the Royal Institute of Technology in Stockholm, Sweden and picked up his check for 123,000 Swedish crowns (\$34,000), ended his speech by expressing the hope that atomic knowledge will be used in the service of scientific research, in medicine and in other peaceful purposes and will not become a means of destroying the culture which humanity has been able to build up during millenniums. 20/

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|------------|---|-----------|
| <u>1/</u>  | IAC Agency, Washington, D.C.,   | 19 Dec 47 |
| <u>2/</u>  | " " " "   | 9 Aug 48  |
| <u>3/</u>  | " " " "   | 11 Nov 44 |
| <u>4/</u>  | International Who's Who   | 1948      |
| <u>5/</u>  | IAC Agency, Washington, D.C.,   | undated   |
| <u>6/</u>  | " " " "   | May 45    |
| <u>7/</u>  | " " " "   | Aug 45    |
| <u>8/</u>  | " " " "   | undated   |
| <u>9/</u>  | " " " "   | 21 Feb 45 |
| <u>10/</u> | " " " "   | 19 Aug 45 |
| <u>11/</u> | " " " "   | 4 Apr 44  |
| <u>12/</u> | " " " "   | 24 Sep 47 |
| <u>13/</u> | " " " "   | 29 Aug 44 |
| <u>14/</u> | " " " "   | 18 Mar 47 |
| <u>15/</u> | " " " "   | 14 May 48 |
| <u>16/</u> | " " " "   | 8 Aug 45  |
| <u>17/</u> | <u>Daily Digest of World Broadcasts &amp; Radio Telegraph Services,</u> |           |
|            |   | 13 Dec 47 |
| <u>18/</u> | IAC Agency, Washington, D.C.,   | 26 Sep 45 |
| <u>19/</u> | Daily Express, London   | 7 May 47  |
| <u>20/</u> | IAC Agency, Washington, D.C.,   | 13 Dec 46 |

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884021-1388

PUBLICATIONS OF OTTO HAHN

- "Isotope Weights & Packing Fraction Curve" in collaboration with Flügge & Mattauch Report on the Work at the KWIC on Preparation 38." 1940.
- Work on Nuclear Physics at KWIC" 1941; a Chemical Work; b) Investigation of Resonance Process; c) The Fission Process of Prep. 38.
- "The Fission of Uranium Nucleus." 1942.
- "The Experimental Work on the Separation of Uranium Fission Products" in collaboration with Strassman, Götte; 1942.
- "The Question of the Origin of the 2.3 day Isotope of Element 93 from Uranium," in collaboration with Strassman; 1942.
- "Artificial Transmutation & Fission of Uranium" 1943.
- "Chemical Separation of Uranium Fission Products" 1944.
- "Chemical Separation of Uranium Fission Products II; in collaboration with Strassmann, 1944.
- Radio Active Strontium & Yttrium Isotopes Resulting from U Fission - in collaboration with Strassman 1943.
- On the behaviour of the alkaline earth isotopes produced by the bombardment of uranium with neutrons - in collaboration with Strassmann 1939.
- Production of active Barium isotope from uranium & thorium by neutron bombardment; production of further radioactive fragments by fission of Uranium, in collaboration with Strassmann 1939.
- Do "Trans-uranium elements" exist? 1) Final proof of the non-existence of "Eka-platinum" and "Eka-iridium" in collaboration with Strassmann - 1939.
- On the fragments of uranium fission, in collaboration with Strassmann 1939.
- Further fission products from the bombardment of Uranium, with neutrons. In collaboration with Strassmann 1939.
- On the fission of Uranium nucleus by slow neutrons, in collaboration with Strassmann 1939.
- Separation of isotopes of krypton from those of Xenon produced by U fission, in collaboration with Strassmann - 1940.
- Preparation of fission products of uranium by the use of "emanating power" of uranium compounds, in collaboration with Strassmann - 1940.
- Preparation of fission products of Thorium by the use of the "emanating power" of thorium hydroxide, in collaboration with Strassmann - 1940
- On the experimental disentanglement of elements and isotopes produced by the fission of Uranium, in collaboration with Strassmann & H. Götte - 1942.
- On short-lived isotopes of Barium and Lanthanum produced by Uranium fission, in collaboration with Strassman, 1942.
- On some fragments of the fission of Thorium, in collaboration with Strassmann & S. Flügge - 1939.
- On the fission of the nuclei of uranium and thorium into lighter atoms, in collaboration with Strassmann - 1939.
- On some further products of uranium fission, in collaboration with Strassmann - 1940.
- Some new fission products of uranium, in collaboration with Strassmann - 1940.
- Short-lived isotopes of Bromine and Iodine produced by uranium fission, in collaboration with Strassmann - 1940.
- On the production of Zirconium and Protactinium produced by the bombardment of Thorium with neutrons, in collaboration with Strassmann - 1941.
- On the isotopes of Molybdenum produced by Uranium fission, in collaboration with Strassmann - 1941.
- On the isotopes of Molybdenum produced by Uranium fission, in collaboration with Strassmann - 1941

834021-1389

Publications of Otto Hahn contd

- The isolation and some of the properties of element 93. In collaboration with Strassmann. 1942.
- Some peculiarities of the isotopes produced by nuclear fission of Uranium and Thorium - 1939
- Reactions of atomic nuclei and the fission of uranium - 1940.
- The transmutation of chemical elements, a chapter of physical and chemical cooperation - 1942.
- Natural and artificial transmutation of atomic nuclei - 1941.
- Artificial atomic transmmutations and the fission of heavy nuclei - 1942.
- The transmutation of chemical elements and the fission of uranium - 1944.
- Artificial atomic transmmutations and the fission of heavy nuclei - 1944.
- Artificial atomic transmmutations and the fission of heavy nuclei - 1944.
- The Chemical elements and natural isotopes according to the state of research on isotopes and nuclei. In collaboration with Flugge and J. Mattauch - 1940.
- Same as above - 1939 - in collaboration with Flugge & Mattauch
- Concerning the report: "The chemical elements and natural isotopes according to the state of research on isotopes and nuclei." 1941. .
- Supplement 1940 and 1941 to the extensive report from January 1940: "The chemical elements and natural isotopes according to the state of research on isotopes and nuclei" in collaboration with Flugge & Mattauch, 1942.
- Did a radioactive Caesiumisotope exist in former geological periods? Barium and Strontium from Pollucite? in collaboration with Strassmann, J. Mattauch & Ewald -- 1942.
- Did a Caesium isotope of long half-life exist? A contribution to the interpretation of unusual lines in mass-spectroscopy? in collaboration with Strassmann, J. Mattauch & Ewald - 1943.
- Determinations of geological age by the Strontium method - 1942 (According to investigations by O. Hahn, F. Strassmann, J. Mattauch & H. Ewald).
- Determinations of geological age by the Strontium method - 1944.
- Radiochemistry. (In preparation) in collaboration with Erbacher. No date given.



GERMANY before 1946  
HAHN, OTTO Professor  
Born 8 Mar 1879 Ph D at  
Frankfort 1901 Nuclear  
chemist  
BIR 1948 CIA P-457

83404-1391

~~SECRET~~

241850

## CIA BIOGRAPHIC REGISTER

Case No. 8010580Date: 13 September 1948Name: LAUE, Max Th. F. von  
Variant: Von Laue, MaxBirthdate: 9 October 1879  
Birthplace: Pfaffendorf,  
near KoblenzPresent Position: Titulary Deputy Director,  
Max Planck Institute,  
AVA, GöttingenNationality: GermanLocation: Business - Max Planck Institute  
Private - Bunsenstrasse 16, GöttingenRace: White  
Sex: Male  
Marital Status: Married  
Name of Spouse:Gen. Occupation: Theoretical physicistChildren: one son, TheodoreEducation: Ph.D., University of Berlin, 1903Political: (see below)Languages: EnglishReligion: Protestant, EvangelicalHonors: Nobel Prize winner, 1914; Valbruch Prize  
from University of GöttingenPublications:Career

- - - Studied at universities of Strasbourg, Göttingen, Munich and Berlin. Also awarded honorary Dr. of Engineering, University of Stuttgart and honorary Dr. of Science, University of Manchester
- 1906 - Qualified as a university teacher of physics at the University of Berlin
- 1909 - Private Dozent (lecturer), University of Munich
- 1912 - Professor, University of Zurich
- 1914 - Professor, University of Frankfurt/Main  
Awarded Nobel Prize
- 1919 - Professor, University of Berlin
- - - Member, Kaiser Wilhelm Gesellschaft zur Förderung der Wissenschaften, Berlin.

Approved for Release  
Date NOV 1985~~SECRET~~

85402-1392

~~SECRET~~LAUE, Max Th. F. von

- Prior to 1940 - Repeatedly visited England, the U.S., and lectured in England, France, Sweden, Switzerland
- 1936 — 1945 - Director, Kaiser Wilhelm Institute for Physics, Berlin-Dahlem
- - - - Member, Gesellschaft der Wissenschaften in Göttingen
- - - - Member, Mathematical Physical Class, Preussische Academie der Wissenschaften - Berlin
- - - - Member, Physikalsche Gesellschaft
- - - - Member, Deutscher Mathematischer Verein
- - - - Member, Kant Gesellschaft
- - - - Member, Deutsche Röntgen-Gesellschaft (honorary)
- 1947 — date Deputy Director of Max Planck Institute, AVA, Göttingen;  
Chairman, Hundred year old Deutsche Physikalische Gesellschaft (British zone);  
Active in foundation of Bi-Zonal Physikalische Technische Reichsanstalt
- 1948 - Scheduled to visit the U.S., June or July

Prof. Dr. Max von Laue, world renowned German scholar 1/ and a member of a group of physicists working at the University of Göttingen on the program of scientific research conducted under authority of the Allied Control Commission in Germany, was scheduled to visit the United States in June and July of this year. 3/ Awarded the Nobel Prize in 1914 for his research on the Interference Phenomenon of X-rays, 1/ he enjoys the reputation of being perhaps the most eminent living German physicist 4/ and the most respected of the older physicists among the German scientists. 9/

A specialist in theoretical physics, Von Laue was reported prior to the war as a champion of the modern school of Einstein's theory of Relativity and had devoted his attentions to the quantum theory, the Compton Effect, to Bohr's atomic model, to the "Einstein-Bohr equation" and the disintegration of the atom. 5/

He spent the war years as Professor of theoretical physics at the University of Berlin and as Director of the Kaiser Wilhelm Institute for Physics in Berlin-Dahlem. 1/ In 1944 it was reported that his full time was taken up with teaching 8/ and Von Laue's claim that he had nothing to do with the German uranium project was generally concurred in. 6/, 7/ He went along with Heisenberg and the others when the KWIP was evacuated to Hechingen in the closing days of the war 9/ and it was there that he was

- 2 -

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834021-1393



~~SECRET~~LAUE, Max von

picked up by US forces. Shortly after V-E day he was sent to England with other German personnel 10/ and at that time was described as a shy, mild-mannered man who could not understand the reason for his detention. 11/

Politically Von Laue has been reported as opposed to the Nazi regime. 1/, 8/ Prior to the war Von Laue reportedly was not active in politics. While some of his friends considered him a liberal, others thought he had conservative leanings and he is believed to have been a member of the former German Democratic Party. 1/ Because of his high scientific standing Von Laue could afford to oppose the Nazis and from the beginning reportedly did so openly and courageously. 8/ According to one source he used his influence in numerous cases to provide positions abroad for German scholars dismissed from office by the Nazi Government for political or racial reasons. In 1943 when he was invited by the Swedish Academy of Sciences to lecture in Stockholm, his letters from there to friends in the U.S. expressed opposition to Hitler's regime. 1/ Von Laue, whose son is at Princeton and was in the American Army during the war, has been repeatedly described as very well disposed to England and America. 4/, 11/, 12/.

Scientifically Von Laue was rated during the war as one of the leading scientists of the world and the noblest figure in German science. 8/ He has also been described as a scholar of superior intellect and learning, who, though shy and rather awkward in his personal bearing and not a fluent public speaker, commanded respect wherever he appeared. 1/ Though one recent report described him as perhaps the most eminent living German physicist, 4/ other intelligence sources state that, since he has done no creative work in science during the last fifteen years 12/ and in view of his age, he is of no special value scientifically to the U.S., the U.K. or other nations. 13/

A recent (Oct 47) visitor to Göttingen reported that Von Laue seems to be an old man, though he talks vigorously and is in close touch with everything about him. 9/ He is Titulary Deputy Director of the Max Planck Institute but his administrative interests are actually entirely centered in the Deutsche Physikalische Gesellschaft (the One-Hundred-Year-Old German Physical Society revived in the British zone to facilitate the exchange of ideas among scientists and reestablish intellectual freedom) and in the foundation of the Bi-Zonal Physikalische Technische Reichsanstalt (German Bureau of Standards). 14/ Von Laue is also co-editor with Pohl of the American licensed Zeitschrift für Physik. 14/

<u>1/</u>	IAC Agency, Washington, D.C.,	21 Oct 44
<u>2/</u>	" " "	" " 9 Aug 48
<u>3/</u>	" " "	" " 21 May 48
<u>4/</u>	" " "	" " 21 May 48
<u>5/</u>	" " "	" " 12 Apr 44
<u>6/</u>	" " "	" " undated
<u>7/</u>	" " "	" " 28 Mar 46

- 3 -

~~SECRET~~

80-62-1394

~~SECRET~~

LAUE, Max von

<u>8/</u>	IAC Agency, Washington, D.C..	31 Aug 44
<u>9/</u>	" " " "	12 Feb 48
<u>10/</u>	" " " "	May 45
<u>11/</u>	" " " "	6 Aug 45
<u>12/</u>	" " " "	24 Sep 47
<u>13/</u>	" " " "	19 Dec 47
<u>14/</u>	Physikalische Blatter, No. 10,	1947

- 4 -

~~SECRET~~

83402-1395



GERMANY before 1946  
LAUE, MAX von Prof.  
B. 9 Oct 1879 Ph D Univ.  
of Berlin 1903 Physical  
chemist.  
BIR 1948 CIA P-458

88-62-1396

~~SECRET~~CIA BIOGRAPHIC REGISTER

241850

Name: HEISENBERG, Dr. Werner Carl  
Variant:Case No. 8060359  
Date: 21 Sep. 1948Present Position: Director, Max Planck Institute,  
GöttingenBirthdate: 5 Dec 1901Location: Business - Max Planck Institute,  
AVA, GöttingenBirthplace: WürzburgPrivate - Merkelstrasse 18, Göttingen  
Telephone: 3647Nationality: GermanGen. Occupation: Theoretical physicistRace: WhiteSex: MaleEducation: Ph.D. University of Munich, 1923Marital Status: Married (since)  
1937Name of Spouse: Elisabeth  
SchumacherLanguages: EnglishChildren: three sons and  
three daughters, and one  
recent addition.Honors: Nobel Prize for Physics, 1932Religion: EvangelicalPolitical Affiliation:  
(See below)Career

1920 - 1923 Studied under Sommerfeld

1924 - Dozent, Göttingen University;  
Awarded Rockefeller Foundation Trip to Copenhagen

1926 - Lecturer, Copenhagen University

- - - Member, Saxon Academy of Sciences at Leipzig

- - - Member, Kaiser Leopold Academy of Science at Halle

1927 - 1941 Prof. of Theoretical Physics, University of Leipzig

1929 - Lecture of U.S., Japan and India.

1932 - Awarded Nobel Prize for Physics;  
Lectured in the U.S.

1936 - Began voluntary military training courses in 99th Mountain  
Fighter Regiment.

1939 - Lectured in U.S.

1942 - 1945 Professor of Theoretical Physics, University of Berlin;  
Co-director of Institute of Theoretical Physics,  
University of Berlin and the KWI for Physics, Berlin-Dahlem

1943 - Lectured in Zurich  
Lectured in Budapest

1946 - date Director, Max Planck Institute, AVA, Göttingen  
1948 Gave series of six lectures on "Quantum Theory of Wave  
Fields and Elementary Particles" at the Cavendish  
Laboratory, Cambridge University, England. (Feb.)

Approved for Release  
Date 7 NOV 1982~~SECRET~~

88-021-1397

~~SECRET~~HEISENBERG, Dr. Werner Carl

Dr. Werner Heisenberg, top ranking German theoretical physicist 1/ and Nobel Prize winner, 2/ is at present Director of the Max Planck Institute for Physics at Gottingen 1/ and a member of a group of scientists working there on a program of research under the authority of the Allied Control Commission in Germany. 3/

Heisenberg attended the public schools of Würzburg and Munich, and from 1911 to 1920 the Maximilian secondary school for humanities in Munich. This period of instruction was twice interrupted; in the summer of 1918 by service in an agricultural project in Liesbach, and in the spring of 1919 by taking part in the battles near Munich with the Freikorps Lützow (Lützow Volunteer Corps). 4/ These "Freikorps" were very reactionary, militaristic, old regime groups which operated after World War I under the protection of the Junkers and their ilk. 2/ In the fall of 1920 he entered the University of Munich where he studied physics and mathematics, hearing lectures by Sommerfeld, Wien, Voss and Seliger. Heisenberg left Munich during the winter of 1922 - 23 to study at Göttingen but returned there and received the degree of Ph.D. in the summer of 1923 with a thesis on the problem of turbulence. The following fall he returned to Göttingen where he was an assistant in the Institute for Theoretical Physics and received a "venia legendi" there in the summer of 1924. His studies with Sommerfeld and his participation in a series of lectures given by Bohr at Göttingen led Heisenberg to be greatly interested in the question of atomic physics. During a visit to Copenhagen in 1924, as recipient of a Rockefeller stipend, he learned Bohr's views on atomic physics and in 1925 at Göttingen began his work on quantum mechanics. 4/ After two years there as a dozent, Heisenberg returned to the University of Copenhagen where he lectured for a year at which time he became a full professor at the University of Leipzig. Two years later he made an extended lecture tour of the U.S., India and Japan. 4/

In 1932 Heisenberg was awarded the Nobel Prize for Physics for his development of quantum mechanics and its resultant discovery of allotropic forms of hydrogen. 5/ At that time he was the youngest scientist ever to receive the Nobel Prize. 6/ At the age of thirty-one Heisenberg had presented the world with a new mathematical method adequate for describing how the electrons revolving around the nucleus stick to their orbits. The famous principle of indeterminance or uncertainty was a further development of his theory. 5/

Prewar reports describe Heisenberg as a man of medium, athletic build with yellow blond hair combed straight back. His dress was usually that of the professorial class, that is drab suits and dark shoes, but he reportedly never wore stiff collars, and when vacationing or at home preferred informal attire. A great family man, having come from a good family himself, Heisenberg kept regular hours but worked very hard and often very late. A non-smoker and ill-disposed to liquor and public functions, his chief forms of diversion were athletics and music.

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83-021-1398

**SECRET**HEISENBERG, Dr. Werner Carl

A good swimmer and tennis player, he loved tennis and skiing above everything else and enjoyed mountain climbing almost as well. As a music lover he attended all the better concerts and is an accomplished pianist himself. 7/ Heisenberg once made a trip as a deck hand on a German cargo boat from one of the Baltic ports to the Mediterranean, earning his way and mixing with the rest of the crew. 8/

Heisenberg was Professor of Theoretical Physics at the University of Leipzig from 1927 to 1941 and during this period visited the U.S. on lecture tours in 1932 2/ and again in 1939. During this latter visit he reportedly was very serious and extremely depressed and gave evidence of his attitude toward the Nazi regime. According to one source, though he allegedly did not believe in the Nazi regime and wished to see the old Germany restored, he felt it his duty to support the German government. 9/ There are indications that Heisenberg was strictly opposed to Nazism from the beginning of Hitler's rule 8/ 10/ 11/ 12/ 13/ 14/, and that in 1935, he, along with other professors, protested against the dismissal of five Leipzig professors. 10/ Described as a conservative and nationalistic, 12/ he gave lectures on relativity long after that subject had been banned by the Nazis as a Jewish theory (Einstein). As a result he was for a time on the blacklist so far as the Party was concerned and was the object of a storm of invective from "Die Stürmer", Julius Streicher's mouthpiece. 8/ Captured German documents also show that in a memorandum regarding Heisenberg, from Himmler to the SS Dozentenführer in Leipzig, Himmler thanked and congratulated the Leipzig SD for the very thorough and accurate report on Heisenberg. The memorandum stated in substance that "while it is evident that Heisenberg's attitude was not exactly in line with that described by the Party, I (Himmler) regard him as essentially decent and want the SS and SD organizations in Leipzig informed of that fact. In view of his comparative youth and influence and ability to attract future scientists, we cannot permit ourselves to remove or kill him. It would be highly desirable to get Heisenberg to write a scientific article for one of the publications of the SS. It is hoped that he can ultimately be brought to work with us, possibly within the framework of the Ahnenerbe," 15/ (a German scientific organization whose mission it was to promote the theory of Aryanism).

Later reports, however, describe Heisenberg as somewhat of a politician and inclined to be an opportunist. 2/ In spite of his early opposition to Hitler's rule, he later told his friends that he had now accepted the Nazi regime as a necessary evil 10/, 11/. According to one source it was thought that Heisenberg had shrewdly taken a middle path, neither identifying himself with any of the Nazi brutalities nor yet opposing German aggrandisement. 8/ Though he is considered anti democratic by one U.S. source 16/, he was not a Nazi party member 2/ nor was he included in the list of professors who signed an oath of allegiance to Hitler. 10/ Reportedly, Heisenberg's dream of a position was to succeed Sommerfeld in the Physics Chair at Munich. He would have done so had he been willing to join the Party and he can never forgive the Nazis for this. 14/

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83-02-1399

~~SECRET~~HEISENBERG, Dr. Werner Carl

In 1941 Heisenberg was transferred from the University of Leipzig to Berlin where he was appointed Professor of Theoretical Physics at the University of Berlin and was made co-Director at the Institute of Theoretical Physics there and of the Kaiser Wilhelm Institute for Physics in Berlin-Dahlem. 11/ His group, which included Hahn, Von Laue, Von Weizsacker, Wirtz, Sauerwein and Hocker 17/, did research on pile experiments. 2/ In January of 1943 Heisenberg lectured in Zurich, Switzerland and associated with Gregor Wentzel (now at University of Chicago on a permanent appointment), Professor of Theoretical Physics at the University of Zurich, and Paul Scherrer, Professor of Physics at the Zurich Institute of Technology. 13/ In the summer of 1943, Heisenberg and his team evacuated to Hechingen, 17/ and continued on a program of atomic energy attaining in 1945 a heavy water pile not quite self-sustaining. 1/

It was at Hechingen that Heisenberg was picked up in May 1945 and with other German personnel was shipped to England shortly after V-E day. 18/ At that time he was described as very friendly and genuinely anxious to cooperate with British and American scientists. 19/ Heisenberg reportedly did not believe that the USSR would allow Russian scientific work to be made public 20/ and that in view of their ideologies he did not see how war between the USSR and America could be prevented. He indicated a preference, if a Western European bloc was established, to join this bloc rather than the USSR. 20/ Heisenberg also believed at that time that scientists were too dependent on their governments and thought they should try to get some political influence. 20/

After returning to Germany in 1946 Heisenberg was made the Director of the Max Planck Institute for Physics located in Allgemeine Versuchsanstalt at Göttingen, (British Zone). 21/ He wrote a long and detailed summary on "Research in Germany on the Technical Application of Atomic Energy" which appeared in the August 16, 1947 issue of Nature, page 211 and outlined the experiments made by German scientists through the war years. 22/ Early in 1947 Heisenberg received an offer to work in the Argentine and had previously in August 1946 reported an offer from the Russians. [REDACTED]

[REDACTED] it is doubted that such an inveterate nationalist would be tempted to accept any external offers provided that there was any hope for setting up his Institute in Germany. 23/ According to one source Heisenberg has no desire to leave Germany although he would like an occasional lecture series or a short visit to another country to talk with other scientific minded people. 14/

A recent (1947) visitor to Göttingen described Heisenberg as "middle-aged" and found few traces of the boyish manner which he remembered from having seen him in the U.S. in 1929. At that time Heisenberg, who has several very good younger men working with him, thought that the study of cosmic radiation may be fully as rewarding as the study of nuclear processes with the aid of cyclotrons, etc. for the next few years. His laboratory, however, was far from lavishly equipped, and he is unable to get equipment.

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~~SECRET~~HEISENBERG, Dr. Werner Carl

Heisenberg did not seem proud of anything in his Institute except a library which had a very good collection of German and American scientific journals. 1/

Scientifically Heisenberg has always <sup>been</sup> rated at the very top in his field 1/, 2/, 10/, 11/, 12/, 13/, 16/, 24/. He has been described as the foremost living theoretical physicist, the only theorist of Nobel Prize stature 25/ and as one of the world's top-ranking physicists Heisenberg would be of high value to any nation, including Germany. 1/

1/	IAC Agency, Washington, D.C.,	19 Dec 47
2/	" " " "	undated
3/	" " " "	9 Aug 48
4/	" " " "	undated
5/	<u>Science News Letter</u>	18 Nov 33
6/	<u>New International Year Book</u>	1933
7/	IAC Agency, Washington, D.C.	30 Mar 44
8/	" " " "	1 Mar 44
9/	" " " "	17 June 44
10/	" " " "	3 Mar 44
11/	" " " "	31 Aug 44
12/	" " " "	4 Apr 44
13/	" " " "	Mar 44
14/	" " " "	12 Mar 47
15/	" " " "	Apr 45
16/	" " " "	24 Sep 47
17/	" " " "	9 Apr 45
18/	" " " "	May 1945
19/	" " " "	6 Aug 45
20/	" " " "	8 Aug 45
21/	" " " "	12 Feb 48
22/	<u>Nature, p. 211</u>	16 Aug 47
23/	IAC Agency, Washington, D.C.	24 Feb 47
24/	" " " "	undated
25/	" " " "	4 Mar 47

- 5 -

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83402-1401



PUBLICATIONS OF WERNER HEISENBERG

- "The Physical Principles of the Quantum Theory", 1930  
 "Excursions in the Fundamentals of Exact Science", 1935  
 "Principle of Uncertainty"  
 Papers on "Matrix Mechanics"
- \* "Experiments with a Lattice Arrangement of Water & Uranium," 1941 ( in
  - \* "Experiments with a Lattice Arrangement of D<sub>2</sub>O & Uranium," 1941 ( collaboration
  - \* "Neutron Increase in D<sub>2</sub>O - Uranium Metal Lattice System," 1942 ( with
  - \* "Neutron Increase in Uranium Metal through Fast Neutrons," 1942 ( Dopel
  - \* Report on the 1st Experiments on the Apparatus Set-up at the KWI for physics -- 1940, in collaboration with others.
  - \* Report on the Experiments with Layer Arrangements of Uranium and Paraffin at the KWI for Physics, Berlin-Dahlem. 1941; in collaboration with others.
  - \* "Preliminary Report on the Results from a Layer-construction Sphere of Uranium Metal and Paraffin" - 1942; in collaboration with others.
  - \* "Measurements of Layer Arrangements of Uranium Metal and Paraffin," 1942 in collaboration with others.
  - \* "Tests with New Layer Arrangements of Uranium Metal and Paraffin" in collaboration with others.
  - \* "Notes on the Planned Half-technical Experiment with 1.5 Tons of D<sub>2</sub>O and 3 Tons of Uranium Metal", 1942
  - \* Three reports on Berlin Pile Experiments B-6 & 7; 1944, 1945; in collaboration with others.  
 Diffusion Length of Thermal Neutrons in U<sub>3</sub>O<sub>8</sub>; in collaboration with Dopel; 1940  
 Determination of Diffusion Length of Thermal Neutrons in Heavy Water in collaboration with Dopel, 1940.  
 Possibility of Technical Energy Production from Uranium Fission I. n.d. (1939 or 1940)  
 Possibility of Technical Energy Production from Uranium Fission II; 1940  
 The Possibility of Producing Energy from the Isotope 238. 1941.  
 Physics of Atom Nucleus. 1944.  
 Experiment with 1.5 tons D<sub>2</sub>O and U and a 40 cm. Carbon Reflector. In collaboration with others, 1945.  
 Energy from Nuclear Fission. 1943.

\* Unpublished.

834021-1402



GERMANY — before 1946  
HEISENBERG, WERNER Prof.  
B. 5 Dec 1901 Ph D Univ.  
of Munich 1923 Nuclear  
physicist  
BIR 1948 CIA P-460

83402 -1403

241869

## CIA BIOGRAPHIC REGISTER

Name: GERLACH, Dr. Walther  
Variant: GERLACH, Dr. Walter

Case No. 8061141  
Date: 10 September 1948

Present Position: Prof. of Physics,  
 Bonn University (see below)

Birthdate: 1 August 1889  
Birthplace: Biebrich on  
 the Rhine

Location: Mussallee 6, Bonn  
 Telephone: 4130 (see below)

Nationality: German

Gen. Occupation: Physicist

Race: White

Sex: Male

Education: Ph.D, University of Tubingen, 1912

Marital Status: Married

Name of Spouse:

Languages:

Children:

Honors:

Religion: Protestant

Publications:

Political Affiliation:  
 (See below)

Career

1916 - -- Lecturer, University of Tubingen  
 1917 - -- Lecturer, University of Göttingen  
 1912 - -- Assistant Professor, University of Frankfurt/Main  
 1925 - -- Full Professor of Physics, University of Tubingen  
 1929 - -- " " " " Munich  
 - - -- Member of Bavarian Academy of Science.  
 1938 - -- Attended International Meeting at Strasbourg  
 representing German scientists.  
 c1941 - -- Director of Physical Institute, University of Munich  
 1944 - -- Goering's Deputy in charge of nuclear physics program of  
 the Reichsforschungsrat (succeeding Esau)  
 1946 - date Professor of Physics, University of Bonn  
 1948 - -- Reportedly in Munich (22 July 1948)

Dr. Walther Gerlach, last wartime Deputy to Goering in charge of the German nuclear project program (Der Bevollmächtigte des Reichsmarschalls für Kernphysik) 1/ had been a professor of physics at the University of Bonn from 1946 until recently (July 48) 2/, when he was reported as having transferred to Munich. 3/

An experimental physicist of considerable ability 4/ and eminent in the field of spectroscopy, Gerlach reportedly has done extremely good work in the study of molecular beams. 5/ Based on a survey of his prewar work only, Gerlach was rated fairly high by U.S. sources at the beginning of the war 6/ and in 1945 was given a very high rating both for his scientific preeminence and as an intelligence target. 7/ Since that time he has been

Approved for Release  
 Date 14 July 1985

834021-1404

**SECRET**GERLACH, Dr. Walther

described as a valuable man 8/ and a first rate experimental physicist with unusually wide interests. 2/ A man of boundless energy and with enormous zeal for the job at hand, Gerlach has been reported, however, as of small value to the US or the United Kingdom. 2/

While one fairly recent report states that Gerlach was not a Nazi 9/ and another describes him as politically indifferent, 8/ all previous reports indicate Gerlach was a thorough Nazi 1/, 4/, 10/, 11/. In 1938 Gerlach represented German scientists at an international meeting in Strasbourg and on this occasion reportedly showed violent pro-Nazi opinions. 11/ Captured documents show Gerlach was highly praised as to his political reliability on S.S. Standarten-Führer reporting to Osenberg on the different specialist heads of the German scientific research program. Gerlach is further open to suspicion because of his connection with the Gestapo, 12/ and it has been recommended that he should not be offered any position of trust in an American university. 1/

Throughout the last year and a half of the war Gerlach was convinced of Germany's superiority in nuclear research and in November 1944 wrote to Martin Bormann stating he was sure they were far ahead of America in research as well as development. 15/

Gerlach was picked up by US forces in the closing days of the war and shortly after V-E day was sent to England with other German personnel. 13/ At this time he was described as friendly and cheerful. 14/ After the announcement of the atomic bomb, however, Gerlach, as the man appointed by the German government to organize research of uranium, reportedly considered himself in the position of a defeated general and contemplated suicide. 14/ Gerlach, essentially a German nationalist 10/ and in 1945 openly opposed to the idea of working for America, 16/ was not believed sympathetic to other nations



- 2 -

**SECRET**

884021-1405

~~SECRET~~GERLACH, Dr. Walther

Although a certain "Gerlach" was reported (July 48) to be in the USSR 18/ it is believed that it is Manfred Gerlach, an ex-Junker's man, 3/ and not Subject.

<u>1/</u>	IAC Agency, Washington, D.C.,	undated
<u>2/</u>	" "	" 19 Dec 47
<u>3/</u>	" "	" 22 July 48
<u>4/</u>	" "	" 28 Mar 46
<u>5/</u>	" "	" Sep 47
<u>6/</u>	" "	" undated
<u>7/</u>	" "	" 21 Feb 45
<u>8/</u>	" "	" 24 Sep 47
<u>9/</u>	" "	" 10 Dec 47
<u>10/</u>	" "	" 20 Feb 46
<u>11/</u>	" "	" 28 Aug 48
<u>12/</u>	" "	" 7 Aug 45
<u>13/</u>	" "	" May 45
<u>14/</u>	" "	" 6 Aug 45
<u>15/</u>	" "	" June 45
<u>16/</u>	" "	" 20 Nov 45
<u>17/</u>	" "	" 20 Apr 47
<u>18/</u>	" "	" 14 July 48

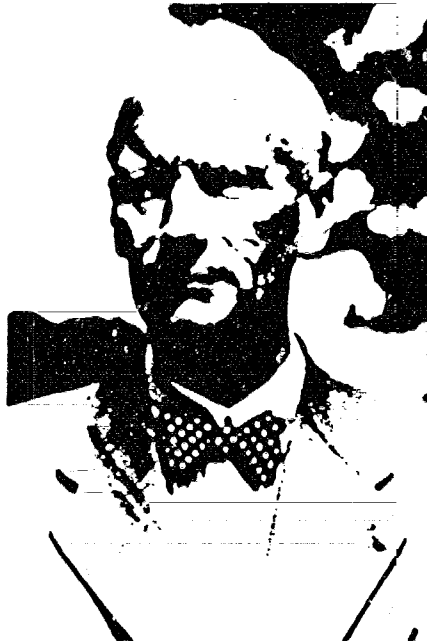
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834021-1406

PUBLICATIONS OF WALTER GERLACH

- "Fundamentals of the Quantum Theory", 1921
- "Atomic Structure & Atomic Disintegration", 1923
- "Matter, Electricity, Energy", 1923
- "Spectroanalysis", Pt I, 1930; Pt. II, 1933; Pt III, 1936
- "Magnetism", 1931
- "Foundations & Methods of Chemical Analysis by the Emission Spectrum", 1934
- "Methods of Natural Scientific Perception", 1936
- "Spectrochemical Accomplishments", 1939
- Introduction to New Edition of Forschungsbericht. Status of  
Successful Pile Experiments up to January 1945 → April 1945 (rough draft)

834021-1407



GERMANY before 1946  
GERLACH, WALTHER Prof.  
B. 1 Aug 1889 Ph D Univ.  
of Tübingen 1912  
Physicist  
BIR 1948 CIA P-459

834021-1408

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241850

## CIA BIOGRAPHIC REGISTER

Name: HARTECK, Dr. Paul  
Variant:

Case No.: 8061157  
Date: 8 September 1948

Present Position: Prof. of Physical Chemistry,  
 University of Hamburg

Birthdate: 20 July 1902  
Birthplace: Vienna

Location: Business - University of Hamburg  
 Private - 20 Heimhuder St., Hamburg 13

Nationality:

Gen. Occupation: Physical Chemist

Race: White

Education: University of Vienna and Berlin, Ph.D.

Sex: Male

Marital Status: Unmarried

Languages:

Name of Spouse:

Honors:

Children:

Publications:

Religion:

Political Affiliation: (See below)

Career

-- -- Studied Chemistry and Physics at Vienna University  
 1923 - 1925 Studied at Berlin University  
 1926 - 1927 Assistant to Prof. Eucken at the Technical College at Breslau.  
 1928 - 1933 Assistant to Geheimrat ~~at~~ Haber at the Kaiser Wilhelm Institute  
 for Physikalische Chemie, Berlin-Dahlem.  
 1930 - Lecturer, University of Berlin  
 1933 - 1934 Studied under Rockefeller Scholarship at Cambridge with Lord Rutherford.  
 1934 - Appointed Professor at and Director of the Institute of Physical  
 Chemistry of Hamburg University  
 1940 - 1945 Experimented on isotopic separation by centrifugal process and on the  
 production of heavy water.  
 1946 - 1947 Dean of Faculty of Mathematics & Natural Sciences, Hamburg University.  
 1947 - date Prof. Physical Chemistry, Hamburg University.

Dr. Paul Harteck, German physical chemist, was last reported (Jan 48)  
 as Professor at and Director of the Institute of Physical Chemistry at the  
 University of Hamburg. 1/

As early as April 1939, when he wrote the German Army Ordnance Department  
 of the military possibilities in uranium research, Harteck was associated with  
 the German nuclear project. Harteck specialized on centrifuges for isotope  
 separation and also on heavy water production. His new method for producing  
 heavy water was considered important enough in 1944 (Dec) to have the highest  
 priority requested for procurement items. 2/

Approved for Release  
 Date 7 NOV 1995

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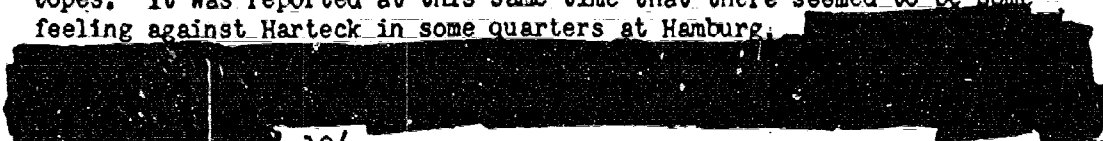


~~SECRET~~HARTECK, Dr. Paul

Harteck was picked up by US forces in the closing days of the war and shortly after V-E day was sent to England with other German personnel. At this time he was described as a very charming personality who appeared to be interested only in his research work 4/ and never caused any trouble. 5/

Although Harteck has been repeatedly referred to as politically indifferent, 2/, 6/, 7/ a report dated prior to V-E day describes him as a weak character personally unreliable, very ambitious, self-centered, and although not interested in politics, joined the Nazi Party for opportunistic reasons. 13/

Based on a survey of his prewar work only, Harteck was rated by U.S. sources at the beginning of the war, as fairly high in his field. 8/ A further indication of Harteck's importance is shown in a report that stated in 1943 a meeting was called by Mr. Speer, German Minister of Armament and War Production, and Harteck was one of the scientists invited to attend. 9/ Later in February 1945 he was given a very high rating, 10/ and considered by US scientists to be a valuable man. 6/ A more recent report, however, describes Harteck as a man of erratic energy, and highly intelligent, but not giving evidence of fulfilling in maturity the great promise of his earlier days. 11/ It has been stated that he might conceivably be of value to the US or the United Kingdom if his perhaps latent powers were released in the right direction and that he could be of value to any nation whose knowledge of heavy water and/or isotope separation were less than his. 11/

  
His laboratory at the Institute of Physical Chemistry was stated to be in good shape and one of the best equipped in Germany with first-rate physical equipment for the study of the problems of diffusion of gases, which is Harteck's special interest. He reportedly had been working on methods of isotope separation by taking advantage of different diffusion rates and his first pride was a great double centrifuge, almost ready to run, with which he is going to try to separate isotopes. It was reported at this same time that there seemed to be some feeling against Harteck in some quarters at Hamburg. 

12/

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HARTECK, Dr. Paul

- 1/ IAC Agency, Washington, D.C., 21 Jan 48
- 2/ " " " undated.
- 3/ " " " May 45
- 4/ " " " 6 Aug 45
- 5/ " " " 14 July 45
- 6/ " " " 24 Sep 47
- 7/ " " " 23 Mar 46
- 8/ " " " undated
- 9/ " " " 19 Aug 45
- 10/ " " " 21 Feb 45
- 11/ " " " 19 Dec 47
- 12/ " " " 12 Feb 48
- 13/ " " " 30 Aug 44

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83-1021-1411

PUBLICATIONS OF PAUL HARTECK

- "Enrichment of Krypton Isotopes" - 1940, in collaboration with Groth.
- "Status of Work on Separating U 235 and U 238 - 1940, in collaboration with Groth.
- The Slowing Down Diffusion and Capture of Neutrons in Solid CO<sub>2</sub> and their Capture in Uranium - 1940, in collaboration with others.
- The Production of Heavy Water - 1941,
- Report on Status of Work & Proposals for Future Work - 1941.
- The Separation of Uranium Isotopes - 1941
- Thermo-diffusion Effect etc. & Comparison with Thermo Syphon Effect - 1941, in collaboration with Jensen.
- The Energy Requirements in the Enrichment of Isotope U 235 - 1941, in collaboration with Jensen.
- Speech in RFR 26 Feb 42 on Production of Heavy Water - 1942.
- Viewpoints on Construction of Clusius-Linde Exchange Plant - 1942.
- The Separation of Isotopes with Special Reference to Uranium - 1942.
- Production of UF<sub>6</sub> on a Semi-Commercial Scale. Investigation of the Alloy Capability of Uranium - 1942, in collaboration with others.
- Calculation of the Separation Effect and the Construction of Various Arrangements of Centrifuges - 1942, in collaboration with Jensen.
- Connection Between the Construction and Separation Ability of Low Pressure Column - 1942, in collaboration with Jensen & Suhr.
- The Production of Heavy Water - 1942, in collaboration with Suess.
- Separation of U. Isotopes by the Ultra Centrifuge III Enrichment of Xenon & U Isotopes (by the balance method) - 1943, in collaboration with Groth & Suhr.
- Free Atoms in Photo-chemical Reactions in "Naturwissenschaften". - 1943.
- Electron and Positron Spectra of Radio-Arsenic -- in collaboration with Schaeffer.

834021-1412



GERMANY before 1946  
HARTECK, PAUL Prof.  
B. 20 July 1902. Edu-  
cated Univ. Vienna and  
Berlin. Physical chemist  
BIR 1948 CIA P-461

834021-1413

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241850

## CIA BIOGRAPHIC REGISTER

Name: KORSCHING, Dr. Horst

Case No. 8061187

Variant:

Date: 30 August 1948

Present Position: Member Max PlanckBirthdate: 11 Aug 1912

Institute, AVA, Göttingen

Birthplace:Location: Business - Max Planck Institute

Göttingen Private - Bunsenstrasse 17, Göttingen

Nationality: GermanGen. Occupation: PhysicistRace: WhiteEducation: Ph.D.Sex: MaleLanguages:Marital Status: BachelorName of Spouse:Honors:Children:Publications:Religion:Political Affiliation:

(See below)

Dr. Horst Korsching, German experimental physicist, is presently (August 1948) a member of a group of nuclear physicists working at the University of Göttingen under the program for the control of scientific research which is being administered by the Control Commission in Germany. 1/

Based on a survey of his prewar work only, Korsching was rated by U.S. sources at the beginning of the war as very close to the top in his field. 2/ As an assistant at the Kaiser Wilhelm Institute for Physics, Berlin-Dahlem, during the war 3/ Korsching did some experimenting with the Clusius separator tube applied to liquids. 4/ In 1945 [REDACTED] stated that Korsching was not a brilliant physicist but that he was a very good experimenter and had some very good ideas on the separation of isotopes. 5/

Korsching was picked up by U.S. forces in the closing days of the war and shortly after V-E day was sent to England with other German personnel. 6/ During this period he was described as a complete enigma, morose, surly, and rarely opened his mouth. Politically, [REDACTED] Korsching was always neutral. 7/ In 1945 he often indicated annoyance at the anglo-philic attitude of some of his fellow workers and was reported as disinclined to work for the Allies but at the same time evidenced that he was not pro-Russian. At one time Korsching considered the possibility of going to Argentina to work on uranium. 8/

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Although Dr. Korsching has a good knowledge of the working problems of the German project 4/ and was originally included among those scientists whose denial to a potential enemy nation was recommended, 2/ he more recently has been described as a reliable routine experimenter of no particular value to the U.S., the United Kingdom, or other nations. 9/

<u>1/</u>	IAC Agency, Washington, D.C.,	9 Aug 48
<u>2/</u>	" " " "	undated
<u>3/</u>	" " " "	24 Sep 47
<u>4/</u>	" " " "	undated
<u>5/</u>	" " " "	7 Sep 45
<u>6/</u>	" " " "	May 45
<u>7/</u>	" " " "	17 July 45
<u>8/</u>	" " " "	Aug 45
<u>9/</u>	" " " "	19 Dec 47

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834021-1415

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PUBLICATIONS OF DR. HORST KORSCHING

"Separation of Liquid Mixtures (Zinc & Deuterium)" 1939 in collaboration with Wirtz,

"Thermal Diffusion in Liquids" 1939 in collaboration with Wirtz.

"Separation of  $\text{CCl}_4$ -Hexane, Separation of Hydrogen Isotopes and Liquid Thermal Diffusion" 1939, 1940 in collaboration with Wirtz

"Separation of Heavy & Light Benzene by Thermal Diffusion in the Liquid Phase" 1941

"On the Synthesis of Metallic Uranium by Electrolysis" 1941

"The Question of the Isotope Effect in Thermal Diffusion in Liquid Phase" 1942

"Status of Measurements on 19 May 1943 (Isotope Separation Apparatus)" 1943

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834021-1416



GERMANY before 1946  
KORSCHING, HORST Ph D.  
Experimental physicist.  
BIR 1948 CIA P-465

834021-1417



( ) ~~SECRET~~

CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

22 September 1948

MEMORANDUM FOR: Director, Joint Intelligence Objectives Agency  
Joint Chiefs of Staff

ATTENTION: Col. R. D. Wentworth, USAF

SUBJECT: Information Concerning German Scientists

REFERENCE: Memorandum from Director, JIOA, subject as  
above, dated 9 August 1948, JIOA 2775

Transmitted herewith in response to your request contained  
in reference above are reports covering the following individuals:

Dr. Otto HAHN	Dr. Kurt DIEBNER
Dr. Werner HEISENBERG	Prof. Walter GERLACH
Prof. Karl von WEIZSACKER	Dr. Paul HARTECK
Dr. Erich BAGGE	Dr. Fritz STRASSMAN
Dr. Horst KORSCHING	Dr. Herman BEUTHE
Prof. Max von LAUE	Dr. Josef MATTAUCH
Dr. Karl WIRTZ	Dr. Erich FISCHER

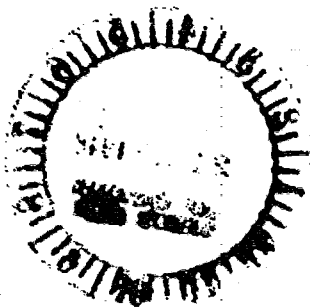
*Norman C. Caum*

NORMAN C. CAUM

Colonel, U.S. Army

Deputy Assistant Director

Office of Collection and Dissemination



See JIOA 2775 dtd 9 Aug. 1948 to CIA

FILE DIST:

383.7 Central Intelligence Agency  
383.7 Nuclear Physicists

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Date 7 NOV 1985

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22 September 1948

MEMORANDUM FOR: Director, Joint Intelligence Objectives Agency  
Joint Chiefs of Staff

ATTENTION: Col. E. D. Wentworth, USAF

SUBJECT: Information Concerning German Scientists

REFERENCE: Memorandum from Director, JIOA, subject as  
above, dated 9 August 1948, JIOA 2775

Transmitted herewith in response to your request contained  
in reference above are reports covering the following individuals:

Dr. Otto HAHN	Dr. Kurt HIEBER
Dr. Werner HEISENBERG	Prof. Walter GERLACH
Prof. Karl von WEIZSACKER	Dr. Paul HARTNEK
Dr. Erich BAUER	Dr. Fritz STRASSMAN
Dr. Horst KORSCHING	Dr. Herman EBYTHE
Prof. Max von LAUE	Dr. Josef MATTANICH
Dr. Karl WIRTZ	Dr. Erich FISCHER

NORMAN C. GRUM  
Colonel, U.S. Army  
Deputy Assistant Director  
Office of Collection and Dissemination



See JIOA 2775 dtd 9 Aug. 1948 to CIA

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383.7 Central Intelligence Agency  
383.7 Nuclear Physicists

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Approved for Release  
Date 7 NOV 1985

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241850

## CIA BIOGRAPHIC REGISTER

Name: MATTAUCH, Dr. JosephCase No. 8061242Variant:Date: 19 July 1948Alias:Present Position: Research at KWIC,  
TailfingenBirthdate: 1895  
Birthplace: AustriaLocation: TailfingenNationality: GermanGen. Occupation: Nuclear chemistRace: White  
Sex: MaleEducation:Marital Status:Languages:Children:Honors:Religion:Publications:Political Affiliation:

Dr. Joseph Mattauch, German nuclear chemist and former assistant-director of the Kaiser Wilhelm Institute for Chemistry in Berlin 1/, was rated as one of the top personalities in the German nuclear research program based only on his prewar record. 2/ A specialist in the field of mass spectrographs, 3/ he came to the Institute in 1939 from Vienna and brought with him his double focusing precision mass spectrograph which was used as a model for a new one. 1/

In October 1943 Mattauch collaborated with A. Flammersfeld on a paper "On a pressure generator now in construction and the possibilities of its use" presented by the former in a lecture at the KWIC in Berlin-Dahlem. Mattauch also lectured at that time "On the use of Inactive Isotopes as Indicators". 1/

He was slated for transfer from the KWIC, Tailfingen to Mainz University to take over the chair of inorganic chemistry in the fall of 1946. His work there was to be primarily concerned with KWIC research but the University itself was not to be affiliated with KWIC. 2/

In January 1947 he left for Switzerland for reasons of ill health and as of June 1947 he was still at Lugano, Switzerland. 3/

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Date ? NOV 1985

83-021-1357

~~SECRET~~MATTAUCH, Dr. Joseph, contd.

Mattauch has written many articles some of which are listed below:

In collaboration with Hahn and Fluegge, "Isotope Weights and Packing Fraction Curve".

"The Number of Neutrons Occuring in the Fission of U-235 and U-238", 1940.

In collaboration with Fluegge "Nuclear Physics Tables", 1942

"Measurements of Relative Frequencies of Isotopes", 1943.

"The Chemical Elements and Natural Isotopes According to the State of Research on Isotopes and Nuclei", (Report on papers from end of 1937 to end of 1939), 1940 in collaboration with Hahn and Fluegge.

"Reports on Isotopes", 1940-41-42-43, in collaboration with Fluegge.

"On a New Method of Measurement of Relative Abundances of Isotopes. Isotopic Constitution and Atomic Weight of Hafnium", 1943 in collaboration with Ewald.

"Isotopic Constitution and Atomic Weight of Neodymium, Samarium, Tungsten", (not published). 1/

In December 1947 it was reported that Prof. Mattauch and Prof. Strassman were continuing the work of Hahn and Heisenberg at the KWI in Tailfingen and that it was planned that the KWI at Tailfingen would be moved to Mainz University in the spring of 1948. 3/

1/ IAC Agency, Washington, D.C. undated, (Secret)

2/ IAC Agency, Washington, D.C. undated (Secret)

3/ IAC Agency, Washington, D.C. undated (Secret)

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S. O. O. -1358

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241850

## CIA BIOGRAPHIC REGISTER

Name: BEUTHE, Dr. Hermann  
Variant:Case No. 8030683  
Date: 23 August 1948Present Position:Birthdate: 20 Sept. 1897  
Birthplace: Rudolstadt/ThuringiaLocation: Reportedly Ronneburg,  
ThuringiaNationality: GermanGen. Occupation: PhysicistRace: WhiteEducation: Ph.D.Sex: MaleMarital Status: MarriedLanguages:Name of Spouse:Honors:Children:Publications:Religion:Political Affiliation: Nazi Party  
Member

Dr. Hermann Beuthe was the German wartime Deputy Director, under Esau, of nuclear physics research of the Reichsforschungsrat (RFR -- National Research Council) and the Director of the Physikalisches Technisches Reichsanstalt (PTR -- German Bureau of Standards). 1/

Politically a Nazi Party member, Beuthe was an officer both in the SS (SS No. 15403) and in the SD (Sicherheitsdienst -- the Security Service -- comparable to our Counter Intelligence Corps) with the rank of "Haupt Sturmfuhrer" (Captain) as early as April 1940. 2/  
[ANALYST'S COMMENT -- This rank indicates that Beuthe was a member of the Elite Guard and with that early date of rank it is probable that he had advanced considerably through the ranks by V-E Day.]

As Director of the PTR, Beuthe was connected with both betatron and cyclotron design in March 1943 and as Esau's Deputy he was familiar with all phases of German nuclear research and was particularly interested in atomic pile research in February 1944. 1/

Scientifically, Beuthe was given very high rating by U.S. forces in the closing days of the war. This rating, however, was made more for his overall knowledge of the German atomic energy project than for his scientific preeminence. 3/ Since that time he has been described as an undistinguished, though competent, physicist, 4/ and it has been stated that his value to the Germans was as an organizer and informer rather than as a scientist. 5/

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Date 7 NOV 1985~~SECRET~~

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BEUTHE, Dr. Hermann contd.

Arrested in 1945 by the Russians Beuthe was interned at Weida in Thuringia but it is reported that he was recently released and is residing in Ronneburg. It is not improbable that he is engaged in work for the Russians. 5/

- 
- 1/ IAC Agency, Washington, D.C., undated.
  - 2/ " " " " " "
  - 3/ " " " " " 12 Feb 46
  - 4/ " " " " " 24 Sep 47
  - 5/ " " " " " 19 Dec 47

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

4 August 1948

MEMORANDUM FOR: J.I.O.A., THE JOINT CHIEFS OF STAFF  
ATTENTION: Colonel R. D. Wentworth, GSC  
SUBJECT: Information Concerning 19 German Scientists

1. Delivered herewith, by Mr. Wilbers of the Biographic Register, CIA, are biographic sketches of the 19 German scientists concerning whom information was requested by J.I.O.A. in its memorandum dated May 4, 1948. It is regretted that it has taken so long to pull this information together, but it should be noted that other jobs assigned to the Register by J.I.O.A. during the same period were given higher priority.

2. The biographic sketches do not include independent evaluations by CIA of the importance of each individual. Based on our conversation of this morning, it is my understanding that J.I.O.A. wished to compare the evaluations of these men prepared by each of the several IAC agencies, and that J.I.O.A. has already received such evaluations directly from Army, Navy, Atomic Energy Commission and Research & Development Board.

3. Transmitted with the sketches is a facsimile of a letter received by CIA from the Air Materiel Command. This gives certain information which may be of value in arriving at the evaluations desired by J.I.O.A.

4. This Office will be most grateful for such cooperation as J.I.O.A. may be able to extend in order that the data from the other agencies concerning these scientists may be incorporated in the files of CIA.

FILE DIST: *section, 1548, 4 Aug 1948*  
C/R CIA

~~10/2~~ NUCLEAR SCIENTISTS w. incl.

*James M. Andrews*  
JAMES M. ANDREWS  
Assistant Director

Office of Collection and Dissemination

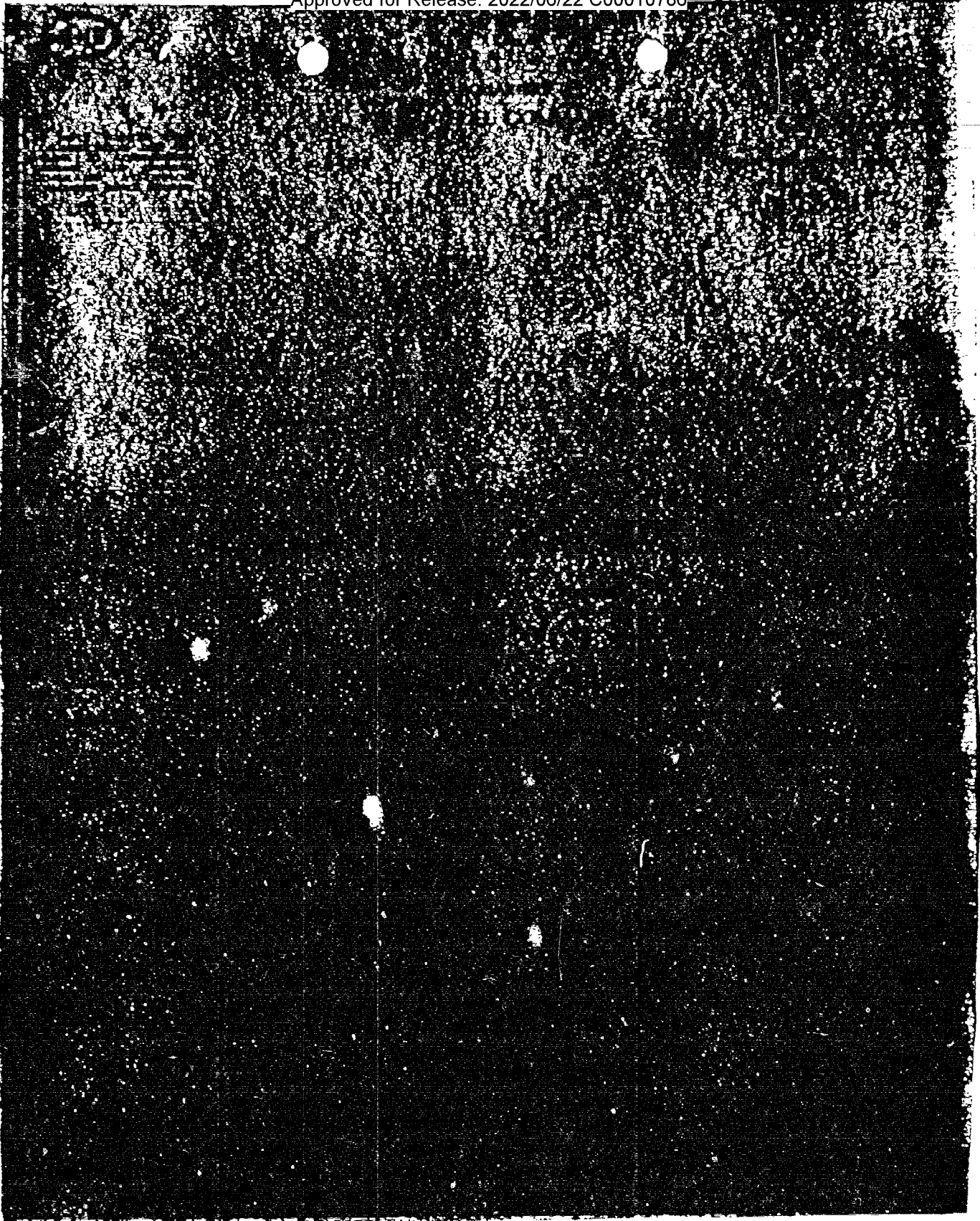


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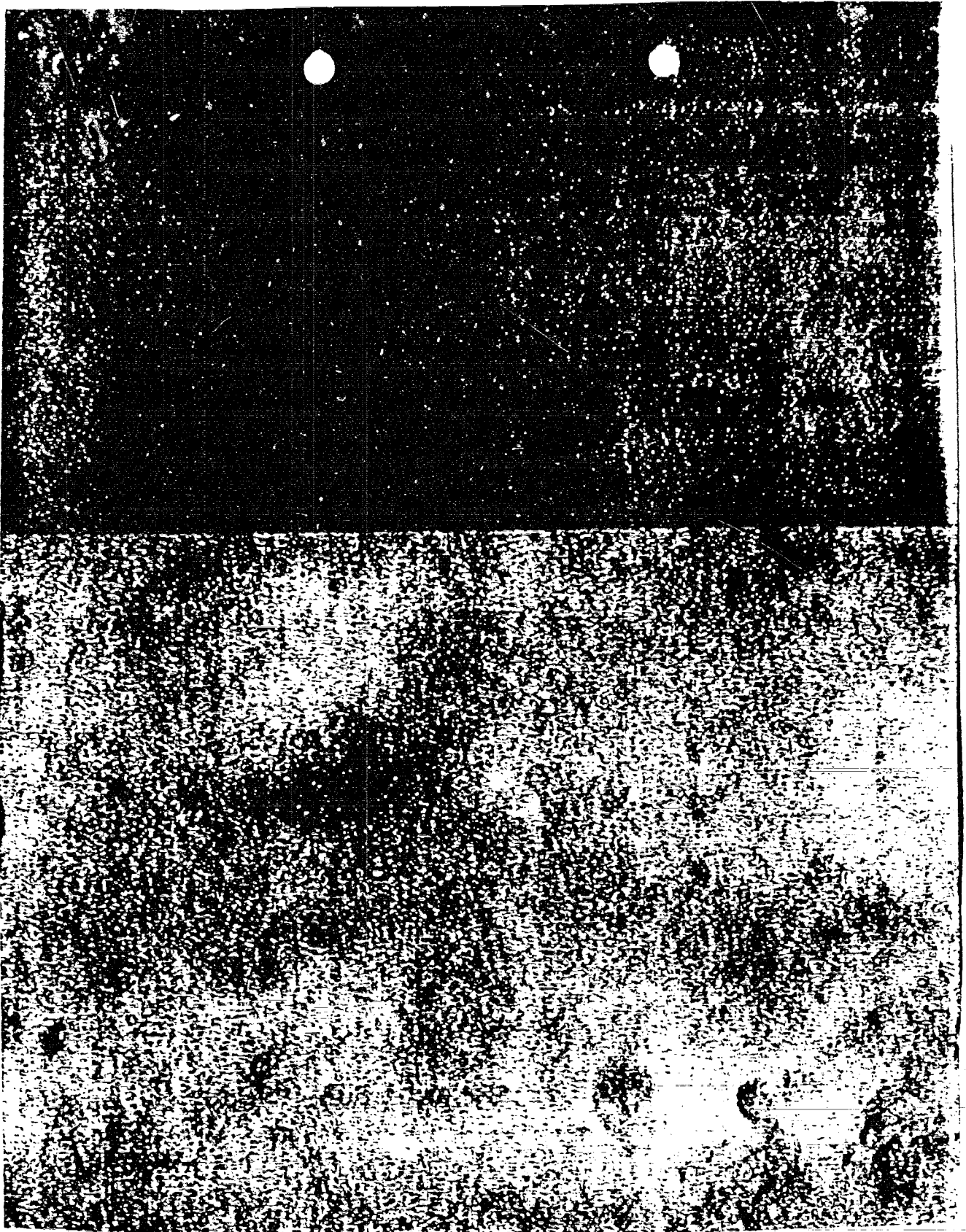
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- 1428

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BIOGRAPHIC REGISTER

Name: BONHOEFFER, Karl Friedrich

Case No. 7011386

Variant:

Date: 19 July 1948

Alias:

Present Position: Univ. of Berlin Birthdate: 13 January 1899Birthplace: BreslauLocation: Berlin Nikolasse,

Kirchweg 26

Nationality: GermanGen. Occupation: Physical chemistRace: WhiteEducation: Ph.D. at Univ. ofSex: Male

Berlin 1922

Marital Status: MarriedLanguages:Name of Spouse:Honors:Children:Publications:Religion: Protestant ✓Political Affiliation: Nationalistic  
but anti-Nazi

Dr. Karl Friedrich Bonhoeffer, repeatedly rated as one of the best German scientists 1/2/ was last reported (November 1947) as being at the University of Berlin in the Russian Zone. 2/

The son of a famous German psychiatrist and neurologist, Bonhoeffer has been described as honest and intelligent, but not very courageous and not a fighter. He attended the Gymnasium, graduated and then served as a volunteer in the German Army during the First World War. 1/ Later he studied at the University of Berlin where he received his doctorate in 1922 and in 1923 he was an assistant professor at the Kaiser Wilhelm Institute for Physics. Bonhoeffer was a full Professor of Physical Chemistry at the University of Frankfurt/Main from 1923 to 1930 when he was appointed to that same position and the University of Leipzig. 4/ He has visited the U.S. and gave a series of lectures here in 1931-32 5/ and for a period of time was associated with the late Prof. F. Haber. 1/

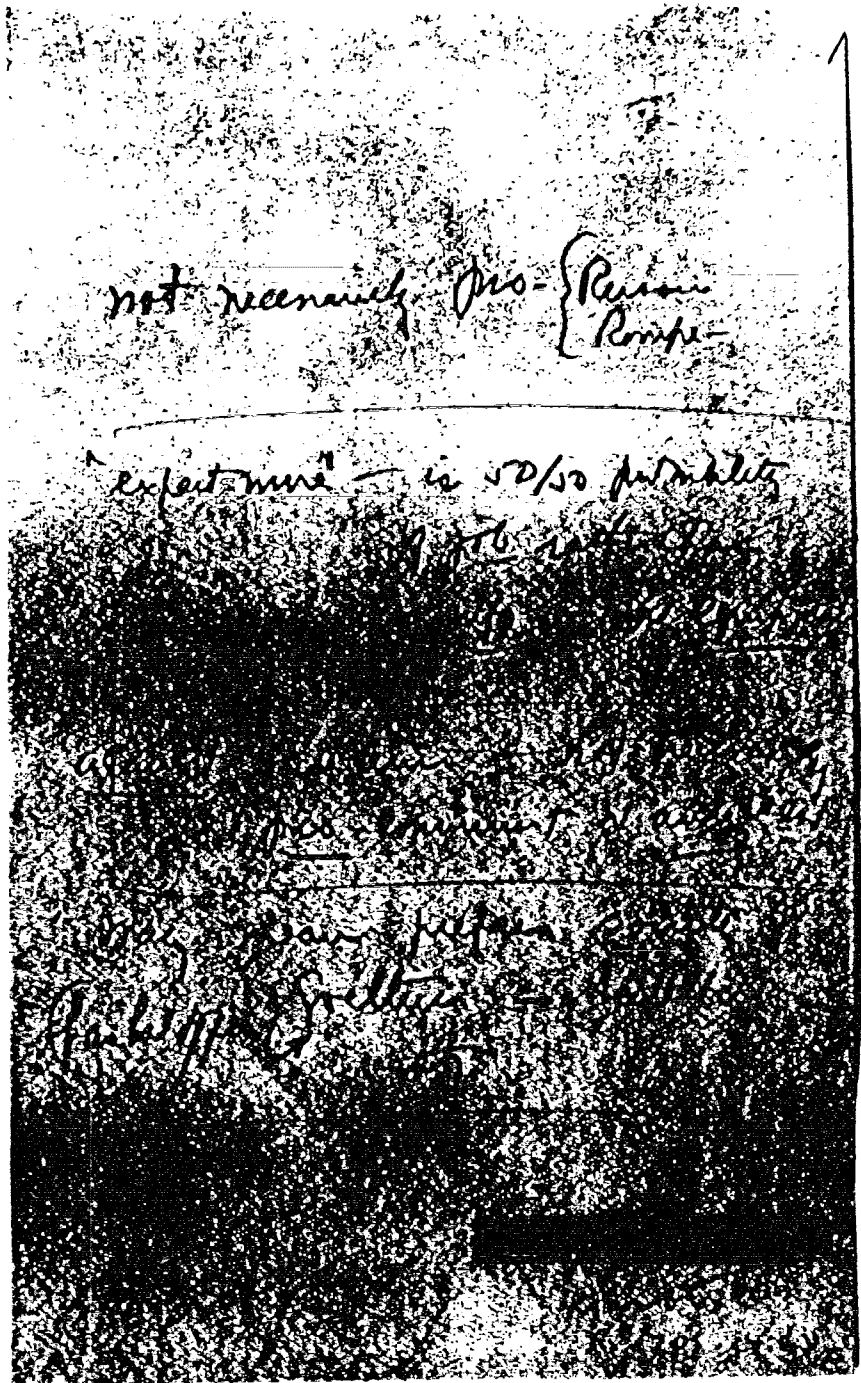
Bonhoeffer was Director of the Physical Chemistry Institute of the University of Leipzig during the war, collaborating with the KWI at Heidelberg in 1944 and associating himself with heavy water experiments in February 1945. 5/ He is reported to be the discoverer of ortho- and parahydrogen 6/ and his most distinctive work has been done in chemical kinetics, photo chemistry and the chemical reactions of heavy water. 4/

Reportedly not a Nazi 6/ Bonhoeffer at the beginning of the Nazi rule was demonstratively philosemitic. 1/

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not necessarily pro- { Person  
Route-

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BONHOEFFER, Karl Friedrich

After the war from 1945 to 1947 Bonhoeffer was reportedly at the University of Leipzig doing research and especially working on the Theory of Mechanism of Propagation of Nervous Impulses. 5/

In June of 1947 Bonhoeffer was granted leave reportedly from the University of Berlin and traveled through England on an escorted tour of various laboratories. It was at this time that he evidenced an interest in "nerve physiology". 7/

Otto Hahn has tried to get him to join the group at Göttingen but he has declined since his family is in the Russian Zone of Berlin and thus cannot effect the transfer. 8/

It was recently (February 1948) reported that Bonhoeffer would visit the U.S. 2/ but as yet he has not arrived.

*Editorial note  
into Danne summary  
of 1948.*

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- 1/ IAC Agency, Washington, D. C., 18 September 1944 (Secret)
  - 2/ IAC Agency, Washington, D. C., 12 February 1948 (Secret)
  - 3/ Foggendorff Lexikon, 1935
  - 4/ IAC Agency, Washington, D. C., 19 November 1945 (Secret)
  - 5/ IAC Agency, Washington, D. C., undated (Secret)
  - 6/ IAC Agency, Washington, D. C., undated (Secret)
  - 7/ IAC Agency, Washington, D. C., 4 June 1947 (Secret)
  - 8/ IAC Agency, Washington, D. C., 5 May 1947 (Secret)

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## BIOGRAPHIC REGISTER

Name: BOTHE, Dr. Walther  
 Variant:  
 Alias:

Case No. 7003277  
 Date: 19 July 1948

Present Position: Director, Physics  
 Inst. KWI for Med. Research, Heidel-  
 Location: Im-Baeckerfeld, No 6, berg  
 Heidelberg  
 Gen. Occupation: Physicist

Birthdate: 8 January 1891  
 Birthplace: Oranienburg  
 Nationality: German

Education: Ph.D., Univ. of Berlin,  
 1914

Race: White  
 Sex: Male  
 Marital Status: Married  
 Name of Spouse:

Languages: English

Children: Two daughters

Honors:

Religion: Evangelical

Publications:

Political Affiliations: Reportedly not  
 a Nazi

Dr. Walther Bothe, world famous German nuclear physicist 1/, was last reported as Director of the Physics Institute of the Kaiser Wilhelm Institute for Medical Research at Heidelberg. 2/

Bothe, whose father was a business man, has been married since 1926 to the daughter of a Russian emigrant. He attended the Gymnasium, graduated and later studied physics at the University of Berlin where he received his Ph.D. in 1914. Bothe then became an assistant at the PTR (Physikalisch-Technische-Reichsanstalt) in Berlin 3/ and in 1929 became Director of the Department of Radio-Activity there. 4/ During this period Bothe also was an Instructor at the University of Berlin (1925) and an assistant Professor at the same university (1929). 5/ From 1930 to 1932 he was a full professor at the University of Giessen and from 1932 to 1934 held a similar position at the University of Heidelberg. 5/ He lost his professorship there in 1934 when that school became a Nazi stronghold. Instead he got a post at the Kaiser Wilhelm Institute for Medical Research, also located in Heidelberg, where party policies did not have such a strong influence. 7/ Bothe held the position of Director of the Physics Institute of the KWI at Heidelberg until the end of the war. 8/

He was pictured by an informant in 1944 as a typical German professor in habits and appearance. Bald, pink-faced, mustached, five foot, seven inches in height and of medium build, Bothe was described as intelligent, honest, very emotional and benevolent. He dressed conservatively in dull suits, straight ties and high stiff collars. Possessing a genial personality, Bothe smokes cigars but does not drink, enjoys playing the piano and has no outdoor life. 3/

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BOTHE, Dr. Walther

Politically Bothe was a loyal German but never a Nazi. 7/ His anti Nazi sympathies have been repeatedly reported 2/, 7/, 8/ 9/ and he intervened very courageously in favor of his colleagues in occupied countries when they were in trouble with the German authorities. When Langevin, Borel, Cotton and Lapique were arrested by the Gestapo in Paris, he rushed to that city and obtained their release. According to one informant it is due to a fairly large extent to him that a part of the European scientists who were disliked by the Nazis could be saved. 3/

Scientifically Dr. Bothe was rated during the war at the very top of his field based only on a survey of his prewar work 10/ and since that time his position as one of the leading German nuclear physicists has been repeatedly confirmed 1/, 3/, 8/, 11/, 12/. Bothe has been involved in nuclear physics research for a long time. In 1921 he joined H. Geiger in the Department of Radio-Activity in the PTR working on joint analysis of Compton effect and coincidence time of scattering quantum and scattering electron. Bothe succeeded Geiger as Director of that Department and in 1929 or 1930 he discovered the artificial nuclear gamma radiation emanating especially from Li, Be, B as a result of the irradiation of the elements by alpha particles from Po. 4/ A specialist in the field of optics, radiology, cosmic rays and biological physics, Bothe has published about one hundred articles in the Journal of Physics. 12/ During the war in collaboration with Gentner he designed the cyclotron, did research on betatron and nuclear reactions and was intimately connected with pile development. 8/

Bothe was picked up at the Physics laboratory of the KWI for Medical Research in Heidelberg in March 1945 by U.S. forces. Bothe greeted U.S. representatives and told about some of the research done in the KWI. He showed reprints, proofs and manuscripts of the wartime papers which were written under his direction and proudly displayed the cyclotron but when questioned about research on war problems Bothe made it very clear that he could not reveal any secrets at that time. He denied having any secret papers and claimed to have burned everything as he was ordered. A thorough investigation by counter-intelligence agents failed to disprove his statements. Bothe was reported as a man of his word and utterly trustworthy, and did not divulge any "secrets" until after V-E day. In July 1945 he submitted a report giving a survey of his war research on the uranium problem. 7/

Later Bothe was made scientific adviser on the FIAT Scientific Committee and in this capacity he submitted lists of personnel whom he thought should be used in processing the review of German science. 13/ Bothe himself was the Senior Author of the "FIAT Review of German Science 1939-1946" Vol. 1. 8/ He refused a "Paperclip" contract to work in the United States because he did not desire employment by the War Department but stated that he would accept a private contract with a University or some private industry. 1/ The United States Navy had requested the utilization of Bothe and his name was included in the highest category of personnel whose utilization by a potential enemy nation would be dangerous to the welfare of this nation 1/ but it developed that, in addition to an unfavorable recommendation on the part of one agency 14/ Bothe

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BOTHE, Dr. Walther

was included in a list of German scientists [redacted] to remain in Germany. 15/

Bothe is now doing research at the KWI for Medical Research as Director of the Physics Laboratory of the Institute. Sorely in need of books and journals he hopes to get the FIAT Library which is unused at Karlsruhe. Rebuilding is very slow and about 80% of the equipment is missing. Bothe has a van de Graaf generator which will soon go into operation and the cyclotron. He has obtained permission from Military Government to use the cyclotron for the production of radio active materials for medical research. Bothe states these will probably be short-lived elements which could not be transported from the U.S.A. and he is counting on the U.S. for the longer lived elements. He has four assistants and a few doctoral candidates, but Bothe now along in years reportedly "seems tired" and has to spend most of his time in administration and teaching. 16/

The following are some of the articles which Bothe has written:

- "Diffusion Length of Thermal Neutrons in Carbon." (1940)
- "Rigorous Treatment of Diffusion in Absorbing Matter." (1940)
- "Evaluation of Pile w/Reflector" (1940)
- "Rules for Indicator Measurements." (1940)
- "Survey of Finite Piles." (1940)
- "Quantitative Analysis of 3 Samples of Ur. Preparation" (1938) & (1940)
- "Method of Measuring Diffusion of Neutrons." (1940)
- \* "Energy of Uranium Fission Neutrons." In collaboration with Gentner; Research Rpt. (1940)
- "The Absorption of Thermal Neutrons in Carbon." In collaboration with Jensen.
- "A Few Properties of Ur. and Moderators." (1941)
- "Article on Elementary Particles."
- "Resonance Capture on the Surface of U Metal." (1941)
- "Resonance Capture on the Surface of U<sub>2</sub>O<sub>3</sub>." (1941)
- \* "Measurements on a Mixture of Ur. Ox & Water. The Augmentation Factor X and the Resonance Capture W." Research Rpt. (1941) In collaboration with Flammersfeld.
- "Neutron Increase for Fast and Slow Neutrons" in 1938. "Diffusion Length" in 1938 — "Metal and Water" in 1941.
- "Effective Cross-Section of U. for Thermal Neutrons from Diffusion Measurement." (1941)
- "Absorption of Thermal Neutrons in Electrographite." (1941)
- "Absorption of Thermal Neutrons & Increase of Fast Neutrons in Beryllium" (1941)
- "Machines for the Utilization of Fission by Fast Neutrons." (1942)
- "Remarks on the Leipzig D<sub>2</sub>O Experiments." (1942)
- "The Velocity of Neutrons in a Slowing Down Medium." (1942)
- "The Increase of Fast Neutrons in Uranium." (1942)
- "Radiation Shielding." (1942)
- "Radiation Shielding Walls." (June '43)

\* Unpublished.

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BOTHE (CONTINUED)

- "Research Tools of Nuclear Physics." (1943)  
 "Technique of Neutron Probes" (1943)  
 "Layer Experiments w/Variation in the Thickness of Uranium and D.O."  
 In collaboration with Funfer (Dec 1943) 2  
 \* "Three Reports on Berlin Pile Experiments B-6, 7." (1944) (1945)  
 "A Few Simple Relations in Experiments on Neutron Increase." (1945)  
 "Experiment with 1.5 tons D<sub>2</sub>O and Uranium & a 40 cm. Carbon Reflector."  
 In collaboration with others. (1945)

\*Unpublished

<u>1/</u>	IAC Agency, Washington, D.C. (Secret)	(3 June 47)
<u>2/</u>	" " " " "	(12 Feb 48)
<u>3/</u>	" " " " "	(Sept 44)
<u>4/</u>	" " " " "	(21 May 46)
<u>5/</u>	Poggerdorff Lexikon	" (1936)
<u>6/</u>	IAC Agency, Washington, D.C.	" (22 July 46)
<u>7/</u>	ARSOS, Samuel A. Goudsmit, Pub. H. Schuman.	
<u>8/</u>	IAC Agency, Washington, D.C. (Secret)	(Undated)
<u>9/</u>	" " " " "	(June 44)
<u>10/</u>	" " " " "	(Undated)
<u>11/</u>	" " " " "	(21 Feb 45)
<u>12/</u>	" " " " "	(24 June 46)
<u>13/</u>	" " " " "	(17 Apr 46)
<u>14/</u>	" " " " "	(15 June 47)
<u>15/</u>	" " " " "	(21 Feb 47)
<u>16/</u>	" " " " "	(12 Feb 48)

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## BIOGRAPHIC REGISTER

Name: BEYERLE, Dr. Karl Case No. 8010551  
 Variant: Date: 19 July 1948  
 Alias:

Present Position: Presently in charge of Instrumentenbau, KWI Birthdate:  
Birthplace:  
Location: Bunsen Strasse 10, Göttingen Nationality: German  
Gen. Occupation: Engineer Race: White  
Sex: Male  
Education: Marital Status:  
Name of Spouse:  
Languages: Children:  
Honors: Religion:  
Publications: Political Affiliation:

Dr. Karl Beyerle is one of the German experts on centrifuges. 1/  
 An engineer by profession he worked in Hamburg 1/ and later in February  
 1945, at the Anschutz firm in Kiel. 2/

In 1944 Beyerle was a consultant of Fleischmann in connection with  
 a project to measure more accurately the speed of slow neutrons and the  
 absorption by various elements of such moving neutrons. 3/

After the war, in September 1946, Beyerle was reported as being one  
 of the German scientists believed to be in Russia 4/ but this report  
 proved to be erroneous and he was probably being confused with Beierl who  
 is reportedly in Russia. 1/

Dr. Beyerle was last reported as being in charge of Instrumentenbau,  
 a section of KWI charged with the manufacture of instruments. His unit is to  
 produce for KWI groups instruments where industrial enterprises will no  
 longer aid. In July of 1947 they were doing research on mechanical and accous-  
 tical techniques, electrical measurements, construction of amplifiers, elec-  
 tron microscopes, and optical and heat measuring. 5/

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BEYERLE, Dr. Karl (cont.)

In December 1947 Beyerle was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 6/

- 
- 1/ IAC Agency, Washington, D. C., 5 August 1947 (Secret)
  - 2/ IAC Agency, Washington, D. C., February 1945 (Secret)
  - 3/ IAC Agency, Washington, D. C., 17 March 1945 (Secret)
  - 4/ IAC Agency, Washington, D. C., 1 September 1946 (Secret)
  - 5/ IAC Agency, Washington, D. C., 16 July 1947 (Secret)
  - 6/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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BIOGRAPHIC REGISTER

Name: DICKEL, Gerhard Hans

Case No. 8030788

Variant:

Date: 19 July 1948

Alias:Present Position: Reportedly Prof.,Birthdate: 1913

University of Munich

Birthplace:Location: MunichNationality: GermanGen. Occupation: Physical chemistRace: WhiteEducation:Sex: MaleMarital Status: MarriedName of Spouse:Languages:Children:Honors:Religion:Publications:Political Affiliation:

Dr. Gerhard Dickel spent the war years at the Institute of Physical Chemistry, University of Munich with Dr. Klaus Clausius working on isotope separation through thermal diffusion and on heavy water. 1/ Based on an analysis of his prewar work he had been rated among the very top German theoretical physicists. It was indicated that his scientific specialties at that time were Gasentmischung Uranium, Isotopentrennung, Trennröhrenverfahren Bei Flüssigkeiten and Chlorisotop. 2/

In addition to contributing articles to Naturwissenschaften in 1936 and 1939, 2/ Dickel is also the author of the following papers:

"Results of Operation of Sep. Column".

"Preliminary Experiments on Choice of U salt for Development of a Washing-out Process for Isotope Separation", 1940-41.

"Effect on the Performance of the Wire Separation of the Centering and Insertion of Discs", 1942. 1/

"A New Procedure on Isotope Separation through Thermal Diffusion."

1/ IAC Agency, Washington, D. C., undated (Secret)

2/ IAC Agency, Washington, D. C., undated (Secret)

3/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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BIOGRAPHIC REGISTER

Name: ERBACHER, Otto  
 Variant:  
 Alias:

Case No. 8030820  
 Date: 19 July 1948

Present Position: Under contract  
 to French government  
 Location: Tailfingen

Birthdate: 9 February 1900  
 Birthplace: Neubuern Am Inn

Gen. Occupation: Radio-active chemist

Nationality: German

Education: University of Munich,  
 Ph.D. 1923  
 Languages:

Race: White  
 Sex: Male  
 Marital Status: Married (family at  
 Freising)

Honors:

Name of Spouse:

Publications:

Children:

Religion:

Political Affiliation:

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Otto Erbacher, formerly at the Kaiser Wilhelm Institute for  
 Chemistry in 1939 and a specialist in the chemistry of radio-active isotopes,  
 [REDACTED] 1/ A former co-worker and  
 associate of Otto Hahn,

Although he has not worked with protoactinium since 1929 when in collaboration  
 with Kalding and von Grosse he processed a carload of Joachimstal material  
 for it 2/, he has written a recent article on the "Chemistry of Protoactinium  
 and Isotopes" 3/, Erbacher was at Tailfingen during the latter days of the  
 war 3/ and has been on leave since 1946. It was reported that he had  
 tuberculosis but that he expected to return to work early in 1948. 2/

In December 1947 Erbacher was included in a list of German  
 scientists who were thought to be outstanding in the field of nuclear  
 research. 4/

- 1/ IAC Agency, Washington, D. C., 3 July 1947 (Top Secret)
- 2/ IAC Agency, Washington, D. C., 15 December 1947 (Confidential)
- 3/ IAC Agency, Washington, D. C., 24 December 1947 (Confidential)
- 4/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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## BIOGRAPHIC REGISTER

Name: EUCKEN, Prof. ArnoldCase No. 8010556Date: 19 July 1948Variant:Alias:Present Position: Lecturer, Univ.  
of GöttingenBirthdate: 3 July 1885Birthplace: JenaLocation: Buel Str 289, GöttingenNationality: GermanGen. Occupation: Physical ChemistRace: WhiteEducation: Ph.D., Univ. of Berlin,  
1907Sex: MaleMarital Status:Name of Spouse:Languages:Children:Honors:Religion: ProtestantPublications:Political Affiliation:

Prof. A. Eucken, German physical chemist and editor of Die Naturwissenschaften, was last reported as a lecturer at the Winter semester 1947-48 at the University of Göttingen on "Introduction to Physical Chemistry and Molecular Dynamics on the Basis of Spectroscopy. 1/

Son of the later German philosopher Rudolf Eucken, he has a younger brother Walter who is a professor of Economics at the University of Freiburg in Breisgau. Reportedly not an outspoken Nazi, Eucken still is strongly nationalistic and considered very ambitious. It has been stated that Eucken has a tendency to overestimate his personal value somewhat and, though distant from the common people, is a great opportunist as far as his personal career is concerned. 2/

In December 1947 Eucken was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 3/

1/ Physikalische Blätter, Heft 10, 1947

2/ IAC Agency, Washington, D. C., 1943 (Secret)

3/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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## BIOGRAPHIC REGISTER

Name: FLEISCHMANN, Prof. Dr. Rudolf  
Variant: FLEISCHMANN, Arthur Rudolf Wilhelm  
Alias:

Case No. 8010553  
 Date: 19 July 1948

Present Position: Director of Physics  
 Institute, University of Hamburg

Birthdate: 1903, 1 May  
Birthplace: Erlangen

Location: Hamburg 36  
 Jungiusstrasse 9, Germany

Nationality: German

Gen. Occupation: Nuclear physicist

Race: White  
Sex: Male  
Marital Status: Unmarried  
Name of Spouse:

Education: Ph.D. Erlangen, 1929

Languages:

Children:

Honors:

Religion: Protestant

Publications:

Political Affiliation: Reportedly  
 an "extreme Nazi"

Prof. Rudolf Fleischmann, well known German nuclear physicist and colleague of Prof. Bothe, is presently the Director of the Physics Institute at the University of Hamburg. 1/

The son of Albert Fleischmann, Professor of Zoology at the University of Erlangen, Rudolf studied at Erlangen and the University of Munich, 1922 to 1926. 2/ He then worked on his doctorate under Prof. B. Gudden and received his degree 25 July 1929. From March 1930 to October 1932 he worked in the First Physics Institute of the University of Göttingen with Prof. Pohl and from October 1932 to May 1934 he was a regular assistant 3/ to Prof. Bothe 1/ at the Philipp Lennard Institute (formerly the Physio-Radiology Institute) of the University of Heidelberg. On 1 May 1934 he was appointed assistant to Prof. Bothe at the Institute for Physics of the Kaiser Wilhelm Institute for Medical Research at Heidelberg, a position he held until 1941 3/ when he was appointed a part time professor at the University of Strasbourg. 1/ It was here that Fleischmann was seized in November 1944 by U.S. forces, interrogated and sent to the U.S. as a prisoner of war. 4/ At the time of his capture, he was described as an "extreme Nazi" and not cooperative. He maintained his work was of a fundamental nature and covered exclusively application of induced radio-activity to biological research. 5/

Politically Fleischmann was a Nazi. A member of the party since 1933 his captured files contained a stenographic transcription of a speech given by Hitler in 1923 and a complete genealogy back to his Ur-Ur-Eltern (great-great-grandparents). He was probably but not certainly a member of the Reichforschungsrat under Gerlach. Records indicate he wrote to Gerlach concerning locations for an evacuation laboratory, received valve designs from Groth and was in constant communication with obvious members like Maurer. 6/

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FLEISCHMANN, Prof. Dr. Rudolf

Scientifically Fleischmann had been described as a high grade experimental physicist, a specialist in nuclear physics and methods of isotope separation.<sup>4/</sup> Based only on a review of his prewar work, he was rated during the war close to the very top of his field <sup>7/</sup> and more recently was included among a list of the outstanding German scientists in the atomic energy field. <sup>8/</sup> Despite Fleischmann's claims that his research was fundamental, <sup>5/</sup> captured records indicate that he worked hard on separating UF<sub>6</sub> using a separator-tube. He attended several meetings of great importance in March 1941, February 1942 and October 1943 at which many important nuclear physicists were present and lectured at the first meeting. <sup>3/</sup> Fleischmann also worked on a top priority research assignment for the Luftwaffe and for the Reichsamt fur Wirtschaftsausbau (National Office for Economic Development) specifically, research into the application of nuclear physics to the solution of problems involving analytical chemistry. It was reported that in 1942 he had conferred also with Dr. Schieber, of the Ministry of Munitions, about his research program and especially to obtain permission to build a cyclotron.<sup>9/</sup> It is interesting to note that Fleischmann in his article, "The Physics of the Atomic Nucleus and the Prospects for its Practical Application", (undated but probably 1942) stated "Experiments to date make it seem very probable that the uranium machine will work. Its principal advantage will be that the "fuel" will be consumed only very slowly. Thus .... it will be possible to give a ship .... a very great cruising radius .... At the moment it seems less likely that the uranium machine can be used as an effective bomb". <sup>10/</sup>

He has published about thirty-five papers on nuclear physics and collaborated on some of these with Prof. Bothe, Wolfgang Gentner and Norline. <sup>3/</sup> (See attached list of articles.)

Fleischmann left the U.S. early in 1946 <sup>12/</sup> and has held the chair of Physics in the University of Hamburg since May 1947. <sup>11/</sup>

- 
- <sup>1/</sup> IAC Agency, Washington, D.C., 21 January 1946 (Secret)
  - <sup>2/</sup> IAC Agency, Washington, D. C., 23 December 1944 (Secret)
  - <sup>3/</sup> IAC Agency, Washington, D. C., 12 February 1945 (Secret)
  - <sup>4/</sup> IAC Agency, Washington, D. C., 29 January 1945 (Secret)
  - <sup>5/</sup> IAC Agency, Washington, D. C., 15 December 1944 (Secret)
  - <sup>6/</sup> IAC Agency, Washington, D. C., 18 June 1945 (Secret)
  - <sup>7/</sup> IAC Agency, Washington, D. C., undated (Secret)

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FLEISCHMANN, Prof. Dr. Rudolf

- 8/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)
- 9/ IAC Agency, Washington, D. C., 30 June 1945 (Secret)
- 10/ IAC Agency, Washington, D. C., November 1945 (Secret)
- 11/ IAC Agency, Washington, D. C., undated (Secret)
- 12/ IAC Agency, Washington, D. C., 20 February 1946

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FLEISCHMANN, R.

Author of the following articles in German journals.

- "Some constants and properties of UF<sub>6</sub>." (Source unknown.)
- "Cross-section of aluminum for thermal neutrons." (Source unknown.)
- "Measurement of vapour pressure of reactive substances. (A new application of the separator tube.)" *Naturwissenschaften*, Vol. 29, pp. 485-488 (Aug. 8, 1941).
- "Nuclei, radioactivity." *Phys. in regelmass. Ber.*, Vol. 8, No. 1, pp. 17-48 (1940). (Survey of work on nuclear reactions and isotope separation from 1935 to Nov. 1939.)
- "Enrichment of N<sup>15</sup> by the separation column method of Clusius and Dickel." *Physikalische Zeitschrift*, No. 41, pp. 14-18 (Jan. 1, 1940).
- "Absorption of slow neutrons in B and Li and the 1/v law." *Zeitschrift für Physik*, Vol. 108, No. 7-8, pp. 485-490 (1938). With F. Norling.
- "Neutron-induced Cd radiation." *Zeitschrift für Physik*, Vol. 111, No. 5-6, pp. 281-291 (1938).
- "Effective cross-sections for slow neutrons." *Zeitschrift für Physik*, Vol. 105, No. 11-12, pp. 690-703 (1937).
- "Slow neutrons." *Ergebnisse der exakten Naturwissenschaften*, Vol. 16, pp. 1-46 (1937). With W. Bothe.
- "Recent results of experimental nuclear investigations." *Zeitschrift für technische Physik*, Vol. 18, No. 12, pp. 490-503 (1937).
- "Resonance levels of the two Br<sup>80</sup> isomers." *Zeitschrift für Physik*, Vol. 107, No. 3-4, pp. 205-209 (1937).
- "Energy resonance for the capture of neutrons." One section of a book on "Nuclear Physics" issued by the Physical Institute of the Technical College in Zurich in the summer of 1936. Other coauthors were P. Auger, G. Bernardini, W. Bothe, J. Clay, J. D. Cockcroft, J. R. Danning, S. Franchetti, H. Geiger, H. v. Halban, Jr., L. Meitner, M. L. E. Oliphant, P. Preiswerk, and E. J. Williams. Book was edited by E. Bretscher in Berlin in 1936. See *Naturwissenschaften*, Vol. 25, No. 15, pp. 235-236 (April 9, 1937).
- "Wave-length dependence of nuclear photo-effect of beryllium." *Zeitschrift für Physik*, Vol. 100, No. 7-8, pp. 440-444 (1936). With W. Gentner.
- "Output of gamma radiation excited by slow neutrons." *Zeitschrift für Physik*, Vol. 100, No. 5-6, pp. 307-320 (1936).
- "Energy liberated at neutron capture." *Zeitschrift für Physik*, Vol. 103, No. 1-2, pp. 115-124 (1936).
- "Quantum energies of some nuclear gamma rays." *Naturwissenschaften*, Vol. 24, No. 5, pp. 77-78 (Jan. 31, 1936). From Institute of Physics, Kaiser Wilhelm Institute for Medical Research, Heidelberg.
- "Artificial nuclear transformations." *Ergebnisse der exakten Naturwissenschaften*, Vol. 14, pp. 1-41 (1935). With W. Bothe.
- "Excitation of secondary gamma radiation by neutrons." *Zeitschrift für Physik*, Vol. 97, No. 3-4, pp. 242-264 (Oct. 11, 1935); No. 5-6, pp. 265-276 (Oct. 18, 1935). *Zeitschrift für technische Physik*, Vol. 16, No. 11, pp. 412-414 (1935).

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FLEISCHMANN, R. (articles, cont.)

"Gamma radiation of artificially radioactive elements." Naturwissenschaften, Vol. 22, No. 25, p. 434 (June 22, 1934). From Institute of Physics, Kaiser Wilhelm Institute for Medical Research, Heidelberg.

"Gamma radiation resulting from slow neutrons." Naturwissenschaften, Vol. 22, No. 50, p. 839 (Dec. 14, 1934). From Heidelberg.

"New form of Geiger counter." Naturwissenschaften, Vol. 20, No. 15, p. 270 (April 8, 1932).

"Selective light absorption in thin layers of alkali metal." Naturwissenschaften, Vol. 20, No. 15, p. 272 (April 8, 1932).

"Artificial nuclear gamma rays, neutrons and positrons. Ergebnisse der exakten Naturwissenschaften, Vol. 13, pp. 1-56 (1934). With W. Bothe.

"External photoelectric effect in alkali halides." Zeitschrift für Physik, Vol. 84, No. 11-12, pp. 717-721 (Aug. 21, 1933).

"Photoelectric effect in semi-insulators." Annalen der Physik, Vol. 5, No. 1, pp. 73-106 (May 16, 1930).

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## BIOGRAPHIC REGISTER

Name: FLUEGGE, Prof. Dr. Siegfried Case No. 8060181  
Variant: FLUGGE, Prof. Dr. Siegfried 30 July 1948

Present Position: Teaching, University of Marburg Birthdate: 16 Mar 1912  
 Birthplace: Dresden, Germany

Location: Marburg an der Lahn, Rent-hof 5 Nationality: German

Gen. Occupation: Nuclear Physicist Race: White  
 Sex: Male

Education: Ph.D. Marital Status:  
 Name of Spouse:

Languages: Children:

Honors: Religion:

Publications: Political Affiliation:

Dr. Siegfried Fluegge, recently (November 1947) appointed to the newly established Chair of Structure of Matter at the University of Marburg, 1/ reportedly is teaching Higher Quantum Theory and Theoretical Optics and with Prof. Huckel is conducting a seminar in theoretical physics. 2/

Until 1937 Fluegge was an assistant to Heisenberg and then moved to the Kaiser Wilhelm Institute for Chemistry. He later became a full professor at the University of Koenigsberg. 3/ A theoretical physicist, he was an early writer on the technical uses of chain reaction, 6/ and based on an analysis of his prewar work only, Fluegge was rated at the very top of his field at the beginning of the war. 7/ During the war Fluegge worked with Mattauch and Hahn, 4/ and also was associated with von Ardenne at the high tension laboratories of the Reichpost. 5/ After V-E day he was given a "high" rating, 8/ and was placed in the top priority group for denial to a potential enemy nation. 9/ One of the Senior Authors of the FIAT review of German Scientists, 5/ Fluegge lectured at the University of Gottingen for a while before going to the University of Marburg. 10/

In 1947 his services were requested by the Office of Naval Research to do work at the University of Chicago, 11/ and an investigation to determine his political eligibility has been initiated. 12/ A specialist in the field of theoretical and nuclear physics and quantum theories, Fluegge has written numerous articles some of which are listed on the attached pages.

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~~SECRET~~FLUEGGE, Prof. Dr. SiegfriedList of Source Material

- 1/ Physikalisch Blatter #7, 1947
- 2/ Physikalischen Blatter #9, 1947
- 3/ IAC Agency, Wash., D.C., 21 May 46 (Secret)
- 4/ " " " " 15 Dec 44 ( " )
- 5/ " " " " undated ( " )
- 6/ " " " " 17 June 44 ( " )
- 7/ " " " " undated ( " )
- 8/ " " " " 21 Feb 48 ( " )
- 9/ " " " " 22 Aug 47 ( " )
- 10/ " " " " undated ( " )
- 11/ " " " " 19 Aug 47 (Secret)
- 12/ " " " " 10 Dec 47 ( " )

Attachment: List of Publications

- 2 -

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FLUGGE, S. (The S. may stand for Siegfried.  
See the last article in the following  
list.)

"Spontaneous fission of uranium and its neighboring elements."  
Zeitschrift fur Physik, p. 298 (1943).

Introduction to "Nuclear Physics Tables," by J. Mattauch. A book  
published by Springer in Berlin in 1942.

"Isotope report for 1941." Physikalische Zeitschrift, Vol. 43,  
pp. 1-5 (Jan. 1942). With J. Mattauch.

"The problem of isomerism in nuclear physics." Physikalische  
Zeitschrift, Vol. 42, No. 13-14, pp. 221-254 (Sept. 1941).

"Characteristic vibrations of a liquid drop, with application to  
nuclear physics." Annalen der Physik, Vol. 39, p. 373 (1941).

"The artificial production of naturally radioactive elements."  
Naturwissenschaften, Vol. 29, pp. 462-467 (Aug. 1, 1941). Report on  
work with cyclotron.

"Concept of exchange energy in quantum mechanics." Naturwissen-  
schaften, Vol. 29, No. 43, pp. 673-677 (Oct. 25, 1940). From Berlin-Dahlem.

"Isotope report for 1940." Physikalische Zeitschrift, Vol. 42,  
pp. 1-5 (Jan. 1, 1941). With J. Mattauch.

"Chemical elements and natural atomic species according to  
results of isotopic and nuclear investigation." Physikalische Zeitschrift,  
Vol. 41, pp. 1-14 (Jan. 1, 1940). With O. Hahn and J. Mattauch.

"Quadrupole moment of the deuteron and nuclear forces."  
Zeitschrift fur Physik, Vol. 113, No. 9-10, pp. 587-595 (1939).

"Disintegration of Th." Naturwissenschaften, Vol. 27, No. 27,  
pp. 470-471 (July 7, 1939). From Kaiser Wilhelm Institute for Chemistry,  
Berlin-Dahlem.

"Remarks on nuclear isomerism." Naturwissenschaften, Vol. 27, No. 27,  
pp. 470-471 (July 7, 1939). From Kaiser Wilhelm Institute for Chemistry,  
Berlin-Dahlem.

"Prospects of technical utilization of energy-content of atomic nuclei."  
Naturwissenschaften, Vol. 27, pp. 402-410 (June 9, 1939). Report on recent  
papers dealing with this problem in connection with the newly discovered  
fission of the U nucleus. From Kaiser Wilhelm Institute for Chemistry,  
Berlin-Dahlem.

"Energy considerations of production of Ba by irradiation of U with  
neutrons." Zeitschrift fur Physikalische Chemie, Vol. 42, Section B,  
No. 3-4, pp. 274-280 (1939). With G. v. Droste.

"Grain-size and diffusion constant from emanating power."  
Zeitschrift fur physikalische Chemie, Vol. 42, Section B, No. 3-4,  
pp. 179-220 (1939). With K. E. Ziegler.

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C O P Y

FLUGGE, S. (articles, cont'd.)

"Adsorption at surfaces with congealed thermal equilibrium of the active zones." Zeitschrift fur physikalische Chemie, Vol. 4, Section B, No. 6, pp. 453-465 (1938). With E. Cremer.

"Emission of neutrons from substances rich in hydrogen." Zeitschrift fur Physik, Vol. 111, No. 1-2, pp. 109-124 (1938).

"Cross-sections for reactions between very light nuclei." Zeitschrift fur Physik, Vol. 108, No. 9-10, pp. 545-549 (1938).

"Mass defects of light nuclei from recent theories of nuclear forces." Zeitschrift fur Physik, Vol. 105, No. 9-10, pp. 522-536 (1937).

"Nuclear physics." Physikalische Zeitschrift, Vol. 38, pp. 13-36 (Jan. 1937). With A. Krebs.

"Structure of the light atomic nucleus." Zeitschrift fur Physik, Vol. 96, No. 7-8, pp. 459-472 (Sept. 7, 1935).

"Is there a neutron of mass 2?" Zeitschrift fur Physik, Vol. 95, No. 5-6, pp. 312-318 (June 17, 1935).

"Possible occurrence of bineutrons in nuclear transformations." Zeitschrift fur Physik, Vol. 95, No. 5-6, pp. 319-320 (June 17, 1935). With A. Krebs.

"Nuclear chemistry." Physikalische Zeitschrift, Vol. 36, pp. 466-480 (July 1, 1935). With A. Krebs.

"Deduction of the fundamental equation of statistics." Zeitschrift fur Physik, Vol. 93, No. 11-12, pp. 804-808 (Feb. 26, 1935).

"Viscous elasticity." Annalen der Physik, Vol. 22, No. 3, pp. 209-222 (March 1935).

"New interpretation of wave-mechanics." Zeitschrift fur Physik, Vol. 87, No. 7-8, pp. 432-441 (Jan. 26, 1934). With E. Madelung.

"Theory of the stoppage of fast electrons." Zeitschrift fur Physik, Vol. 85, No. 11-12, pp. 693-696. (Oct. 14, 1933).

"Influence of neutrons on the internal structure of the stars." Zeitschrift fur Astrophysik, Vol. 6, pp. 272-292 (May 11, 1933).

"Wave mechanics model of the neutron." Zeitschrift fur Physik, Vol. 81, No. 7-8, pp. 491-495 (March 30, 1933).

"Quantum mechanics of diatomic systems." Annalen der Physik, Vol. 16, No. 7, pp. 768-780 (April 1933).

"Present status of problems of stellar absorption." Naturwissenschaften; Vol. 20, pp. 704-705 (Sept. 16, 1932). From Göttingen. Author is given here as Siegfried Flugge.

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~~SECRET~~FLUEGGE, Siegfried - Nuclear Physicist

"On the Quantum Mechanical Exchange Energy" (1940)

"The Determination of Grain Sizes &amp; Diffusion Constants by means of the Emanating Power" (1939). With Zimens.

"Can the Energy Content of the Atom Nucleus be Utilized Technically?" (1939)

"Observations on the Theory of the Rheotron." (1944)

"On the Theory of Resonance Absorption." (1942)

"Estimate of the Proportion of Neutrons Absorbed in the Resonance Area in a Ur.-Hydrogen Mixture." (1939)

"Can One Drive a Uranium Machine in Collaboration with Fast Neutrons?" Unpublished. Research Report. (1942)

"On the Excitation of Neutrons by Cosmic Rays &amp; Their Distribution in the Atmosphere." 1946. (cy in Naval Research Lab. Library)

"Velocity Distribution ("Geschwindigkeits Spectrum") of Slow Neutrons Emitted by a Paraffin Source." (1944)

"Calculation of Fraction of Neutrons which are Absorbed in Resonance Lines in a U - H<sub>2</sub>O Mixture." Part III (1940)"Calculation of Fraction of Neutrons which are Absorbed in Resonance Lines in a U - H<sub>2</sub>O". Part II. (1940)

"Investigation of the Resonance Capture of Neutrons by Uranium II." (1942) In collaboration with Sauerwein.

"Prospects of Tech. Utilization of Energy Content of Nuclei"

"Energy Consideration of the Production of Barium by Irradiation of U with Slow Neutrons" -- with von Droste.

"The Chemical Elements &amp; Natural Isotopes according to the State of Research on Isotopes &amp; Nuclei - (1940) With Hahn, Mattauch. Supplement. (1942)

"Isotope Weights &amp; Packing Fraction Curve" -- with Hahn, Mattauch.

"Production of Element 85 by  $\alpha$  Disintegration of Radium A and Thorium A" du collaboration with Adolf Krebs. (1944)

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## BIOGRAPHIC REGISTER

Name: FUENFER, Erwin Case No. 8030874  
 Variant: FUNFER, Erwin Date: 19 July 1948  
 Alias:

Present Position: Research work Birthdate: 1911  
For the French Birthplace:  
 Location: St. Louis, France

Gen. Occupation: Nuclear physicist Nationality: German

Education: Ph.D. Race: White  
 Sex: Male  
 Languages: Marital Status:  
 Name of Spouse:

Honors: Children:

Publications: Religion:

Political Affiliation:

Dr. Erwin Fuenfer, German nuclear physicist, was last reported at St. Louis France engaged in physical experimental research in discharge problems, e.g. guided spark. 1/

A former student of Geiger or of Gehrtzen, and later assistant to Gehrsten at the University of Giessen, Fuenfer also was a lecturer at that University. 2/

Beginning in 1941 Fuenfer, Flammersfeld and Bothe made up the Heidelberg group under the latter's direction and conducted research on pile experiments there until 1943. They then joined the Kaiser Wilhelm Institute for Physics in Berlin-Dahlem under Weisacker and Heisenberg. 3/ One report indicates that in March 1941 at a conference of German scientists Fuenfer spoke regarding thermal neutrons and Iron, Nickel and Cobalt (or copper) and again in February 1942 regarding neutron, Beryllium, mean-free-paths and diffusion pathlengths, absorption and Radium-Beryllium. 4/

Fuenfer has written many articles some of which are listed below:

"Layer Experiments with Varying Uranium and Heavy Water Thickness."

"Disintegration of Boron by Slow Neutrons."

"Back Scattering of C-Neutrons in Iron." 1940

"Absorption of Thermal Neutrons and Increase of Fast Neutrons in Beryllium", 1941.

"Increase and Absorption of Fast Neutrons in Carbon Water and Heavy Water", 1942.

"Further Measurements on the Neutron Increase in U by Fast Neutrons", 1942.

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FUENFER, Erwin (cont.)

"Layer Experiments with Variation in the Thicknesses of U and D<sub>2</sub>O", 1943.

"Experiment with 1.5 tons D<sub>2</sub>O and U and a 40 Cm. Carbon Reflector",  
1915. 5/

Based only on a review of his prewar work, Fuenfer was rated as close to the top in his field. 6/ and more recently has been included in a list of outstanding German scientists in the field of nuclear research.

- 
- 1/ IAC Agency, Washington, D. C., 31 March 1947 (Secret)
  - 2/ IAC Agency, Washington, D. C., 21 May 1946 (Secret)
  - 3/ IAC Agency, Washington, D. C., 16 January 1945 (Secret)
  - 4/ IAC Agency, Washington, D. C., 15 February 1945 (Secret)
  - 5/ IAC Agency, Washington, D. C., undated, (Secret)
  - 6/ IAC Agency, Washington, D. C., undated, (Secret)
  - 7/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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BIOGRAPHIC REGISTER

Name: GROTH, Dr. Wilhelm

Case No. 8010552

Variant:

Date: 19 July 1948

Alias:Present Position: Professor, PhysicsBirthdate: 1904Institute, University of HamburgBirthplace:Location: Hamburg 36, Klopstoch Str.Front 8Nationality: GermanGen. Occupation: Physical chemistRace: WhiteEducation: Ph.D.Sex: MaleMarital Status:Languages:Name of Spouse:Honors:Children:Publications:Religion:Political Affiliation: Anti-Nazi

Dr. Wilhelm Groth, German atom expert 1/ and former assistant to Prof. Harteck, 2/ was last reported as holding a professorship at the "Physikalisches Institut" of Hamburg University. 1/

An anti-Nazi, Groth was among a group of persons whom the Hofgeismar Purge Tribunal exonerated on February 13, 1948. He recently denied statements of the German and foreign press according to which he had informed Nils Bohr, the Danish atom expert, on the state of German atomic research. When giving evidence before the Purge Tribunal he had said that Bohr, as well as German atom experts, had been informed that trials in the sphere of atomic research in Germany were made along wrong lines and would yield no practical success in the near future. A written statement of the Chairman of the Purge Tribunal however showed that Groth had not stated that he had informed Bohr. 1/

A specialist in the field of isotope separation by use of the ultracentrifuge, Groth did research on this problem from 1941 until 1944 first at Hamburg University 3/ later at Freiburg and finally in November 1944 at Celle where he and his apparatus were seized later by an ALSOS team. 4/ Dr. Groth was in charge of fourteen scientists at Celle. 4/

In 1943 he was among the scientists who attended a meeting under the chairmanship of Mr. Speer, Minister of Armament and War Production, when the problem of nuclear physics was discussed. 5/

A captured German technical report indicated that Professors Svedberg and Dr. Pedersen of Upsala, Sweden learned something of the German isotope separation project from Groth.

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GROTH, Dr. Wilhelm (cont.)

Groth, on the basis of his prewar work, only had been rated as close to the top in his field 6/ and later was given a very high rating in the Strassburg Summary. 7/ He has published many articles some of which are listed below:

"Enrichment of Krypton Isotopes" in collaboration with collaboration with Harteck, 1940.

"Status of Work on Separating U235 and 4238", 1940.

"Corrosion Experiments on Two Alloys Toward UF<sub>6</sub>", 1940.

"Status of Work on Building an Ultracentrifuge", 1941.

"Status of Work on Isotope Separation at the University of Hamburg", 1940.

"Report on Meeting with Prof. Svedberg and Dr. Pedersen at Upsala, Sweden", 1942.

"Separation of U Isotopes by the Ultracentrifuge. I. Enrichment of Xenon Isotope", 1942.

"Status of Work on Separation of Isotopes of Pres. Uranium", 1942.

"Separation of U Isotopes by the Ultra-centrifuge II. Enrichment of U234 and U235", 1942.

Production of UF<sub>6</sub> on a Semi-Commercial Scale. Investigation of the Alloy Capability of U", 1942.

"Separation of U Isotopes by the Separation Tube and the Ultracentrifuge", 1942.

Groth has also done some research in ultraviolet rays 3/ and recently has been included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 6/

- 1/ IAC Agency, Washington, D. C., 1 March 1948 (Secret)
- 2/ IAC Agency, Washington, D. C., 21 May 1946 (Secret)
- 3/ IAC Agency, Washington, D. C., undated (Secret)
- 4/ IAC Agency, Washington, D. C., 16 June 1945 (Secret)
- 5/ IAC Agency, Washington, D. C., 19 August 1948 (Secret)
- 6/ IAC Agency, Washington, D. C., undated (Secret)
- 7/ IAC Agency, Washington, D. C., 12 February 1948 (Secret)
- 8/ IAC Agency, Washington, D. C., ~~SECRET~~ December 1947 (Secret)

834021-1454

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BIOGRAPHIC REGISTER

Name: HAXEL, Otto  
Variant:  
Alias:

Case No. 8010550  
 Date: 19 July 1948

Present Position: Scientific assistant  
 at the KWIP, Univ. of Göttingen  
Location: Zeppelin, Str. 5, Göttingen

Birthdate: 1909  
Birthplace:

Gen. Occupation: Physicist

Nationality: German

Education: Ph.D.

Race: White

Sex: Male

Languages:

Marital Status:

Name of Spouse:

Honors:

Children:

Publications:

Religion:

Political Affiliation: Nazi Party

Otto Haxel, former student and assistant to Prof. Geiger at the Physikalische Technische Hochschule in Berlin-Charlottenburg before the war 1/ recently (September 1947) collaborated with F. G. Hausermanns on a paper entitled "Coincidences with B-Decay and Decay Constants of Rbidium". 2/ It is presumed Haxel is still at the Kaiser Wilhelm Institute for Physics, at the University of Göttingen where he was reported as late as the fall of 1947. 2/

A former party member 1/ and member of the project under Dr. Diebner of the Reichsforschungsrat at Rathaus, 3/ Haxel is reported to have contributed to nuclear research in Germany before the war. 4/

In March 1947 he attended a seminar of nuclear physicists at the St. Louis Laboratory in France and gave a lecture on the Penetration of Matter (Crystals) by Neutrons. 5/ A specialist in the investigation of resonance levels thru transmutation by means of alpha rays, Haxel has also collaborated with Volz in measuring absorption cross sections. 6/

In addition to the articles listed below he is also one of the FIAT Report authors. 6/

"Nuclear Transformation of Boron by Slow Neutrons", before 1939.

"Energy and Range of Heavy Disintegration Products of U", before 1935.

"The Absorption of Neutrons in Aqueous Solutions" in collaboration with Volz, 1940.

"Absorption Cross Section for Slow Neutrons. Method I Dependence on Concentration", in collaboration with Volz, 1940.

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"Absorption and Slowing Down of Neutrons in BeO", 1941.

"Absorption of Neutrons in Uranium", in collaboration with Volz, 1941.

"Measurement of the Thickness of the Corrosion Protection Layer on Uranium", 1944.

"Energy and Range of Slow Alpha Rays", in collaboration with Haeman, 1943.

In December 1947 Haxel was included in a list of German scientists who were thought to be outstanding men in the field of nuclear research. 7/

- 
- 1/ IAC Agency, Washington, D. C., 21 May 1946 (Secret)
  - 2/ Physikalische Blatter #9, 1947
  - 3/ IAC Agency, Washington, D. C., 13 April 1945 (Secret)
  - 4/ IAC Agency, Washington, D. C. 28 March 1946 (Secret)
  - 5/ IAC Agency, Washington, D. C., 12 March 1947 (Secret)
  - 6/ IAC Agency, Washington, D. C., undated (Secret)
  - 7/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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## BIOGRAPHIC REGISTER

Name: HOUTERMANN, Fritz, G. Case No. 7005160  
Variant: HOUTERMANS, Fritz G. 30 July 1948

Present Position: Lecturer & professor Birthdate: 22 Jan. 1903  
 Second Physics Institute, University Birthplace: Danzig  
 of Göttingen.

Location: 22 Lotzestrasse, Göttingen. Nationality: German

Gen. Occupation: Physicist Race: White  
 Sex: Male

Education: Germany; Cambridge University, Marital status: Married  
 England; Kharkov Physico-Technical Name of Spouse:  
 Institute, Russia Children:

Languages: Religion:

Honors: Political Affiliation:  
 (See below)

Publications:

Fritz Houtermanns, German physicist, has been reported as lecturing at the winter semester, 1947-48, at the University of Göttingen on the Physics of the Neutron. 1/

Born in Danzig of Dutch extraction, Houtermanns grew up in Austria and Germany and left the latter in 1933 when he was an associate and co-worker of Gustav Hertz because of the Nazi party. He proceeded to England and worked at Cambridge University and subsequently went to Kharkov, Russia where he worked at the Physico Technical Institute.

In 1937 as he was preparing to leave Russia, Houtermanns, according to his own statement, was arrested by the NKVD (now the MVD) on vague charges of counter revolutionary activity for Germany. Shortly after the German-Russian Treaty of 1939 and as a result of the intervention of Dr. R. A. Millikan of California Tech, he was released in 1940 after preparing what he claims was a false confession of technical espionage which he formed in such a manner as to be scientifically fallacious, but which satisfied the NKVD, who exiled him to Germany in spite of his requests not to be sent there. Upon his arrival in Germany, Houtermanns says he was immediately imprisoned by the Gestapo. 2/ After three months he was released but he was never admitted to the URAN VEREIN (Uranium Society) because he was considered unsafe. 3/ As a result his connection

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~~SECRET~~HOUTERMANN, Fritz, G.

with the German nuclear physics project was not great although he was in close contact with von Weizsacker and von Ardenne and worked with the latter on a cyclotron.

In 1941 Houtermanns wrote a long and detailed evaluation of the quality, political inclination and present situation of physicists, engineers and technically trained helpers in the USSR, based on his personal observations. He made two trips to Kiev and Kharkov in 1941 in the service of the RIM for the purpose of taking over research institutions. 4/ Houtermanns' official position during the war was with the PTR (German Bureau of Standards) at Ronneburg, Thuringen where he worked with counter-tubes. 2/

Politically, Houtermanns at the time of his departure from Gottingen in 1933 was inclined toward Communist trends. This view, however, was soon changed due to his imprisonment as a foreign suspect and other unpleasant experiences while in Russia prior to 1940. 5/ His request to the Russians not to be returned to Germany indicates his anti-Nazi sympathies. 6/ In 1945 Houtermanns, in an interview with a representative of the U.S., stated he believed that Russia has not abandoned her desire of creating world-wide Communism. A criterion of the sincerity of any nation, Houtermanns believes, can be established by the insistence on the part of the U.N. that each member nation allow its citizens to emigrate freely. He believes that a nation refusing this right to its citizens cannot be trusted and that the U.N. can still force Russia to adopt this rule. 7/

Scientifically, opinions on Houtermanns differ. A technical interrogator in 1945, appraised him as possessing information which was unreliable and opinions which were immature. 3/ An equally reliable source indicated that this appraisal should be discounted. 3/ Houtermanns was stated to be the first man in Germany to propose fissionability of plutonium and wrote several memoranda on the subject but little attention was paid to him in Germany. 6/

Houtermanns has written many articles some of which are listed below:

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~~SECRET~~HOUTERMANN, Fritz, G.

"The Energy Consumption of Isotopic Separation" 1941.

"Nuclear Physics Works in Naturwissenschaften" 1940-41.

"The Question of Starting a Nuclear Chain Reaction" 1941

"The Question of Releasing Nuclear Chain Reactions" 1944

"On the Use of Thorium for Nuclear Energy from Fission" 1945.

"Concerning the Thermal Dissociation of the Vacuum." 3 Mar 47.  
in collaboration with Jensen."Über den (n,2n) -- Processes Involving Beryllium with Neutrons  
From a (Po / Be) Source."

"Mathematisch-Physikalische Klasse" 1946/

"The Age of Uranium" June 1947.

Collaborated with O. Haxel on a paper entitled, "Coincidences  
with B-Decay and decay constants of Bismuth" 1947.Mrs. Houtermanns has been reported as being at the Physics Department  
of Radcliffe College, Cambridge, Mass. 6/

- 
- 1/ Physikalische Blatter, No. 10, 1947 (unclassified)
  - 2/ IAC Agency, Washington, D.C., 20 Feb 46 (Secret)
  - 3/ " " " " , 10 Jan 46 (Secret)
  - 4/ " " " " , 8 Oct 45 (Secret)
  - 5/ " " " " , 29 July 47 (Secret)
  - 6/ " " " " , 30 Jan. 46 (Secret)
  - 7/ " " " " , 12 Sept. 45 (Secret)

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## BIOGRAPHIC REGISTER

Case No. 8010573  
Date: 29 July 1948Name: JENSEN, Hans  
Variant: JENSEN, J(ohannes) HansPresent Position: University of HamburgBirthdate: 1907  
Birthplace:Location: Hamburg, GermanyNationality: Naturalized German  
of Dutch extraction.Gen. Occupation: Physical ChemistEducation:

Race: White

Sex: Male

Languages:

Marital Status:

Name of Spouse:

Honors:

Children:

Publications:

Religion:

Political Affiliation:

At the beginning of the last war Professor Hans Jensen, recently (Dec. 47) reported at the University of Hamburg, 1/ had been rated by U.S. sources, based on a survey of his pre-war work only, as very close to the top in his field. 2/

A former full professor, 3/ and Director of the Institute of Physical Chemistry at the Technische Hochschule at Hannover, 1/ Jensen was a theoretical collaborator at the Institute Harteck during the war. 3/ Known for his work on the theoretical considerations of the separation of isotopes, 2/ he was an advisor to Harteck, Groth and Suhr, on their ultracentrifuge experiments and also worked on heavy water research. 1/ He corresponded frequently with Prof. Rudolf Fleischmann, at the University of Strasbourg on isotope separation research and for a time worked on the cyclotron in Paris. 4/

An indication of Jensen's importance is shown in a report that stated in 1943 a meeting was called by Mr. Speer, German Minister of Armaments and War Production, to discuss the problem of nuclear physics and Jensen was one of the scientists invited to attend. 5/ He also was given a "high" rating by U.S. analysts in 1944. 4/

Politically, little is known of Jensen except that he allegedly kept Bohr informed on research activities in Germany and Norway during the war. 1/

He is the author of many works some of which are listed below:

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JENSEN, Hans

"On the Slowing Up, Scattering and Capture of Neutrons in Solid CO<sub>2</sub> and on Their Capture in Ur" in collaboration with Harteck, Knauer and Suess. 1940. Unpublished.

"Slowing Up of Neutrons in Carbon, Water and Heavy Water." 1944.

"Absorption of Thermal Neutrons in Carbon" in collaboration with Bothe. 1944.

\* "Concerning the Thermal Dissociation of Vacuums" in collaboration with Houtermanns.

\* "Concerning the Excitation of Molecular and Lattice Oscillation Caused by Recoil in Nuclear Processes in Chemically Combined Atoms" in collaboration with Steinwedel.

\*Articles published by Jensen, J. Hans D. and presumed to be the Jensen reviewed above:

- 1/ IAC Agency, Washington, D.C., undated. (Secret)
- 2/ IAC Agency, Washington, D.C., undated. (Secret)
- 3/ IAC Agency, Washington, D.C., 21 May 46 (Secret)
- 4/ IAC Agency, Washington, D.C., 12 Feb. 45 (Secret)
- 5/ IAC Agency, Washington, D.C., 19 Aug. 45 (Secret)

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## BIOGRAPHIC REGISTER

Name: JORDAN, Prof. Dr. Paul

Case No. 8010399

Variant:

Date: 19 July 1948

Alias:

Present Position: Guest professor Birthdate: 18 October 1902  
at Hamburg University Birthplace: Hanover, GermanyLocation: Hamburg 36, Jungius Str.  
9, Germany

Nationality: German

Gen. Occupation: Astro-physicist

Race: White

Education: University of Göttingen Sex: Male  
1924

Marital Status: Married

Languages: .

Name of Spouse:

Honors:

Children:

Publications:

Religion: Protestant

Political Affiliation: Reportedly an  
"avowed Nazi"

Prof. Paul Jordan, the son of a Hanover painter Prof. Ernst Jordan, attended the University of Göttingen where he specialized in physics, mathematics and the natural sciences. He received his degree in 1924 and later studied in Copenhagen. After serving as an assistant professor at Göttingen, he moved to Hamburg where he taught theoretical physics from 1927 to 1929 and later from 1935 to 1944 at Rostock where he became a full professor. 1/ Jordan is reported also as occupying the chair Theoretical Physics in Berlin during 1943 and 1944. 2/

After the collapse of Germany, he was allegedly invited to succeed Prof. Max von Laue at Berlin and from 1945 to 1947 he taught and did research work at Göttingen. 1/ In the spring of 1947, together with a German solar physicist named Kiepenheuer, Jordan reportedly attended a conference held at St. Louis, France by the Joliot-Curie Committee on Atomic Energy 3/ and lectured on new cosmologic theories. 4/

In 1947 he was appointed guest professor at Hamburg, 1/ where it is reported that his lectures drew upwards of 400 students. His wife is stated to be in Berlin trying to move their effects to Hamburg 2/ where Jordan is living in incredibly primitive conditions and "literally starving". 5/

Politically Jordan has been reported as being an "avowed Nazi" but his ability has been acknowledged both by his fellow workers 6/ and by our own scientists who rated him very close to the top based only on his pre-war activities. 7/

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JORDAN, Prof. Dr. Paul

- 1/ IAC AGENCY, WASHINGTON, D. C., 7 January 1948 (Unclassified)
- 2/ IAC Agency, Washington, D. C., 8 January 1948 (Secret)
- 3/ IAC Agency, Washington, D. C., March 1947 (Secret)
- 4/ IAC Agency, Washington, D. C., 12 March 1947 (Secret)
- 5/ IAC Agency, Washington, D. C., 20 January 1948 (Secret)
- 6/ IAC Agency, Washington, D. C., 9 December 1947 (Secret)
- 7/ IAC Agency, Washington, D. C., undated (Secret)

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BIOGRAPHIC REGISTER

Name: KOPFERMANN, Dr. Hans  
Variant:  
Alias:

Case No. 8061186  
Date: 19 July 1948

Present Position: Research, Univ. of Göttingen  
Location: Banrat-Gerberstrasse 12, Göttingen, Germany  
Gen. Occupation: Theoretical physicist  
Education: Ph.D.  
Languages:  
Honors:  
Publications:

Birthdate:  
Birthplace:  
Nationality: German  
Race: White  
Sex: Male  
Marital Status:  
Name of Spouse:  
Children:  
Religion:  
Political Affiliation:

Dr. Hans Kopfermann, former professor at the University of Kiel 1/ is reported to be Director of the Second Physical Institute at the University of Göttingen 2/ doing betatron research. 2/ A specialist in theoretical and nuclear physics, Kopfermann has been acknowledged to be an authority in the field of nuclear spin and spectroscopy. 4/

Kopfermann has a 6 Mev betatron and a mass spectrograph at Göttingen 3/ and reportedly is a very modest individual and somewhat awed by finding himself in the chair previously occupied by Professor James Franck. He recently collaborated with P. Brix also of Göttingen on a paper entitled "Isotope Shifting Effect of the Heavy Water Elements" which was presented at the September 1947 meeting of the German Physical Society in Göttingen. 5/

In December 1947 Kopfermann was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 6/

- 1/ IAC Agency, Washington, D. C., 21 May 1946 (Secret)
- 2/ IAC Agency, Washington, D. C., 16 January 1948 (Secret)
- 3/ IAC Agency, Washington, D. C., 29 September 1947 (Secret)
- 4/ IAC Agency, Washington, D. C., 22 June 1948 (Secret)
- 5/ Physikalische Blätter, #9, 1947
- 6/ IAC Agency, Washington, D. C., 19 December 1947 (Secret)

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BIOGRAPHIC REGISTER

Name: MAURER, Werner

Case No. 8010549

Date: 19 July 1948

Variant:Alias:Present Position:Birthdate: 1906, 22 MarchBirthplace:Location: Wiehl Bei KölnOber-Berg-Kreis (B2)Nationality: GermanGen. Occupation: PhysicistRace: WhiteEducation: Ph.D, Technische Hochschule,  
1933.Sex: MaleMarital Status:Name of Spouse:Languages:Children:Honors:Religion:Publications:Political Affiliation: Reportedly an  
"reliable Nazi" 1/

Dr. Werner Maurer, formerly a spectroscopist and an assistant at the Technische Hochschule in Darmstadt, 2/ was a member of the Reichsforschungsrat Kernphysik during the war. He and Wolfgang Riezler were an Arbeitsgruppe under Prof. Gerlach 3/ and worked on the Paris cyclotron under Joliot from 1942-1944. Previously in 1937-38 Maurer had spent a year and a half with Bothe at the Kaiser Wilhelm Institute, Heidelberg 2/ and also during this period was associated with the American physicist Dr. J. B. Fisk. 3/ He later was located at the Kaiser Wilhelm Institute for Physics at Berlin-Dahlem 2/ and the University of Strasbourg under Dr. Fleischmann. 3/

Maurer was seized at the University of Strasbourg in November 1944 by United States forces and in subsequent interrogations in December he was uncooperative. He stated that in the time he spent at Joliot's laboratory he did no war research and was associated with experiments on the separation of Bismuth isotopes. An analysis of his laboratory notebooks indicated that he had drafted articles on the nuclear physics of chlorine, copper and lanthanum and on the artificial radio-activity of Bismuth. There was also an indication that during the months immediately preceding his seizure he was working hard on beta-radioactivity and gamma-radioactivity produced artificially in tantalum, tungsten, hafnium, sulfur and other materials of intermediate atomic number. 4/

Politically Maurer has been reported as unquestionably a reliable Nazi and in 1945 was in a prisoner of war camp in the U.S. 1/

Scientifically he also has been associated with research on the proportionality amplifier, radio-active isotopes (also chemical separation), high frequency and the cyclotron 2/ and has been described as an able young physicist. 1/

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Date 2 NOV 1985

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MAURER, Werner (cont.)

Dr. Maurer has written the following scientific articles:

"Transformation of Boron by Slow Neutrons", in collaboration with J. B. Fisk.

"Energy Distribution of Neutrons from Boron".

"Neutron Emission of the Uranium Nucleus as a Result of its Spontaneous Fission", 1942.

He also contributed a note to Zeitung für Naturforschung, Band 2a, Heft 10 in October 1947 entitled "A new 10-min. Lanthanum isotope resulting from the irradiation of barium with deuterons". Barium as a chloride, nitrate or carbonate was irradiated with the deuteron beam supplied by the College de France cyclotron to a maximum of 5.8 KeV.

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- 1/ IAC Agency, Washington D. C., 20 February 1946 (Secret)
  - 2/ IAC AGENCY, Washington D. C., 21 May 1946 (Secret).
  - 3/ IAC Agency, Washington, D. C., undated (Secret)
  - 4/ IAC Agency, Washington, D. C., 12 February 1945 (Secret)

~~SECRET~~

834021-1466

C O P Y

MAURER, W.

Author of the following articles in German journals.

"Investigations of radioactive copper as an indicator for experiments on animals." *Naturwissenschaften*, Vol. 30, No. 49-52, pp. 589-590 (Dec. 3, 1943). With G. Schubert, H. Vogt, and W. Riezler.

"Neutron emission of the uranium nucleus as a result of its spontaneous fission." *Zeitschrift fur Physik*, p. 285 (1943). With H. Pose.

"Artificially radioactive isotopes of lead and its neighboring elements obtained from uranium and thorium lead." *Zeitschrift fur Physik*, Vol. 119, pp. 602-629 (Sept. 25, 1942). With Wolfgang Ramm.

"The 19-minute isotope of molybdenum and the isotope of element 43 produced therefrom." *Zeitschrift fur Physik*, Vol. 119, pp. 334-351 (July 31, 1942). With Wolfgang Ramm.

"Experiments on fluorescence radiation of helium and the conservation of spin at impacts of the second kind between excited and normal helium atoms." *Zeitschrift fur Physik*, Vol. 115, No. 7-8, pp. 410-430 (1940). With R. Wolf.

"Light excitation by ion and atom collisions." *Physikalische Zeitschrift*, Vol. 40, pp. 161-181 (March 1, 1939).

"Transformation of B by slow neutrons." *Zeitschrift fur Physik*, Vol. 112, No. 7-8, pp. 436-452 (1939). With J. B. Fiak.

"Longest range proton group in the disintegration of boron by alpha particles." *Zeitschrift fur Physik*, Vol. 107, No. 7-8, pp. 509-512 (1937). With H. Maier-Leibnitz.

"Nuclear transformations and cosmic radiation." *Zeitschrift fur technische Physik*, Vol. 18, No. 12, pp. 538-541 (1937) and *Physikalische Zeitschrift*, Vol. 38, pp. 964-967 (Dec. 1, 1937). With W. Bothe, W. Gentner, H. Maier-Leibnitz, E. Wilhelm, and K. Schmeiser.

"Excitation function and energy distribution of neutrons emitted from boron by bombardment with alpha particles." *Zeitschrift fur Physik*, Vol. 107, No. 11-12, pp. 721-729 (1937).

"Light excitation by bombardment of positive caesium ions by helium atoms." *Zeitschrift fur Physik*, Vol. 104, No. 1-2, pp. 113-121 (1936).

"Light excitation by collision of lithium ions with helium atoms." *Zeitschrift fur Physik*, Vol. 104, No. 9-10, pp. 658-665 (1937).

"Effective cross-section for excitation of the D-line by collision of Na ions and He." *Zeitschrift fur Physik*, Vol. 106, No. 7-8, pp. 453-457 (1937). With K. Mehnert.

"Light excitation in helium by collision with potassium ions." *Zeitschrift fur Physik*, Vol. 101, No. 5-6, pp. 323-334 (1936).

"Excitation of mercury by bombardment with  $\text{Li}^+$ ,  $\text{Na}^+$ ,  $\text{K}^+$ ,  $\text{Rb}^+$ ,  $\text{Cs}^+$ ." *Physikalische Zeitschrift*, Vol. 37, pp. 659-661 (Sept. 15, 1936). With O. Henle.

"Fluorescence of helium and collisions of the second kind by excited helium atoms." *Zeitschrift fur Physik*, Vol. 92, No. 1-2, pp. 100-115 (Nov. 2, 1934). With R. Wolf.

"Excitation in He by impact of He atoms at 0 to 6000 v." *Zeitschrift fur Physik*, Vol. 96, No. 7-8, pp. 409-502 (1935).

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BIOGRAPHIC REGISTER

Name: POHL, Dr. Robert Wickard

Case No. 8010554

Date: 19 July 1948

Variant:Alias:Present Position: Professor,  
Univ. of GöttingenLocation: Bunsen Strasse 10,  
Uder Klopstock Str 4Gen. Occupation: Experimental  
physicistEducation: Ph.D., Berlin 1906;Hon. Dr. of Engineering,  
BreslauLanguages:Honors:Publications:Birthdate: 10 August 1884Birthplace: HamburgNationality: GermanRace: WhiteSex: MaleMarital Status: MarriedName of Spouse: Tusca MadelungChildren: Two girls, one boyReligion: ProtestantPolitical Affiliation:

Dr. Robert Pohl, German physicist, was last reported (October 1947) as being at the University of Göttingen. 1/ A relative of the famous 17th century astronomer Johann Kepler, Pohl received his doctorate from the University of Berlin in 1906. He later lectured there in 1911 and in 1916 became a professor at the University of Göttingen. From 1920 until the last war, Pohl was the Director of the Physics Institute at that University. He is the author of books on "Introduction to Physics"; "Lessons in Electricity", (1927); and "Mechanics and Acoustics", (1930) and has published a number of articles on light and electricity. 2/

Co-editor with Prof. von Lane of Zeitschrift Fur Physik, an American licensed scientific publication, Pohl has also been reported as collaborating with Prof. Mollwo on lectures on certain phases of "Electricity and Optics" during the 1947-48 winter semester at the University of Göttingen. 3/

Based on an analysis of his prewar work Pohl had been rated during the war as fairly high among the German scientists 4/ and lately was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 5/

1/ IAC Agency, Washington, D. C., undated, (Secret)

2/ IAC Agency, Washington, D. C., undated, (Secret)

3/ IAC Agency, Washington, D. C., undated, (Secret)

4/ IAC Agency, Washington, D. C., undated, (Secret)

5/ IAC Agency, Washington, D. C., undated, (Secret)

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## BIOGRAPHIC REGISTER

Name: RIEZLER, Prof. Dr. Wolfgang Case No. 8010555  
 Variant: RIETZLER Date: 19 July 1948  
 Alias:

Present Position: Lecturer at the Birthdate: 1905  
 Univ. of Bonn Birthplace:  
 Location: Bonn Nuss Ailee 6 Nationality: German  
 Gen. Occupation: Physicist Race: White  
 Education: Sex: Male  
 Marital Status:  
 Name of Spouse:  
 Languages: Children:  
 Honors: Religion:  
 Publications: Political Affiliation:

Dr. Wolfgang Riezler, who before the war did research work at the X-ray Research Institute of the University of Bonn 1/ and at the University of Cologne 2/, has returned to do research at the Physics Institute of the former University. 3/

A member of the Reichsforschungsrat Kernphysik unter Prof. Gerlach during the war, Reizler worked with Gentner at the University of Cologne in 1943. He and Maurer were an arbeite gruppe under Gerlach 1/ and he also worked with Joliot on the Paris cyclotron during 1942-44. 3/ When the University of Cologne was evacuated in 1945, Riezler accompanied the group to Garmisch-Partenkirchen. 1/

Specializing in the scattering of alpha rays, cross sections of neutrons 3/ and radio active isotopes, Riezler has been rated by Prof. F. F. Kirchner, former professor of experimental physics at the University of Cologne as a "good physicist". 2/

In April 1946, Riezler attended a nuclear physics symposium held at St. Louis, France and discussed at length with Prof. F. Sauter a report given by Prof. W. Doring on the Smyth opus. 4/

Dr. Riezler has written many articles some of which are listed below:

"Introduction to Nuclear Physics", 1942.

"Testing of SF<sub>6</sub> as Filler of Ionization Chambers", Verh D. Phys. Ges., 1939.

"Absorption of C. Neutrons in Rare Earths", 1940.

"Peculiar Behavior of the Effective Cross-Sect. of Uranium for

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RIEZLER, Prof. Dr. Wolfgang

Slow Neutrons", 1942.

"Influence of the Layer Thickness of the Measurement of Working Cross Sections of Slow Neutrons", 1942.

"Absorption Cross Section of Metallic Uranium for Slow Neutrons", 1941.

"Activation of Xenon by Neutrons", 1943. 1/

In December 1947 Riezler was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 5/

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- 1/ IAC Agency, Washington, D. C., undated, (Secret)
  - 2/ IAC Agency, Washington, D. C., 3 September 1946, (Secret)
  - 3/ IAC Agency, Washington, D. C., 21 May 1946, (Secret)
  - 4/ IAC Agency, Washington, D. C., 5 May 1947, (Secret)
  - 5/ IAC Agency, Washington, D. C., 19 December 1947, (Secret)

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## BIOGRAPHIC REGISTER

Name: STARKE, Dr. Kurt

Case No. 8061537

Date: 19 July 1948

Variant:Alias:Present Position:

Birthdate: 1911

Birthplace:Location: Im Baeckerfeld, Heidelberg  
(April 1947)Nationality: GermanGen. Occupation: Nuclear chemistRace: WhiteSex: MaleEducation:Marital Status: UnmarriedLanguages:Name of Spouse:Honors:Children:Publications:Religion:Political Affiliation:

Dr. Kurt Starke, former assistant at the Kaiser Wilhelm Institute for Chemistry at Berlin-Dahlem 1/ and specialist in nuclear chemistry, was last reported as negotiating the terms of a contract with the French government (April 1947). 2/

A student of both Prof. Hahn in Berlin-Dahlem and Prof. Bothe in Heidelberg, 2/ Starke was an assistant at KWIC until 1944. It was reported that he worked on the Paris cyclotron during the war and also on the separation of radio-active isotopes and the chemical properties of neptunium. 3/

Dr. Starke worked on the element 93 with Prof. Hahn and on heavy water production experiments with Clusius 4/ and has had some association with Mme. Bob Zah Wei, radium researcher at the Joliot-Curie Institute. In December 1946 he wrote Mme. Zah Wei informing her of the activity of German scientists enclosing copies of scientific treatises. At that time he stated he had not found a position which he liked, could not leave the U.S. Zone and evidenced a hope that he would be offered a position in the U.S.A. 5/

Starke has written many articles some of which are listed below:

"Separation of Artificial Radioactive Isotopes & Isomers", 1941.

"Enrichment of Artificially Radioactive Uranium Isotope 92 U 239 and its Daughter 93 239 (Element 93)" May 1941.

"Washing-out and Rectification of H<sub>2</sub> - HD - D<sub>2</sub> Mixtures", February 1942, with Clusius.

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STARKE, Dr. Kurt (cont.)

"Theory of Fractional Distillation of  $H_2$  - HD -  $D_2$  Mixtures", with Clusius, June 1942.

In December 1947 Starke was included in a list of German scientists who were thought to be the outstanding men in the field of nuclear research. 6/

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- 1/ IAC Agency, Washington, D. C., 21 May 1946 (Secret)
  - 2/ IAC Agency, Washington, D. C., 29 April 1947 (Secret)
  - 3/ IAC Agency, Washington, D. C., 22 July 1946 (Secret)
  - 4/ IAC Agency, Washington, D. C., undated (Secret)
  - 5/ IAC Agency, Washington, D. C., 16 January 1947 (Confidential)
  - 6/ IAC Agency, Washington, D. C. 19 December 1947 (Secret)

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CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

6 July 1951

MEMORANDUM FOR Colonel Daniel E. Ellis, USAF,  
Director, Joint Intelligence Objectives Agency

SUBJECT : Information Report No. [REDACTED] 1.3(a)(4)  
C

1. With reference to your request of June 26, 1951 to  
Mr. Arthur H. Alexander, (reference JIOA 1024) there is attached  
for your attention a copy of Information Report No. [REDACTED] 1.3(a)(4)  
C

*P. G. Strong*  
P. G. STRONG

✓ CIA Misc.  
Extra Copies

Approved for Release  
Date 7 NOV 1985

[REDACTED]

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CLASSIFICATION [REDACTED]  
 CENTRAL INTELLIGENCE AGENCY  
**INFORMATION REPORT**

REPORT NO. [REDACTED]

CD NO.

COUNTRY Germany (Western Zone)

DATE DISTR. 23 May 19

SUBJECT German Guided Missiles Experts Potentially Available for Employment in the US

NO. OF PAGES 4

PLACE ACQUIRED - - -

NO. OF ENCLS. 1 (LISTED BELOW)

DATE ACQUIRED BY SOURCE 1932-51

SUPPLEMENT TO REPORT NO. [REDACTED]

DATE OF INFORMATION 1 May 51

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A.	B. <input checked="" type="checkbox"/>	C.	D.	E.	F.	1.	2. <input checked="" type="checkbox"/>	3.	4.	5.	6.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT OF U.S.C. 31 AND 32 AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED.

THIS IS UNEVALUATED INFORMATION

SOURCE [REDACTED]

1,3(a)(4)  
C

- During the years 1932-45 the Germans built up, especially at Peenemuende, a large highly skilled and thoroughly trained group of guided missile personnel which included scientists, engineers, technicians and foremen. After the close of World War II, these experts were dispersed. The USSR secured more of these men than any other nation. Smaller groups went to the UK and France. The US Army, in its Operation "Paperclip", brought a limited number to the US. A large reservoir still remains in Germany.
- An acute shortage of men, skilled in this field, confronts the US today in its accelerated guided missile program. This shortage will increase in the future. A long time and a great deal of money are required to train men having the necessary foundation for this work. Such men are also in short supply, so that the outlook, from the standpoint of technical personnel, is serious.
- [REDACTED] a partial solution to this bottleneck would be to bring a large number of experts from the German reservoir to work on the US guided missile program. [REDACTED] such a group could be recruited, under proper conditions, that would prove valuable to any guided missile program, whether based on German experience or not. Most of the men concerned are extraordinarily devoted to the subject on which they have spent so many years and [REDACTED] many desire to come to the US.
- Following is a list of 32 men of exceptional promise who have, in the past, expressed a desire to come to the US. [REDACTED]

1,3(a)(4)  
C

Name Last Known Address Comments

DATE ACQUIRED BY SOURCE 1932-51

SUPPLEMENT TO REPORT NO. [REDACTED]

DATE OF INFORMATION 1 May 51

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A.	B. <b>X</b>	C.	D.	E.	F.	1.	2. <b>X</b>	3.	4.	5.	6.

THIS DOCUMENT CONTAINS INFORMATION AFFECTING THE NATIONAL DEFENSE OF THE UNITED STATES WITHIN THE MEANING OF THE ESPIONAGE ACT SO U.S.C. 31 AND 32 AS AMENDED. ITS TRANSMISSION OR THE REVELATION OF ITS CONTENTS IN ANY MANNER TO AN UNAUTHORIZED PERSON IS PROHIBITED BY LAW. REPRODUCTION OF THIS FORM IS PROHIBITED

THIS IS UNEVALUATED INFORMATION

SOURCE



1.3(a)(4)  
C

1. During the years 1932-45 the Germans built up, especially at Peenemuende, a large highly skilled and thoroughly trained group of guided missile personnel which included scientists, engineers, technicians and foremen. After the close of World War II, these experts were dispersed. The USSR secured more of these men than any other nation. Smaller groups went to the UK and France. The US Army, in its Operation "Paperclip", brought a limited number to the US. A large reservoir still remains in Germany.

2. An acute shortage of men, skilled in this field, confronts the US today in its accelerated guided missile program. This shortage will increase in the future. A long time and a great deal of money are required to train men having the necessary foundation for this work. Such men are also in short supply, so that the outlook, from the standpoint of technical personnel, is serious.

3. [REDACTED] a partial solution to this bottleneck would be to bring a large number of experts from the German reservoir to work on the US guided missile program. [REDACTED] such a group could be recruited, under proper conditions, that would prove valuable to any guided missile program, whether based on German experience or not. Most of the men concerned are extraordinarily devoted to the subject on which they have spent so many years and [REDACTED] many desire to come to the US.

1.3(a)(4)  
C

4. Following is a list of 32 men of exceptional promise who have, in the past, expressed a desire to come to the US. [REDACTED]

Name	Last Known Address	Comments
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- |                         |   |   |
|-------------------------|---|---|
| 1) Dip Ing Erich Bachem | E B Nabern/Teck<br>Württemberg<br>US Zone   | Inventor of the famous<br>interceptor Natter                  |
| 2) Dr Ing Richard Bernd | Jungingen (Hohen-<br>zollern)<br>Schütte 20 | Chief of the rocket<br>development of Schmidding<br>Bodenbach |

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CLASSIFICATION [REDACTED]


STATE	<input checked="" type="checkbox"/> NAVY	<input checked="" type="checkbox"/> NSRB	DISTRIBUTION									
ARMY	<input checked="" type="checkbox"/> AIR	<input checked="" type="checkbox"/> FBI										



- 2 -

<u>Name</u>	<u>Last Known Address</u>	<u>Comments</u>
3) Ing Herbert Borchert	Berlin-Spandau Askaniering G II	Better than average designer, tools and fixtures.
4) Dipl Ing Friedrich Brandner	Frau Irmgard Grass (20) Mattierzoll uber Boorsaum Zuckerfabrik	Excellent automatic pilot and servo man.
5) Ing Alfred Diehl	(13b) Augsburg Lessingstr 10	Very good designer and test engineer worked on He 176, 178, Me 163, 263. For long years employee of Messerschmidt
6) Ing Hans E P Fahlbusch	Hamburg 13 Isestr 89	Stress analyst Junkers, Hentschel, Messerschmidt, Blohm and Voss.
7) Ing Rolf Falke	Aachen Maltheserstr 13	Very good electrical engineer. Special experience in Waterfall test stand instrumentation.
8) Dr Werner Fricke	(16) Wanfried/Werra Schlagdstr 22	Leading development engineer, Rheintochter.
9) Dr Ing S J Gievers	2 Princess Gardens London S W 7	One of the best auto-pilot and servo men. Kreiselgerete m b H. Now back in Germany. Address unknown.
10) Dr Ing Johannes Goerner	(21b) Iserlehn Wallstr 48	Creative and very good electrical engineer. Anschütz timer development for V2 and Waterfall.
11) Ing Kurt Graupe	(14a) Geislingen/ Steige Kepplerstr 36 bei Pfeiffenberger	Excellent mathematician for calculation of electrical control instruments. For years Peenemuende, preliminary design group.
12) Ing Alfred Haut	(24b) Sophien Magd Koog Post Bredstedt Uv Husum	Very good engineer for electrical and pneumatic valve design.
13) Dipl Ing Johannes Hillermann	(24a) Luebeck- Travemuende Priwall, Waldweg 172	Good test engineer. Vibration expert. Worked at Peenemuende-West with Walther-Keil, Gotenhafen and D V L.
14) Ing Udo Heubuer	Stuttgart-Zuffen- hausen Markomannenstr 35	Chief test engineer for gas generating plants and turbine pumps. Peenemuende.

- 6) Ing Hans E P Fahlbusch      Hamburg 13      Stress analyst Junkers,  
Isestr 89      Hentschel, Messerschmidt,  
Blohm and Voss.
- 7) Ing Rolf Falke      Aachen      Very good electrical engineer.  
Maltheserstr 13      Special experience in Water-  
fall test stand instrumenta-  
tion.
- 8) Dr Werner Fricke      (16) Wanfried/Werra      Leading development engineer,  
Schlagstr 22      Rheintochter.
- 9) Dr Ing S J Gievers      2 Princess Gardens      One of the best auto-pilot  
London S W 7      and servo men. Kreiselgerete  
m b H. Now back in Germany.  
Address unknown.
- 10) Dr Ing Johannes      (21b) Iserlehn      Creative and very good  
Goerner      Wallstr 48      electrical engineer.  
Anschütz timer development  
for V2 and Waterfall.
- 11) Ing Kurt Graupe      (14a) Geislingen/      Excellent mathematician for  
Steige      calculation of electrical  
Kepplerstr 36      control instruments. For  
bei Pfeiffenberger      years Peenemuende, preliminary  
design group.
- 12) Ing Alfred Haut      (24b) Sophien      Very good engineer for elec-  
Magd Koog      trical and pneumatic valve  
Post Bredstedt      design.  
Uv Husum
- 13) Dipl Ing Johannes      (24a) Luebeck-      Good test engineer.. Vibra-  
Hillermann      Travemuende      tion expert. Worked at Peene-  
Priwall, Waldweg 172      muende-West with Walther-  
Keil, Gotenhafen and D V L.
- 14) Ing Udo Heubuer      Stuttgart-Zuffen-      Chief test engineer for gas  
hausen      generating plants and turbine  
Markomannenstr 35      pumps. Peenemuende.
- 15) Ing Joachim von      (24) Lieth bei      Designer with Heinkel Aircraft  
Koeller      Ehnshorn/Holst      Corp since 1935 guided missiles.  
Zigelei Rotenhelm      Walther-Kiel-V1 booster.  
Specialist in steam generating  
plants.



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- 3 -

<u>Name</u>	<u>Last Known Address</u>	<u>Comments</u>
16) Ing Albert Kowall	Hameln Kaelberanger 3 Germany British Zone	Excellent tool, fixture and production line planner and designer. Long years in Peenemuende.
17) Dr Goldmann	C Lorenz A G Landshut/Bayern	Specialist in radio control and navigation.
✓ 18) Dr O H Lange	De Braye House 53 Alexandria Rd Farnborough Hants, England	A-1 radio, radar and guidance expert "Wurgburg" for Waterfall. Still in England, but wants to come to the US.
19) Dipl chem Norbert Loft	(20) Bad Grund Harz	Excellent combustion expert for rocket propellants.
20) Dr Ing Werner Oschatz	Basel, Switzerland Hirzbrunnenstr 9	Excellent expert injection problems diesel engines, motors, combustion chambers. Technical assistant at the University of Dresden.
21) Dipl Ing Hermann Pitzken	Geesthacht/Elbe Waldstrasse Holzhaus 8	Excellent expert in solid rockets. For long years chief in the German Board of Ordnance.
✓ 22) Ober Ing Walter Riedel	RPD RAE Westcott near Aylesburg (Bucks) England	Top man. Chief designer for guided missiles at Peenemuend from 1936-42. Wants to come to US.
23) Ing Heinz Schley	Bad Schwartau b Luebeck, Peterstr G	Experienced test engineer, V1, Rheintochter, Water power plants. Peenemuende-West.
24) Dr Johannes Schwab	Hegnach bei Stuttgart Hauptstr 1	Excellent expert in ground handling equipment. In the guided missiles business since 1936.
25) Ober Ing Paul Stang	Berlin-Charlotten- burg 9 Skirenweg 7 bei W Binder	Laboratory chief for remote control instrument development at Goerken (Hawai Palermo and Osterhasel)
26) Dipl Ing Rudolf Urtel	c/o Distler i Neue Strasse 4 Erlangen b Nuernberg	Television, radar guidance expert, A-1 man.
27) Dr Fritz Runge	Berlin	Top radar guidance man.

- 19) Dipl chem Norbert Loft (20) Bad Grund  
Harz Excellent combustion expert  
for rocket propellants.
- 20) Dr Ing Werner Oschatz Basel, Switzerland  
Hirzbrunnenstr 9 Excellent expert injection  
problems diesel engines,  
motors, combustion chambers.  
Technical assistant at the  
University of Dresden.
- 21) Dipl Ing Hermann  
Pitzken Geesthacht/Elbe  
Waldstrasse  
Holzhaus 8 Excellent expert in solid  
rockets. For long years  
chief in the German Board  
of Ordnance.
- ✓22) Ober Ing Walter  
Riedel RPD RAE Westcott  
near Aylesbury  
(Bucks)  
England Top man. Chief designer for  
guided missiles at Peenemuende  
from 1936-42. Wants to come  
to US.
- 23) Ing Heinz Schley Bad Schwartau b  
Luebeck, Peterstr  
G Experienced test engineer,  
VJ, Rheintochter, Water  
power plants. Peenemuende-  
West.
- 24) Dr Johannes Schwab Hegnach bei Stuttgart  
Hauptstr 1 Excellent expert in ground  
handling equipment. In  
the guided missiles business  
since 1936.
- 25) Ober Ing Paul Stang Berlin-Charlotten-  
burg 9  
Skirenweg 7 bei  
W Binder Laboratory chief for remote  
control instrument develop-  
ment at Goerken (Hawai  
Palermo and Osterhasel)
- 26) Dipl Ing Rudolf  
Urtel c/o Distler  
Neue Strasse 4  
Erlangen b Nuernberg Television, radar  
guidance expert, A-1 man.
- 27) Dr Fritz Runge Berlin  
Telefunken A G Top radar guidance man.  
Department chief with  
Telefunken A G
- 28) Dr Ing Otto Waltz Firma Woellnerwerke  
Ludwigshafen/Rhein  
French Zone Specialist in turbine  
pumps for guided missiles.
- 29) Prof Hans Wierer Tech Hoch Gras  
Austria Outstanding expert in all  
guided missile electronics.  
Peenemuende

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Name	Last Known Address	Comments
30) Dr Helmut Winkler Ing Sammeck } Team " Baltzer)	(24b) Greiff Werke Halen/Wuerttemberg	Outstanding team in the development of acid proof woven plastic tanks for guided missiles.
31) Dr Ernst Wischhoefer	(13b) Schwaigen N7 Post Eschenlohe Oberbayern	Chief stress engineer at Peenemuende. Excellent.
32) Dipl Ing Ralph von Wolff	Freiburg i B Immentalstr 46	For long years static test engineer for modern aircraft especially jet driven interceptors.

5. A list of 600 additional German specialists who are potentially available for employment in the US is contained in the enclosure. This list was previously submitted to the Army and Air Force Intelligences in January 1946. Ten of these men were brought in by Operation "Paperclip" and are marked "US".

1.3(a)(4)  
C

6. The addresses in the 32 man list above are probably mostly correct. The 600 name list is now five years old, so it is probable that most of the addresses are no longer valid. The present location of these men would have to be determined by investigation in Germany.

--End--

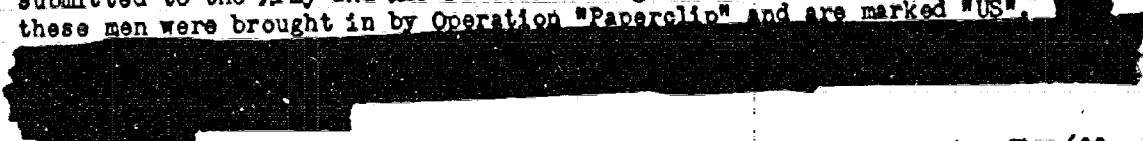
Enclosure: List of Guided Missiles Engineers, Technicians and Skilled Workers.

32) Dipl Ing Ralph von  
Wolff

Freiburg 1 B  
Immentalstr 46

for long years static test  
engineer for modern aircraft  
especially jet driven inter-  
ceptors.

- 5. A list of 600 additional German specialists who are potentially available for employment in the US is contained in the enclosure. This list was previously submitted to the Army and Air Force Intelligences in January 1946. Ten of these men were brought in by Operation "Paperclip" and are marked "US".



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- End -

Enclosure: List of Guided Missiles Engineers, Technicians and Skilled Workers.



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Enclosure

List of Guided Missiles Engineers, Technicians and Skilled Workers

1. The abbreviated titles used in this list have the following significance:

Dr Ing - Doctor of Engineering  
 Dipl Ing - Master of Engineering  
 Ing - Technician  
 F M - Fine mechanic or skilled foreman

2. This list is presented in the form in which it was submitted to Air Force Intelligence in January 1946. It contains the last known addresses of the men concerned. Many, if not most, of the addresses are probably no longer correct.
3. A supplementary list is provided in which the names are listed alphabetically under each professional classification. The numbers provide a cross reference and show up the duplications.
4. "US" after the names indicates that the man was brought to the US under Operation "Paperclip". "H" after the name indicates that the man was under active consideration for Huntsville when "Paperclip" was terminated.
5. The men in the first column are preferred. Those in the second column are alternates.

List of Names As Originally Submitted

- |  |   |
|--|---|
| 1. HAEUSERMANN, Walter, Dr Ing - US<br>Jugenheim a d Bergstrasse<br>Zwingenbergerstr 9                     | 1a. KAGERER, Anton, Dipl Ing<br>Straubing/Bayern<br>Innere Passauerstr 37, bei Kette    |
| 2. SEIDLBOECK, Alfred, F M<br>Reinfeld/Guelzen oder<br>Nussdorf/Inn, Rosenheim Land<br>Gutshaus Weidenbach | 2a. HUETTENBERGER, Willi, F M<br>Landshut   |
| 3. RAITHEL, Wilhelm, Dr Ing - US<br>Hoechst/Ridda/Oberhessen   | 3a. KAISER, Hans, Dipl Ing<br>c/o Teubold<br>Erlangen<br>Brueckerstr 26                 |
| 4. OSTHOFF, Leopold, Ing - US<br>Bielefeld<br>Benteler Werke   | 4a. PITSCHMANN, Ernst, Dipl Ing<br>Witzenhausen<br>Goldener Loewe                       |
| 5. WALTHER, Alvin, Prof Dr<br>Darmstadt<br>Technische Hochschule<br>Mathematisches Institut                | 5a. KOX, Hans, Dr Phil<br>Hamburg-Bergedorf<br>Sternwarte                               |
| 6. BRINKMANN, August, F M<br>Ahlen/Westf<br>Gemaericherstr 49  | 6a. GROSSER, Willi, F M<br>Landshut   |
| 7. KOENIG, Rudi, Ing<br>c/o Dr P Schlechter<br>Niederbeerbach bei Darmstadt<br>Obergasse 2                 | 7a. OTT, Albert, F M<br>Wuermen bei Pforzheim oder<br>c/o Krause, Eschwege<br>Ottostr 8 |
| 8. HEROLD, Ing<br>Coburg (13b)   | 8a. HEINISCH, Kurt, Ing   |

2. This list is presented in the form in which it was submitted to Air Force Intelligence in January 1946. Approved for Release: 2022/06/22 C00010786 the men concerned. Many, if not most, of the addresses are probably no longer correct.
3. A supplementary list is provided in which the names are listed alphabetically under each professional classification. The numbers provide a cross reference and show up the duplications.
4. "US" after the names indicates that the man was brought to the US under Operation "Paperclip". "H" after the name indicates that the man was under active consideration for Huntsville (when "Paperclip" was terminated).
5. The men in the first column are preferred. Those in the second column are alternates.

List of Names As Originally Submitted

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| 1. HAEUSERMANN, Walter, Dr Ing - US<br>Jugenheim a d Bergstrasse<br>Zwingenbergerstr 9                     | 1a. KAGEKER, Anton, Dipl Ing<br>Straubing/Bayern<br>Innere Passauerstr 37, bei Kette    |
| 2. SEIDLBOECK, Alfred, F M<br>Reinfeld/Guelzen oder<br>Nussdorf/Inn, Rosenheim Land<br>Gutshaus Weidenbach | 2a. HUETTENBERGER, Willi, F M<br>Landshut   |
| 3. RAITHEL, Wilhelm, Dr Ing - US<br>Hoechst/Nidda/Oberhessen   | 3a. KAISER, Hans, Dipl Ing<br>c/o Teubold<br>Erlangen<br>Brueckerstr 26                 |
| 4. OSTHOFF, Leopold, Ing - US<br>Bielefeld<br>Benteler Werke   | 4a. PITSCHMANN, Ernst, Dipl Ing<br>Witzenhausen<br>Goldener Loewe                       |
| 5. WALTHER, Alvin, Prof Dr<br>Darmstadt<br>Technische Hochschule<br>Mathematisches Institut                | 5a. KOK, Hans, Dr Phil<br>Hamburg-Bergedorf<br>Sternwarte                               |
| 6. BRINKMANN, August, F M<br>Ahlen/Westf<br>Gemmericherstr 49  | 6a. GROSSER, Willi, F M<br>Landshut   |
| 7. KOENIG, Rudi, Ing<br>c/o Dr P Schlechter<br>Niederbeerbach bei Darmstadt<br>Obergasse 2                 | 7a. OTT, Albert, F M<br>Wuermen bei Pforzheim oder<br>c/o Krause, Eschwege<br>Ottostr 8 |
| 8. HEROLD, Ing<br>Coburg (13b)<br>Rosenarerstr 28  | 8a. HEINISCH, Kurt, Ing<br>Landshut   |
| 9. KUNZ, Heinrich, F M<br>Darmstadt<br>Am Tiefen See 16  | 9a. ELLER, F M<br>c/o Mang<br>Freilassing/Bayern<br>Am Sonnenfeld 30                    |

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Enclosure

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10. WINGENSIEFEN, Hans, Dipl Ing  
Koeln-Klettenberg  
Lohrbergstr 22
11. LINDENLAUB, Karl, F M  
Darmstadt-Arheilgen  
Beckstr 3
12. EGGERTH, Eugen, F M  
Rosdorf 226 bei Goettingen
13. HESSELMANN, Ing  
c/o Dr/ P Schlechter  
Niederbeerbach bei Darmstadt  
Obergasse 2
14. FLEINES, F M  
Frankfurt/Main-Sossenheim  
Schmierstoff-Labor der  
I G Farben, Frankfurt/Main-Hoechst
15. WERER, Fritz Horst, Ing  
Schleswig  
Am Flachsteich
16. KRAEMER, Franz, Dipl Ing  
Bienheim/Rhein
17. WOEGERBAUER, Ing - H  
Flugzeugwerke Wels, Werk Braun  
(Waschenberg) Bahnstation Wims-  
bach oder  
Stadelpaura zwischen Wels und  
Gmunden (Oesterreich, Am Zone)
18. GROPP, Hans, Ing  
Bornem/Harz  
ueber Bockenem
19. HECK, Arno, Ing - US  
Landshut
20. KUERSCHNER, Helmut, Dipl Ing - US  
Darmstadt, Technische Hochschule  
Institut Prof Hueter
21. LINDENBERG, Erich, Ing - H  
Hamburg  
Firma "Promonta"
22. FISCHER, Kurt, Ing  
Hannover-Linden
- 10a. LINK, Otto, Ing  
Ballingen/Wttbg  
Firma Bizerba
- 11a. NEUBERT, Herbert, F M  
Landshut
- 12a. GUTFREUND, F M  
c/o Kunz  
Darmstadt  
Am Tiefen See 16
- 13a. SEIFFERT, Erich, Ing  
Giessen  
Am Nahringsberg 8 bei Fritsch ode  
c/o Tuebbecke, Witzenhausen
- 14a. PABST, F M  
Frankfurt/Main - Hoechst  
Koenigsteinerstr  
Schuhhaus Oker, 4 te Etage
- 15a. BUNTE, Hermann, Ing  
Brackvede bei Bielfeld  
Betriebswerke
- 16a. MANDEL, Dipl Ing  
C/O Frau Maria Sandler  
Wien XI/79  
Simmeringer Hauptstr 25
- 17a. TUJZ, Hans, Ing  
Voitsburg/Steiermark  
Grazer Vorstadt 1 oder  
Graz, Muehlriegel 3
- 18a. PHILIPSS, Albert, Ing  
Duisburg-Hamborn  
Gortherstr 64
- 19a. GERHARDS, Walter, Ing  
c/o Seiffert  
Giessen  
Am Nahringsberg 8 bei Fritsch  
oder c/o Dr Bussman, Landshut
- 20a. HERMANN, Emil Ing  
Heidenheim a d Brenz  
Felsenstr 35
- 21a. GENSSLE, Otto, Ing  
Reutlingen
- 22a. SAMMECK, Albert, Ing  
Muenchen-Gladbach

12. EGGERTH, Eugen, F M  
Rosdorf 226 bei Goett

12a. GUILFLEND, F M  
c/o Kunz  
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Am Tiefen See 16

13. HESELMANN, Ing  
c/o Dr/ P Schlechter  
Niederbeerbach bei Darmstadt  
Obergasse 2

13a. SEIFFERT, Erich, Ing  
Giessen  
Am Nahringsberg 8 bei Fritsch ode  
c/o Tuebbecke, Witzenhausen

14. PLEINES, F M  
Frankfurt/Main-Sossenheim  
Schmierstoff-Labor der  
I G Farben, Frankfurt/Main-Hoechst

14a. PABST, F M  
Frankfurt/Main - Hoechst  
Koenigsteinerstr  
Schuhhaus Oker, 4 te Etage

15. WEBER, Fritz Horst, Ing  
Schleswig  
Am Flachsteich

15a. BUNTE, Hermann, Ing  
Brackwede bei Bielfeld  
Betriebswerke

16. KRAEMER, Franz, Dipl Ing  
Bienheim/Rhein

16a. WANDEL, Dipl Ing  
C/O Frau Maria Sandler  
Wien XI/79  
Simmeringer Hauptstr 25

17. WOEGERBAUER, Ing - H  
Flugzeugwerke Wels, Werk Braun  
(Waschenberg) Bahnstation Wims-  
bach oder  
Stadelpaura zwischen Wels und  
Gmunden (Oesterreich, Am Zone)

17a. TUTZ, Hans, Ing  
Voitsburg/Steiermark  
Grazer Vorstadt 1 oder  
Graz, Muehlriegel 3

18. GROPP, Hans, Ing  
Bornem/Harz  
ueber Bockenem

18a. PHILIPSS, Albert, Ing  
Duisburg-Hamborn  
Gortherstr 64

19. HECK, Arno, Ing - US  
Landshut

19a. GERHARDS, Walter, Ing  
c/o Seiffert  
Giessen  
Am Nahringsberg 8 bei Fritsch  
oder c/o Dr Bussman, Landshut

20. KUERSCHNER, Helmut, Dipl Ing - US  
Darmstadt, Technische Hochschule  
Institut Prof Hueter

20a. HERMANN, Emil Ing  
Heidenheim a d Brenz  
Felsenstr 35

21. LINDENBERG, Erich, Ing - H  
Hamburg  
Firma "Promonta"


21a. GENSSLE, Otto, Ing  
Reutlingen

22. FISCHER, Kurt, Ing  
Hannover-Linden-Badenstedt  
Koertingsdorf

22a. SAMMECK, Albert, Ing  
Muenchen-Gladbach

23. KLEIN, Manfred, Ing  
Landshut

23a. LANG, Fritz, Ing  
Landshut

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24. BRUETZEL, Karl, Dipl Ing  
Graefelfing-Muenchen  
Aribostr 43
25. OSSE, Felix, Ing  
c/o Grube  
Gosttingen  
Von Linsingenstr 3
26. WINTER, Bernhard, Ing - H  
Ruesselshelm/Main  
Wienerstr 20
27. KROEGER, Arthur, Ing - US  
Hamburg-Harburg  
Schlosstr 47
28. GROTH, F M  
Altenhunden/Westf  
Gartenstr 39
29. SCHUETZ, Karl, Ing  
Siegen oder  
Landshut
30. FELLMANN, Eduard, Ing  
Graz, Steiermark  
Rotthalstr 4, I  
Oesterreich
31. HILTEN, Heinz, Ing  
Eppishausen 72  
bei Kirchheim/Schwaben  
bei Kerler
32. KRAEMER, Fritz, Dipl Ing  
Darmstadt  
Gabelsbergerstr 21
33. PFERDMEYER, Rudolf, Ing  
Wuppertal-Barmen  
Westkottstr 74
34. REILMANN, Paul, Ing  
Strassdorf bei Schwasbisch-Gruend  
Haus Kellermann
35. SCHWAIGERER, Siegfried, Dr Ing  
Stuttgart-W  
Hauptmannsreuthe 73 bei Hilger
36. SCHLECHTER, Petter, Dr Ing  
Niederbeerbach bei Darmstadt  
Obergasse 2
37. PETERS, Kurt  
c/c Lindenlaub  
Darmstadt-Arheiligen  
Beckstr 3
- 24a. HESE, Alfred, F M  
Eschwege  
Ottostrasse 8
- 25a. LINKE, Horst, Ing  
c/o Krause  
Eschwege  
Ottostr 8
- 26a. KRAUER, Otto, Ing  
Hamburg-Harburg  
Brehmstr 6
- 27a. FRANZ, Hans Werner, Ing  
Stadtthagen/Westf  
Oberrstr 43 bei Badtmoeller
- 28a. JUEINGLING, Heinrich, F M  
Bad Frankenhausen/Kyffhaeuser
- 29a. HEEGER, Leopold, Ing  
Wildenauerbach bei Ludenturg  
i Oesterreich
- 30a. SCHELICH, Ernst, Dipl Ing  
Hilden bei Duesseldorf  
Hoffeldstr 49
- 31a. BENEDIX, Walter, Ing  
c/o Frl Lehnig  
Waiblingen/Wtbg  
Neue Bahnhofstr 44
- 32a. DEUKER, E A, Dr Ing  
Hannover  
Technische Hochschule
- 33a. MRAZECK, Anton, F M  
Landshut
- 34a. GEHRKE, Henry, Ing  
Futin/Holstein  
Ploemerstr
- 35a. SCHEMM, Willi, Dipl Ing  
Olte/Westf  
Winterbergstr 1
- 36a. BERNDT, Rudi, Dipl Ing  
c/o Maier  
Witzenhausen (Pa Lusdecke & Storm)
- 37a. AHRENS, Heinz, F M  
Landshut

- 26. WINTER, Bernhard, Ing - Approved for Release: 2022/06/22 C00010786  
 Russelsheim/Main  
 Wienerstr 20  
 Brehmstr 6
- 27. KROEGER, Arthur, Ing - US  
 Hamburg-Harburg  
 Schlostr 47
- 28. GROTH, F M  
 Altenhuden/Westf  
 Gartenstr 39
- 29. SCHUETZ, Karl, Ing  
 Siegen oder  
 Landshut
- 30. FELLMANN, Eduard, Ing  
 Graz, Steiermark  
 Rotthalstr 4, I  
 Oesterreich
- 31. HILTEN, Heinz, Ing  
 Eppishausen 72  
 bei Kirchheim/Schwaben  
 bei Kerler
- 32. KRAEMER, Fritz, Dipl Ing  
 Darmstadt  
 Gabelsbergerstr 21
- 33. PFERDMANN, Rudolf, Ing  
 Wupperthal-Barmen  
 Westkottstr 74
- 34. REILMANN, Paul, Ing  
 Strassdorf bei Schwabisch-Gruend  
 Haus Kellermann
- 35. SCHWAIGERER, Siegfried, Dr Ing  
 Stuttgart-W  
 Hauptmannsreuth 73 bei Hilger
- 36. SCHLECHTER, Petter, Dr Ing  
 Niederbaerbach bei Darmstadt  
 Obergasse 2
- 37. PETERS, Kurt  
 c/o Lindenlaub  
 Darmstadt-Arheilgen  
 Beckstr 3
- 38. SCHUBERT, Reinhard, Dr Ing  
 Kempten/Allgaeu  
 Salzstr 26
- 27a. FRANZ, Hans Werner, Ing  
 Staithagen/Westf  
 Oberstr 43 bei Badtmoeller
- 28a. JUEWGLING, Heinrich, F M  
 Bad Frankenhausen/Kyffhaeuser
- 29a. HEEGER, Leopold, Ing  
 Wildenduernbach bei Ludenturg  
 i Oesterreich
- 30a. SCHELICH, Ernst, Dipl Ing  
 Hilden bei Duesseldorf  
 Hoffeldstr 49
- 31a. BENEDIX, Walter, Ing  
 c/o Frl Lehnig  
 Waiblingen/Wttbg  
 Neue Bahnhofstr 44
- 32a. DEUKER, E A, Dr Ing  
 Hannover  
 Technische Hochschule
- 33a. BRAZECK, Anton, F M  
 Landshut
- 34a. GERRKEN, Henry, Ing  
 Eutin/Holstein  
 Ploenerstr
- 35a. SCHEMM, Willi, Dipl Ing  
 Olte/Westf  
 Winterbergstr 1
- 36a. BERNDT, Rudi, Dipl Ing  
 c/o Madec  
 Witzenhausen (Fa Lusdacke & Storm)
- 37a. AHRENS, Heinz, F M  
 Landshut
- 38a. KRAMAR, Ernst, Dipl Ing  
 Fa Lorenz A G  
 Pforzheim



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enclosure

- 4 -

39. KIRMAYR, Hans, Dipl Ing  
c/o Schlechter  
Niederbeerbach bei Darmstadt  
Obergasse 2
- 39a. CAMINENBERG, Heinrich, Dipl Ing  
Heelden/Niederrhein  
Post Isselberg  
Gut Buschhof
40. EIFFLAENDER, Kurt, Dipl Ing  
Hannover  
Siegestr 13
- 40a. RUST, Karl, Ing  
c/o Dr Koehler  
Gandersheim bei Kreiensen  
Neustr 11 oder  
Landshut, Dr Busmann/Daniel
41. KNOTHE, Herbert, Dipl Ing  
c/o Prof Walther  
Darmstadt, Techn Hochschule
- 41a. EICHLER, Martin, Dr Phil  
Hammenstedt bei Nordheim  
c/o Pastor Pirrwitz  
Fichteweg 28
42. KAYSER, Alois, F M  
Werl/Westf  
Siegerstr 4
- 42a. ALTMAYER, Wilhelm, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
43. HIRN, Max, Ing  
Hanau/Main  
Bernhardstr 8
- 43a. ZETTL, Josef, Dipl Ing  
Muenchen 12  
Sandtnerstr 5
44. MEKRETTICH, Kurt, Ing - H  
Landshut
- 44a. KRAFFT, Friedrich, Ing  
Mainz oder  
Frankfurt/Main oder  
Landshut, Dr Busmann/Daniel
45. KLAMGES, Ferdinand, F M  
Soehnstetten/Wttbg oder  
Wahlsheim/Saar
- 45a. SPAHN, Robert, F M  
Alsfeld/Hessen
46. MAFFBUFFEL, Dr Ing - US  
Balkhausen bei Jugenheim/Bergstr
- 46a. SCHWARZ, Emil, Ing  
Schwaebisch-Gmuend  
Ackerstr 1
47. MOFFS, Hermann, Ing  
Duisburg-Wennergaut  
Posenerstr 24
- 47a. MARKERHOFER, Alois, Ing  
Mannheim  
Baeckerei
48. REYZLAFF, Hans, F M  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
- 48a. BERGMANN, Fritz, F M  
Landshut
49. WUTZ, Alois, Ing  
c/o Dr Hans Arnold  
Landshut  
Ostendstr 6
- 49a. SCHNEIDER, Hans-Georg, Ing  
Selb/Bayern  
Fa Rosenthal-Isolatoren
50. SALLWEY, Hans, Dipl Ing  
Langen bei Frankfurt/Main  
Bahnstrasse 96
- 50a. DIPPART, Ernst, Ing  
Wallensee bei Hameln/Westf  
Angerstr bei Knoll
51. GOLDAMMER, Ing  
c/o Meerrettich  
Landshut
- 51a. FICK, Ernst, Ing  
Eutingen bei Pforzheim  
nburgstr 43 oder

- |   |   |
|---|---|
| 41. KNOTHE, Herbert, Dipl Ing<br>c/o Prof Walther<br>Darmstadt; Techn Hochschule    | 41a. EICHLER, Martin, Dr Phil<br>Hammenstedt bei Nordheim<br>c/o Pastor Pirrwitz<br>Fichteweg 28              |
| 42. KAYSER, Alois, F M<br>Werl/Westf<br>Siegerstr 4                                 | 42a. ALTMAYER, Wilhelm, F M<br>c/o Frl Lehnig<br>Waiblingen/Wttbg<br>Neue Bahnhofstr 44                       |
| 43. NERN, Max, Ing<br>Hanau/Main<br>Bernhardstr 8                                   | 43a. ZETTL, Josef, Dipl Ing<br>Muenchen 12<br>Sandtnerstr 5   |
| 44. MEKRETTICH, Kurt, Ing - H<br>Landshut   | 44a. KRAFFT, Friedrich, Ing<br>Mainz oder<br>Frankfurt/Main oder<br>Landshut, Dr Busmann/Daniel               |
| 45. KLAMGES, Ferdinand, F M<br>Soehnstetten/Wttbg oder<br>Wahlsheim/Saar            | 45a. SPAHN, Robert, F M<br>Alsfeld/Hessen   |
| 46. MANTEUFFEL, Dr Ing - US<br>Balkhausen bei Jugenheim/Bergstr                     | 46a. SCHWARZ, Emil, Ing<br>Schwaebisch-Gmuend<br>Ackerstr 1   |
| 47. MOTHS, Hermann, Ing<br>Duisburg-Wenneraut<br>Posenerstr 24                      | 47a. MARKERHOEFER, Alois, Ing<br>Mannheim<br>Baeckerei  |
| 48. REYZLAFF, Hans, F M<br>c/o Tuebbecke<br>Witzenhausen<br>Am Grabenbach 2         | 48a. BERGMANN, Fritz, F M<br>Landshut   |
| 49. WUTZ, Alois, Ing<br>c/o Dr Hans Arnold<br>Landshut<br>Ostendstr 6               | 49a. SCHNEIDER, Hans-Georg, Ing<br>Selb/Bayern<br>Fa Rosenthal-Isolatoren                                     |
| 50. SALLWEY, Hans, Dipl Ing<br>Langen bei Frankfurt/Main<br>Bahnstrasse 96          | 50a. DIPPART, Ernst, Ing<br>Wallensee bei Hameln/Westf<br>Angerstr bei Knoll                                  |
| 51. GOLDAMMER, Ing<br>c/o Meerrattich<br>Landshut                                   | 51a. FICK, Ernst, Ing<br>Eutingen bei Pforzheim<br>Hindenburgstr 43 oder<br>Landshut, Buero Dr Busmann/Daniel |
| 52. MADKE, Walter, Dipl Ing<br>Witzenhausen<br>Brueckenstr gegenueber<br>Fa Herrjet | 52a. LJEB, Edgar, F M<br>Landshut   |

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Enclosure

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53. KUEHNE, Walter, Dipl Ing  
Landshut
54. KAEHNEL, Helmut, Ing  
Berlin-Spandau  
Germersheimerweg 61
55. SCHULZE, Heinrich, Ing  
Hannover-Herrenhausen  
Herrenhauserstr 39 oder 59
56. DAHL, Werner, Ing  
Bonn/Rhein  
Simrockstr 12
57. THOMER, Wilhelm, Ing  
Witzenhausen  
Kriegasse 26 oder  
c/o Tuebbecke, Witzenhausen
58. PARTENFELDER, Hans, Ing  
Berlin-Siemenstadt  
Rohrdamm 51
59. WAGNER, Hermann, Ing  
Buderstadt  
Steintorstr 15
60. SCHEMPT, Wilhelm, Ing  
Hannover
61. ROESSLER, Hans, F M  
Waiblingen  
Bahnhofstr 59
62. MERKELBACH, Ing  
Siemens-Halskem  
Koeln/Rhein
63. BRASELMANN, Ferdinand, Ing  
Oberbauer ueber Milspe/Westf
64. SEILER, Ernst, Ing  
Murnau/Oberbayern  
Kohlgruberstr 72 $\frac{1}{2}$   
bei Matheus
65. TIETZE, Otto  
Witzenhausen  
Kriegasse 26 oder  
c/o Tuebbecke, Witzenhausen
66. BILLIG, Kurt, F M  
Landshut
- 53a. LAYES, Walter, Ing  
Duesseldorf-Eller  
Zeppelinstr 44
- 54a. HORNUNG, Walter, Dr Ing  
Waldbrunn 35 ueber Wuertzburg
- 55a. BARTKLS, Waldemar, Ing  
Hannover-Linden  
Koethner Holzweg
- 56a. FUHR, Wolfgang, Dipl Ing  
c/o Storch  
Landshut
- 57a. TISCHER, Ing  
Berlin-Lichterfelde
- 58a. ROTE, Helmut, F M  
c/o Kuns  
Darmstadt, Am Tiefen See 16  
oder Landshut
- 59a. HUFEN, Hermann, Ing  
Duisburg-Hamborn  
Mecklenburgerstr 18
- 60a. SCHLICHTER, August, F M  
Emsdorf/Saar oder  
Griesborn/Saar
- 61a. SILBEREIS, F M  
Frankfurt/Main-Hoechst  
Zentralversucherraum der I G Farben  
Frankfurt/Main - Hoechst
- 62a. BANGERTER, Dipl Ing  
Stuttgart oder Landshut
- 63a. SCHIFFMANN, Erich, Ing  
Landshut
- 64a. HAEPNER, Hans, Ing  
Landshut
- 65a. FIRNROHR, Ing  
Landshut, Buero Dr Bussmann/Darmst
- 66a. PFLANZE, Willi, F M  
Landshut

55. SCHULZE, Heinrich, Ing  
 Hannover-Herrenhausen  
 Herrenhauserstr 39 oder 29

56. DAHL, Werner, Ing  
 Bonn/Rhein  
 Simrockstr 12

57. THOMER, Wilhelm, Ing  
 Witzenhausen  
 Kniegasse 26 oder  
 c/o Tuebbecke, Witzenhausen

58. PARTENFELDER, Hans, Ing  
 Berlin-Siemensstadt  
 Rohrdaam 51

59. WAGNER, Hermann, Ing  
 Buderstadt  
 Steintorstr 15

60. SCHMIDT, Wilhelm, Ing  
 Hannover

61. ROESSLER, Hans, F M  
 Weiblingen  
 Pahnhofstr. 59

62. MERKELBACH, Ing  
 Siemens-Halskern  
 Koeln/Rhein

63. BRASELMANN, Ferdinand, Ing  
 Oberbauer ueber Milspe/Westf

64. SEILER, Ernst, Ing  
 Murnau/Oberbayern  
 Kohlgruberstr 72 1/2  
 bei Matheus

65. TIETZE, Otto  
 Witzenhausen  
 Kniegasse 26 oder  
 c/o Tuebbecke, Witzenhausen

66. BILLIG, Kurt, F M  
 Landshut

67. SCHWEDES, Ernst, Dipl Ing  
 c/o Leitzwerke  
 Wetzlar/Lahn

55a. BARTELS, Waldemar, Ing  
 Linden  
 Holzweg

56a. FUHR, Wolfgang, Dipl Ing  
 c/o Storch  
 Landshut

57a. TISCHER, Ing  
 Berlin-Lichterfelde

58a. ROTH, Helmut, F M  
 c/o Kuns  
 Darmstadt, Am Tiefen See 16  
 oder Landshut

59a. HUFEN, Hermann, Ing  
 Duisburg-Hamborn  
 Mecklenburgerstr 18

60a. SCHLICHTER, August, F M  
 Emsdorf/Saar oder  
 Griesborn/Saar

61a. SILBEREIS, F M  
 Frankfurt/Main-Hoechst  
 Zentralversuchsraum der I G Farben  
 Frankfurt/Main - Hoechst

62a. BANGERTER, Dipl Ing  
 Stuttgart oder Landshut

63a. SCHIFFMANN, Erich, Ing  
 Landshut

64a. HAEFNER, Hans, Ing  
 Landshut

65a. FIRNROHR, Ing  
 Landshut, Buero Dr Bussmann/Darmst

66a. PFLANZE, Willi, F M  
 Landshut

67a. ZILKA, Otto, Dipl Ing  
 c/o Biehl  
 Witzenhausen  
 Von der Schanze 20

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Enclosure

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68. THAMM, Guenther, Ing  
Woltorf bei Peine  
Braunschweig  
Volksschule
- 68a. SCHEELE, Hans, Dr Ing  
Stuttgart-Cannstatt  
Taubenheimstr 84
69. MUENZ, Willi, Ing  
Laufsch-Bahnhof  
bei Aschaffenburg/Main
- 69a. LANG, Fritz, Ing  
Landshut
70. LINKOER, Richard, F M  
Stuttgart-Cannstatt  
Wildungerstr 37
- 70a. GARDIAN, George, F M  
Landshut
71. BLANKENBERG, Kurt, F M  
Gosttingen  
Reinholdstr 12
- 71a. KUNZE, Gottfried, F M  
Landshut
72. HENNECKE, Alois, Ing  
Landshut
- 72a. LOB, Ing  
Landshut, Buero Dr Bussmann/Daniel
73. ANDERS, Kurt, Ing  
Waiblingen bei Stuttgart  
Neue Bahnhofstr 53  
bei Haha
- 73a. ANSCHUETZ, Herrmann, Dipl Ing  
Muenchen 25  
Valleystr 53a
74. BROMMER, Wilhelm, F M  
Darmstadt  
Technische Hochschule  
Institut Prof Huster
- 74a. BARTEEL, Hans, F M  
Landshut oder  
c/o Frl Marianne Gelbrich  
Dresden N 6  
Boehmischestr 25
75. BAUKOHL, Joachim, Ing  
Landshut
- 75a. UTPATEL, Georg, Ing  
Eschwege  
Ottostr 8 c/o Krause
76. HEISCHKAMP, Erich, F M  
Landshut
- 76a. LOEHNDERS, Hans, F M  
Klebe/Rheinland  
Emmerichstr oder  
c/o Krause, Eschwege, Ottostr 8
77. KURERG, Willi, Ing  
Gelsenkirchen/Westf  
Otto Schlemmstr 58
- 77a. NEIL, Walter, Ing  
Eschwege  
Bernhardstr 19
78. TUEBBECKE, Julius, Ing  
Witzenhausen  
Am Grabenbach 2
- 78a. FREY, Herbert, Ing  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
79. NEITHOEFFER, Gerhard, F M  
Rheinhausen/Niederrhein  
Schwarzenberg, Martinstr 7
- 79a. SCHUEMMER, Martin, F M  
Weinheim/Bergstrasse
80. SCHMITT, Walter, Ing  
c/o Fischer  
Witzenhausen  
Hoetel Goldener Loeve
- 80a. EESE, Heinz, Ing  
Landshut oder  
c/o Frl Lehnig, Waiblingen/Wttbg  
Neue Bahnhofstr 44
81. KROH, Hubert, Dipl
- 81a. KROH, Heinrich, F M  
Landshut

- |  |  |
|--|--|
| 70. LINKOER, Richard, F M<br>Stuttgart-Cannstatt<br>Wildungerstr 37                      | (U.S. GUARDIAN, George, F M<br>Landshut  |
| 71. PLANKENBERG, Kurt, F M<br>Goettingen<br>Reinholdstr 12                               | 71a. KUNZE, Gottfried, F M<br>Landshut   |
| 72. HENNECKE, Alois, Ing<br>Landshut   | 72a. LOB, Ing<br>Landshut, Buero Dr Bussmann/Daniel  |
| 73. ANDERS, Kurt, Ing<br>Waiblingen bei Stuttgart<br>Neue Bahnhofstr 53<br>bei Hahn      | 73a. ANSCHUTZ, Herrmann, Dipl Ing<br>Muenchen 25<br>Valleystr 53a  |
| 74. BRONNER, Wilhelm, F M<br>Darmstadt<br>Technische Hochschule<br>Institut Prof Huster  | 74a. BARTHEL, Hans, F M<br>Landshut oder<br>c/o Frl Marianne Gelbrich<br>Dresden N 6<br>Boehmischestr 25 |
| 75. HAUKOHL, Joachim, Ing<br>Landshut  | 75a. UTPATEL, Georg, Ing<br>Eschwege<br>Ottostr 8 c/o Krause   |
| 76. HEISCHKAMP, Erich, F M<br>Landshut   | 76a. LOENDERS, Hans, F M<br>Klebe/Rheinland<br>Emmerichstr oder<br>c/o Krause, Eschwege, Ottostr 8       |
| 77. KUBERG, Willi, Ing<br>Gelsenkirchen/Westf<br>Otto Schlemmstr 58                      | 77a. NEIL, Walter, Ing<br>Eschwege<br>Bernhardstr 19   |
| 78. TUEBBECKE, Julius, Ing<br>Witzenhausen<br>Am Grabenbach 2                            | 78a. FREY, Herbert, Ing<br>c/o Tuebbecke<br>Witzenhausen<br>Am Grabenbach 2                              |
| 79. REITHOEFER, Gerhard, F M<br>Rheinhausen/Niederrhein<br>Schwarzenberg, Martinstr 7    | 79a. SCHUEMMER, Martin, F M<br>Weinheim/Bergstrasse  |
| 80. SCHMUTT, Walter, Ing<br>c/o Fischer<br>Witzenhausen<br>Hoetel Goldener Loeve         | 80a. EKESE, Heinz, Ing<br>Landshut oder<br>c/o Frl Lehnig, Waiblingen/Wttbg<br>Neue Bahnhofstr 44        |
| 81. KROH, Hubert, Dipl Ing<br>c/o Karl Brustzell<br>Muenchen-Grasafelding<br>Aribostr 43 | 81a. OCHS, Heinrich, F M<br>Linsingen bei Traysa<br>Brz Kassel   |

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Enclosure

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82. ROTHE, Kurt, Ing  
Landshut

83. HEAUSSLER, Erwin, F M  
Berlin-Neukölln  
Weißestr 9

84. ZARBS, Wilhelm, F M  
Ludwigscheid/Westf

85. LICHTÉ, Heinrich, Dr Ing  
Hannover  
Nienburgerstr 1  
Geodätisches Institut  
Ecke Schneiderberg

86. OTT, Albert, F M  
Wusmen bei Pforzheim  
oder c/o Krause, Eschwege  
Ottostr 8

87. JENSEN, Dr Ing - US  
c/o Kraemer, Darmstadt,  
Gabelsbergerstr 21

88. NITZ, Paul, F M  
Schwarsfeld Kreis Neuahaldensleben oder  
c/o Haehnel, Berlin-Spandau  
Germersheimerweg 61

89. LAFPE, Alfred, F M  
Landshut

90. GUENTHER, Werner, Dipl Ing  
c/o Dr Arnold  
Landshut/Bayern  
Ostendstr 6

91. RECHMANN, Heinrich, F M  
Linz/Rhein

92. SCHAFFERT, Erich, Ing  
Giessen  
Am Nabringsberg 8 bei Fritsch  
oder c/o Tuebbecke, Witzhausen

93. FOCK, Manfred, Dipl Ing  
Stuttgart-0  
Heubergstr 50

82a. MOHRING, Hans, Ing  
c/o Fran Anni Kroll  
Bielefeld-Bethel  
Saronweg 30

83a. HINKE, Eduard, F M  
Redel Zipf Kreis Voecklabruck  
Oesterreich

84a. BRACKMANN, Fritz, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

85a. LUDWIG I, Guenther, Dr Phil  
Goettingen  
Mathematisches Institut

86a. GLANDT, Erich, F M  
Eschwege  
Ludwigstr 32 oder  
c/o Krause, Eschwege, Ottostr 8

87a. GOERNER, Erich, Dipl Ing  
Augsburg  
Messerschmidt A G

88a. WERNER, Rolf, Ing  
c/o Haehnel  
Berlin-Spandau  
Germersheimerweg 61

89a. BESTER, Hans, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

90a. KUDRESS, Siegfried, Dipl Ing  
St Ludwig bei Wittfeld/Main  
Franken

91a. ERTE, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37

92a. HEINIGK, Leo, F M  
Rheinhausen/Niederrhein  
Major Steinbachstr 9 oder  
c/o Neithoefer, Rheinhausen

93a. LAMBERG, Karl, Dr Ing  
Frankfurt/Main  
Metallgesellschaft  
Bockenheimer Anlage 45

84. ZANESS, Wilhelm, F M  
Ludenscheid/Westf  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
85. LICHTK, Heinrich, Dr Ing  
Hannover  
Nienburgerstr 1  
Geodastisches Institut  
Ecke Schneiderberg
86. OTT, Albert, F M  
Wuermen bei Pforzheim  
oder c/o Krause, Eschwege  
Ottostr 8
87. JENNISSON, Dr Ing - US  
c/o Kraemer, Darmstadt,  
Gabelsbergerstr 21
88. NITZ, Paul, F M  
Schwarsfeld Kreis Neuhaldensleben oder  
c/o Haehnel, Berlin-Spandau  
Germersheimerweg 61
89. LAEFFE, Alfred, F M  
Landshut
90. GUENTHER, Werner, Dipl Ing  
c/o Dr Arnold  
Landshut/Bayern  
Ostendstr 6
91. RECHMANN, Heinrich, F M  
Lintz/Rhein
92. SKIFFERT, Erich, Ing  
Giessen  
Am Nabringsberg 8 bei Fritsch  
oder c/o Tuebbecke, Witzenhausen
93. FOCK, Manfred, Dipl Ing  
Stuttgart-0  
Heubergstr 50
94. SCHMIDT, Friedrich Wilhelm, Dr Ing  
Erlangen/Thuer  
Goethestr 20 bei Sollmann
95. EDLER, Ernst, Ing  
c/o von Liebhaber  
Kassel-Wilhelmshoehle  
Kuhbergstr 12
- 85a. LUDWIG I, Guenther, Dr Phil  
Goettingen  
Mathematisches Institut
- 86a. GLANDT, Erich, F M  
Eschwege  
Ludwigstr 32 oder  
c/o Krause, Eschwege, Ottostr 8
- 87a. GOERNER, Erich, Dipl Ing  
Augsburg  
Messerschmidt A G
- 88a. WERNER, Rolf, Ing  
c/o Haehnel  
Berlin-Spandau  
Germersheimerweg 61
- 89a. BESTER, Hans, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 90a. ENDRESS, Siegfried, Dipl Ing  
St Ludwig bei Wittfeld/Main  
Franken
- 91a. ERTH, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
- 92a. HEINIGK, Leo, F M  
Rheinhausen/Niederrhein  
Major Steinbachstr 9 oder  
c/o Neithoefler, Rheinhausen
- 93a. LOEBBERG, Karl, Dr Ing  
Frankfurt/Main  
Metallgesellschaft  
Böckenheimer Anlage 45
- 94a. ZUMBUSCH, Dr Ing  
Muenchen 42 (Laim)  
Diesterweg 4
- 95a. FLECK, Ernst, Dipl Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

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96. TUTZ, Hans, Ing  
Voitsburg/Steiermark  
Grazer Vorstadt 1 oder  
Graz, Muehlriegel 3
97. RACHLITZ, Paul, F M  
Waiblingen/Wttbg  
Schorndorferstr 11 bei Behner
98. KOEHL, Willi, Ing  
Ladenburg bei Mannheim
99. GEILING, Leonhard, Dr Ing  
Freilassing/Obberbayern  
Siedlung Bruch
100. GUENTSCHEL, Heinz, Ing  
Jena a d Saale  
Katharinenstr 23
101. BRINKMEIER, Gerhard, Ing  
Muenchen 8  
Birkkarsttze 16, III  
bei Holz
102. DOLLHOFF, Wilhelm, Dipl Ing  
Stuttgart-Cannstatt  
Theodor Veilstr 68
103. GERHARDS, Walter, Ing  
c/o Seiffert  
Giessen  
Am Nahringsberg 8 bei Fritsch  
oder Landshut
104. SCHUSTER, Hans, Ing  
Eschwege  
Beethovenstr 24
105. SCHENDEL, Arthur, Dipl Ing  
Landshut
106. HARZBECHER, Gerhard, Ing  
Eschwege  
Bernhardstr 22  
bei Glamroth
107. GENSSLE, Otto, Ing  
Reutlingen
108. POETZSCHKE, Heinz, Dipl Ing  
c/o Fril Charlotte Steyer  
Landshut  
Niedermayrstr 29
109. GRABER, Franz, F M  
Steinach am Brenner  
Oesterreich
- 96a. RUOFF, Josef jr, F M  
Landshut  
Buero Dr Bussmann/Daniel
- 97a. FRISCH, Albert, F M  
Kuebelberg/Rheinpfalz
- 98a. SANDVOSS, Willi, Ing  
Landshut
- 99a. BEHRENS, Guenther, Ing  
Flensburg  
Nerongs Allee 42 bei Bdjahn
- 100a. KOENIG, Kurt, Ing  
Landshut
- 101a. WEGER, Fritz, Ing  
Linz bei Kehl/Rhein  
oder Dr Arnold, Landshut.  
Ostendstr 6
- 102a. LUDEWIG, Hermann, Ing  
Trebbin bei Berlin
- 103a. HENKEL, Johann, F M  
Unterrieden/Witzenhausen  
bei Siebert
- 104a. PERLICK, Rudolf, Ing  
c/o Fril Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 105a. FUKLER, Karl, F M  
Steg bei Bacharach/Rhein
- 106a. BUERGER, Albert, Ing  
Oborn bei Pulsnitz  
Bezirksstr 197b
- 107a. EMEOF, Theophil, F M  
Kaiserlautern  
c/o Einwohner Meldeamt
- 108a. ERDERUEGGER, Walter, Dipl Ing  
Eilshausen Kreis Herford/Westf
- 109a. POHAJAC, Hans, F M  
Innsbruck/Oesterreich  
henstr 8

98. KOBEL, Willi, Ing Approved for Release: 2022/06/22 C00010786 Willi, Ing  
Ladenburg bei Mannheim Landshut
99. GEILING, Leonhard, Dr Ing 99a. REHPENS, Guenther, Ing  
Freilassing/Obberbayern Flensburg  
Siedlung Bruch Nerongs Allee 42 bei Bdjahn
100. GUENTSCHEL, Heinz, Ing 100a. KOENIG, Kurt, Ing  
Jena a d Saale Landshut  
Katharinsstr 23
101. BRUNOMEIER, Gerhard, Ing 101a. WEGER, Fritz, Ing  
Muenchen 8 Linz bei Kehl/Rhein  
Birkkarsttze 16, III oder Dr Arnold, Landshut  
bei Holz Ostendstr 6
102. DOLLHOFF, Wilhelm, Dipl Ing 102a. LUDEWIG, Hermann, Ing  
Stuttgart-Cannstatt Trebbin bei Berlin  
Theodor Veilstr 68
103. GERHARDS, Walter, Ing 103a. HENKEL, Johann, F M  
c/o Seiffert Unterrieden/Witzenhausen  
Giessen bei Siebert  
Am Nahringsberg 8 bei Fritsch  
oder Landshut
104. SCHESTER, Hans, Ing 104a. PERLICK, Rudolf, Ing  
Eschwege c/o Frl Lehnig  
Beethovenstr 24 Waiblingen/Wttbg  
Neue Bahnhofstr 44
105. SCHEDEL, Arthur, Dipl Ing 105a. FUELBER, Karl, F M  
Landshut Steg bei Bacharach/Rhein
106. HARZBECHER, Gerhard, Ing 106a. BUERGER, Albert, Ing  
Eschwege Oborn bei Pulsnitz  
Bernhardstr 22 Bezirksstr 197b  
bei Glamroth
107. GENSSLE, Otto, Ing 107a. IMHOF, Theophil, F M  
Reutlingen Kaiserslautern  
c/o Eisenstr Meldeamt
108. POETZSCHKE, Heinz, Dipl Ing 108a. ERDERUEGGER, Walter, Dipl Ing  
c/o Frl Charlotte Stayer Eilshausen Kreis Herford/Westf  
Landshut  
Niedermayrstr 29
109. GRABER, Franz, F M 109a. POHAJAC, Hans, F M  
Steinach am Brenner Innsbruck/Oesterreich  
Oesterreich Hoehenstr 8
110. LANGE, Ernst, Dipl Ing 110a. WARREN, Fritz, Dipl Ing  
Bielefeld Reinheim/Odenwald  
Ravenburgerstr 117 Kirchstr 24 bei Kobus

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111. STORK, Georg, F M  
Arheilgen bei Darmstadt
112. KNAUER, Otto, Ing  
Hamburg-Harburg  
Brehmstr 6
113. KLOEPPPEL, Karl, Prof Dr  
Darmstadt  
Technische Hochschule
114. MGAZECK, Anton, F M  
Landshut
115. BENZ, Franz, F M  
Offenburg/Obberhein  
Elektrizitaetswerke
116. EKHEILINGER, Robert, F M  
Freilassing/Obbayern  
Weibhauser Siedlung 6
117. BAUERLE, Wilhelm Ing  
Heidenheim/Brenz  
Fa Voith
118. HESSERT, Emil, Ing  
Achern/Baden oder  
Schluchtern bei Heilbronn
119. AUF'M KAMPE, Joachim, Dr Ing  
Ainring bei Bad Reichenhall
120. MUEHLNER, Egon, Dr Ing  
Braunschweig  
Siegfriedstr 56, I
121. SPEER, Eugen, Dr Phil  
Hentschelwerke  
Kassel
122. BACHER, Konrad, Dr Ing  
Bacharach/Rhein  
Steeg 35
123. BERGEST, Rudi, Dipl Ing,  
c/o Madec  
Witzenhausen  
bei Fa Luedecke & Storm
124. POHAJAC, Hans, F M  
Innsbruck/Oesterreich  
Hoehenstr 9
- 111a. ADERHOLT, Kurt, F M  
Pinneberg/Holstein  
Friedenstr 48
- 112a. IRMER, Gerhard, F M  
Solingen-Ohliss  
Mankhauserstr 38 bei Fuhlendorf
- 113a. SIELAFF, Ernst, Dipl Ing  
Augsburg  
Messerschmidt A G
- 114a. TREIB, Franz, F M  
Schaffhausen/Saar  
Ehemalige Goebbelstr 11  
oder c/o Krause, Eschwege  
Ottostr 8
- 115a. BRANDEL, Kurt, F M  
Essen/Ruhr  
Siepenstr 5 bei Pollert
- 116a. SIMA, Alfred, Ing  
Kalsdorf bei Graz Nr 169, bei Berg  
Steiermark/Oesterreich  
feld
- 117a. BOETTCHER, Friedrich, Ing  
Gross-Wudicke bei Rathenow
- 118a. KOHOUBEK, Heinz, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 119a. HOEHNDOERF, Fritz, Dr Phil  
Bad Reichenhall/Bayern
- 120a. SCHLOLAUF, Herbert, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg
- 121a. KNOTHE, Herbert, Dipl Ing  
Darmstadt  
Fichtestr 32
- 122a. BLUM, Robert, Dipl Ing  
Stuttgart-Degeloch  
Loewinstr - Rosshauweg bei Saale
- 123a. FIEDLER, Herbert, F M  
Bischhausen bei Witzenhausen  
Berggasse  
oder Hentschelwerke, Kassel
- 124a. MAYER, Fritz, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37

113. KLOEPPPEL, Karl, Prof <sup>113a. STRAVE, Ernst, Dipl Ing</sup>  
 Darmstadt <sup>Approved for Release: 2022/06/22 C00010786</sup>  
 Technische Hochschule <sup>Messerschmidt A G</sup>

114. NEAZECK, Anton, F M <sup>114a. TREIB, Franz, F M</sup>  
 Landshut <sup>Schaffhausen/Saar</sup>  
<sup>Ehenalige Goebbelstr 11</sup>  
<sup>oder c/o Krause, Eschwege</sup>  
<sup>Ottostr 8</sup>

115. BENZ, Franz, F M <sup>115a. BRANDL, Kurt, F M</sup>  
 Offenburg/Obberhein <sup>Essen/Ruhr</sup>  
 Elektrizitaetswerke <sup>Siepenstr 5 bei Pollert</sup>

116. BEHRINGER, Robert, F M <sup>116a. SIMA, Alfred, Ing</sup>  
 Freilassing/Obbayern <sup>Kalsdorf bei Graz Nr 169, bei Berg-</sup>  
 Weibhauser Siedlung 6 <sup>Steiermak/Oesterreich <sup>feld</sup></sup>

117. BAUERLE, Wilhelm Ing <sup>117a. BOETTCHER, Friedrich, Ing</sup>  
 Heidenheim/Brenz <sup>Gross-Wudicke bei Rathenow</sup>  
 Fa Voith

118. HESSERT, Emil, Ing <sup>118a. KOHOPEK, Heinz, Ing</sup>  
 Achern/Baden oder <sup>c/o Frl Lehnig</sup>  
 Schluchtern bei Heilbronn <sup>Waiblingen/Wttbg</sup>  
<sup>Neue Bahnhofstr 44</sup>

119. AUF'M KAMPE, Joachim, Dr Ing <sup>119a. HOEHENDORF, Fritz, Dr Phil</sup>  
 Ainring bei Bad Reichenhall <sup>Bad Reichenhall/Bayern</sup>

120. MUEHLNER, Egon, Dr Ing <sup>120a. SCHLOLAUF, Herbert, Ing</sup>  
 Braunschweig <sup>c/o Frl Lehnig</sup>  
 Siegfriedstr 56, I <sup>Waiblingen/Wttbg</sup>

121. SPEER, Eugen, Dr Phil <sup>121a. KNOTHE, Herbert, Dipl Ing</sup>  
 Hentschelwerke <sup>Darmstadt</sup>  
 Kassel <sup>Fichtestr 32</sup>

122. BACHER, Konrad, Dr Ing <sup>122a. BLUM, Robert, Dipl Ing</sup>  
 Bacharach/Rhein <sup>Stuttgart-Degeloch</sup>  
 Steeg 35 <sup>Loewinstr - Rosehauweg bei Saile</sup>

123. BERGST, Rudi, Dipl Ing <sup>123a. FIEDLER, Herbert, F M</sup>  
 c/o Madee <sup>Bischhausen bei Witzzenhausen</sup>  
 Witzzenhausen <sup>Berggasse</sup>  
 bei Fa Luedecke & Storm <sup>oder Hentschelwerke, Kassel</sup>

124. POHAJAC, Hans, F M <sup>124a. MAYER, Fritz, F M</sup>  
 Innsbruck/Oesterreich <sup>c/o Linkohr</sup>  
 Hoehenstr 9 <sup>Stuttgart-Cannstatt</sup>  
<sup>Wildungerstr 37</sup>

125. ZELLER, Josef, F M <sup>125a. TASCHKE, Kurt, Dipl Ing</sup>  
 Grossauheim bei Hanau/Main <sup>Frankfurt/Main-Eschersheim</sup>  
<sup>Landgraf Wilhelmstr 15</sup>

126. CANINBERG, Heinrich, Dipl Ing <sup>126a. MERR, Hans, F M</sup>  
 Heelden/Niederrhein <sup>Eschwege, Ludwigstr 4 oder</sup>  
 Post Isselberg <sup>c/o Krause, Eschwege, Ottostr 8</sup>  
 Gut Duschhof <sup>oder Geisslauern/Saar</sup>

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Enclosure

- 10 -

127. TSCHERMACK, Rudolf, Ing  
Landshut oder  
Oberstdorf bei Pa Mauser
- 127a. BAETZ, August, Ing  
Machtlos Kreis Ziegenheim bei Kass:
128. BECKMANN, Dr Ing  
Muenchen, 19  
Weissenhausstr 4
- 128a. WUTKE, Ing  
Flensburg/Schleswig  
Wester Allee 92
129. FLANDORFER, Gerhard, Ing  
Ermschward/Werra No 57  
bei Sparbert
- 129a. HOLSKE, Richard, Ing  
Bas Sodaan-Allendorf/Werra
130. HARMANS, Jan, Dr Ing  
c/o Oskar Zosel  
Landshut, Ostendstr 6  
oder Buero Landshut
- 130a. KUTZSCHE, Werner, Dipl Ing  
Landshut oder  
Kreischs/Sachsen  
Rosenstr 104 h
131. ARNOLD, Wilhela, F M  
Wiesbaden-Biebrich  
Friedrichstr 19
- 131a. BERWALD, Franz, F M  
Landshut
132. RUST, Karl, Ing  
c/o Dr Kochler  
Gandersheim bei Kreifensen  
Neustr 11 oder  
Landshut, Buero Dr Bussmann/Daniel
- 132a. FUESER, Willi, F M  
Eschwege  
Bernhardstr 26 oder  
c/o Krause, Eschwege, Ottostr B
133. KRAUSS, Gerhard, Ing  
Hoepfingen Kreis Buchen/Odenwald  
Kirchenstr 2
- 133a. HOPPMANN, Werner, Ing  
Waldorf/Taunus
134. BEHNKE, Karl, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 134a. GSKLE, Josef, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
135. KRAFFT, Friedrich, Ing  
Mainz oder Frankfurt/Main  
oder Landshut Dr Bussmann/Daniel
- 135a. HANKE, Hans, F M  
Berlin N 31  
Hussitenstr 16
136. KOESTERS, Ludwig, Ing  
Hersfeld/Werra  
August Gottliebstr 15
- 136a. PFEFFER, Theophil, Ing  
Metzingen/Wttbg  
Kurzestr 2
137. FICK, Ernst, Ing  
Zutingen bei Pforzheim  
Hindenburgstr 43 oder  
Landshut, Dr Bussmann/Daniel
- 137a. KURZSCHENKEL, Hermann, F M  
Grossauheim/Main  
oder Landshut Dr Bussmann/Daniel
138. SCHWARZ, Adolf, F M  
Wien, 24  
Brunn am Gebirge  
Gattringerstr 34
- 138a. LAMPE, Alfred, F M  
Wolgast oder  
Landshut
139. CHAussy, Karl-Heinz  
Karlsruhe  
Kallivodastr 1
- 139a. SCHOLZ, F M  
Landshut/Bayern
140. KATHER, Gottfried, F M  
Weiden bei Aachen
- 140a. KALUEZA, Ewald, F M  
Landshut

129. FLANDORFER, Gerhard, Ing  
Ermachverd/Werra No 21  
bei Sparbert

130. HARMANS, Jan, Dr Ing  
c/o Oskar Zosel  
Landshut, Ostendstr 6  
oder Buero Landshut

131. ARNOLD, Wilhelm, F M  
Wiesbaden-Biebrich  
Friedrichstr 19

132. RUST, Karl, Ing  
c/o Dr Koehler  
Gandersheim bei Kreifensen  
Neustr 11 oder  
Landshut, Buero Dr Bussmann/Daniel

133. KRAUSS, Gerhard, Ing  
Hoepfingen Kreis Buchen/Odenwald  
Kircheastr 2

134. BRENKE, Karl, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

135. KRAPFT, Friedrich, Ing  
Mainz oder Frankfurt/Main  
oder Landshut Dr Bussmann/Daniel

136. KOESTERS, Ludwig, Ing  
Hersfeld/Werra  
August Gottliebstr 15

137. PICK, Ernst, Ing  
Zittingen bei Pforzheim  
Hindenburgstr 43 oder  
Landshut, Dr Bussmann/Daniel

138. SCHWARZ, Adolf, F M  
Wien, 24  
Brunn am Gebirge  
Gattringerstr 34

139. CHAUSSY, Karl-Heinz  
Karlsruhe  
Kallivodastr 1

140. KATHER, Gottfried, F M  
Weiden bei Aachen

141. BAUMGARTEL, Albert, Ing  
Schwandorf/Bayern  
Winterstr 3 bei Dittrich

142. WEIGAND, Leonhard, Dipl Ing  
Muenchen  
Uhlandstr 1

130a. KUTZSCHE, Werner, Dipl Ing  
Landshut oder  
Kreischta/Sachsen  
Rosenstr 104 h

131a. BERHALD, Franz, F M  
Landshut

132a. FUESER, Willi, F M  
Eschwege  
Bernhardstr 26 oder  
c/o Krause, Eschwege, Ottostr B

133a. HOFFMANN, Werner, Ing  
Waldorf/Taunus

134a. GSELLE, Josef, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

135a. HANKE, Hans, F M  
Berlin N 31  
Hussitenstr 16

136a. PFEFFER, Theophil, Ing  
Metzingen/Wttbg  
Kurzestr 2

137a. KURZSCHENKEL, Hermann, F M  
Grossauheim/Main  
oder Landshut Dr Bussmann/Daniel

138a. LANPE, Alfred, F M  
Wolgast oder  
Landshut

139a. SCHOLZ, F M  
Landshut/Bayern

140a. KALUZZA, Ewald, F M  
Landshut

141a. BACHMANN, Alfred, Dipl Ing  
c/o Frau Hanna Steinhilber  
Senden bei Neuulm  
Ulmerstr 231 bei Schiefele

142a. MEISCHNER, Herbert, Dr Ing  
Braunschweig-Wolfenbuettel  
Stadtmarkt 15

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ENCLOSURE

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143. LAYES, Walter, Ing  
Duesseldorf-Eller  
Zeppelinstr 44
- 143a. GLASMACHER, Hermann, F M  
c/o Weihoefer  
Rheinhausen/Niederhein  
Schwarzenberg, Martinstr 7
144. MILENZ, Ing  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
- 144a. SCHWARRICK, F M  
Berlin-Pankow  
Binzstr 20
145. MAROGRAF, Kurt, Ing  
Fuerth  
Theaterstr 14 oder  
ueber Haehnel, Berlin
- 145a. LOHMANN, Dipl Ing  
c/o Frau Hildegard Angele  
Landshut
146. TISCHER, Ing  
Berlin-Lichterfelde
- 146a. PREUSSE, Erich, F M  
Landshut  
Dr Bussmann/Daniel
147. MEUTH, Hans-Otto, Dipl Ing  
Stuttgart-M  
Nussklinge 19
- 147a. BRUNNER, Dr Ing  
Berlin-Plötzensee  
Tegeler Weg  
Chem Techn Reichsanstalt
148. HUFEN, Hermann, Ing  
Duisburg-Hamborn  
Mecklenburgerstr 18
- 148a. JOEKREN, Wilfried, Ing  
c/o Dr Mahlow  
Saal bei Regensburg
149. HANNEWALD, Dipl Ing  
Darmstadt  
Techn Hochschule  
Institut Prof Busch
- 149a. KOKILLNER, Karl-Heinz, Dipl Ing  
Darmstadt  
Bockhausstr 13
150. SPAHN, Robert, F M  
Ahlfeld/Hessen
- ~~150a.~~ GICKEL, Walter, F M  
c/o Frl Lehnig W  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
151. KAEFER, Heinz, Dipl Ing  
Darmstadt-Balkhausen
- 151a. HERMANN, Adolf, Ing  
Heidelberg  
Fa Stotz Kontakt
152. SCHELICHTER, August, F M  
Emsdorf/Saar oder  
Griesdorf/Saar
- 152a. HUEHL, Valentin, F M  
Darmstadt Griesheim  
Alte Darmstadterstr 39
153. VENZKE, Guenther, F M  
Landshut
- 153a. WILHELM, Josef, F M  
Muenchen 12  
Barthstr 8
154. BOLTE, Ude, Dr Ing  
Darmstadt  
Tamusstr 5
- 154a. WICKLAS, Rudolf, F M  
Bremen  
Lueneburgerstr 39
155. VOGADKA, Johann, F M  
Wien 20  
Salzachstr 7
- 155a. ZSCHEYGE, Ernst, F M  
AEG Hamburg  
Zentral Personalstelle
156. WINKELMANN, Willi, F M  
Wittenbergstr 10  
Hamburg
- 156a. WALCH, Melchior, F M  
Hamburg

145. MARGGRAF, Kurt, Ing  
Fuertth  
Theaterstr 14 oder  
ueber Haechnal, Berlin
146. TISCHER, Ing  
Berlin-Lichterfelde
147. MEUTH, Hans-Otto, Dipl Ing  
Stuttgart-M  
Nusskinge 19
148. HUFEN, Hermann, Ing  
Duisburg-Hamborn  
Mecklenburgerstr 18
149. HANNEWALD, Dipl Ing  
Darmstadt  
Techn Hochschule  
Institut Prof Busch
150. SPAHN, Robert, F M  
Ahlfeld/Hessen
151. KAEFER, Heinz, Dipl Ing  
Darmstadt-Balkhausen
152. SCHELICHTER, August, F M  
Ensdorf/Saar oder  
Griesdorf/Saar
153. VENZKE, Guenther, F M  
Landshut
154. BOLTE, Udo, Dr Ing  
Darmstadt  
Tamusstr 5
155. VOSADKA, Johann, F M  
Wien 20  
Salzachstr 7
156. WINKELMANN, Willi, F M  
Misburg bei Hannover  
Arendstr 33, bei Oelze
157. MAHLO, Heinz, Dr Ing  
Saal bei Regensburg
- 145a. LOEMANN, Dipl Ing  
c/o Frau Hildegard Angele  
Landshut
- 146a. PREUSSE, Erich, F M  
Landshut  
Dr Bussmann/Daniel
- 147a. BRUNNER, Dr Ing  
Berlin-Ploetzensee  
Tegeler Weg  
Chem Techn Reichsanstalt
- 148a. JOEKEREN, Wilfried, Ing  
c/o Dr Mahlow  
Saal bei Regensburg
- 149a. KOELLNER, Karl-Heinz, Dipl Ing  
Darmstadt  
Bockhausstr 13
- ~~150a.~~ GICKEL, Walter, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 151a. HERMANN, Adolf, Ing  
Heidelberg  
Pa Stotz Kontakt
- 152a. HUEHL, Valentin, F M  
Darmstadt Griesheim  
Alte Darmstadtterstr 39
- 153a. WILHELM, Josef, F M  
Muenchen 12  
Barthstr 8
- 154a. WICKLAS, Rudolf, F M  
Bremen  
Lueneburgerstr 39
- 155a. ZSCHEYGE, Ernst, F M  
ABG Hamburg  
Zentral Personalstelle
- 156a. WALCH, Melchior, F M  
Regensburg  
c/o Einwohner-Meldeamt
- 157a. VOM LIEBHABER, Rudolf, Ing  
Kassel-Wilhelmshoehe  
Kuhbergstr 12


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Enclosure

- 12 -

158. BRINK, Karl, Dr Ing  
Wedel bei Hamburg  
Gaertnerstr 1 oder  
Fa Siebert & Kuehn  
Oberkaufungen bei Kassel
159. KLAR, Paul, Ing  
Vollmerz 13, Kreis  
Schluetchtern
160. STAGGE, Dipl Ing  
Leuna bei Merseburg  
Torweg 11
161. SÄTTLER, Wilhelm, F M  
Hamburg 20  
Krempenstr 10, III
162. SCHNITTE, Heinz, Ing  
Braunschweig  
Madamenweg 110
163. PITSCHMANN, Ernst, Dipl Ing  
Witzenhausen  
Goldener Loewe
164. BURSCHRAF, Hans, F M  
c/o Georg Stork  
Darmstadt-Arheiligen
165. LEWIDERS, Hans, F M  
Kleve/Rheinland  
Kamerichstr oder  
c/o Krause, Eschwege  
Ottostr 8
166. TORHESSEN, Heinz, Ing  
Duesseldorf  
Aachenerstr 208
167. SCHNEIDER, Martin, F M  
Weinheim a d Bergstr
168. ALTMER, F M  
c/o Dr Franz Fischer  
Nuernberg  
Ohm Polytechnikum
169. MEINZER, Erwin, F M  
Karlruhe  
Karlstr 28
170. KAHLS, Hans, F M  
Heiligenhaus bei  
Duesseldorf
171. ZIDDERMANN, Erich, Dr Ing  
Darmstadt
- 158a. WILHELM, Rudolf, Dipl Ing  
c/o Wolfgang Rentsch  
Landshut
- 159a. BUCKESFELD, Wilhelm, Ing  
Kochel/Oberbayern
- 160a. PAULI, Fritz, Ing  
Landshut
- 161a. GUENTHER, Rudolf, Dipl Ing  
Frankfurt/Main  
Gartenstr 14
- 162a. FRANK, Hans, Ing  
Heidenoldendorf  
bei Friedrichshafen
- 163a. TABUELER, Gerhard, F M  
Ravensburg  
bei Friedrichshafen
- 164a. HESSE, Fritz, F M  
Landshut
- 165a. MORBIUS, Fritz, F M  
Eschwege, Bernhardstr 19 oder  
c/o Krause, Ottostr 8 oder  
Hentschelwerke, Kassel
- 166a. HASS, Martin, Dr Ing  
Friedl/Chiemsee - Obbayern
- 167a. BLATTGEN, Wilhelm, F M  
Duisburg  
c/o Einwohner-Meldeamt
- 168a. SEKKAUS, Daniel, F M  
c/o Prof Hueter  
Darmstadt  
Technische Hochschule
- 169a. GRELL, F M  
Landshut
- 170a. GRIMBERG, F M  
Landshut
- 171a. SCHMID, Wulfo, Dr Ing

160. STAGGE, Dipl Ing Leuna bei Merseburg Torveg 11	160a. PAULI, Fritz, Ing Landshut
161. SATTLER, Wilhelm, F M Hamburg 20 Krempenstr 10, III	161a. GUENTHER, Rudolf, Dipl Ing Frankfurt/Main Gartenstr 14
162. SCHNELLE, Heinz, Ing Bramsche Madamenweg 110	162a. FRANK, Hans, Ing Heidenoldendorf bei Friedrichshafen
163. FITSCHMANN, Ernst, Dipl Ing Witzenhausen Goldener Loewe	163a. TAEUBLER, Gerhard, F M Ravensburg bei Friedrichshafen
164. BUESGRAF, Hans, F M c/o Georg Stork Darmstadt-Arheilgen	164a. HESSE, Fritz, F M Landshut
165. LEHNDERS, Hans, F M Kleve/Rheinland Kemerichstr oder c/o Krause, Eschwege Ottostr 8	165a. MOEBIUS, Fritz, F M Eschwege, Bernhardstr 19 oder c/o Krause, Ottostr 8 oder Hentschelwerke, Kassel
166. TOMHESSEN, Heinz, Ing Duesseldorf Aachenerstr 208	166a. HASS, Martin, Dr Ing Priem/Chiemsee - Obbayern
167. SCHUEPPE, Martin, F M Weinheim a d Bergstr	167a. BLETTGEN, Wilhelm, F M Duisburg c/o Einwohner-Meldeamt
168. ALTHER, F M c/o Dr Franz Fischer Huernberg Ohm Polytechnikum	168a. SEKKHAUS, Daniel, F M c/o Prof Hueter Darmstadt Technische Hochschule
169. MEINZER, Erwin, F M Karlsruhe Karlstr 28	169a. GRELL, F M Landshut
170. KARLS, Hans, F M Heiligenhaus bei Duesseldorf	170a. GRIMBERG, F M Landshut
171. ZIDDERMANN, Erich, Dr Ing Darmstadt Technische Hochschule 1st Prof Hueter	171a. SCHMID, Walfo, Dr Ing Darmstadt Technische Hochschule
172. HINKE, Eduard, F M Redel Zipf Kreis Voeklabruck Oesterreich	172a. BRINKMANN, August, F M Ahlen/Westf Gemmericherstr 49

  
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Enclosure

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173. CORNELIUS, Willi, Dr Ing  
Darmstadt  
Technische Hochschule
174. HERDMANN, August, F M  
Dortmund  
c/o Eiswohner-Meldeamt
175. SCHULZE, Kurt, Ing  
Ballgow-Doerberitz  
Kreis Mauen  
Alemandenstr 11  
oder ueber Haehnel  
Berlin-Spandau  
Germersheimerweg 61
176. GLANDT, Erich, F M  
Eschwege  
Ludwigstr 32  
c/o Krause, Ottostr 8
177. GERHARDT, Hermann, Ing  
Wupperthal-Barmen  
Eintrachtstr 14
178. HINSTEDT, Karl, Dipl Ing  
Landshut
179. SCHEER, Georg, Dipl Ing  
Blaubeuren/Ulm  
Metzgerstr 1
180. RENTSCH, Wolfgang, Dipl Ing  
c/o Landshut oder  
Pirna Cobitz/Sachsen  
Liebethalerstr 14
181. WIESER, August, Dipl Ing  
Muenchen-Lein  
Hogenbergstr 27
182. HEINIGK, Leo, F M  
Rheinhausen/Wiederrhein  
Major Steinbachstr 9  
oder c/o Neithoefer  
Rheinhausen
183. NOLTE, Kurt, F M  
Wupperthal-Barmen  
Sonnenstr 59
184. SCHARLAU, Horst, F M  
Rethmar bei Hannover
- 173a. FINGADO, Dr Ing  
Darmstadt  
Technische Hochschule
- 174a. CLAUS, Harry, F M  
Landshut
- 175a. HARMANN, Ing  
c/o Helmut Haehnel  
Berlin-Spandau  
Germersheimerweg 61
- 176a. SEIDEL, Anton, F M  
Serk bei Saarburg oder  
Russ a d Saar
- 177a. SEUFERT, Willi, Dipl Ing  
Stuttgart-N  
Keplerstr 10  
Technische Hochschule
- 178a. HUETTENBERGER, Willi, F M  
Landshut
- 179a. DITTRICH, Max, F M  
c/o Alois Hag.  
Riedenburg an der Altmuehl  
Bayern
- 180a. MOSCH, Rudolf, Dipl Ing  
c/o Marianne Gelbrich  
Dresden N 6  
Boehmischestr 25, I  
oder Landshut
- 181a. SCHIFFMANN, Erich, Ing  
Landshut
- 182a. SIEBICHEROTH, Kurt, F M  
Grafenweiler/Pfalz  
Buderhof 39
- 183a. GAN GHOFFER, Peter, F M  
Muenchen 12  
Sandtnerstr 12 bei Zettel
- 184a. FINK, Leo, F M  
Köln-Bickendorf  
Mehdelsohnstr 8

175. SCHULZE, Kurt, Ing  
Dallgow-Doberitz  
Kreis Mauen  
Alemandenstr 11  
oder ueber Haehnel  
Berlin-Spandau  
Germersheimerweg 61

WADSMANN Ing  
Haehnel  
Berlin-Spandau  
Germersheimerweg 61

176. GIANDT, Erich, F M  
Eschwege  
Ludwigstr 32  
c/o Krause, Ottostr 8

176a. SEIDEL, Anton, F M  
Berk bei Saarburg oder  
Russ a d Saar

177. GERHARDT, Hermann, Ing  
Wupperthal-Barmen  
Eintrachtstr 14

177a. SEUFERT, Willi, Dipl Ing  
Stuttgart-M  
Kepplerstr 10  
Technische Hochschule

178. HIMSTEDT, Karl, Dipl Ing  
Landshut

178a. HUETTENBERGER, Willi, F M  
Landshut

179. SCHEER, Georg, Dipl Ing  
Blaubeuren/Ulm  
Metzgerstr 1

179a. DITTRICH, Max, F M  
c/o Alois Hag  
Riedenburg an der Altmuehl  
Bayern

180. REKITSCH, Wolfgang, Dipl Ing  
c/o Landshut oder  
Pirna Cobitz/Sachsen  
Liebethalerstr 14

180a. MOSCH, Rudolf, Dipl Ing  
c/o Marianne Gelbrich  
Dresden N 6  
Boehmischestr 25, I  
oder Landshut

181. WIESER, August, Dipl Ing  
Muenchen-Leim  
Hogenbergstr 27

181a. SCHIFFMANN, Erich, Ing  
Landshut

182. HEINIGK, Leo, F M  
Rheinhausen/Niederrhein  
Major Steinbachstr 9  
oder c/o Neithoefen  
Rheinhausen

182a. SIEBICHTEROTH, Kurt, F M  
Grafenweiler/Pfalz  
Buderhof 39

183. WOLTE, Kurt, F M  
Wupperthal-Barmen  
Sonnenstr 59

183a. GAN GHOFFER, Peter, F M  
Muenchen 12  
Sandtnerstr 12 bei Zettel

184. SCHARLAU, Horst, F M  
Rethmar bei Hannover

184a. PINK, Leo, F M  
Koeln-Bickendorf  
Weddelsohnstr 8

185. GOERTH, Johannes, Ing  
Voelkenrode/Braunschweig  
L F A Office Dr Stern  
oder ueber Haehnel  
Berlin-Spandau  
Germersheimerweg 61

185a. EICHMANN, F M  
c/o Schaendel  
Landshut



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Enclosure

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186. RUOFF, Josef Jr, F M  
Landshut  
Buerro Dr Bussmann/Daniel
- 186a. PFLAUME, Willi, F M  
Solingen  
Landwehr  
Eiberfelderstr 19 oder 90
187. WUESTEN, Eugen, Ing  
Kassel  
Hollaendischestr 149
- 187a. HASSE, Arno, Ing  
c/o Frau Anni Kroll  
Bielefeld-Bethel  
Baronveg 30
188. STRAEFER, Fritz, F M  
c/o Fri Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 188a. BLAFFERT, Eberhard, F M  
Landshut
189. LUDWIG II, Dr Ing  
Berlin-Spandau  
Pichelsdorferstr 1  
oder ueber Haehnel  
Berlin-Spandau  
Germersheimerweg 61
- 189a. ZELLER, Alois, F M  
Landshut
190. GIESSEN, Heinrich, F M  
Eitorf a d Sieg
- 190a. BRANDENBURG, Wolfgang, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
191. EISERT, Werner, F M  
Darmstadt  
Technische Hochschule  
Inst Prof Hueter
- 191a. FIEBER, Karl Wilfried, Dr Ing  
Velden Woerther See/Kaernten  
Oesterreich
192. HENKEL, Johann, F M  
Unterrieden-Witzenhausen  
bei Siebert
- 192a. HENKLI, Otto, F M  
Ermschverd-Witzenhausen  
bei Karl Edel
193. SAELZLER, Walter, Ing  
Stuttgart-Kaltenthal
- 193a. PALM, Bernhard, Ing  
Stuttgart-Kaltenthal  
Gallusstr 46
194. KESSEL, Lothar, Ing  
Frankfurt/Main  
Neumannstr 74
- 194a. WILDEGEN, Gerhard, Ing  
Muenchen-Graefelfing  
Lochhammer
195. FISCHER, Joachim, F M  
c/o Lindenlaub  
Darmstadt-Arheiligen  
Bachstr 3
- 195a. JAEHGER, Karl, F M  
c/o Georg Stork  
Darmstadt-Arheiligen
196. IMHOFF, Theophil, F M  
Kaiserslautern  
Einwohner-Meldeamt
- 196a. FERCH, Paul, F M  
c/o Tuebbecke  
Witzenhausen
197. VOEPPKEL, Dr Ing  
c/o Kraemer  
Darmstadt  
Gabelsbergerstr 21
- 197a. PIELER, Ludwig, Dipl Ing  
Bickenbach a d Bergstrasse  
bei Darmstadt
198. MENSCHEL, Heinz, F M  
Berlin-Nasels
- 198a. ZIMMEL, Max, F M

188. STRAEFER, Fritz, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
189. LUDWIG II, Dr Ing  
Berlin-Spandau  
Pichelsdorferstr 1  
oder ueber Hachnel  
Berlin-Spandau  
Germersheimerweg 61
190. GIESSEN, Heinrich, F M  
Eitorf a d Sieg
191. EISERT, Werner, F M  
Darmstadt  
Technische Hochschule  
Inst Prof Hueter
192. HENKEL, Johann, F M  
Unterrieden-Witzenhausen  
bei Siebert
193. SAEZLER, Walter, Ing  
Stuttgart-Kaltenthal
194. ERWE, Lothar, Ing  
Frankfurt/Main  
Neumannstr 74
195. FISCHER, Joachim, F M  
c/o Lindenlaub  
Darmstadt-Arheiligen  
Beckstr 3
196. DINGHOFF, Theophil, F M  
Kaiserslautern  
Einwohner-Meldeamt
197. VORPPEL, Dr Ing  
c/o Kraemer  
Darmstadt  
Gabelsbergerstr 21
198. MENSCHEL, Heinz, F M  
Berlin-Haselhorst  
Burscheiderweg 56
199. IRMER, Gerhard, F M  
Solingen-Ohlis  
Manghauserstr 38  
bei Pahlendorf
- 188a. BLAPFYKKT, Eberhard, F M  
Landshut
- 189a. ZELLER, Alois, F M  
Landshut
- 190a. BRANDENBURG, Wolfgang, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
- 191a. FIEBER, Karl Wilfried, Dr Ing  
Velden Woerther See/Kaernten  
Oesterreich
- 192a. KENKLI, Otto, F M  
Ermschverd-Witzenhausen  
bei Karl Edel
- 193a. PALM, Bernhard, Ing  
Stuttgart-Kaltenthal  
Gallusstr 46
- 194a. WILDHAGEN, Gerhard, Ing  
Muenchen-Graefelfing  
Lochhammer
- 195a. JAEHMERT, Karl, F M  
c/o Georg Stork  
Darmstadt-Arheiligen
- 196a. FERCH, Paul, F M  
c/o Tuebbecke  
Witzenhausen
- 197a. PIELER, Ludwig, Dipl Ing  
Bickenbach a d Bergstrasse  
bei Darmstadt
- 198a. ZINDAHL, Max, F M  
Eschwege  
Ottostr 8
- 199a. GREINER, Fritz, F M  
Frankfurt/Main  
Thorwaldsenstr 47 bei Kaiser


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Enclosure

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200. BOLSKE, Richard, Ing  
Bad Soden-Allendorf/Werra
201. KOEHEL, Herbert, Dipl Ing  
c/o Dr Arnold  
Landslut
202. TIMMERHOFF, Wilhelm, Dr Ing  
Koeeln-Klettenberg  
Lohrbargstr 22  
bei Wingsiefen
203. TRUMB, Franz, F M  
Schaffhausen/Saar oder  
c/o Krause, Eschwege  
Ottostr 8
204. KULWILM, Enno, F M  
Bielefeld  
Bendelerwerke c/o Osthoff
205. SCHEUESKLE, Leo, Ing  
Stuttgart  
Gaansheidstr 15
206. HESTERBERG, Erwin, F M  
Bochum-Stiepel  
Auf der Ecke 7
207. FIEDLER, Herbert, F M  
Bischhausen-Witzenhausen  
Berggasse oder  
Kentschelwerke, Kassel
208. ROTZ, Dr Phil  
c/o Fr Fischer  
Fuernberg  
Ohm Polytechnikum  
Kesslerstr 40
209. BRANBL, Kurt, F M  
Essen/Ruhr  
Siepenstr 5 bei Pollert
210. PEHLE, Max, Ing  
c/o Frl Werneburg  
Landslut
211. GROSS, Albert, F M  
c/o Fritz Horst Weber  
Schleswig  
Am Flachsteig
- 200a. PERLICK, Rudolf, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 201a. STEINERT, Gerhard, Ing  
c/o Henschel & Sohn  
Kassel
- 202a. WINKLER, Odilo, Ing  
Geraberg/Thuur  
Bahnhofstr 56 bei Schmidt
- 203a. BEITWEILER, Mathias, F M  
Serk bei Saarburg oder  
Buss a d Saar
- 204a. MASKOW, Erich, F M  
c/o Linkohf  
Stuttgart-Cannstatt  
Wildungerstr 37
- 205a. METZGER, F M  
Landslut
- 206a. ANDRICH, Werner, Ing  
Muenchen  
Jagdstr 9
- 207a. LUTZ, August, F M  
c/o Tuebbecke  
Witzenhausen oder  
Bischhausen/Witzenhausen oder  
Lauterbach/Kessen, Goethestr 23
- 208a. FISCHER, Dr Phil  
Wiesbach/Mittelfranken
- 209a. WULLKAU, F M  
c/o Metzger  
Oberlahnstein bei Koblenz
- 210a. TRETSCHOK, Ing  
c/o Dipl Ing Otto  
Goettingen  
Rheinhauserstr 40
- 211a. STEPHEN, Erich  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44

c/o Dr Arnold  
Landshut

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202. TIMMERHOFF, Wilhelm, Dr Ing  
Koeln-Klettenberg  
Lohrbergstr 22  
bei Wingensiefen
203. TRUB, Franz, F M  
Schaffhausen/Saar oder  
c/o Krause, Eschwege  
Ottostr 8
204. KULWILM, Enno, F M  
Bielefeld  
Bendelerwerke c/o Osthoff
205. SCHUESSELE, Leo, Ing  
Stuttgart  
Gaensheidstr 15
206. HESTERBERG, Erwin, F M  
Bochum-Stiepel  
Auf der Ecke 7
207. FIEDLER, Harbert, F M  
Bischhausen-Witzenhausen  
Berggasse oder  
Kentschelwerke, Kassel
208. ROTH, Dr Phil  
c/o Fr Fischer  
Fuernberg  
Ohm Polytechnikum  
Kesslerstr. 40
209. BRANGL, Kurt, F M  
Essen/Ruhr  
Siepenstr 5 bei Pollert
210. PEHLE, Max, Ing  
c/o Frl Werneburg  
Landshut
211. GROSS, Albert, F M  
c/o Fritz Horst Weber  
Schleswig  
Am Flachsteig
212. OST, Albert, Dipl Ing  
Bad Kreuznach oder  
Techn Hochschule  
Barnstadt
- 202a. WINKLER, Odilo, Ing  
Geraberg/Thuar  
Bahnhofstr 56 bei Schmidt
- 203a. BRITWILLER, Mathias, F M  
Serk bei Saarburg oder  
Buss a d Saar
- 204a. MASKOW, Erich, F M  
c/o Linkohf  
Stuttgart-Cannstatt  
Wildungerstr 37
- 205a. METZGER, F M  
Landshut
- 206a. ANDRICH, Werner, Ing  
Muenchen  
Jagdstr 9
- 207a. LUTZ, August, F M  
c/o Tuschbecke  
Witzenhausen oder  
Bischhausen/Witzenhausen oder  
Lauterbach/Kessen, Goethestr 23
- 208a. FISCHER, Dr Phil  
Wiesbach/Mittelfranken
- 209a. WULLKAU, F M  
c/o Metzger  
Oberlahnstein bei Koblenz
- 210a. TRETSCHOK, Ing  
c/o Dipl Ing Otto  
Goettingen  
Rheinhauserstr 40
- 211a. STEPFEN, Erich  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 212a. BLUTHNER, Erich, Ing  
Leipzig 5  
Spichernstr 21 bei Lehmann

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213. DEER, Hans, F M  
Eschwege, Ludwigstr 4 oder  
c/o Krause, Ottostr 8 oder  
Geisslautern/Saar
214. FRIEBES, Karl, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
215. AUBIN, Walter  
c/o Hachnel  
Berlin-Spandau  
Germerseinerstr 61 oder  
Schwanfeld Kreis Neuhaldensleben
216. FUESER, Willi, F M  
Eschwege  
Bernhardtstr 26 oder  
c/o Krause, Ottostr 8
217. WOHL, Paul, Ing  
Duisburg-Hochfeld  
St Johannstr 4
218. HAASE, Helmut, Ing  
Landshut
219. URTEL, Rudolf, Dipl Ing  
c/o Dister  
Erlangen bei Nuernberg  
Neue Strasse 4
220. KUEHN, F M  
c/o August Brinkmann  
Ablen/Westf  
Gemmericherstr 49
221. SACHER, Hans, Dipl Ing  
Witzenhausen/Werra  
Eduard Schroeterstr 13
222. HANKE, Hans, F M  
Berlin N 31  
Hussitenstr 16
223. GORDES, Heinz, Dipl Ing  
Braunschweig  
Inst Prof Busemann
224. KRINKEL, Johann, Ing  
Nuernberg  
Buchenschlag 149
225. KHN, Friedrich, Dr Ing
- 213a. PIRKER, Erich, F M  
Mannheim oder  
Ludwigshafen c/o Einwohner-  
Meldeamt
- 214a. KROHN, Kurt, F M  
Landshut
- 215a. REIBER, Wolfgang, F M  
Tuebingen  
Guelinstr 6
- 216a. APEL, Erich, Ing  
Landshut
- 217a. STERSECK, Walter, Ing  
Ludwigstadt-Ottendorf/Bayern
- 218a. BENEDIX, Walter, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 219a. LUTZ, Alfred, Dipl Ing  
Technische Hochschule  
Inst Prof Rueter  
Darmstadt
- 221a. SCHWALBE, Max, F M  
Landshut
- 222a. WENDE, Herbert, Ing  
Landshut  
Dr Bussmann/Daniel
- 223a. WITFIG, Felix, Dr Ing  
Goettingen  
Dallmannstr 12 beo Sartorius  
oder Goettingen-Treuenhagen  
Hindeburgstr 189 bei Jordan
- 224a. MUMBERT, Willi, F M  
Eschwege, Ottostr 8  
c/o Krause

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|--|---|
| 215. AURIN, Walter<br>c/o Haehnel<br>Berlin-Spandau<br>Gernerheimerstr 61 oder<br>Schwanfeld Kreis Neuhaldensleben | Approved for Release: 2022/06/22 C00010786<br>Wittgang, F M<br>Tuebingen<br>Gmelinstr 6   |
| 216. FUESER, Willi, F M<br>Eschwege<br>Bernhardtstr 26 oder<br>c/o Krause, Ottostr 8                               | 216a. APKL, Erich, Ing<br>Landshut  |
| 217. WOHL, Paul, Ing<br>Duisburg-Hochfeld<br>St Johannstr 4  | 217a. STERSECK, Walter, Ing<br>Ludwigstadt-Ottendorf/Bayern   |
| 218. HAASE, Helmut, Ing<br>Landshut  | 218a. BENEDIK, Walter, Ing<br>c/o Frl Lehnig<br>Waiblingen/Wttbg<br>Neue Bahnhofstr 44  |
| 219. URTEL, Rudolf, Dipl Ing<br>c/o Diester<br>Erlangen bei Nuernberg<br>Neue Strasse 4                            | 219a. LUTZ, Alfred, Dipl Ing<br>Technische Hochschule<br>Inst Prof Hueter<br>Darmstadt  |
| 220. KUEHN, F M<br>c/o August Brinkmann<br>Ahlen/Westf<br>Gernericherstr 49  | 220a. SCHWALBE, Max, F M<br>Landshut  |
| 221. SACHER, Hans, Dipl Ing<br>Witzenhausen/Werra<br>Eduard Schroeterstr 13  | 221a. GRAMER, Georg, Dr Ing<br>c/o Frau Debus<br>Landshut oder<br>Schornbeck/Elbe<br>Bismarckstr 5b                                     |
| 222. HANKE, Hans, F M<br>Berlin N 31<br>Hussitenstr 16   | 222a. WENDE, Herbert, Ing<br>Landshut<br>Dr Bussmann/Daniel   |
| 223. GORGES, Heinz, Dipl Ing<br>Braunschweig<br>Inst Prof Busemann   | 223a. WITTIG, Felix, Dr Ing<br>Goettingen<br>Dallmannstr 12 bei Sartorius<br>oder Goettingen-Treuenhagen<br>Hindeburgstr 189 bei Jordan |
| 224. REINKEL, Johann, Ing<br>Nuernberg<br>Buchenschlag 149   | 224a. MUMBERT, Willi, F M<br>Eschwege, Ottostr 8<br>c/o Krause  |
| 225. KENI, Friedrich, Dipl Ing<br>Tuebingen<br>Brunstr 26 (?)  | 225a. EDSCHERMANNS, Dr Ing<br>c/o Prof Fassbender<br>Universitaet Erlangen  |
| 226. KURZSCHEKEL, Hermann, F M<br>Grossanheim/Main oder<br>Landshut Dr Bussmann/Daniel                             | 226a. KEGEL, Kurt, F M<br>Landshut<br>Dr Bussmann/Daniel  |



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227. WAHLS, Werner, F M  
Timmasepe ueber Nortorf/Holst
- 227a. STAEHLI, Gustav, Dr Ing  
Stuttgart-Cannstatt  
Waiblingerstr
228. RUTTENSTOCK, Bruno, Ing  
c/o Gerhard Brinkmeier  
Muenchen 8  
Birkharspitze 16, III  
bei Holz
- 228a. STUEHNER, Herbert, Ing  
Landshut oder  
Chemnitz, Lindenstr 6 bei Kuester
229. PAULI, Fritz, Ing  
Landshut
- 229a. PFLANZE, Willi, F M  
Landshut
230. VON LIEBHABER, Rudolf  
Kassel-Wilhelmshoehe  
Kubbergstr 12
- 230a. HACKH, Rudolf, Dipl Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
231. STURM, Dipl Ing  
Eberbach/Neckar  
Fa Stotz-Apparatebau
- 231a. GOELICH, Walter, F M  
c/o Bruetzel  
Graefelfink/Muenchen  
Aribostr 43
232. GLASMACHER, Hermann, F M  
c/o Meithoefer  
Rheinhausen/Wiederhein  
Schwarzenberg  
Martinstr 7
- 232a. KALUZZA, Ewald, F M  
Landshut  
Dr Bussmann/Daniel
233. SCHEMITT, Peter, F M  
Darmstadt-Arheiligen
- 233a. SCHEIDT, Heinz, F M  
Waiblingen  
Bahnhofstr
234. ROLAND, Heinrich, Dipl Ing  
Goettingen  
Rotestr 37
- 234a. OTTO, Wilhelm, Dipl Ing  
c/o Roland  
Goettingen  
Rotestr 37
235. KEESLER, Alfred, F M  
c/o Tschabecke  
Witzenhausen  
Am Grabenbach 2
- 235a. WINKLER, Otto, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
236. PREUSSE, Erich, F M  
Landshut  
Dr Bussmann-Daniel
- 236a. SPITZ, F M  
Landshut  
Dr Bussmann/Daniel
237. KOLLERT, Wilhelm, Ing  
Landshut
- 237a. SEIDEL, Erich  
Markleeberg bei Leipzig
238. ANGLAM, Franz, F M  
Landshut
- 238a. METZGER, Alfred, F M  
Oberlahnstein bei Koblenz
239. RUEHL, Valentin, F M  
Darmstadt-Griesheim  
Alte Darmstaedterstr 39
- 239a. SCHMIDT, Ernst, F M  
Landshut  
Dr Bussmann/Daniel
240. SCHIFFMANN, Erich, Ing  
Landshut
- 240a. SANDVOSS, Willi, Ing  
Landshut

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|---|---|
| 229. PAULI, Fritz, Ing<br>Landshut  | 229a. PFLANZE, Willi, F M<br>Landshut   |
| 230. VON LIEBHABER, Rudolf<br>Kassel-Wilhelmshoehe<br>Kubbergstr 12                                       | 230a. HACKH, Rudolf, Dipl Ing<br>c/o Frl Lehnig<br>Waiblingen/Wttbg<br>Neue Bahnhofstr 44 |
| 231. STURM, Dipl Ing<br>Eberbach/Heckar<br>Fa Stotz-Apparatebau   | 231a. GOELICH, Walter, F M<br>c/o Bruetzel<br>Graefelfink/Muenchen<br>Aribostr 43         |
| 232. GLASMACHER, Hermann, F M<br>c/o Neithoefer<br>Rheinhausen/Wiederhein<br>Schwarzenberg<br>Martinstr 7 | 232a. KALUZZA, Ewald, F M<br>Landshut<br>Dr Bussmann/Daniel                               |
| 233. SCHMITT, Peter, F M<br>Darmstadt-Arheiligen  | 233a. SCHRIDT, Heinz, F M<br>Waiblingen<br>Bahnhofstr                                     |
| 234. ROLAND, Heinrich, Dipl Ing<br>Goettingen<br>Rotestr 37   | 234a. OTTO, Wilhelm, Dipl Ing<br>c/o Roland<br>Goettingen<br>Rotestr 37                   |
| 235. KESSLER, Alfred, F M<br>c/o Tuebbecke<br>Witzenhausen<br>Am Grabenbach 2                             | 235a. WINKLER, Otto, F M<br>c/o Linkohr<br>Stuttgart-Cannstatt<br>Wildungerstr 37         |
| 236. PREUSSE, Erich, F M<br>Landshut<br>Dr Bussmann-Daniel  | 236a. SPITZ, F M<br>Landshut<br>Dr Bussmann/Daniel  |
| 237. KOLLENT, Wilhelm, Ing<br>Landshut  | 237a. SKIRKL, Erich<br>Marklesberg bei Leipzig  |
| 238. ANGLAM, Franz, F M<br>Landshut   | 238a. METZGER, Alfred, F M<br>Oberlahnstein bei Koblenz                                   |
| 239. RUEHL, Valentin, F M<br>Darmstadt-Griesheim<br>Alte Darmstaedterstr 39                               | 239a. SCHMIDT, Ernst, F M<br>Landshut<br>Dr Bussmann/Daniel                               |
| 240. SCHIFFMANN, Erich, Ing<br>Landshut   | 240a. SANDVOSS, Willi, Ing<br>Landshut  |
| 241. PESCHKE, Karl Heinz, F M<br>c/o Haehnel<br>Berlin-Spandau<br>Gernersheimerweg 61                     | 241a. PRETZEL, Walter, F M<br>Landshut  |



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242. PRASTROFER, Williheld, Ing  
Graz/Oesterreich  
Drei Hakengasse 32
243. WALCH, Melchior, F M  
Regensburg  
c/o Einwohner-Meldeamt
244. HUBENTHAL, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
245. KLEBER, Emil, F M  
c/o Zeller  
Grossauheim bei Hanau/Main
246. KAPPUS, Dr Ing  
Langfeld/Odenwald
247. TAEUBLER, Gerhard, F M  
Ravenburg bei  
Friedrichshafen
248. FISCHER, Heinrich, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
249. NAUMANN, Gerhard, F M  
c/o Haehnel  
Berlin-Spandau  
Germersheimerweg 61
250. SCHMIDT, Kurt, F M  
Landshut oder  
c/o Stage  
Lauza bei Merseburg
251. HAXEL, Otto, Dr Phil  
Goettingen  
Kaiser Wilhelm Institut  
 fuer Physik  
Bunsenstr 29
252. MOEBIUS, Fritz, F M  
Eschwege, Bernhardstr 19  
oder  
c/o Krause, Ottostr 8  
oder  
c/o Hentschelwerke, Kassel
253. GANSCHOW, Hermann, Dr Ing  
Bergheim/Sieg  
Kirchstr 5
254. TAPFZEN, Robert, Dipl Ing  
Rodenkirchen bei Bracke  
Oldenburg
- 242a. HORN, Kurt, Ing  
Plauen/Voigtland
- 243a. MAWRATH, Robert, F M  
Landshut  
Dr Bussmann/Daniel
- 244a. ARTMAYER, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
- 245a. HAUSER, Franz, Dipl Ing  
Muenchen 12  
Aldegrevestr 26
- 246a. STEIN, Dr Ing  
Darmstadt  
Technische Hochschule
- 247a. NEUMANN, Guenther, Dipl Ing  
c/o Kaehler  
Landshut
- 248a. RUMBERT, Paul, F M  
Landshut
- 249a. WINTERGERST, Sigmund, Dr Ing  
Muenzig am Starnberger See Nr 52
- 250a. MUELLER, Alfred, F M  
Landshut
- 251a. SKERACH, Karl, Dr Ing  
Muenchen  
Technische Hochschule
- 252a. KARHLER, Ing  
Landshut
- 253a. THUN, Hans Eberhard, Dipl Ing  
Stuttgart-O  
Cannstatterstr 212
- 254a. BOEKER, Herbert, Ing  
c/o Oskar Zosel  
Landshut oder  
 ueber Freiberg/Sachsen

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244. HUBERTHAL, F M c/o Linkohr Stuttgart-Cannstatt Wildungerstr 37	244a. ARTHALER, F M c/o Linkohr Cannstatt Wildungerstr 37
245. KLEBER, Emil, F M c/o Zeller Grossauheim bei Hanau/Main	245a. HAUSER, Franz, Dipl Ing Muenchen 12 Aldegreverstr 26
246. KAPFUS, Dr Ing Lengfeld/Odenwald	246a. STEIN, Dr Ing Darmstadt Technische Hochschule
247. TAKUBLER, Gerhard, F M Ravenburg bei Friedrichshafen	247a. NEUMANN, Guenther, Dipl Ing c/o Kaehler Landshut
248. FISCHER, Heinrich, F M c/o Frl Lehnig Waiblingen/Wittbg Neue Bahnhofstr 44	248a. RUDOLBERT, Paul, F M Landshut
249. KAUFMANN, Gerhard, F M c/o Haehnel Berlin-Spandau Germersheimerweg 61	249a. WILFBERGERST, Sigmund, Dr Ing Muenzig am Starnberger See Nr 52
250. SCHMIDT, Kurt, F M Landshut oder c/o Stagge Laden bei Mersburg	250a. MUELLER, Alfred, F M Landshut
251. HAYEL, Otto, Dr Phil Goettingen Kaiser Wilhelm Institut fuer Physik Bunsenstr 29	251a. SKERBACH, Karl, Dr Ing Muenchen Technische Hochschule
252. MOEBIUS, Fritz, F M Eschwege, Bernhardstr 19 oder c/o Krause, Ottostr 8 oder c/o Hentschelwerke, Kassel	252a. KAHLER, Ing Landshut
253. GANSCHOW, Hermann, Dr Ing Bergheim/Sieg Kirchstr 5	253a. TRUN, Hans Eberhard, Dipl Ing Stuttgart-0 Cannstatterstr 212
254. TANTZEN, Robert, Dipl Ing Bodenkirchen bei Bracke Oldenburg	254a. BOEHDE, Herbert, Ing c/o Oskar Zosel Landshut oder Malda ueber Freiberg/Sachsen Chemnitzerstr 21

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255. OESTERROTH, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
256. BLATTGEN, Wilhelm, F M  
Duisburg  
c/o Einwohner-Meldeamt
257. CARH, Emil, F M  
c/o Briakmann  
Ahlen/Westf  
Gemmericherstr 49
258. THIRY, Johannes, Dipl Ing  
Walzheim Kr Waiblingen/Wttbg  
Bahnhofstr 459
259. BOETICHER, Kurt, F M  
Landshut
260. BOEKER, F M  
c/o Heinz Guentschel  
Jena/Saale  
Katharinenstr 23
261. MUELLER, Jakob, F M  
c/o Prof Rueter  
Techn Hochschule  
Darmstadt
262. PALM, Ernst, Dip Ing  
Linz/Donau  
Christian Coulinstr 22
263. BRINKMANN, August, F M  
Ahlen/Westf  
Gemmericherstr 49
264. FERLICK, Rudolf, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
265. BEIDEL, Anton, F M  
Serk bei Saarbürg  
Buss/Saar
266. KLEINHANNES, Max, Ing  
Stickenbuettel  
bei Cuxhaven  
Sahlenburger Chaussee 19
267. SIEBROTTERROTH, Kurt, F M  
Grafenveller/Pfalz  
Buderhof 39
- 255a. RICHTERS, Hermann, F M  
c/o Seidlboeck  
Reinfeld-Guelzen oder  
Nussdorf am Inn  
Rosenheim Land, Gut Weidenbach
- 256a. STRIEWE, Adolf, F M  
Duesseldorf  
Bachstr 154
- 257a. VINCKEY, F M  
Landshut
- 258a. TRUMPER, Dr Ing  
Landshut oder  
c/o Bruetzel, Muenchen-Graefelfing  
Aribostr 42
- 259a. GRUKNOW, Heinrich, F M  
Landshut
- 260a. WURBS, Herbert, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Bahnhofstr 44
- 261a. SOMMER, Rudolf, Ing  
Ermschverd/Witzenhausen
- 262a. KLENK, Wilfried, Ing  
Berlin-Friedenau  
Caeciliengarten 26
- 263a. FRANZ, Hans Werner, Ing  
Stadhagen/Westf  
Obernstr 43 bei Badtmoeller
- 264a. HACKH, Rudolf, Dipl Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 265a. KESSELER, Alfred, F M  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
- 266a. SCHEUKMANN, Max, Ing  
Eschwege  
Ottostr 2
- 267a. ZIDDAHL, Max, F M  
Eschwege, Ottostr 8

- 257. CARIN, Emil, F M  
c/o Briakmann  
Ahlen/Westf  
Gemmericherstr 49
- 258. THIRY, Johannes, Dipl Ing  
Welzheim Nr Waiblingen/Wttbg  
Bahnhofstr 459
- 259. BOETTCHER, Kurt, F M  
Landshut
- 260. BOEKER, F M  
c/o Heinz Guentschel  
Jena/Saale  
Katharinenstr 23
- 261. MUELLER, Jakob, F M  
c/o Prof Muester  
Techn Hochschule  
Darmstadt
- 262. PALM, Ernst, Dip Ing  
Linz/Donau  
Christian Coulinstr 22
- 263. BRINKMANN, August, F M  
Ahlen/Westf  
Gemmericherstr 49
- 264. FERLICK, Rudolf, Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 265. SKIDEL, Anton, F M  
Berk bei Saarburg  
Buss/Saar
- 266. KLEINHANDERS, Max, Ing  
Stickenbuettel  
bei Cuxhaven  
Sahlenburger Chaussee 19
- 267. SIEBICHERROTH, Kurt, F M  
Grafenweiler/Pfalz  
Buderhof 39
- 268. BUETTGEN, Erhard, F M  
c/o Zeller  
Grossauheim bei Hanau/Main
- 269. BERLWICKE, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
- 258a. TRUENGER, Dr Ing  
Landshut oder  
c/o Bruetzel, Maenzen-Graefelfing  
Aribostr 42
- 259a. GRUENOW, Heinrich, F M  
Landshut
- 260a. WURBS, Herbert, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Bahnhofstr 44
- 261a. SOMMER, Rudolf, Ing  
Ermschverd/Witzenhausen
- 262a. KLEHK, Wilfried, Ing  
Berlin-Friedenau  
Caeciliengarten 26
- 263a. FRANZ, Hans Werner, Ing  
Stadthagen/Westf  
Oberrstr 43 bei Badmoeller
- 264a. HACKH, Rudolf, Dipl Ing  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 265a. KESSLER, Alfred, F M  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
- 266a. SCHEUNKEMANN, Max, Ing  
Eschwege  
Ottostr 2
- 267a. ZIMDAHL, Max, F M  
Eschwege, Ottostr 8
- 268a. SCHAUFUSS, Dipl Ing  
Berlin-Charlottenburg 9  
Heidenburger Allee 35
- 269a. HOLZINGER, Eduard, F M  
Landshut



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270. SANDVOSS, Willi, Ing  
Landshut
- 270a. NAUMANN, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
271. BARTWICKI, Leonhard, F M  
Berlin-Haselhorst  
Burscheiderweg/Daumstr oder  
ueber Haahnel, Berlin-Spandau  
Germerheimerweg 61
- 271a. ROSENTHAL, Gottfried, Dr Phil  
c/o Ernst Leitzwerke  
Wetzlar/Lahn
272. PFLAUME, Willi, F M  
Selingen-Landwehr  
Klberfelderstr 19 oder 90
- 272a. FUHR, Wolfgang, Dipl Ing  
c/o Storch  
Landshut
273. MORBUS, Helmut, Dipl Ing  
Frankfurt/Main  
Zeyppelin Allee 62
- 273a. ERDMANN-JESNITZER, Friedrich, Dr Ing  
Berlin-Wilmersdorf  
Burgunderstr 3
274. WINKLER, Otto, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
- 274a. MILEWSKI, Gerhard, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
275. STRIEWE, Adolf, F M  
Duesseldorf  
Bachstr 154
- 275a. DOKKOF, Erwin, F M  
Eschwege, Ottostr 6
276. RENKLY, Otto, F M  
Kraschwerd/Witzenhausen  
bei Karl Ebel
- 276a. BEYRICH, Gerhard, Ing  
Landshut
277. BRUDBERT, Paul, F M  
Magdeburg-Ost  
Richtofenstr 10
- 277a. SEMLINGER, Erwin, Ing  
Steinheim a/d/Murr  
ueber Marbach
278. BAESE, Wilhelm, F M  
Oschersleben/Bode  
Kirchstr 1
- 278a. HOLZMANN, F M  
Landshut
279. ROSEMANN, Dr Ing  
Technische Hochschule  
Stuttgart
- 279a. SCHWEDT, Otto, Dr Ing  
Muenchen-Neuauibling  
Brunhamstr 25
280. GOLLNOW, Dieter, Dr Ing  
Landshut
- 280a. KEYSERLING, Archibald, F M  
Eschwege, Rittergut Schwedda
281. GRUBER, Max, F M  
Landshut
- 281a. LIPPMAN, Hans, F M  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
282. FERCH, Paul, F M  
c/o Tuebbecke  
Witzenhausen  
Am Grabenbach 2
- 282a. HESE, Alfred, F M  
Eschwege, Ottostr 6
283. ZUMPE, Herbert, F M  
Eschwege  
Ludwigstr 7
- 283a. HEIGL, Josef, F M  
Muenchen 25  
Oberlaenderstr 20

- |   |  |
|---|--|
| 272. PFLAUME, Willi, F M<br>Selingen-Landwehr<br>Elberfelderstr 19 oder 90            | 272a. FUHR, Wolfgang, Dipl Ing<br>c/o Storch<br>Landshut                                 |
| 273. MOEBUS, Helmut, Dipl Ing<br>Frankfurt/Main<br>Zeppelin Allee 62                  | 273a. ERDMANN-JESNITZER, Friedrich, Dr Ing<br>Berlin-Wilmersdorf<br>Burgunderstr 3       |
| 274. WINKLER, Otto, F M<br>c/o Linkohr<br>Stuttgart-Cannstatt<br>Wildungerstr 37      | 274a. MILEWSKI, Gerhard, F M<br>c/o Frl Lehnig<br>Waiblingen/Wttbg<br>Neue Bahnhofstr 44 |
| 275. STRIEWE, Adolf, F M<br>Duesseldorf<br>Bachstr 154                                | 275a. DORNEGF, Erwin, F M<br>Eschwege, Ottostr 6   |
| 276. RINKLY, Otto, F M<br>Ernschverd/Witzenhausen<br>bei Karl Ebel                    | 276a. BEYRICH, Gerhard, Ing<br>Landshut  |
| 277. BRUMBERT, Paul, F M<br>Magdeburg-Ost<br>Richthofenstr 10                         | 277a. SEMLINGER, Erwin, Ing<br>Steinheim a/d/Murr<br>ueber Marbach                       |
| 278. BAESE, Wilhelm, F M<br>Oschersleben/Bode<br>Kirchstr 1                           | 278a. HOLZMANN, F M<br>Landshut  |
| 279. HOSKMAN, Dr Ing<br>Technische Hochschule<br>Stuttgart                            | 279a. SCHNEDE, Otto, Dr Ing<br>Muenchen-Neuaubing<br>Brunhamstr 25                       |
| 280. GOLLNOW, Dieter, Dr Ing<br>Landshut  | 280a. KEYSERLING, Archibald, F M<br>Eschwege, Rittergut Schwebda                         |
| 281. GRUBER, Max, F M<br>Landshut   | 281a. LIPPMAN, Hans, F M<br>c/o Tuebbecke<br>Witzenhausen<br>Am Grabenbach 2             |
| 282. FERCH, Paul, F M<br>c/o Tuebbecke<br>Witzenhausen<br>Am Grabenbach 2             | 282a. HESSE, Alfred, F M<br>Eschwege, Ottostr 6  |
| 283. ZUMPE, Herbert, F M<br>Eschwege<br>Ludwigstr 7                                   | 283a. HEIGL, Josef, F M<br>Muenchen 25<br>Oberlaenderstr 20                              |
| 284. MELCHIOR, Kaspar, F M<br>Landshut oder<br>Saarbruecken<br>c/o Einwohner-Meldeamt | 284a. BUCH, F M<br>c/o Linkohr<br>Stuttgart-Cannstatt<br>Wildungerstr 37                 |



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Enclosure

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285. DUECK, Oswald, Ing  
Berlin-Zehlendorf  
Thornstr 14
286. GREIDER, Fritz, F M  
Frankfurt/Main  
Thorvaldsenstr 47 bei Kaiser
287. KHAUER, Otto, Ing  
Hamburg-Harburg  
Brahmstr 6
288. HIRSCHMANN, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
289. BARTECHER, F M  
c/o Roland  
Goettingen  
Rotestr 37
290. HILDEBRAND, Siegfried, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
291. VAQUE, F M  
Berlin-Spandau  
Gernersheimerveg 61
292. REITWEILER, Mathias, F M  
Serk bei Saarburg oder  
Puss/Saar
293. BUSSIG, Karl, Dipl Ing  
Landshut
294. SCHERZER, Prof Dr Ing  
Darmstadt  
Technische Hochschule
295. KAUMANN, Ernst, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
296. LUPE, August, F M  
c/o Tustbecke  
Witzenhausen oder  
Bischhausen bei Witzenhausen  
oder Lauterbach/Hessen  
Goethestr 23
297. LIHK, Otto, Ing  
Balingen/Wttbg
- 285a. CHRISTIANSEN, Leopold, Dr Ing  
Landshut oder  
Koeditz bei Hof Nr 110
- 286a. MOHRING, Hans, Ing  
c/o Frau Anni Kroll  
Bielefeld-Bethel  
Baronveg 30
- 287a. REIPERT, Werner, Ing  
Eschwege, Ottostr
- 288a. WEGNER, Rudolf, F M  
c/o Frl Lehnig  
Waiblingen, Wttbg  
Neue Bahnhofstr 44
- 289a. ZIEGLER, Erwin, Ing  
Schweinfurt/Main  
Sonnenstr 20, III
- 290a. REBEL, Heinrich, F M  
c/o Frl Lehnig  
Waiblingen, Wttbg  
Neue Bahnhofstr 44
- 291a. KONZAK, Erich, F M  
c/o Karl Bruetzel  
Munzchen-Graefelfing  
Aribostr 43
- 292a. GROSSJUNG, Fritz, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 293a. HARDT, Heinz, Dr Ing  
Darmstadt, Villenkolonie Waldfriede  
oder c/o Prof Walther  
Darmstadt, Fichtestr 32
- 294a. BOENING, Dr Ing  
Landshut oder  
Waldbrunn 35, ueber Wuertzburg
- 295a. HEYRICH, Gerhard, F M  
Landshut
- 296a. QUERENGAESSER, Hugo, Dr Ing  
Dorf Guettingen  
bei Feuchtvangen, Haus 87
- 297a. BARTH, Martin, Dipl Ing  
Munzen bei Tullien

287. KNAUER, Otto, Ing  
Saarburg-Saarburg  
Brahmstr 6
288. HIRSCHMANN, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
289. BARTSCHER, F M  
c/o Roland  
Goettingen  
Rotestr 37
290. HILDEBRAND, Siegfried, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
291. VAQUE, F M  
Berlin-Spandau  
Germersheimerweg 61
292. REITWILLER, Mathias, F M  
Berk bei Saarburg oder  
Pfass/Saar
293. BUSSIG, Karl, Dipl Ing  
Landshut
294. SCHERZER, Prof Dr Ing  
Darmstadt  
Technische Hochschule
295. NAUMANN, Ernst, F M  
c/o Linkohr  
Stuttgart-Cannstatt  
Wildungerstr 37
296. LUTZ, August, F M  
c/o Tuebbecke  
Witzenhausen oder  
Bischhausen bei Witzenhausen  
oder Lauterbach/Hessen  
Goethestr 23
297. LINK, Otto, Ing  
Balingen/Wttbg  
Fa Bizerba
298. SCHULZ, Prof Dr  
Darmstadt  
Technische Hochschule
- 288a. WEGNER, Rudolf, F M  
c/o Frl Lehnig  
Waiblingen, Wttbg  
Neue Bahnhofstr 44
- 289a. ZIEGLER, Erwin, Ing  
Schweinfurt/Main  
Sonnenstr 20, III
- 290a. REZEL, Heinrich, F M  
c/o Frl Lehnig  
Waiblingen, Wttbg  
Neue Bahnhofstr 44
- 291a. KONZAK, Erich, F M  
c/o Karl Bruestzel  
Muenchen-Graefelfing  
Aribostr 43
- 292a. GROSSJUNG, Fritz, F M  
c/o Frl Lehnig  
Waiblingen/Wttbg  
Neue Bahnhofstr 44
- 293a. HARDT, Heinz, Dr Ing  
Darmstadt, Villenkolonie Waldfriede  
oder c/o Prof Walther  
Darmstadt, Pichtrstr 32
- 294a. ROHNUNG, Dr Ing  
Landshut oder  
Waldbrunn 35, ueber Wuertzburg
- 295a. HEIRICH, Gerhard, F M  
Landshut
- 296a. QUERKHAESSER, Hugo, Dr Ing  
Dorf Guetingen  
bei Feuchtwangen, Haus 87
- 297a. BARTH, Martin, Dipl Ing  
Michelhausen bei Tullen  
Oesterreich
- 298a. ROHNUNG, Dr Ing  
Landshut/Bayern oder  
Waldbrunn 35, ueber Wuertzburg

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299. PIRKER, F M  
Mannheim oder  
Ludwigshefen  
c/o Einwohner-Meldeamt

299a. KLUGHAMMER, Dipl Ing  
Landshut

300. WERNER, Heinz, Ing  
Rostock  
Richard Wagnerstr 18

300a. HOLZINGER, Eduard, F M  
Landshut

Classified List

Doctors of Engineering

119	Aug'M Kampe	93a	Loehberg
122	Bacher	85a	Ludwig I
128	Beckmann	189	Ludwig II
154	Bolte	157	Mahlo
158	Bpink	46	Manteuffel
147a	Brunner	142a	Meischeder
285a	Christiansen	120	Muehlner
173	Cornelius	296a	Querengaesser
32a	Deuker	3	Raithel
41a	Eichler	271a	Rosenthal
225a	Easchermann	208	Roth
273a	Erdmann-Jesnitzer	68a	Scheele
191a	Fieber	294	Scherzer
207	Fiedler	36	Schlechter
173a	Fingado	171a	Schmid
208a	Fischer	94	Schmidt
253	Ganschow	298	Schmieden
280	Gollnow	38	Schubert
221a	Gramer	35	Schwaigerer
1	Hausermann	279a	Schvede
293a	Hardt	251a	Seebach
130	Harnans	121	Speer
166a	Hass	227a	Staechli
251	Haxel	246a	Stein
119a	Hoehndorf	202	Timmerhoff
54a	Hornung (See 294 and 298a)	258a	Truemper
279	Hosemann	197	Voeppl
87	Jennisson	5	Walther
246	Kappus	249a	Wintergerst
113	Kloepffel	223a	Wittig
5a	Kox	171	Zimmermann
85	Lichte	94a	Zumbusch

Masters of Engineering

73a	Anschuetz	130a	Kutsche
141a	Bachmann	110	Lange
62a	Bangerter	145a	Lohmann
297a	Barth	219a	Lutz
36a	Berndt	52	Madee
123	Bernst	147	Meuth
122a	Blum	273	Moebus
24	Bruetzel	180a	Mosch
293	Bussig	247a	Neumann
30a	Caninenbe		

Classified ListDoctors of Engineering

119	Aug'M Kampe	93a	Loehberg
122	Bacher	85a	Ludwig I
128	Beckmann	189	Ludwig II
154	Bolte	157	Mahlo
158	Bpink	46	Manteuffel
147a	Brunner	142a	Meischerder
285a	Christiansen	120	Muehlner
173	Cornelius	296a	Querengaesser
32a	Deuker	3	Raithel
41a	Eichler	271a	Rosenthal
225a	Easchermann	208	Roth
273a	Erdmann-Jesnitzer	68a	Scheele
191a	Fieber	294	Scherzer
207	Fiedler	36	Schlechter
173a	Fingado	171a	Schmid
208a	Fischer	94	Schmidt
253	Ganschow	298	Schmieden
280	Gollnow	38	Schubert
221a	Grauer	35	Schwaigerer
1	Hausermann	279a	Schwede
293a	Hardt	251a	Seebach
130	Harmans	121	Speer
166a	Hass	227a	Staepli
251	Haxel	246a	Stein
119a	Hoehndorf	202	Timmerhoff
54a	Hornung (See 294 and 298a)	258a	Truemper
279	Hosenann	197	Voepfel
87	Jenaisson	5	Walther
246	Kappus	249a	Wintergerst
113	Kloepfel	223a	Wittig
5a	Kox	171	Zimmermann
85	Lichte	94a	Zumbusch

Masters of Engineering

73a	Anschuetz	130a	Kutzsche
141a	Bachman	110	Lange
62a	Bangerter	145a	Lohmann
297a	Barth	219a	Lutz
36a	Berndt	52	Madee
123	Bernat	147	Meuth
122a	Blum	273	Moebus
24	Bruetzel	180a	Mosch
293	Bussig	247a	Neumann
39a	Caninenberg (Sp) (See 126)	212	Ost
139	Chaussy	234a	Otto
102	Dollhoff	262	Palm
225	Khni	197a	Pieler
40	Eifflaender	4a	Pitschmann (See 163)
98a	Endress	108	Poetschke
108a	Erdbruegger	180	Rentsch

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95a	Fleck	234	Roland
93	Fock	221	Sacher
56a	Fuhr (See 272a)	50	Salvey
87a	Goerner	268a	Schaufuss
223	Gorges	179	Scheer
90	Guentner	30a	Schelich
161a	Guenther	35a	Schemm
230a	Hackh (See 264a)	105	Schendel
16a	Handel	67	Schvedes
149	Hannewald	177a	Seufert
245a	Hauser	113a	Sielaff
178	Hinstdt	160	Stagge
151	Kaefer	231	Sturm
1a	Kagerer	254	Tantzen
3a	Kaiser	125a	Tasche
39	Kirmaur	258	Thiry
299a	Klughammer	253a	Thum
41	Knothe (See 121a)	219	Urtel
201	Koechel	110a	Wahren
149a	Koellner	142	Weigand
16	Kraemer, Franz	181	Wieser
32	Kraemer, Fritz	158a	Wilhelm
38a	Kramer	10	Wingensiefen
81	Kroh	43a	Zettl
53	Kuehne	67a	Zilka
20	Kuerschner		

Technicians

73	Anders	53a	Layes (See 143)
206a	Andrich	21	Lindenberg
216a	Apel	10a	Link (See 297)
127a	Baetz	25a	Linke
117	Baeuerle	72a	Loh
55a	Bartels	102a	Ludewig
141	Baumgartel	47a	Marerhoefer
99a	Behrens	145	Marggraf
31a	Benedix (See 218a)	44	Maerettich
276a	Beyrich	62	Merkelbach
212a	Bluethner	144	Milenz
254a	Boehme	286a	Moehring
117a	Boettcher	47	Moths
200	Bolske	69	Muenz
63	Brasselmann	77a	Neil
101	Brinkmeier	25	Oese
159a	Buckesfeld	4	Osthoff
106a	Buerger	193a	Palm
15a	Bunte	58	Partenfelder
56	Dahl	160a	Pauli (See 229)
50a	Dippart	210	Pehle
285	Dueck	104a	Perlick (See 200a and 264)
194	Eberl	136a	Pfeffer
95	Edler	33	Pferdtmenges
30	Fellmann	18a	Philipp
51a	Fick (See 137)	242	Prasthofer
65a	Firnrohr	34	Reilmann
22	Fischer	224	Reinel
129	Flandorfer	287a	Reipert
162a	Frank		
27a	Franz (See		

16a	Handel	67	Schwedes
149	Hannevald	113a	Sielaff
245a	Hauser	160	Stagge
178	Himstedt	231	Sturm
151	Kaefer	254	Tantzen
1a	Kagerer	125a	Tasche
3a	Kaiser	258	Thiry
39	Kirmaur	253a	Thum
299a	Klughammer	219	Urtel
41	Knothe (See 121a)	110a	Wahren
201	Koechel	142	Weigand
149a	Koellner	181	Wieser
16	Kraemer, Franz	158a	Wilhelm
32	Kraemer, Fritz	10	Wingensiefen
38a	Kranar	43a	Zettl
81	Kroh	67a	Zilka
53	Kuehne		
20	Kuerschner		

Technicians

73	Anders	53a	Laves (See 143)
206a	Andrich	21	Lindenberg
216a	Apel	10a	Link (See 297)
127a	Baetz	25a	Linke
117	Baeuerle	72a	Loh
55a	Bartels	102a	Ludewig
141	Baumgartel	47a	Marerhoefer
99a	Behrens	145	Marggraf
31a	Benedix (See 218a)	44	Maerettich
276a	Beyrich	62	Merkelbach
212a	Bluethner	144	Milenz
254a	Boehoe	286a	Moehring
117a	Boettcher	47	Moths
200	Bolske	69	Muenz
63	Braselmann	77a	Neil
101	Brinkmeier	25	Oese
159a	Buckesfeld	4	Osthoff
106a	Buerger	193a	Palm
15a	Bunte	58	Partenfelder
56	Dahi	160a	Pauli (See 229)
50a	Dippart	210	Pehle
285	Dueck	104a	Perlick (See 260a and 264)
194	Eberl	136a	Pfeffer
95	Edler	33	Pferdtmenges
30	Fellmann	18a	Philipps
51a	Fick (See 137)	242	Prasthofer
65a	Firnrohr	34	Reilmann
22	Fischer	224	Reinel
129	Flandorfer	287a	Reipert
162a	Frank	82	Rothe
27a	Franz (See 263a)	40a	Rust (See 132)
78a	Frey	228	Ruttenstock
34a	Gehrken	193	Saelzler
99	Gelling	22a	Sammeck
21a	Gensle (See 107)	98a	Sandross (See 240a and 270)
19a	Gerhards (See 103)	266a	Scheunemann

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177	Gerhardt	63a	Schiffmann (See 181a and 240)
185	Goerth	120a	Schlolaut
51	Goldammer	60	Schmidt
18	Gropp	80	Schmitt
100	Guentschel	49a	Schneider
218	Haase	162	Schnelle
64a	Haefner	205	Schussesle
54	Haehnel	29	Schuetz
175a	Hartmann	55	Schulze, Heinrich
106	Harzbecher	175	Schulze, Kurt
187a	Hasse	104	Schuster
75	Haukohl	46a	Schwarz
19	Heck	13a	Seiffert (See 92)
29a	Heeger	64	Seller
80a	Heese	277a	Sealinger
8a	Heinisch	116a	Sima
72	Hennecke	261a	Sommer
151a	Hermann, Adolf	45a	Spahn
20a	Hermann, Emil	201a	Steinert
8	Herold	217a	Sterseck
13	Heselmann	228a	Stuehner
118	Hessert	68	Thamm
31	Hilten	57	Thoner
43	Hirn	57a	Thaecher (See 146)
133a	Hoffman	166	Toennessen
129a	Holske	210a	Tretschok
242a	Horn	127	Tschermack
59a	Hufen (See 148)	78	Tuebbecke
148a	Joehren	17a	Tutz (See 96)
252a	Kaehler	75a	Utpatel
159	Klar	157a	Von Liebhaber (See 230)
23	Klein	59	Wagner
266	Kleinhannes	15	Weber
262a	Klenk	101a	Weger
26a	Knauer (See 112 and 287)	222a	Wende
98	Koegel	300	Werner, Heinz
100a	Koenig, Kurt	88a	Werner, Rolf
7	Koenig, Rudi	194a	Wildhagen
136	Koesters	202a	Winkler
118a	Kohoutek	26	Winter
237	Koertt	17	Woegerbauer
44a	Krafft (See 135)	217	Wohl
133	Krauss	187	Wuesten
27	Kroeger	128a	Wutke
77	Kuberg	49	Wutz
23a	Lang (See 69a)	289a	Ziegler

Fine Mechanics (F M)

111a	Aderholt	291a	Konzak
37a	Ahrens	214a	Krohn
42a	Altmayer	220	Kuehn
168	Altner	204	Kulvilm
238	Anklam	9	Kunz
131	Arnold	71a	Kunze
244a	Artmayer	137a	Kurzschkel (See 226)
278	Baese	89	Laabe
74a	Barthel	138a	Lampe
271	Bartnicki		anders

74	Haennele	29	Schulze, Heinrich
175a	Hartmann	55	Schulze, Kurt
106	Harzbecher	104	Schuster
187a	Hasse	46a	Schwarz
75	Haukohl	13a	Seiffert (See 92)
19	Heck	64	Seiler
29a	Heeger	277a	Sealinger
80a	Heese	116a	Sima
8a	Heinisch	261a	Sommer
72	Hennecke	45a	Spahn
151a	Hermann, Adolf	201a	Steinert
20a	Hermann, Emil	217a	Sterseck
8	Herold	228a	Stuehner
13	Hesemann	68	Tham
118	Hessert	57	Thoner
31	Hilten	57a	Ti'acher (See 146)
43	Hira	166	Toennessen
133a	Hoffman	210a	Tretschok
129a	Holske	127	Tschermack
242a	Horn	78	Tuebbecke
59a	Hufen (See 148)	17a	Tutz (See 96)
148a	Joehren	75a	Utpatel
252a	Kaehler	157a	Von Liebhaber (See 230)
159	Klar	59	Wagner
23	Klein	15	Weber
266	Kleinhanes	101a	Weger
262a	Klenk	222a	Wende
26a	Knauer (See 112 and 287)	300	Werner, Heinz
98	Koegel	88a	Werner, Rolf
100a	Koenig, Kurt	194a	Wildhagen
7	Koenig, Rudi	202a	Winkler
136	Koesters	26	Winter
118a	Koboutek	17	Woegerbauer
237	Kolbert	217	Wohl
44a	Krafft (See 135)	187	Wuesten
133	Krauss	128a	Wuttke
27	Kroeger	49	Wutz
77	Kuberg	289a	Ziegler
23a	Lang (See 69a)		

Fine Mechanics (F M)

111a	Aderholt	291a	Konzak
37a	Ahrens	214a	Krohn
42a	Altmayer	220	Kuehn
168	Altner	204	Kulvilm
238	Anklam	9	Kuns
131	Arnold	71a	Kunze
244a	Artmayer	137a	Kurzschinkel (See 226)
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Unclassified

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37	Peters	65	Tietze
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42	Kayser	260a	Wurbs
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280a	Keyserling	125	Zeller, Josef
45	Klammes	84	Zenses
245	Kleber	198a	Zindahl (See 267a)
		283	Zumpe
		155a	Zschoyge

Unclassified

215	Aurin	211a	Stephen
37	Peters	65	Tietze
237a	Seidal		


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CIA - O S I 634097

Report on Tenth Informal S and T Coordination  
Meeting Held in Frankfurt, 15 June 1951

Present: Col. H. H. Rogers, ID/EUCOM  
Maj. J. M. Hustead, ID/EUCOM  
Dr. S. H. Williams, Hq/USFA  
LCDR S. F. Tyler, ONI  
Lt. Col. L. D. Ely, ATIO, USAF  
  
Mr. F. D. Bradley, OI/HICOG  
Dr. K. H. Weber, OI/HICOG

1.3 (a) (4)  
C

- (b) Recent developments in the implementation of Project 63 were discussed. Since certain methods now used do not appear satisfactory to all theater agencies, it was agreed that the Director of Intelligence, HICOG should be asked to call together representatives of the agencies concerned with this project to discuss the problem and devise a coordinated method of implementation.

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Date NOV 1985

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CLASSIFICATION [REDACTED]

CENTRAL INTELLIGENCE AGENCY

REPORT NO. [REDACTED]

# INFORMATION REPORT

CD NO. 772808

COUNTRY Germany

100235

DATE DISTR. 24 MAR 1955

SUBJECT Survey of Physical and Chemical Research

NO. OF PAGES 100

PLACE ACQUIRED Berlin and Western Zones

NO. OF ENCLS. (LISTED BELOW)

DATE ACQUIRED BY SOURCE Late Summer and Fall 50

SUPPLEMENT TO REPORT NO. [REDACTED]

DATE OF INFORMATION Late Summer and Fall 50

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
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### INTRODUCTION

The following is a composite report of the sources' observations and evaluations of scientific research in Berlin and the Western Zones of Germany including:

- a. A general report consisting of brief articles on the present status of German scientific research including a comparison of research in the Western and Eastern Zones.
- b. Institute reports which include information on the buildings, equipment, personnel and individual research projects for each of the institutions visited.

To aid the reader, the following have been compiled and appear at the beginning of this report:

- a. A table of contents which includes a list of the institutions on which the sources report.
- b. A name index of all scientists mentioned in the report.

DATE OF INFORMATION Late Summer and Fall 50

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
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- 9) The Students
- 10) Reports from the Eastern Zone
- 11) "Deutsche Physik"
- 12) The Different Lands
- 13) Reactions to the Laws

## C. Institute Reports

Berlin	Kaiser Wilhelm Institut fuer physikalische Chemie Physikalisches Institut der freien Universitaet Physikalisches Institut der Technischen Universitaet
Bonn	Chemisches Institut und Physikalisches-Chemisches Institut
Freiburg	Physikalisches Institut Chemisches Institut Physikalisch-Chemisches Institut Institut fuer Therapie
Stuttgart	Physikalisch-Chemisches Institut Max Planck Institut fuer Metallkunde Physikalisches Institut Institut fuer angewandte und theoretische Physik Kaiser Wilhelm Institut fuer Roentgenforschung
Tuebingen	Institut fuer physikalische Chemie Kaiser Wilhelm Institut fuer Biochemistry Physikalisches Institut
Karlsruhe	Institut fuer physikalische Chemie Physikalisches Institut
Heidelberg	Physikalisch-Chemisches Institut 1. and 2. Physikalisches Institut Kaiser Wilhelm Institut fuer Medizin Abteilung Physik
Mainz	Kaiser Wilhelm Institut fuer Chemie Physikalisch-Chemisches Institut Physikalisches Institut
Darmstadt	Institut fuer physikalische Chemie der Technischen Hochschule Institut fuer praktische Mathematik der Technischen Hochschule Physikalisches Institut der Technischen Hochschule

- 2) Public Esteem of Science
- 3) The Successful Approved for Release: 2022/06/22 C00010786
- 4) Physical Chemistry and Physics
- 5) The University Laboratories
- 6) The Future of the Universities
- 7) The Max Planck Institutes
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Stuttgart	Physikalisch-Chemisches Institut Max Planck Institut fuer Metallkunde Physikalisches Institut Institut fuer angewandte und theoretische Physik Kaiser Wilhelm Institut fuer Roentgenforschung
Tuebingen	Institut fuer physikalische Chemie Kaiser Wilhelm Institut fuer Biochemistry Physikalisches Institut
Karlsruhe	Institut fuer physikalische Chemie Physikalisches Institut
Heidelberg	Physikalisch-Chemisches Institut 1. and 2. Physikalisches Institut Kaiser Wilhelm Institut fuer Medizin Abteilung Physik
Mainz	Kaiser Wilhelm Institut fuer Chemie Physikalisch-Chemisches Institut Physikalisches Institut
Darmstadt	Institut fuer physikalische Chemie der Technischen Hochschule Institut fuer praktische Mathematik der Technischen Hochschule Physikalisches Institut der Technischen Hochschule

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Frankfurt    Physikalisches Institut  
 Physikalisch-Chemisches Institut

Giessen    Chemisches Institut  
 Physikalisches Institut  
 Physikalisch-Chemisches Institut (at Lauterbach)

Marburg    Physikalisches Institut  
 Physikalisch-Chemisches Institut

Goettingen    Max Planck Institut fuer physikalische Chemie  
 Max Planck Institut for Physics  
 Chemisches Institut der Universitaet Goettingen  
 Institut fuer theoretische Physik der Universitaet  
 I-Physikalisches Institut der Universitaet  
 II-Physikalisches Institut der Universitaet  
 III-Physikalisches Institut der Universitaet  
 Max Planck Institut, Division of Instrumentenkunde  
 Physikalisch--Chemisches Institut der Universitaet Goettingen

Hamburg    Physikalisches Institut  
 Physikalisch-Chemisches Institut

Muenchen    Physikalisch and Physikalisch-Chemisches Institut  
 Naturforscher und Aerzte Tagung  
 Physikalisches Institut der Technischen Hochschule  
 Angewandte Physik der Technischen Hochschule  
 (Herrsching) Kaelte Laboratorium der Bayrischen Akademie

Erlangen    Physikalisches Institut  
 Physikalisch-Chemisches Institut

Bamberg    Geophysikalisches Institut

Wuerzburg    Physikalisches Institut



Physikalisch-Chemisches Institut  
Goettingen ~~Physikalisch-Chemisches Institut~~ ~~Chemie~~  
Max Planck Institut for Physics  
Chemisches Institut der Universitaet Goettingen  
Institut fuer theoretische Physik der Universitaet  
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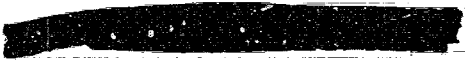
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Bamberg Geophysikalisches Institut

Wuerzburg Physikalisches Institut



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GENERAL REPORT1. THE INSTITUTE SYSTEM

There are a few general comments regarding the differences between research laboratories and the conditions under which scientific research is done in the US and in Germany.

In the first place an institute of physics in a German university is very different from a department of physics in a US university, although both fulfill almost identical functions. The US department, in a large university, has several full professors (in Chicago, there are 12 in the department of physics; 14 in chemistry of which eight are physical chemists) and an approximately equal or greater number of associate professors, assistant professors and instructors. In addition, there are usually some, but few, research assistants whose duties are to aid particular professors in their research. The German institute is usually the property of one full professor, who has several assistants assigned to him, and may include one or two "planmaessige" associate professor (ausserordentlich). The usual complement of institutes in a German university includes one institute each of physics, chemistry, and, sometimes, applied physics, theoretical physics, inorganic chemistry and organic chemistry separately. Therefore, the total staff of full professors in the physical sciences is very much smaller than the equivalent staff of one of the great US universities.

With the present tendency to decrease the number of assistants in the German departments, the teaching load on the full professor is quite incredible on the standards of the better US universities. Against this, there is one relieving feature in the German teaching method. Course examinations and tests are not usual in Germany. The amount of personal contact between teacher and student is a minimum in the courses. The rather large amount of advising, test correcting, and making out of grades, that goes with the usual US lecture course is absent. In spite of this relieving feature, it is difficult for an American to understand how the German professor ever manages to find time to direct research, except during the holidays. Indeed, many professors remarked that they had no time for research except during the holidays.

2. PUBLIC ESTEEM OF SCIENCE

There is a second difference between the conditions of research in the US and Germany. Presumably before World War I, and to our knowledge in the period 1920-33, the public esteem of scientific and theoretical work was high in Germany. In this period, the US professor rather envied the social and financial position of his German colleague. During the ensuing period, the US scientific scholar has gained enormously in public esteem, particularly due to the phenomenal importance of scientific research in the war. The financial support of scientific work in the US is adequate and essentially unquestioned. The US scientist is now used to a certain degree of public regard and esteem, and, as a group, scientists are consulted in matters of public policy.

Due, probably, to the consistent propaganda of defamation against all things academic by the Nazi Government, and perhaps also to the comparative failure of German science to contribute to the German war effort in World War II, the public esteem of science, and particularly theoretical science, has decreased in Germany. The result is that the US scientist, well acquainted with both countries before 1933, is now surprised at the complete lack of support for scientific work in Germany compared to the US. This lack of support is not only the result of the financial poverty of the German States. Professors appear to have little or no influence on their "Kultur Ministerium" in the various states. The "Kultur Minister" appears to be frequently incompetent and arrogant. Certainly in Hesse this condition is particularly flagrant.

3. THE SUCCESSFUL DIRECTOR

A third general comment concerns a situation which is a direct consequence of the general financial difficulty. Approved for Release: 2022/06/22 C00010786 actors:

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## 3. THE SUCCESSFUL DIRECTOR

A third general comment concerns a situation which is a direct consequence of the general financial difficulties and of the previously mentioned factors:

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A certain amount of aggressive ambition and energy in overcoming difficulties is a necessary attribute of the successful scientist under the most favorable conditions. However, the difficulties which the US scientist must combat are those imposed by the nature of his science, and are not primarily those of financial lack of equipment, nor of the man-made stupidities of bureaucracy.

The average German institute has suffered severely during the war by destruction of buildings, loss of apparatus, lack of budget, and by the additional imposition of a lack of public support, either from industry or from the state governments. The result is that the success of an institute in producing scientific work since the war is frequently dependent on accidental factors of destruction suffered, and on the personal abilities and aggressiveness of the director in obtaining financial support and combating the heavy hand of the German State bureaucracy. The abilities which in the US would be considered a criterion for success are frequently not sufficient to produce results under German conditions.

#### 4. PHYSICAL CHEMISTRY AND PHYSICS

It is an old story that a physicist is a man employed by a physics laboratory and a physical chemist one employed in a physical chemistry laboratory. The division between the two fields has become so fine that no other definition is generally applicable. Work done in one physical laboratory may be almost identical in character to work done elsewhere in a physical chemical laboratory.

In the US there is a strong tendency for physical chemical laboratories to expand their field of research to include fields formerly called physics. Most young US spectroscopists are now employed as physical chemists, whereas this field was formerly physics. Most low temperature laboratories in the US belong to physical chemical departments rather than physics. In Germany this trend is less noticeable.

In view of the difficulty of defining a field of research as belonging to one or the other scientific discipline, it is difficult to compare the relative status of the actual sciences in the two countries. However, it is easy to compare the relative status of the institutes calling themselves physics to those calling themselves physical chemistry in Germany, with the similar status in the US.

By such a comparison it is clear that physical chemistry compared to physics is far weaker in Germany than in the US. This is not a new development, but probably dates from the baleful effect of Nernst's heavy hand on physical chemistry in Germany in the first quarter of the twentieth century.

The ratio, three institutes of experimental, and one of theoretical physics in Goettingen, to one institute of physical chemistry, at present without a director, is not far from typical in Germany. In Heidelberg, there are three physics "Ordinaria" and one in physical chemistry. In Bonn, physical chemistry was an "Abteilung" of chemistry until recently. In Wuerzburg, there is no physical chemistry.

In the US, chemistry departments were, before World War II, usually double the size of the physics departments, and the chemistry departments were about half physical chemistry. Since the war, physics departments in the US have probably expanded more than chemistry. The ratio of 12 full professors in physics at Chicago to eight in physical chemistry is probably typical of US universities. It is probably fair to say that the ratio is 3 to 1 in Germany rather than 3 to 2 in the US.

The ratio of the number of institutes in Germany is not even as marked as the general ratio in equipment and excellence of the institutes. Goettingen, Frankfurt, Muenchen (University), Darmstadt, do not have occupants for the chair of physical chemistry. Except for the Institute of Physical Chemistry in Wuerzburg and the institute in Stuttgart, none of the physical chemistry departments are well equipped as most of



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This sad weakness of the institutes of physical chemistry in Germany is, however, largely compensated by a tendency for the physicists to undertake problems in fields which would be handled by physical chemists in the US.

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5. THE UNIVERSITY LABORATORIES

The university laboratories, with few exceptions, work under very difficult conditions. Some have good reconstructed buildings, others work in cellars of ruins. The budget of all of them is completely inadequate. The usual sum for purchase of equipment and all running expenses excluding salaries, heat, gas and building repairs is 10,000 DM per year. This, in most places, amounts to \$75.00 per year or less for each research worker, not counting expenses for demonstration and beginners' laboratories! It seems that the universities have stood still since about 1905. Salaries may have had to be raised, the number of scientists and mechanics has remained roughly the same, and the budgets have also not been changed. In the meantime, prices have risen and more complicated equipment is required.

The more aggressive ones among the laboratory directors evidently manage to get some outside support. One seldom can find out how or where this comes from. Evidently, this money does not go through regular university channels, in which case it would be divided among several institutes. One professor claimed that this outside money was kept in cash in a drawer at the laboratory to be used as needed. It is not quite obvious that this is legal, hence the reluctance to discuss it. Actually, the industries supply very little money. Leitz is the one industry which has had a very definite effect on one university, Giessen, by endowing a chair for theoretical physics.

Altogether, however, this outside support does not seem to amount to too much. We would guess that, in the average, it does not more than double the income, which is still too little. Besides, this support is bitterly bought by using the laboratory directors time. ERP money has been a real help.

On this background of working conditions and lack of understanding by the government, one cannot but admire the physicists and chemists who keep up a high standard of careful research. It is surprising that so many scientists have kept their scientific enthusiasm in such adverse circumstances.

The soul of every German laboratory is the workshop. These are usually well equipped and contain, per scientific worker, a considerably greater number of skilled mechanics than is usual in the US. Consequently, a very large number of things which we buy are here constructed in the workshops. Such objects range from mass spectrometers to vacuum tubes. It is clear that this system is basically inefficient, but it is the only means by which research can be continued.

In almost all university laboratories, the work done impressed us well. It is careful, accurate and systematic. Clearly there are differences. The smaller laboratories usually specialize on one particular problem which they try to solve as completely as possible. Almost all physical chemistry departments do this. A typical example is the laboratory of Mäcke, physical chemistry, in Freiburg.

Professor Hilsch has an excellent laboratory, entirely devoted to work on superconductivity, an interesting subject. Professor Kulenkampf, physics, Wuerzburg, limits himself to X-rays. The work of such laboratories is not always of great interest, but it is research that should be done. Other laboratories intentionally put their interest on a very broad basis. This, of course, is much better for the student. The physics institute of Karlsruhe, run by Gehrtzen, is an example.

The best university laboratories which we have seen are, from the standpoint of amount and interest of work performed, and scientific spirit, in order: the physics institute of Kopfermann in Goettingen; that of Walcher in Marburg; those of Haxel and Bothe in Heidelberg. The laboratory of Harteck in Hamburg, which we only scanned under the guidance of a theoretical physicist, may be in this class. Only two of the KWI's rank with these best university laboratories: the one for physical chemistry in Berlin and the one at Mainz which is not yet complete but shows great promise.

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The laboratories should not only be evaluated by the work that is done, but also by the work which is not done because it is too expensive, although negligibly cheap by US standards. Many times did we discuss the scientific problems of some laboratory and suggested extensions or modifications of procedure. The answer is: "We have thought of that, /and they had, in all details/ but we simply cannot afford it." There are some pathetic cases. A student in Darmstadt was doing a very promising research problem, which he had to break off, since the laboratory could not afford the electric current to heat a Tammann oven - price: 300 DM per month. This illustrates the fact that even small improvements in financial conditions will pay off in amount of research produced.

Many of the laboratories are behind US developments and know it. We heard the frequent remark: "First, we have to catch up with you in the US." This applies mostly to the fields of ferromagnetism and semiconductors. Other laboratories are fully up-to-date and contribute to the knowledge in the US. Queerly enough, this is also the case in the field of nuclear physics.

In view of the enormous difference, probably by a factor as large as ten, of the means available per scientific worker in Germany and the US, one may well ask if the German work is of any value at all. If the answer is yes, as it is, one may then wonder if the US laboratories are merely wasting money. The answer is complicated.

Certain scientific questions cannot be answered by the use of inexpensive equipment. Other questions can be so answered. Although most research in the US is not wasteful, there is a tendency, due to the ease with which support can be obtained, to pick those problems which require expensive equipment. Probably, in many cases, not enough effort has been expended to think how the job could have been done more cheaply.

The German scientists consciously pick those problems that require equipment within their means. These problems are numerous, and most of the work is good and of real value. Unfortunately, the consequences of a problem cannot always be foreseen. In many cases, the German is cut off from pursuing a line opened up by his own research because of the cost of the necessary equipment.

## 6. THE FUTURE OF THE UNIVERSITIES

This picture of the status of the university laboratories is not a static one. Great changes are occurring, and even if the support of the universities does not increase, the general situation will look different and better in a year or two. This is less true for physical chemistry than for physics.

At the present moment, very few laboratories are in full swing and producing publishable work. Most of them were more or less destroyed, or at least short of equipment, in 1946. A considerable number have been taken over, since 1945, by new, younger and more energetic directors. As yet, the reconstruction of none of these is complete. Some have, by now, adequate buildings. Probably almost all of them will have reached that stage in a couple of years. There remains a considerable shortage of equipment, which is steadily being built up. At the places where the equipment is new, it is sometimes so new that it has not yet yielded scientific results.

In the physics departments, major changes are on the way, since a considerable number of laboratories are constructing major pieces of equipment. For instance, Hamburg, Freiburg and Mainz are building pressure van der Graafs for 4-6 m.e.v. Kopfermann in Goettingen has contracted for a large Betatron, any number of laboratories for small ones. In a year or two, all these things will be working and yielding results. By that time, the German laboratories may give the impression of modest, but up-to-date institutions, by US standards. ERP money has been a great help and is largely responsible for the general state of equipment.

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That the prospects for physical chemistry look much less auspicious than those for physics is largely due to the general status of physical chemistry in Germany (see Section 4).

## 7. THE MAX PLANCK INSTITUTES

The situation at the Kaiser-Wilhelm Institutes (KWI) or Max Planck Institutes, is entirely different from that of the universities. There is no lack of space and no real lack of money. Any reasonable request for apparatus can be fulfilled. These institutes are well equipped according to US standards. This statement has to be modified with respect to nuclear physics. Whereas a large number of US institutions have "atomsmashing" machines giving more than 100 m.e.v., none such exist in Germany. A single cyclotron for 3 m.e.v. exists at Heidelberg.

It is very important that in a country where most institutions are poor, there exist some well equipped laboratories as a model to which one should aspire. It is to be hoped that at some time the university laboratories will reach the standard of the KWI's.

Needless to say, the existence of rich laboratories in a country of poor ones creates problems and envy. Formerly, the few positions of Directors of KWI institutes were particular positions awarded only to the very best scientists in the land: Einstein, von Laue, Max Planck, Hahn, were such people. This highest standard of scholarship is no longer strictly adhered to. Butenandt and Bonhoeffer, the men with by far the greatest reputations in their respective fields, are obvious and correct choices for receiving KWI positions. Both deserve one, although he has it in name only, since the building is still occupied by US forces.

It is not obviously clear that Heisenberg, a theoretician, should be the director of an experimental institute; in his war work on piles he has not proved to be a good leader of experimentalists.

The Berlin KWI for physical chemistry has, for lack of directorship, fallen apart into a number of semi-independent small institutes. Very good work is done. The men in it, for instance Ueberreiter and Stranski are very good, but no better than some university physicists or chemists. Yet they have entirely different conditions of work, much better possibilities to publish and make their names known. The scientists at the universities see this very clearly and are thoroughly disturbed.

Altogether, we were not too impressed by the research of the KWI's. The work is no better than at the good universities, which live in perpetual struggle for money. At Goettingen, for instance, the university physics labororium of Kopfermann (2. Physikalisches Institut), with a budget of 10,000 DM, has much more interesting research than the KWI, yet the working conditions are shockingly different.

If science in Germany is to be helped, this is not done by further improving the lot of the Max Planck Institutes. The most important task would be to support the university laboratories and bring them up to the standard of equipment of the Max Planck Institutes.

## 8. NUCLEAR RESEARCH IN GERMANY

Nuclear research in Germany is undertaken in only a few laboratories, and is, in many respects, far behind the developments in the US. For one thing, there is a lack of the high energy machines, cyclotrons, large van der Graafs, etc, which are encountered in many laboratories in the US. The construction of such machines is forbidden by law. Actually, this makes little difference since the money for such constructions would not be available.

The few laboratories which are actively working on nuclear research (at present only  
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institutes are well equipped according to US standards. This statement has to be modified with respect to 'Approved for Release: 2022/06/22 C00010786' of US institutions have "atomsmashing" machines giving more than 100 m.e.v., none such exist in Germany. A single cyclotron for 3 m.e.v. exists at Heidelberg.

It is very important that in a country where most institutions are poor, there exist some well equipped laboratories as a model to which one should aspire. It is to be hoped that at some time the university laboratories will reach the standard of the KWI's.

Needless to say, the existence of rich laboratories in a country of poor ones creates problems and envy. Formerly, the few positions of Directors of KWI institutes were particular positions awarded only to the very best scientists in the land: Einstein, von Laue, Max Planck, Hahn, were such people. This highest standard of scholarship is no longer strictly adhered to. Butenant and Bonhoeffer, the men with by far the greatest reputations in their respective fields, are obvious and correct choices for receiving KWI positions. Both deserve one, although he has it in name only, since the building is still occupied by US forces.

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The Berlin KWI for physical chemistry has, for lack of directorship, fallen apart into a number of semi-independent small institutes. Very good work is done. The men in it, for instance Ueberreiter and Stranski are very good, but no better than some university physicists or chemists. Yet they have entirely different conditions of work, much better possibilities to publish and make their names known. The scientists at the universities see this very clearly and are thoroughly disturbed.

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The few laboratories which are actively working on nuclear research (at present only Mainz, Heidelberg, Marburg and Goettingen) are not greatly hindered by these laws. There are a number of laboratories which shy away from this field. We were often told that nuclear physics is "forbidden" which is patently not true. But some scientists object to having to ask permission, and say they don't want any favors.

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The lack of interest in nuclear physics makes itself felt in adjacent fields. The situation is a clear example of what scientists in the US have claimed would happen if one licenses nuclear physics: nuclear physics would perhaps continue, but the adjacent fields would suffer. In the US, a great deal of physical chemistry measurements are made with radioactive tracer techniques. The same holds for medical research. Completely new fields are opened by these methods. We have not seen a single physical chemistry laboratory in Germany in which tracer methods were used. Radioactive tracers are available in Germany through Harwell (I do not know at what prices). No isotopes, separated stable, or radioactive can be obtained from the US. We tried to check on tracer work in medicine by discussing the question with a US research associate who is visiting medical laboratories under the auspices of the MSB. He had not seen any such research [see 00-B-29092/].

## 9. THE STUDENTS

In all laboratories, it is very noticeable that a generation is missing. There are exceedingly few men who are not far beyond their Ph Dr degree. Formerly, a good laboratory would contain roughly one Ph Dr to two students. These Ph Dr's were kept on as assistants or on fellowships. At present, a laboratory, on the average, comprises one or two post Ph Dr assistants for about 15 students working towards their doctorate. After the war, a very vigorous selection of students was undertaken. At present, only one out of ten applicants is admitted to physics or chemistry. The result is that a crop of students is finishing up at present. The opinion of most laboratories is that the present crop is excellent. The men have mostly been in the war and are more mature than the normal student. It is well worth watching how these men will develop in the future. One exception in this pattern is Mainz. There was no selection made here at admittance, and the students were reported to be rather poor.

Our personal impression of the students was that they were stiff and formal. They stood at attention when the chief entered, and, upon being asked to tell what they were doing, recited details of their apparatus in an unenthusiastic manner. In many of the laboratories the director would not choose to introduce any student, and would speak about the research himself. Of course, there were exceptions to this. In many laboratories, few students were around during the vacation.

By and large, however, we gained the impression that the chasm between professor and student is very, very much wider in Germany than in the US. This is an unhealthy situation. The lack of an intermediate generation enhances this. There are a number of professors who are conscious of this fact, consider it dangerous and act definitely to change it. But it will require many years to bring about cordial relations on an equal footing between professors and students. Since no student was ever invited with us by any of the professors, and since the students seemed to be somewhat on the defensive, we did not manage to establish any contact with them except at one occasion, namely at Wuerzburg. Here the director, Kuhlenkamp, was away, and two assistants took us around in a very informal way and introduced us to everybody in the laboratory. The students were not stiff and scared, talked well and to the point. They made definitely a good impression. We were then asked to go to the library to talk to the students and tell them about universities in the US. The students were obviously extremely interested, so we spent two hours discussing our systems and their troubles. It was intimated that the visit would have been very different had Kuhlenkamp been there.

The living conditions of the students and the younger assistants are hard. Some students live in the laboratories. One finds cots on which they sleep and an electric plate on which they cook. Some assistants with a family of two children, live in a single room in a laboratory.



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We encountered another curious case. The daughter of the ophthalmologist, Professor Wessaly, in Muenchen, is a student of chemistry, has passed her diploma examination and is working for her doctorate. Since the chemistry department at the university is thoroughly destroyed, she has fixed up her own laboratory in the laundry of her parents' home. It is quite well equipped with a thermostat, ample glassware and chemicals.

The future of the present students and young assistants looks very dark. It is simple calculation that, if each institute turns out two Ph Dr's per year (probably much too low a figure), and the turnover of full professors is 20 years, about one out of 400 students will ever obtain the coveted position of "Ordinarius". Perhaps more than twice this number will remain all their life in research organizations, either at KWI's, or as what one used to call "ewiger Privatdozent"; this means that they will end up as something called "planmæssiger" or "ausserplannaessiger Extraordinarius", attached to some laboratory on a very poor salary. Vogt and Hueckel at Heidelberg, Houtermanns at Goettingen seem to be slated for this fate. Some of these men are just as good scientists as those at the top, but lack the administrative or lecturing ability so that they have never made the race. Between the wars and before the Nazis, it was this group of people who constituted the immigration of scientists into the US. Most have succeeded very well there.

The rest of the students, that is, the vast majority, have to look to industry for employment. The industries, at present, however, do not take many scientists. They have their own troubles of rebuilding and getting known processes running. At this time, most of them are not contemplating the development of new lines for which they would need scientists.

A healthy development of industry may change that in a few years. Otherwise, emigration to the Eastern Zone (section 10) will present a real danger.

#### 10. REPORTS FROM THE EASTERN ZONE

The reports from the Eastern Zone sound very disquieting. Most eastern scientists showed a reluctance to talk about conditions. But Professor Kienle, who has left Potsdam, and Professor Heubner, who is now at the Freie Universitaet Berlin, were quite frank.

The working conditions in the Eastern Zone are, or are rapidly becoming, much better than in the Western Zone. The usual budget of a physics department in the west is 10,000 DM per year, even for as large a laboratory as that in Goettingen; in contrast, Greifswald, traditionally a small and unimportant place, has a budget of 120 thousand marks. These are East marks, but in buying power in the Eastern Zone, they are not much less than DM in the West Zone. Kienle's budget in Heidelberg is by factors of 10 less than what it was in Potsdam. A new pharmacological laboratory is built at the Humboldt University for Heubner's successor, much larger than Heubner's at the Freie Universitaet.

Kienle said that, on a top scientist, no pressure is exerted towards active participation with the government. All that is required is that one keeps one's mouth shut. If a student or assistant disappears, one must not ask questions. However, this demand was too much for Kienle.

The Soviets put no obstacle of any kind in Kienle's way when he left for the Western Zone. Those scientists who are afraid of, and hostile to, the USSR consider this a very clever move. At present, there is a constant migration from east to west. But many people foresee a backswing, since conditions for science in the west are bad, positions for young people rare, industry in trouble. Many believe that soon scientists and technicians will begin to turn to the Eastern Zone if they believe that they will be able to return if they wish. There are many people who are able

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The only remedy would be to improve the conditions for science in the West.

#### 11. "DEUTSCHE PHYSIK"

The scientific workers in one laboratory always know better, and regard more highly, the work done by others in their own laboratory than that done elsewhere. Similarly, the science of any country always takes undue weight in the eyes of the scientists of that country. The slight difficulty of reading a foreign language adds to this tendency when a language difference exists. US physicists and physical chemists are probably less aware of recent German work than they should be.

This tendency towards nationalism in science is less marked in the regard with which work of ten or twenty years ago is held. Most Americans, in reporting the work of the first half of the twentieth century, would show comparatively little national bias in evaluating the work done, say, previous to 1935.

It was clear, in visiting some of the German laboratories, that the scientists were not sufficiently aware of recent work similar to their own done in the US. This defect may be readily explained by the isolation during the war, and the comparative difficulty, even now in some laboratories, of getting US publications.

No such explanation can be used in the case of the speeches of Heisenberg and of Harteck at the meeting of Naturforscher und Aerzte in Munich on the 22nd of October. Heisenberg spoke on the subject "Fifty years of Quantum Theory" and Harteck on "Quantum Theory in Chemistry". Both speeches should better have had the prefix "German" before Quantum.

Heisenberg succeeded in speaking for an hour on the development of quantum theory without mentioning the names of de Broglie, Fermi, or Brillouin, and referring to Dirac only once. In discussing recent developments of nuclear physics only one US name was mentioned, that of Schwinger. Since the contributions of the German physicists was discussed at length the omissions were quite remarkable. His reference to the discovery of electron spin by Uhlenbeck, rather than by Goudsmit and Uhlenbeck was presumably due to the Alsos book by the former.

Harteck's speech was a curious hodge-podge of discussion of various German investigations, some of which were neither physical chemistry nor quantum mechanics. The widespread application of quantum mechanics to the chemistry of complicated molecules, which is largely an English and US development, was summarized in one sentence saying that in the Anglo-Saxon countries books which are understandable to chemists have been written on quantum mechanics.

The curious nationalism of these two speeches was not at all noticeable in the speeches on the following day by two astronomers, Heckmann and Kienle.

The strong tendency of the older German physicists to ignore foreign work is also demonstrated by one incident frequently related to us by one or other of those who were taken to the British encampment at the close of the war. At the time the atomic bomb exploded over Hiroshima the German atomic scientists in that group did not understand President Truman's reference to the "New element, Plutonium". Since US publications of 1939, 1940 and 1941, which were certainly available to the Germans had they wished to get them, had always referred to element 93 as Neptunium and 94 as Plutonium, this incident merely demonstrates that the US work had never been looked at carefully.

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This nationalism of viewpoint is not universal among the German physicists, and seems to be rather lacking in the younger generation who occasionally ask, rather pathetically, whether we find any science of any value done in the German laboratories. However, although the younger men show more inferiority complex than conceit, there is still extremely little acquaintance shown with foreign work.

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12. THE DIFFERENT LAENDER

The support of the universities in the different German laender is entirely different.

In the US Zone, the institutes in Wuerttemberg-Baden were all either completely repaired and rebuilt or rapidly approaching completion. No general complaints were uttered about the handling of the universities by the "Kultur Ministerium" in this land. Research budgets were not large, or even remotely adequate by US standards, but the institutes seemed to be improving and building up their equipment.

On the other hand, both Hesse and Bavaria seem to be attempting to destroy what is left of their universities.

The Kultur Minister in Hesse appears to be held in universal contempt by all the professors. The building program is extraordinarily slow, inefficient and inadequate. Even comparatively small repair jobs which are greatly needed, and where lack of attention is causing added deterioration, are not undertaken. An example of this is the lecture hall of Czerny's institute in Frankfurt.

Bavaria runs a close second to Hesse for last place. The curse of Bavaria is political catholicism. The "Kultur Minister", Herr Hundhammer, seems to be interested only in building up his pet theological academies (Catholic, of course) in Bamberg and Regensburg. He seems to take an active position in hindering the rebuilding of the old universities. When a motion was introduced in the Bavarian Landtag to establish a second professorship for physics in Wuerzburg, Hundhammer spoke against it and managed to stop it. The university at Muenchen seems hardly to exist, at least as far as the physical sciences are concerned.

Even the disposal of ERP money in this case seems to be done poorly. Gerlach, Rector of Muenchen University, did not know that money was available, nor did Kuhlenskampf at Wuerzburg until after they had heard that money for an electron microscope had been granted to Regensburg. In view of the fact that the name of the scientist who receives this plum is not even known outside of Regensburg, the case seems fantastic.

In contrast to Hesse and Bavaria, the conditions in South Baden and South Wuerttemberg (French Zone), although not good, are quite tolerable. Hamburg appears to go to some effort to support the University. In Nord-Rhein Westphalen the conditions are said to be fair. Hannover is certainly not too good, but far better than Hesse or Bavaria. It is claimed that a general rule exists; wherever the government is socialist, the support of the universities is poor.

It is usually said that the German Laender are too poor to support their universities. It is a real question whether these Laender can afford to neglect their institutes of scientific research as they do. Unless more money, and very considerably more money, is poured into research in Germany, the industries of Germany are bound to fall far behind those of other countries. It is not clear to us how this lesson, which Germany taught the world in the late nineteenth and early twentieth century, of the importance of good universities and first class scientific research in attaining modern industrial supremacy, can be so soon forgotten.

In writing this report there is not time nor a convenient library to obtain accurate comparative figures, but a rough comparison with a US state may be made. California, still predominantly agricultural, and less dependent on industry than Western Germany, has four great research institutions, those at Berkeley, Stanford, Los Angeles and Pasadena. These four institutions must together have at least 40 full professorships in physics and perhaps 25 in physical chemistry.

The population of California was 6.9 millions in 1940 which is just that of Niedersachsen, and less than 75% of that of Bavaria.

Niedersachsen has Goettingen, and the Technische Hochschule at Hannover and Braunschweig, with about eight professors of physics and at most three of physical chemistry, all with research budgets some tenfold less per man than the California budgets.

Bavaria, with Muenchen University and T.H., Erlangen, and Wuerzburg has also about ten full professorships in physics and only two in physical chemistry. The Bamberg and Regensburg institutions are far outclassed by the very numerous, and by no means all bad, smaller colleges and universities of California.

### 13. REACTIONS TO THE LAWS

The laws 22 and 23, limiting research and industrial production of research instruments in fields considered to be of military importance were not mentioned, at least directly, by the majority of scientists. With a few scientists, however, we held long discussions on this subject.

In general, one may say that law 22, limiting research, is only mildly annoying to some, but not severely limiting to legitimate scientific research. Those who were actually engaged in nuclear research found it quite possible to do whatever they needed to do without coming in conflict with its provisions. Stranski expressed some slight annoyance with the fact that his reports from the Technische Hochschule were returned by the English authorities asking for more details. He said that the US authorities accepted the reports he turned in without question. Haxel, in Goettingen, said that the German authorities, to whom the reports were given directly, often made trouble by requiring more detail than was necessary.

The effect of this law in discouraging those whose main field of interest is not nucleonics, but who could use nuclear techniques, from making this use, is also discussed in section 8. This is always an undesirable effect of any law like this one. The use of tracer isotopes is a very useful tool. Difficulty and expense in obtaining isotopes, lack of experience in the technique, and general inertia, always tend to discourage the research worker from using this tool unless it becomes absolutely necessary for the successful pursuit of his problem. If one adds a restriction due to the necessity of obtaining a legal permission, one further increases the inhibition.

It is not clear that fundamental scientific research in nuclear physics should be restricted in Germany. It is so very far from atom bomb construction that one may well question its necessity. On the other hand, the damaging effect of this law is again so slight that it scarcely seems to be an important question, one way or another.

The law 23 limiting the production, use, and possession of certain research instruments is more serious. We have frequently heard criticism of this law. The most frequent form of criticism is that of a few of its rather ridiculous and trivial provisions. Czerny is said to have measured the electrical resistance of a broomstick as a lecture demonstration, and to have pointed out to his class that since its resistance exceeded one megohm its ownership by the laboratory should be formally reported. Geiger counters are made one day, and become scrap metal the next. To report all counters is literally impossible in some laboratories.

This form of criticism was stated most succinctly by Haxel: "We are tired, from Nazi times, of laws that we can't keep. We are willing to accept strict laws, and we want to obey them, but we dislike to be dishonest to our friends in the Scientific Research Division, who have really helped us, by pretending to comply with a law which we cannot comply with".

This character of law 23 can probably be changed without fundamental modification by careful rewriting.

A more fundamental criticism, applying to industry, was voiced several times, and especially by Houtermann and Haxel. This referred to the effect of the law in driving the industrial production of scientific equipment into the Eastern Zone.

It was said that, for one thing, the industries will undertake the construction of, say, betatrons, only if they can construct four or five. Normally, with two orders they would construct this number, expecting to sell them later. They get permission, one at a time, to construct when they have orders from users only. The result is that they move this part of their industry, with its skilled technicians, into the Eastern Zone.

A similar case of a small industry which was offered a small order for counters for Turkey was mentioned. The red tape and secretaries necessary to obtain the permission was said to exceed in cost the value of the order. The order went to the Eastern Zone.

Whether these objections, applying mostly to the effect on industry, are actually legitimate, can probably be ascertained better by investigation in the industry. They are reported here as heard.

We asked Haxel and Houtermann if they had any constructive suggestion for a change. Their proposal was that, in any industry, one makes one man responsible for the fact that no instruments helpful to the Soviets go beyond the Iron Curtain. In a laboratory, visitors on regular inspections will know far more about the war potential than a sheet of apparatus can tell.



INSTITUTE REPORTS

14. Institute : KAISER WILHELM INSTITUTE FUER PHYSIKALISCHE CHEMIE, (BERLIN)  
DER MAX PLANCK GESELLSCHAFT.

Place : Berlin

Director : PROFESSOR DR KARL BONHOEFFER

Date : Saturday, 26 Aug 50 and Thursday, 28 Sep 50

Visit conducted by : Professor STRANSKI on Saturday, 26 Aug and Prof UEBERREITER on Thursday, 28 Sep 50.

Other Research Workers Encountered :

PROFESSOR DR ERWIN MUELLER	(Field Electron Microscope)
DR G KANIG	(Macromolecules)
DR H ORTHMANN	(Viscosity of Polymers)
DIPL ING EVELY OTTO	(Temperature Conductivity of Polymers)
PROFESSOR DR MOLIERE	(Theory and Surface Reactions)
DR FLIETH	(X-ray structure and valence angles)
DR ING I BROSER	(CdS crystal counter)
DR ING R WARMUNSKY	(CdS crystal counter)

Building : The building was shaken by explosive bombs and badly burnt during the war. It had also been sacked by the Soviets; there was not even a light switch remaining. It has been entirely reconditioned. It is a large institute, unusually large by US as well as German standards. The building is in excellent condition and well designed for a laboratory. Few US laboratories are superior. The library is large and well stocked with the recent literature.

Equipment : There is no sign of any lack of equipment. In addition to an apparently adequate supply of all ordinary electrical and optical instruments there is a large Siemens electron microscope which appears to be an excellent and extremely convenient instrument.

General impression and remarks : Since PROFESSOR BONHOEFFER is seldom here, the institute really consists of a large number of smaller sections which appear to operate independently but cooperatively in much the manner of a large US department. The staff appears to be excellent, and the impression that the various sections cooperate and are scientifically interested in each others work was obtained. Were it not for the political situation in Berlin one would feel that this institute would be one of the most advantageous places in the world for advanced research in physical chemistry.

Both PROFESSOR STRANSKI and PROFESSOR UEBERREITER were extremely cordial and glad to show us around. Both of them are worried and depressed by the Soviet threat, and both would like to come to the US. This would be difficult for PROFESSOR STRANSKI, who speaks hardly any English, and who is very much accustomed to the German way of life (he is quite a German Nationalist, which is surprising for a Bulgarian). PROFESSOR UEBERREITER, however, speaks English, enjoys teaching, and is young and unmarried.

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He would presumably make the necessary adjustments easily. Both men would be very valuable additions to US science.

PROFESSOR STRANSKI would be in great danger if he should fall into the hands of the Soviets. He was asked in 1945 to go to the USSR and stalled about acceptance until the Americans arrived. PROFESSOR UEBERREITER was originally at the Humboldt University, but felt that it was impossible to work under the Soviets.

Individual  
research  
projects

: a. PROFESSOR STRANSKI, Crystal Growth and Morphology.

Both urotropine (tetramethylene-tetra amine) and tungsten, which are both body centered cubic, behave similarly. Urotropine grows with the 110 faces alone present, annealing brings out the 100 and 112 faces but not the 111 face. Tungsten (see Mueller, under, for experimental method) similarly never shows 111 face but 110, 100 and 112 faces grow on annealing. (110 face has nearest neighbor interaction, 100 only second nearest, whereas 111 and 112 only third nearest neighbor interaction, however 112 can give second nearest interaction by a shift of surface molecules only). Also the normally occurring (smooth) faces are not wet by the melt at melting point, whereas those with "steps" are, indicating premelting on these faces.

Especially interesting were some experiments with  $As_2O_3$ , which crystallizes in two forms, "Arsenite", consisting of a molecular lattice of  $As_4O_6$  molecules, and "Clauderite" which has a plane lattice of As and O atoms. Modification A is stable at low temperatures and C at higher. However, C vaporizes by a factor 600 fold slower, even at the low temperatures where it is the less stable. The transitions between the two forms are very slow. If A is heated so that a vapor of  $As_4O_6$  forms and a glowing wire heated in the vapor then a glass-like partial modification of C forms, which re-vaporizes when the glowing wire is cooled.

b. ERWIN MUELLER, Field Electron Microscope.

This is probably the most originally new item of research that we saw, and is probably a very valuable and important tool for future research. The principle, and the apparatus, are both almost ridiculously simple.

The sharpened and etched point of a tungsten wire, having a radius of about  $10^{-7}$  cm, is placed about 1 cm in front of a wire ring, about 1 cm radius, and all of this in front of a fluorescent screen approximately 5 cm away. The whole is evacuated, and the ring charged to some 10,000 volts positive. The cold electron emission from the wire point, induced by the field, is thus projected on the screen with a magnification of some  $10^6$  fold. The field at the point is  $10^7$  volts/cm.

The most obvious effect, first observed, is the difference of emission of the different crystal faces of the needle point. The pointed wire is arranged so that it can be heated. If annealed

Individual  
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projects

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The most obvious effect, first observed, is the difference of emission of the different crystal faces of the needle point. The pointed wire is arranged so that it can be heated. If annealed, the faces grow, and the edges, when the faces come together, emit strongly, since they are acted upon by a greater electric gradient. Molecules vaporized onto the needle point stand out from the surface and due to the greater gradient at the protrusion, give greater electron emission. The resolution on the screen is about 2 mm or 20 AU at the surface of the point.

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Single Barium atoms are sufficiently large to be seen.

Pthalocyanin molecules give the characteristic pattern of their four leaf clover shape. Hemichloride molecules can be seen, and the center is bright or dark depending on whether the Cl<sup>-</sup> is above or below.

The whole range of effects was demonstrated to us in some 20 minutes.

This instrument opens up the possibilities of a wide range of application, some of which may, indeed, not turn out well, but at least some of which will certainly be important.

c. UEBERREITER, High Polymer Investigations.

(1) The polymerization induced by visible light, which is rapid and homogeneous through the solution. This may be of considerable technical importance. The complete kinetics of this effect is under investigation.

(2) Viscosity of Polymers (with DR H ORTEMANN). The viscosity is measured over a very long temperature range by three methods, flow, plastic lengthening and plastic twisting. The points by the different methods overlap. In plastic lengthening and twisting the significant value is the steady value obtained after several days or weeks when very high strains have occurred, for instance, lengthening by 800 percent.

(3) Temperature conductivity (with EVELY OTTO). A cylinder of plastic, with a thermocouple in the center, having a constant temperature throughout, is dipped suddenly in a thermostat of another temperature (5°C different). The time change of temperature is observed. The coefficient itself shows second order changes if plotted against temperature.

Although this section of the Institute is modest in comparison with the more well known institute of Staudinger in Freiburg, it gave the impression of a more modern and imaginative approach than that current at Freiburg. Ueberreiter has capabilities of becoming one of the most productive workers in this important field.

d. Electron Microscope. The use of the Siemens electron microscope was demonstrated. The instrument was very impressive and convenient to use.

e. EROSER and WARMINSKY. The luminescence and simultaneous conductivity of CdS crystals induced by radioactive emissions (d-rays) was being studied. Decay times of about 10<sup>-6</sup> seconds occur. The effects are similar to those observed in organic crystals (naphthalene etc) and which are used in crystal counters. Inorganic crystals may have certain advantages over organic crystals for certain purposes.

f. PLIETH (with STRANSKI) studied the X-ray structure of Arsenites, Clauderites (see item 1), and the valence angle changes of certain diphenyls, such as (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>CH<sub>2</sub>, (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>O, (C<sub>6</sub>H<sub>5</sub>)<sub>2</sub>S, etc.

g. MOLIERE is interested in theoretical questions in quantum mechanics and statistical mechanics. He also has under investigation the ki Approved for Release: 2022/06/22 C00010786 Cl<sub>11</sub> on heated surfaces

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g. MOLIERE is interested in theoretical questions in quantum mechanics and statistical mechanics. He also has under investigation the kinetics of the reaction of  $SnCl_4$  and  $TiCl_4$  on heated surfaces ( $1000^\circ$ ). The deposition of Sn or Ti is measured by the increase in diameter of the wire, which can be followed either by the change of resistance, or optically. Whereas the reaction is complete with every collision for  $SnCl_4$  and  $TiCl_4$  it appears that  $TiCl_2$ , which forms also, does not decompose on the surface. The molecule  $TiCl_2$  is also found to be produced and decomposes readily on the surface.

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15. Institute : PHYSIKALISCHES INSTITUT DER FREIEN UNIVERSITAET.

Place : Berlin

Director : Director of the theoretical division is Professor GUENTHER LUDWIG.

Date : Thursday, 28 Sep 50.

Visit Conducted by : We visited Professor LUDWIG in his office accompanied by Dr MOLIÈRE of the Kaiser Wilhelm Institut.

Building and apparatus : No report.

General impression and remarks : Professor LUDWIG is a young man who showed a rather broad interest in questions of statistical mechanics and in quantum electro-dynamics. He gave the impression of being intelligent and capable. The discussion centered around recent advances, and did not go extensively into Professor LUDWIG's own researches.

16. Institute : PHYSIKALISCHES INSTITUT DER TECHNISCHE UNIVERSITAET

Place : Berlin

Director : Professor RAMSAUER

Date : Friday, 29 Sep 50.

Visit Conducted  
by : Dr KRAEMER, Prof GOBRECHT.

Other Research  
Workers  
Encountered : Dr KLUGE, assistant.

Building : The institute is in an enormous building with wide halls, large rooms. The large lecture hall holds more than one thousand. The building had been seriously damaged, and part of it completely destroyed, by bombs. It was still in the process of rebuilding and repair. When repair and reconditioning is finished it will be an excellent building for an institute.

Equipment : Very little apparatus was available for scientific work. There was one good prism spectrograph, several ovens and the usual small equipment for vacuum lines and simple electrical measurements.

The apparatus for lecture demonstrations and for the "Praktikum" appeared to be excellent. Most of the laboratory experiments for the Praktikum were set up in ten identical sets, one next to the other, in the large laboratory rooms. In spite of the large number (200) of students taking the praktikum at the same time, it appeared that there was adequate space and equipment to give excellent instruction. The shop was large and spacious.

We were told that the total budget for replacement of apparatus, and purchase of new equipment was 150 DM per month. This figure is so ridiculously low that it must put severe limitations, not only on research, but also on the routine instruction.

General Impression  
and Remarks : We were received courteously, but somewhat frostily by Prof Ramsauer. After showing us the lecture room and some really amusing lecture demonstrations he turned us over to his assistant, Dr Kraemer, and even thaved out enough to shake hands. The laboratory appears to be several years behind in reconstruction and rebuilding. The main job is, at present, to get the institute in shape as a place of instruction for students. This is no minor job, since this laboratory has the largest number of students of any institute we have seen. In the course of our visit we met Professor Gobrecht, who was very cordial and showed us the research which was in progress. This research seems to be only under Dr Gobrecht's direction. There was quite a lot of it for one man, but very little for a building of that size. Professor Gobrecht made a very good impression. He is interested and interesting.

Individual Research  
Projects : a. Dr KLUGE, a bright and enthusiastic young physicist, was mainly

b. Professor GOBRECHT'S main interest lies in the spectra of the rare earth salt. Before the introduction of D-Marks, he managed to buy a good spectrograph. The interest is largely in the infra-red. The laboratory is too poor to buy apparatus for the detection of infra-red radiation, and therefore construct the equipment themselves.

(1) Thermocouples as detectors of infra-red radiation are being developed and constructed.

(2) Another detection apparatus consists of a collodion film, which is blackened on one side, and covered with vaseline on the other. If an infra-red spectral line hits the blackened surface, the vaseline evaporates and thereby leaves a trace. This apparatus promises to work well.

c. The effect which Haxel in Goettingen called "Schmirgel effect" is here found in a different form. Metal films are produced by evaporation of the metal in vacuum onto glass plates. These films blacken a photographic plate, even if a thin sheet of collodion is interspersed.

d. Single crystals of KCl of dimensions of several inches, were grown by a Diplom candidate. They are going to be used in the production of a monochromator.

e. If potassium sulphate is reduced, the resultant salt is fluorescent. This is presumably due to some potassium sulphide which is formed. GOBRECHT is going to investigate this radiation.

f. The so-called "Benedix effect" in the thermal conductivity of metals was investigated and found to be non-existent, or at least under the capabilities of simple detection.



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17. Institute : CHEMISCHES INSTITUT UND PHYSIKALISCH-CHEMISCHES INSTITUT

Place : Bonn

Director : Professor HELFERICH, organic chemistry; Professor GROTH, physical chemistry, coming only this fall.

Date : Thursday, 31 Aug 50.

Visit Conducted by : Professor HELFERICH and W HANS

Other Research Workers Encountered : Professor ANTWEILER and STOMMEL

Building : The building was badly destroyed, but has been to some extent reconstructed. Up to now, physical chemistry was just an "Abteilung". With the arrival of Professor GROTH from Hamburg it will become an institute of its own and be located in a new building.

Equipment : The usual physical chemical equipment was in evidence in the physical section. In addition there were several excellent polarographs. The organic section was visited hastily and appeared to have no special equipment other than that normally expected.

We were told that Occupation troops had removed most of the apparatus, and that practically everything had to be purchased new since the war.

General Impression and Remarks : Professor Helferich was a kind and courteous gentleman of the old school. After politely receiving us and showing us hastily through a few laboratories of the organic section, he turned us over to Dr W Hans, a young assistant in the physical chemical section.

Hans was very young (probably under thirty), intelligent and enthusiastic. The present laboratory is very small but seemed to function well; the rather pleasant rooms and adequate equipment made a good impression. The work undertaken appeared to be interesting but mostly in the limited field of polarigraphy.

There is apparently a considerable building underway.

One reaction of Dr Hans was interesting and probably typical of his generation. He was 12 when the Nazi's came to power, and was brought up in the Hitler Jugend. After a short period of study he was in the Army during the war. He had evidently been thoroughly indoctrinated in party theory and had accepted the doctrine completely.

The revelation of the Nazi atrocities was completely amazing to him. He was thoroughly shocked and apparently left without any resilience of political rehabilitation. He wants nothing to do with politics now.

Individual Research Projects : Professor ANTWEILER is apparently largely a technician interested in the construction of polarographs, and their technical applications.

Investigations on the origin of the maximum in current observed with some ions at potentials just above the half wave value were being made. This maximum is accompanied by a flow of the solution around the drop electrode. The origin of this is believed to be known (see also Heidelberg - Dr Ender).

STOMMEL was preparing hydrates of the noble gases, and investigating their crystal structure.  $\text{Xe}_6\text{H}_2\text{O}$  is quite stable.

18. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITÄT

Place : Freiburg

Director : Professor GENTNER

Date : Friday, 15 Sep 50.

Visit Conducted by : Professor GENTNER and Peter JENSEN.

Other Research Workers Encountered : MAIER, FESSLER, SMITZ, DEUTSCHMAN.

Building : The original physics laboratory with its equipment, was completely destroyed by bombing. The physics institute is now in a building which was constructed for some other purpose and only partially destroyed. It is not very well suited for physics, and it is crowded.

Equipment : The equipment is definitely poor. However, some nuclear machine for the institute is, at present, under construction.

General Impressions and Remarks : Professor Gentner is certainly a very good physicist. He received us very cordially. Gentner chose to go to Freiburg because it is in the French occupation zone. He knows many French physicists and hoped to have more contact with them in this way. This hope does not seem to have materialized to a great extent. Peter Jensen is a young physicist whom I knew as a child and whose work is promising.

That not much work of great interest is being done in this laboratory is due to its size and lack of equipment. This latter situation will improve with the completion of the pressure van der Graaf machine.

Individual Research Projects :

- a. GENTNER and JENSEN are mainly busy planning for the new instrument. Jensen is doing some theoretical work with his namesake at Heidelberg.
- b. GENTNER, with the assistance of SMITZ, is determining the age of some beds of potassium chloride by the content of argon. This is careful and meticulous work. The crucial ratio of the decay of potassium into calcium to that into argon is also under investigation.
- c. MAIER studies liquid crystals with Raman effect and super sound.
- d. FESSLER studies X-rays.
- e. DEUTSCHMAN works with a Wilson cloud chamber, mainly on cosmic rays. Constant recordings are going on on top of the building as well as on a mountain above Freiburg to determine the relation of cosmic ray intensity with solar activity.

19. Institute : CHEMISCHES INSTITUT DER UNIVERSITAET.

Place : Freiburg

Director : Professor STAUDINGER

Date : Friday, 15 Sep 50.

Visit Conducted by : Dr BATZER

Other Research Workers Encountered : Professor STAUDINGER

Building : This rather large institute was almost completely destroyed by bombing and has been rebuilt, largely by the students. There was a display of pictures showing the course of reconstruction in Professor Staudinger's office. The institute is obviously proud of the role played by its members in the rebuilding.

The building appears to be adequate in size and admirably constructed for a chemical laboratory, although not modern in appearance.

Apparatus : All apparatus appears to be post war, apparently little or none survived the war. The impression obtained was of a sufficient supply to enable the work to go on without severe limitation, in contrast to the impression given by many university laboratories. We visited only the high polymer part of the laboratory, and most of the usual equipment for working with macromolecules seemed to be present.

General Impression and Remarks : This is undoubtedly one of the best macromolecule institutes in the world, although there was some slight impression that the recent very rapid advances in the US had not been followed sufficiently. For instance, we were told that the Journal of Chemical Physics was not available in Freiburg. Since much of the recent US advance is published in this Journal, this appeared to be a severe lack. Actually, MECKE, in the physical chemistry institute, had the post war Journal of Chemical Physics as we later found.

Professor STAUDINGER is of retirement age, and it was clear that he had not followed or understood much of the newer US concepts.

There was complaint of inadequate budget, although this was less evident in the laboratory than in some others. It is surprising that just in this field, which has such enormous immediate technical possibilities, the German industry is not willing to support research in this institute. The general impression, which may be hastily formed, was that the fame and reputation of the institute and its director was still attracting good men and enabling good work to be done in spite of a slight tendency to fall behind the times due to the age of the director.

Individual Research Projects : So much work was under way that only a few special items of physical chemical nature might be singled out. Most of the work is of more organic interest.

a. Light scattering experiments were being set up for the measurement of molecular weights. There was interest in the details of how the US results had been obtained. The method to be used involved a variation of wave length rather than of angle of scattering.

b. Osmotic pressure measurements, to investigate molecular weights, and deviations from perfect solution laws were conducted. Again, there were questions about the meaning of new US theories and viewpoints.

20. Institute : INSTITUTE FUER PHYSIKALISCHE CHEMIE DER UNIVERSITAET, FREIBURG

Place : Freiburg

Director : Professor R MECKE

Date : Saturday, 16 Sep 50.

Visit Conducted by : Professor R MECKE

Other Research Workers Encountered : MACK, Private Dozent

Building : The building had been almost completely destroyed by bombing and had been rebuilt, largely by the students. The building was clean, airy, not too crowded and adequate for the institute.

Equipment : Although the equipment and apparatus was far from luxurious, there appeared to be sufficient for the work undertaken. New apparatus could be used to advantage, but it was not apparent that the research was crippled by its lack.

Absorption spectrophotometers in visible, ultra-violet and infra-red, dielectric constant measuring set ups, and the necessary equipment for measuring vapor pressures and simple thermodynamic properties of solutions were available.

General Impression and Remarks : The work in this laboratory appeared to be careful, precise, and reliable, although possibly a little uninspired. Professor Mecke has concentrated the complete research into one, not very broad field, which he is investigating carefully and thoroughly, and from all angles. This field is the interactions of molecules containing OH groups, which is due primarily to what is called hydrogen bonding. Spectral measurements, dielectric constant measurements, and thermodynamic equilibria are measured, in solutions of phenols and alcohols in solvents containing inert groups only such as hydrocarbons,  $\text{CCl}_4$ , etc, and in solution with each other. The work of the laboratory appears to be strictly under the direction of Professor Mecke.

Individual Research Projects : The work of this laboratory is so closely coordinated that the description of individual projects is pointless except in connection with the whole. A few items might be mentioned.

The shift in the OH band of solutions of phenol at different concentrations and different temperatures in different solvents was measured.

Dielectric constants under the same conditions were measured.

The shift in the OH band due to the "self association" of OH in nitro phenol was measured.

21. Institute : INSTITUT FUER EXPERIMENTAL THERAPIE

Place : Freiburg

Director : Dr Peter MARQUARDT

Date : Monday, 18 Sep 50.

Visit Conducted  
by : Dr MARQUARDT

Other Research  
Workers  
Encountered : Dr PHILLIPS.

Building : The institute consists mainly of one large double room in the  
clinic and the director's office.

Equipment : Apparatus for recording amplitude and frequency of frog  
heart beats in vitro, operating tables for small animals, etc.  
The equipment appeared to be adequate for the work of this small  
institute.

General Impression  
and Remarks : The visit to this institute was occasioned largely by personal  
friendship with the director, but also because of its work with  
digitalis. Radioactive digitalis is now available from the  
Argonne National Laboratory in Chicago, and would be extremely  
useful to the work of this institute.

The institute gives the impression of consisting of a small  
group of cooperative and enthusiastic workers.

Individual Research  
Projects : a. A new method of standardizing digitalis preparations.

22. Institute : INSTITUT FÜR PHYSIKALISCHE CHEMIE DER TECHNISCHE HOCHSCHULE, STUTTGART.

Place : Stuttgart

Director : Professor GRUBE

Date : Tuesday, 19 Sep 50

Visit Conducted by : Dr FLAD

Other Research Workers Encountered : Doctors OEHRINGER, SCHMID, HOERNLE.

Building : The building had been damaged but had been completely repaired and rebuilt. It was adequate in size and well suited for research.

Equipment : The budget was poor, and there was mention of the restriction of research due to this. One problem was stopped because the budget could not stand the 300 DM per month cost for the electricity to keep a Talman oven going for the research. However, there seemed to be the usual material necessary for physical chemical work, including quite a bit of special equipment for high temperature research.

General Impression and Remarks : The high temperature thermodynamic work in this laboratory seemed to be good. There was apparently a thorough understanding of the thermodynamics involved, and a good sense of how to carry out experiments. The work in other fields was not so impressive. This was possibly merely an impression due to the special interests of our guide, Dr Flad. The high temperature work was in the field of equilibrium pressures of oxides, phase diagrams, melting points and vapor pressures.

Individual Research Projects :

- a. HOERNLE prepared SiO in an oven containing Si and SiO<sub>2</sub>, measuring the weight effused through a known opening.
- b. FLAD measured the dissociation pressure of Cr<sub>2</sub>O<sub>3</sub> in an Al<sub>2</sub>O<sub>3</sub> tube at 1000° to 1400°C by observing the partial pressure of H<sub>2</sub> passed through the tube, which is necessary to prevent reduction.
- c. OEHRINGER and SCHMID had an impressive ultrasonic apparatus, but a less impressive problem.



23. Institute : MAX FLANCK INSTITUT FUER METALKUENDE

Place : Stuttgart

Director : Professor MP GEBHARD

Date : Tuesday, 19 Sep 50.

Visit Conducted  
by : Professor GEBHARD.

Building : New, clean, roomy, and apparently well suited for the work.

Equipment : Apparently everything that was wanted was available.  
The ovens and smelting rooms, which seemed to be planned  
on a rather lavish scale, were not yet completely set up.

General Impression  
and Remarks : Professor Gebhard was courteous and willing to show everything,  
but very stiff. All laboratories were exhibited and the work  
described, but no other workers were introduced. Although the  
experiments were described, the scientific reason for carrying  
out the work was not mentioned. It was not clear whether the  
experiments were performed with random aim, or whether there  
actually was a clear program behind them. One had the impression  
that the technical execution of the experiments was probably  
excellent.

Individual Research  
Problems : Only one problem struck us as interesting. By observing the  
magnetic susceptibility and its temperature dependence, the  
percent of each phase in a pressed powder of Ni-Cu as a  
function of time could be obtained.

24. Institute : PHYSIKALISCHES INSTITUT DER TECHNISCHEN HOCHSCHULE

Place : Stuttgart

Director : Professor REGENER

Date : Wednesday, 20 Sep 50.

Visit Conducted  
by : Professor GLASER and Dipl phys MAGUN.

Building : The building had suffered some destruction, but rebuilding is complete.

Equipment : Modest, shop-built equipment seemed adequate, but difficulties in purchase of new items were mentioned.

General Impressions  
and Remarks : This laboratory has an offshoot near the Bodensee for cosmic ray observation, and also connections with Hechingen. Evidently the main interest lies out of town. To some degree, the Stuttgart institute seems to be a service laboratory for the institute near the Bodensee.

The research work is still very much in the stage of reconstruction. Most problems were begun, with no results available yet. The building was very crowded. Eighty students are present in the advanced praktikum with adequate room for about 20.

Individual Research  
Problems

- a. Investigation of the behavior of photographic plates; the fading of particle tracks, etc. Tracks of protons in plates were obtained by neutron irradiation.
- b. Construction of reliable counting circuits for constant investigation of cosmic rays. The purpose is to further investigate the connection between cosmic ray activity and sun spots.
- c. Construction of a counter for the neutron component of cosmic radiation.
- d. In more detail, the work of GLASER on measurement of the behavior of a high energy spark. The temperature goes to about 30,000°. Current versus time, as well as luminescence versus time, are measured. Times of  $10^{-8}$  seconds can be resolved. In the beginning, the spectrum is continuous. In the later stages, the Argon lines appear. The spectrum in the beginning is due to free-free transitions.
- e. Study of electrets. Question: Are the surface layers impurities, or sprayed charges, or dipoles?

25. Institute : INSTITUT FUER ANGEWANDTE UND THEORETISCHE PHYSIK.

Place : Stuttgart.

Director : Professor DEHLINGER and Professor FUES.

Date : Wednesday, 20 Sep 50.

Visit Conducted by : Professors DEHLINGER and KOCHENDOERFER.

Other Research Workers Encountered : Doctors ROEMM, JAUCHEMANN. We met Professor FUES in Bad Nauheim.

Building : The institute is in a comparatively few rooms, which are pleasant and well suited for research. The rooms are slightly crowded, but not objectionably so.

Equipment : While not lavish, there appears to be enough for the type of experimental work undertaken.

General Impression and Remarks : This is an institute entirely directed toward the theoretical study of metals. The theoretical work appears to be excellent. The relatively small amount of experimental work is purely an outgrowth of the theoretical investigations. The experiments are well thought out, clean cut and neat, and although technically simple, are all directed to give a clear answer to a direct question. The institute is excellent.

Individual Research Projects :

a. DEHLINGER, ROEMM, KOCHENDOERFER are interested in the plasticity of metals, dislocations, and their role in slip. By clean experimentation, the slip hardening of aluminum and other single crystals was found to be linear in the strain. Good theoretical work somewhat salted with experiments.

b. Semi-conductors. This is the work of FUES. We saw JAUCHEMANN. Hall effects, etc, are being measured. We did not hear too much about this part since Fues, the soul of the work, was out of town. It was reported that theoretical work is being done on the conductivity of surface layers.

26. Institute : KAISER WILHELM INSTITUT FUER ROENTGEN FORSCHUNG.

Place : Stuttgart.

Director : Professor GLOCKER.

Date : Wednesday, 20 Sep 50.

Visit Conducted by : Professor DEELINGER.

Other Research Workers Encountered : Professor RICHTER.

Building : The building is either new or completely rebuilt and is very satisfactory for the purpose.

Equipment : Many very large and expensive machines for taking X-ray photographs of massive metallic objects. Engineering testing devices for making conventional tests of strength of materials.

General Impression and Remarks : The institute was just dolled up to be "shown" since a 30-year celebration was in progress. This gave the impression, which was probably superficial, that the institute consisted exclusively of highly polished apparatus which was never used. The collection was impressive. We were not informed of any results of importance obtained with the equipment. The exception to this impression is the work of Professor RICHTER on electron diffraction of thin films, which was excellent pure science.

Individual Research Problems : RICHTER: The amorphous films of some metals, As, Sb, Ge, studied by electron diffraction show the close range order of the crystal, not the liquid. The more distant maxima in the  $F_2(R)$  curves correspond to those of disordered tetrahedra.

27. Institute : INSTITUT FUER PHYSIKALISCHE CHEMIE DER UNIVERSITAET, TUEBINGEN.

Place : Tuebingen.

Director : Professor KORTUEM.

Date : Thursday, 21 Sep 50.

Visit Conducted by : Professor KORTUEM and Mrs KORTUEM, who is also a physical chemist.

Other Research Workers Encountered : Dr BINECK, LUCK, DREESEN.

Building : The building was not destroyed during the war, but is old, and has not been remodelled or redecorated. It is exceedingly dark, dingy and small. The institute is cramped into a few basement rooms. It is hard to see how there can be enough room for students during the semester. However, every corner is well utilized for experimental work.

Equipment : Occupation troops had removed most of the old equipment. Enough spectrographic and general physical chemical apparatus was available for the work undertaken, but the equipment is far from lavish.

General Impression and Remarks : The dinginess of the building was in marked contrast to the enthusiastic warmth of our reception by the Kortuems. Both are obviously capable and interested scientists. They utilize the limited facilities of the institute to the utmost, and appear to do excellent and interesting work in spite of very unfavorable conditions.

This laboratory deserves much better support. The contrast with the luxury of Butenant's KWI institute is appalling. Both Kortuems impressed us highly by their scientific ability and political reliability. Their work is chiefly in the absorption spectra of solutions.

Individual Research Projects :

a. Dr BINECK.

Spectrum, conductivity, and dielectric constant of solutions of metallo-organic compounds in ether are measured. Examples are Na C (C<sub>6</sub>H<sub>5</sub>) and Li C<sub>6</sub>H<sub>5</sub>. One of the chief problems is that of synthesis of the pure compound.

b. Professor KORTUEM.

Some organic compounds develop new lower energy absorption bands upon rise in temperature. They associate these with a low lying excited triplet state, and intend to investigate this, among other ways, by measuring the magnetic susceptibility.

c. KORTUEM.

The absorption spectra of crystals can be obtained by observing the spectrum found in the reflection of continuous light from a powder of crystals. The reflected spectrum is independent of crystal size below a certain fineness of powder. The method appears to work, and is the only satisfactory method when large crystals cannot be grown.

d. LUCK.

The dependence of the absorption of monochromatic light by I<sub>2</sub> vapor on tube length and pressure is determined. The monochromatic light has sufficient spectral breadth to cover many I<sub>2</sub> rotation lines. The results are interpretable in terms of pressure broadening. The effect of foreign gases will be studied.

e. DREESSEN.

Certain thermochemical quantities, including vapor pressures of solutions were studied.

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28. Institute : KWI FOR BIOCHEMISTRY.

Place : Tuebingen.

Director : Professor BUTENANT.

Date : Thursday, 21 Sep 50.

Visit Conducted  
by : Professor KORTUEM and Dr SCHRAMM.

Building : The building is brand new, not very large, but exceedingly pleasant and well suited.

Equipment : Everything that is needed seems to be present. There is an excellent ultra centrifuge with optical equipment, and a diffusion cell.

General Impression  
and Remarks : The work of this laboratory is somewhat out of our line, but Professor Kortuem wanted us to see the showplace of Tuebingen. The laboratory is a beautiful building, built to the specifications of the laboratory staff. The contrast with the university laboratories is striking, and one cannot help feeling that it is unsound.

This laboratory was originally in Berlin. Most of the equipment was removed to Tuebingen before bombs got the building in Berlin. Later, a good deal of equipment was moved to a village. From there it was stolen by some French trucks, but some of it was later mysteriously retrieved. Equipment left in Tuebingen was removed by the French. However, there has been ample replacement.

Professor Butenant was away. Most of the history of the laboratory came from his wife, who is a school friend of mine. Butenant was an early member of the Nazi Party. He is said to have a leftish leaning and a great deal of resentment against the denazification procedures.

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29. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAET.

Place : Tuebingen.

Director : Professor KOSSEL.

Date : Thursday, 21 Sep 50.

Visit Conducted by : Professor BRAUNBECK (theoretical physics) and Dr MENZEL.

Other Research Workers Encountered : Miss ANKER, a US PhD student.

Building : The building was old, and had not been destroyed by bombing. It had also not been remodeled. Although adequate in space, and not a rubble pile, it was dark and dingy, and not very satisfactory. Some painting is now being done.

Equipment : Much of the equipment had been lost, largely by removal by the French in the early part of the occupation. Considerable replacement has been made. There exists a small van der Graaf machine. Various X-ray and electron beam set-ups were shown.

General Impression and Remarks : The general impression obtained of the institute was definitely poor. The problems attacked seemed to be basically rather uninteresting, and to lack any general aim. The range of interest was fairly narrow. It is conceivable that this impression may be subjective and due to the type of guidance. An objective fact, however, stood out. The laboratory has a great deal of empty space. There are more, and better, empty rooms in the cellar than Professor Kortuem has for the whole department of Physical Chemistry in which excellent work is done.

We heard later from Haxel that the laboratory was entirely different when Geiger had it. The "praktikum" was then in the basement, and the entire remaining space was filled with research work. At present, the "praktikum" is spread over most of the laboratory, and research curtailed. Professor KOSSEL is over 60 years of age and probably not very active.

Individual Research Projects

a. Various instruments for electron defraction. The main pride was an apparatus which puts the sample (mica) into the focus of a convergent electron beam. The patterns obtained depend on the thickness of the sample.

b. An X-ray apparatus used for measuring, with great accuracy, the lattice dimensions of crystals. Some refinement of alignment are present compared to previous similar machines. Only a small range of temperature is contemplated. (PhD thesis, Miss ANKER, US national.)

c. Mainly the work of MENZEL and a PhD student - The study of single crystals of metals. The single crystals are worked into spheres. For copper, this can be done with a lathe on a single crystal. For zinc, such work requires the crystal structure, and Approved for Release: 2022/06/22 C00010786



Visit Conducted  
by

: Professor BRAINBECK (theoretical physicist) and Dr MENZEL.  
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Other Research  
Workers  
Encountered

: Miss ANKER, a US PhD student.

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c. Mainly the work of MENZEL and a PhD student - The study of single crystals of metals. The single crystals are worked into spheres. For copper, this can be done with a lathe on a single crystal. For zinc, such work destroys the crystal structure, and the crystals must be grown directly in a spherical vessel. Chemical etching produces a microscopic structure showing plateaus, or the tendency to form a surface of definite crystal planes. Evaporation in vacuum shows the same tendency.

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30. Institute : INSTITUT FUER PHYSIKALISCHE CHEMIE DER TECHNISCHE HOCHSCHULE, KARLSRUHE.

Place : Karlsruhe.

Director : Professor GUENTHER.

Date : Friday, 22 Sep 50.

Visit Conducted by : Dr Hans SIEMONSEN.

Other Research Workers Encountered : Dr GEBERT, Assistant - ultrasonics.

Building : The building is satisfactorily large. It suffered severe damage during the war and rebuilding is still not quite complete. In rebuilding, some basement rooms in a court with overhead lighting make excellent praktikum laboratories. The rooms of the building are generally pleasant, light and as yet not completely occupied.

Equipment : Most apparatus was lost during the war. Replacements seem to be adequate for the work, but as usual it appears that the budget is such that the problems which can be worked on are somewhat limited by the necessity of avoiding expensive equipment. The usual electrochemical equipment, calorimetric equipment, and a few set ups for producing ultrasonic waves were available. Some spectroscopic equipment was there.

General Impression and Remarks : The institute gave a somewhat empty impression. This was probably occasioned more by the fact that it has but recently become habitable, rather than because of lack of ideas or problems or lack of students. On the other hand, with the exception of Dr SIEMONSEN's own problem it was not quite evident that problems of real scientific importance were being attacked with a clear end in view. The problems shown to us were diversified. Possibly this impression was only due to some lack of interest of our guide, Dr SIEMONSEN, rather than an inherent lack of interest of the problem.

Individual Research Projects :

- a. The spectrum of the chemiluminescence of the Grignard reagent under oxidation by gaseous oxygen was under investigation.
- b. The oxidation or decomposition of certain organic molecules induced by ultrasonic waves in water solution. The value of this problem was not clear. The decomposition is caused by H<sub>2</sub>O<sub>2</sub> formed by cavitation of dissolved gas in the water. (Gebert).
- c. Overtoltage of hydrogen on iron.
- d. SIEMONSEN's work was the experimental direct calorimetric measurement of the heat of reaction of chlorine with metals. An iron bomb calorimeter was used. This work was tied up with the available entropy data from US sources and used for the computation of chemical equilibria. SIEMONSEN impressed me as able, and as knowing what he was doing and why.

31. Institute : PHYSIKALISCHES INSTITUT DER TECHNISCHES HOCHSCHULE.

Place : Karlsruhe.

Director : Professor GERTHSEN.

Date : Friday, 22 Sep 50.

Visit Conducted by : Professor GERTHSEN.

Other Research Workers Encountered : M POLLERMAN.

Building : The old physics building is practically completely demolished. About a year ago, the present institute was started in the rooms of a former barrack at the other end of town. The location has many advantages. Beginning students never enter the laboratory. It is completely a research institute. The building is excellently suited for a physics laboratory.

Equipment : On German university standards, the equipment is very good. Professor GERTHSEN was allotted a fairly generous sum of money to start the laboratory. However, his annual budget in the future is not so adequate.

General Impression and Remarks : It is amazing that so much research can be started in one year. Thirty-five different pieces of work are now being done. A conscientious attempt is made to vary the lines of research. Professor GERTHSEN seems to be an excellent laboratory director. Evidently, he used to be a nuclear physicist. He said, "We have now changed our line of work". When we pointed out that work in nuclear physics was, after all, not forbidden, he remarked that he hated to ask favors. Professor GERTHSEN is a student and ardent admirer of the late Professor Geiger. He feels very bitter about the way in which Professor Geiger perished in Berlin. Mrs Geiger lives in extreme poverty. He feels that some assistance should be given to the wife of a man to whom nuclear physics owes so much. Professor GERTHSEN made an excellent guide. With each project, he discussed first the purpose and ultimate end of the experiment. In each room, there was on the wall a careful drawing of the experimental set up.

Individual Research Projects :

- a. The laboratory studies many problems involving cathode ray tubes. There was one amusing method of increasing the voltage of positive rays by a factor three; it depends on the fact that, with residual gas in the tube, H ions may regain, and later lose, an electron. While neutral, they can pass a gap in which a charged ion would lose its energy.
- b. The laboratory contains a van der Graaf machine, analogous to the one in Tuebingen.
- c. Measurements of adsorption of oxygen and hydrogen on nickel, at varying temperatures, are studied.

d. The behavior of quartz fiber manometers is studied in detail. A thin plate of mica is attached to the quartz fiber, and the vibrations parallel to and at right angles to the plate investigated. The net result is that the colliding gas particles do not get into translational equilibrium with the plate at normal incidence but do in parallel incidence (for thermal equilibrium, the accommodation coefficient is smaller than 1). These investigations make possible the construction of a quartz fiber manometer as an absolute instrument.

e. The process in the Wilson chamber is studied by M. POLLERMAN. A burst of cathode rays enters the chamber. An electric field induces migration of the columns of positive and negative ions. The velocity of motion is measured, the increase in ionic radius found. For the negative columns, the formation of visible droplets occurs at one definite supersaturation, or extent of expansion of the chamber. The positive column seems to consist of two different ion types. These ions have the same mobility, but form droplets at different degrees of supersaturation. The reason for the effect is as yet unexplained.

32. Institute : PHYSIKALISCH-CHEMISCHES INSTITUT DER UNIVERSITAET HEIDELBERG.

Place : Heidelberg.

Director : Professor Klaus SCHAEFFER.

Date : Saturday, 23 Sep 50.

Visit Conducted by : Professor SCHAEFFER.

Other Research Workers Encountered : Dr Fritz ENDER, Assistant (Polarigraphy).  
Mr Rudolf NITSCHKE, student (Accommodation Coefficients).

Building : The institute is housed in the former residence of Bunsen. It is modestly small, not too well suited to scientific work, but has been kept in moderately good condition. When students are enrolled in the "Praktikum", the institute must be severely crowded. Lighting is poor, but not impossible.

Apparatus : As usual, the apparatus is somewhat inadequate, and the choice of problems appears to be somewhat influenced by the modest budget. What was there was well used. The apparatus consisted chiefly of glass vacuum set ups, precise electrical measuring devices for direct current or low frequency alternating current, and polarographs.

General Impression and Remarks : Professor SCHAEFFER appears to be intelligent and capable. He is probably an unusually good teacher. He was cordial and anxious to show his work, and explained its significance well. The work in the laboratory appeared to be excellent and reasonably well chosen, although possibly not highly inspired.

Professor SCHAEFFER's main interest is in the accommodation coefficient of gaseous molecules on metal surfaces. The necessary data seem to be carefully compiled, and one has the impression of considerable experimental ingenuity in devising methods of obtaining quantities difficult to measure directly.

On my request to meet the best students, he introduced Mr Rudolf Nitsche, who impressed me as thoroughly capable and probably an unusual doctorant. He will take his degree shortly.

Professor SCHAEFFER's assistant, Dr Fritz Ender, was severely crippled, but impressed me as unusually intelligent. His main interest seemed to be in the field of polarigraphy but he shows a rather wide understanding. This man is probably a very capable scientist.

Individual Research Projects : a. Direct measurement of accommodation coefficient.

A wire, temperature determined by electrical resistance, is heated in the axial center of a concentric thermostated glass cylinder. The gas pressure is  $10^{-3}$  to  $10^{-2}$  mm Hg. Temperature difference is about  $20^{\circ}\text{C}$ . and temperatures vary from liquid air to plus  $300^{\circ}\text{C}$ . The

Visit Conducted  
by

: Approved for Release: 2022/06/22 C00010786  
PROFESSOR SCHAEFFER.

Other Research  
Workers  
Encountered

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The heat loss due to the gas can be written as  $Q = kpx (C_v + 3R/2)$  where  $k$  is a calculable constant,  $x$  the accommodation coefficient. This is a standard method.

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b. Comparative method determining x.

By adjusting  $P_a$  and  $P_o$  for gases a and b the Q can be made identical for two gases. By then measuring the heat transferred from a heated strip to a second wire, which is proportional to  $x^2$ , the individual ratio of x's in the two gases can be determined. From this the heat capacity can be determined if it is unknown for one gas.

c. Determination of the time of adsorption.

The course of pressure with time when gas flows into an evacuated space through a long straight capillary is determined. The same measurement is made with a wire in the capillary. From the difference the average time spent on the capillary surface can be computed.

d. Polarigraph.

Dr ENDER is investigating the overvoltage obtained at the end of the first rise. This is known to be connected with currents in the electrolyte surrounding the forming mercury droplet. Ender is convinced that the effect is primarily due to the inhomogeneity in the electric field at the drop produced by the anode. He apparently has very satisfactory experimental confirmation of this.

ENDER has also investigated the difference in resonance energies in various aromatic acids by observing the difference in half wave potentials.

33. Institute : 1 and 2. PHYSIKALISCHES INSTITUT.

Place : Heidelberg.

Directors : Professor W BOTHE and Professor HAXEL.

Date : Saturday, 23 Sep 50.

Visit Conducted by : Professor BOTHE, HAXEL and MAIER-LEIBNITZ.

Other Research Workers Encountered : One assistant of Professor JENSEN - JENSEN (theoretical physics) was absent. He was later seen in Hamburg.

Building : The building, which is large and spacious and was not bombed, is, at present, undergoing a thorough reconstruction, since Professor Haxel has just arrived, and space for a second institute is being arranged for him. Consequently, not very much could be seen.

Equipment : The equipment of this laboratory is quite satisfactory for the standards of a German university. This is probably due to its close alliance with the Kaiser Wilhelm Institut for medical research. (See below.)

General Impressions and Remarks : We were most cordially received by Professor BOTHE, HAXEL, and MAIER-LEIBNITZ. We had already encountered Haxel and Maier-Leibnitz is an old acquaintance. One received the impression of a lively, well conducted laboratory, with excellent cooperation of the members. Professor Bothe is an outstanding personality, and Haxel a younger man of great promise. The combination of these two men with the theoretician Jensen gives promise for excellent progress.

This institute, with the KWI in Heidelberg, is almost the only place in Germany where nuclear physics is extensively pursued, and where relatively big machines are available. Much good work on this subject has come out of this laboratory in the past.

Individual Research Projects :

- a. MAIER-LEIBNITZ works with a cloud chamber in a magnetic field and investigates the scattering of positrons on electrons. Some very beautiful photographs were obtained. One shows multiple scattering of the scattered electron. Due to the magnetic field, one can distinguish between the positron and the electron. One plate showed the annihilation of a positron.
- b. Professor BOTHE investigates the scattering of electrons on nuclei. This was first done with a simple apparatus in the physics laboratory, and is now continued with the van der Graaf apparatus at the KWI. It appears that the scattering formula by Mott is not in agreement with the careful experiments.
- c. Professor BOTHE's cosmic ray work is exceedingly interesting. In the laboratory in the cellar of the building, showers are produced in various thicknesses of lead. It appears that the shower intensity versus thickness of lead has three maxima, at 3, 16 and 25 cm of lead. The showers at 16 and 25 cm were investigated further. Both consist of only 2 particles.



Other Research  
Workers

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The shower producing particles for the shower at 3 cm of lead comes from showers in the walls only. Those for the showers at 25 cm of lead are neutral. This is puzzling.

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34. Institute : KAISER WILHELM INSTITUT FUER MEDIZINFORSCHUNG, ABTEILUNG PHYSIK.

Place : Heidelberg.

Director : Professor W BOTHE.

Date : Monday, 25 Sep 50.

Visit Conducted  
by : Dr MAIER-LEIBNITZ.

Other Research  
Workers  
Encountered : Professor BOTHE.

Building : The building was constructed about 1930, and is very elegant and spacious - but it is almost wholly occupied by the US 4th Medical Laboratory! In addition to the cyclotron room and the Van der Graaf room, only two laboratories are available to the physicists. This is exceedingly regrettable, since it makes efficient work with the two machines, which are unique in Germany, almost impossible.

Equipment : A 13 M.E.V. cyclotron, the only one in Germany; it is mostly used to irradiate samples for medical research. A Van der Graaf, the largest I have so far seen in Germany, but small compared to US standards.

General Impressions  
and Remarks : The place is almost too crowded to work. The research workers we met are mostly the same as in the Physics Laboratory (see above).

Individual Research  
Projects :

- a. MAIER-LEIBNITZ is investigating a somewhat puzzling effect found in the annihilation of positrons. The coincidence rate at angles of  $180^\circ$  depends on the material in which the annihilation takes place.
- b. MAIER-LEIBNITZ also attempts to get an accurate K capture to positron ratio for various elements.
- c. The Van der Graaf machine is, at present, used to accelerate electrons, and Professor BOTHE's work on scattering of electrons on nuclei is extended.

35. Institute : KAISER-WILHELM INSTITUT FUER CHEMIE.

Place : Mainz.

Director : Professor STRASSMANN.

Date : Tuesday, 3 Oct 50.

Visit Conducted  
by : Professor STRASSMANN.

Other Research  
Workers

Encountered : Dr FLAMMERSFELD.  
Dr LUDWIG WALDMANN.  
Dr ALFRED KLEMM.

Building : The institute is housed in two buildings, one, which houses the high energy machines is absolutely new, the other, in which most of the offices and laboratories are to be located, is being remodeled from a former large machine shop.

The new building for the high voltage equipment seems to be excellently designed for the purpose.

The other building is by no means completely finished. The rooms and laboratories which have been completed are pleasant, large, and apparently very suitable for laboratories.

Equipment : The outstanding piece of equipment is a high voltage linear accelerator, capable of producing an ion beam of 0.8 milli ampere at 1.3 million electron volts energy. A Van der Graaf machine in a pressure tank capable of withstanding 20 atmospheres pressure, and expected to produce an ion beam of three to four million electron volts is being assembled. Both machines were constructed during the war, and have been moved from Berlin.

One very fine precision mass spectrograph, with probably the highest resolution of any instrument in the world, is set up and operating. Other mass spectrographs are expected to be installed.

In addition, there are numerous counters and scalars for measuring radioactive materials and an apparently adequate supply of all ordinary electrical equipment, vacuum pumps, and similar apparatus used in nuclear research.

General Impressions  
and Remarks

: This laboratory is the direct descendent, with the same name, of the institute of Hahn and Meitner, in which nuclear fission was discovered. It had been hoped that Hahn would continue as director, but as he did not, his collaborator, Strassman now has the direction. The physicist, Mattauch, who succeeded Meitner, has spent two years in Bern, waiting for the completion of the building. He will return soon.

The laboratory gives the impression of a new, growing institute, staffed with an enthusiastic competent staff, who were producing good scientific results while at the same time devoting a considerable portion of their time to the construction of new equipment.

The staff were all comparatively young. They remarked, in discussing various pieces of apparatus and methods, that their techniques had not yet caught up with recent US advances in the field, but they seemed to be well aware of these improvements, and fully capable of making use of them.

This is a laboratory which should be expected to produce many useful results in the near future.

Individual Research  
Projects

A considerable portion of the staff effort is spent in constructing and rebuilding of the large machines.

a. Dr FLAMMERSFELD had discovered an isomeric state of 3-minute half life and about 100 keV energy in  $Se^{19}$ . This is in the theoretically expected region, but the life is shorter than that predicted theoretically.

b. Dr WALDMANN has developed an apparatus by which diffusion coefficients of gases can be obtained by a stationary method. The apparatus consists essentially in a cylindrical tube through which the two gases flow, separated from each other by a membrane parallel to the tube. Where the membrane stops, diffusion starts. Every position down the tube corresponds to a time interval after the start of diffusion.

(1) In the apparatus described above, a temperature difference between the two gases occurs in the diffusion region. This predictable effect has been measured for the first time.

(2) Dr WALDMANN has interested himself in the kinetic theory of such effects as that above, and in the theory of exchange reactions.

c. Dr KLEMM has been investigating a method for the separation of isotopes, using molten salts, which is in principle at least, similar to the electrotonetic method of separating protein fractions. If an electric current passes vertically through molten  $ZnCl_2$  floating on molten  $PbCl_2$ , the  $Cl^-$  ions move in one direction and the positive  $Pb^{++}$  and  $Zn^{++}$  in the opposite. The molten  $PbCl_2$  has a higher conductivity than  $ZnCl_2$  so the boundary stays sharp if the current is passed in such a direction that the  $Zn^{++}$  ions follow the  $Pb^{++}$  (positive current flowing downward).

By a simple device of constraining the current to pass through a relatively thin tube connecting two large reservoirs the actual position of the two fluid boundary remains almost stationary.

An isotope separation should occur in the  $ZnCl_2$  near the boundary.

Analyses have not yet been made on the zinc samples.

Sweden is contemplating attempting to use the method for the separation of uranium isotopes. This might conceivably be of interest to the Atomic Energy Commission.

In order to prevent convective mixing, the tube in which the current flows is filled with glass splinters. The packing of these is poor. Consequently, glass beads of some 0.1 mm diameter or less are produced by dropping the glass powder through a Tamman oven heated to 2000°C. An  $Al_2O_3$  tube is used to protect the glass from

A consiApproved for Release: 2022/06/22 C00010786spent in constructing and rebuilding of the large machines.

a. Dr FLAMMERSFELD had discovered an isomeric state of 3-minute half life and about 100 keV energy in  $Se^{79}$ . This is in the theoretically expected region, but the life is shorter than that predicted theoretically.

b. Dr WALDMANN has developed an apparatus by which diffusion coefficients of gases can be obtained by a stationary method. The apparatus consists essentially in a cylindrical tube through which the two gases flow, separated from each other by a membrane parallel to the tube. Where the membrane stops, diffusion starts. Every position down the tube corresponds to a time interval after the start of diffusion.

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d. The precision mass spectrometer is used for the precise determination of isotope masses, particularly of light elements. Dr EWALD, in charge of the work, was not present.

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36. Institute : PHYSIKALISCHES CHEMISCHES INSTITUT DER UNIVERSITAET MAINZ.
- Place : Mainz.
- Director : Professor SCHULZ.
- Date : 3 Oct 50.
- Visit Conducted by : Dr CANTOW.
- Other Research Workers Encountered : Dr MEYERHOFF  
Frl. Dr MARX  
H DOLL
- Building : The building is a remodeled one-story garage, without cellar. Although reasonably satisfactory, it does not make ideal laboratory space.
- The whole university is housed in a former Flak post, the general studies and humanities occupying the former barracks, and the physics and chemistry occupying garage space and repair shop quarters. New additions, in particular, two large lecture rooms are to be built as additions to the chemistry and physics institutes.
- Equipment : A good ultracentrifuge, osmometers, a few small spectrographs, and the usual physical chemical apparatus are available. The equipment appeared to be adequate, but, except for the ultracentrifuge, not exceptional.
- The ultracentrifuge was an air driven, vacuum contained rotor type, with the usual index of refraction camera for detecting the sedimentation boundary. Beside it, and arranged to use the same camera, was an apparatus for measuring diffusion coefficients.
- General Impressions and Remarks : The director, Professor SCHULZ, was away on vacation. The assistant, Dr CANTOW, who took us around, was young and enthusiastic. Possibly the influence of his guidance is responsible for the impression of a fresh enthusiasm, but slight lack of background, in the work of the laboratory.
- The whole institute works in the field of large molecules. Most of the work is centered about artificial polymers, particularly polystyrene. Some work is done with cellulose, and cellulose derivatives, and it is intended to include work on proteins.
- Individual Research Projects :
- Dr CANTOW was constructing a light scattering apparatus, arranged to measure the scattering as a function of wave length and angle. He was intending to use centrifugation to optically purify the solution.
  - Dr MEYERHOFF had charge of the ultracentrifuge. The molecular weight of polystyrenes were being measured.
  - H DOLL was in the laboratory of Dr Helfritz, who was not there. Osmotic pressure measurements seemed to be the chief occupation of this room. Doll exhibited a new type osmometer, developed by Helfritz, which measured osmotic pressure in hours, instead of

Other Research  
Workers  
Encountered: Dr MEYERHOFF  
Frl. Dr MARX  
H DOLL

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Projects

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- c. H DOLL was in the laboratory of Dr Helfritz, who was not there. Osmotic pressure measurements seemed to be the chief occupation of this room. Doll exhibited a new type osmometer, developed by Helfritz, which came to equilibrium in a few hours, instead of several days.
- d. Frl. Dr MARX was engaged in reinvestigating the hydrolysis of cellulose about which there is disagreement in the literature.

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37. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAET, MAINZ.

Place : Mainz.

Director : Professor KLUMB.

Date : Tuesday, 3 Oct 50.

Visit Conducted by : Professor KLUMB.

Other Research Workers Encountered : Dr KLAGES  
Dr DAENZER

Building : The building, like that of the chemical and physical chemical laboratory, was a remodeled one story garage, reasonably satisfactory, but not ideal, for laboratory purposes. A foundation for a new lecture room has been laid, but construction is not going on at present.

The equipment is modest. There is, however, a good shop, and very considerable space and machines for training mechanic apprentices, as well as for the technical training of students in machine shop methods.

General Impression and Remarks : Professor KLUMB appeared to be somewhat more interested in the teaching and pedagogical responsibilities of the institute than in the research projects. Research is largely left to the more fortunate colleagues at the KWI. Not an inspiring laboratory.

Individual Research Projects : a. Professor KLUMB is mainly interested in vacuum techniques. Quartz fiber manometers were used, as in Karlsruhe.

b. Dr DAENZER is said to be interested in nuclear physics. It seems that his main occupation consists in supervising Diplom candidates. One of them constructed a rather cute miniature model cyclotron, for the acceleration of electrons.



38. Institute : INSTITUT FUER PHYSIKALISCHE CHEMIE DER TECHNISCHE HOCHSCHULE, DARMSTADT.

Place : Darmstadt.

Director : No actual director at present; the temporary director is Professor WITTE.

Date : Wednesday, 4 Oct 50.

Visit Conducted by : Professor WITTE.

Other Research Workers Encountered : Several students and assistants.

Building : The large Zintel Institut had been partially destroyed by bombs. Only one of three wings is completely reconditioned, but some rebuilding seems to be going on in the other parts of the building. The rooms which were being used are pleasant and well suited for laboratories. Compared with other Hessian institutes, this one is in fair condition and almost adequate in size at the present stage.

Equipment : The prewar apparatus was mostly gone, partially due to bombing and partly due to previous occupancy of the institute by Allied troops, which never seems to be good for scientific instruments. Several modern X-ray cameras were available. In view of the later remarked general lack of support from Hesse, one would suppose that some help from industry had been forthcoming.

General Impression and Remarks : Professor WITTE is interested in metal structure, and the relation between chemical structure and the physical properties due to filling the Brillouin zones. Professor WITTE impressed us as able and intelligent. He was formerly a mineralogist, doctorated under Goldschmidt in Goettingen, and collaborated with Laves, now in Chicago. The work of the institute is now limited to physical chemical problems related to metals.

One story told here deserves repetition. WITTE had wanted an FP-54 radio tube from General Electric to use in an amplifier. After receiving no response to two letters addressed to the Schenectady offices, he inquired at the GE "Filial" in Frankfurt and was told that the Atomic Energy Commission forbade its export from the US.

The FP-54 is a simple pentode of price about US\$5.00, having an unusually high plate to filament resistance, and manufactured since 1935 or earlier. It is incredible to us that the AEC can, or wishes to, forbid its export. I presume the Frankfurt agency only wished to find a simple excuse to avoid handling a small but troublesome order. This type of experience is not good propaganda for the US.

Individual Research Problems : Crystal structures of alloys, in connection with other measurements on the same alloys, were determined using X-ray methods.

The magnetic susceptibilities of alloys, as a function of varying composition, and hence varying filling of the Brillouin zones, were determined.

The solubility of hydrogen in alloys, also as a function of Brillouin zone filling, was determined. Solubility decreases markedly as the zone is filled.

Catalytic effect for hydrogenation reactions for the same alloys were being studied.

Among the alloys under investigation were sets  $MgZn_2$  to  $MgCu_2$  and  $MgZn_2$  to  $MgNi_2$ .

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39. Institute : INSTITUT FUER PRAKTISCHE MATHEMATIK.  
 Place : Darmstadt.  
 Director : Professor A WALTHER.  
 Date : Wednesday, 4 Oct 50.  
 Visit Conducted by : Dr DREYER.  
 Other Research Workers Encountered : None.  
 Building : The institute is in a few rooms on the third floor of a wing of an otherwise uninhabitable building, which is undergoing reconstruction. The few rooms were pleasant.  
 Equipment : Several units of a machine similar to the Bush analyzer were in operation. The machine integrates partial differential equations up to the second order.

An electronic digital computer is contemplated. At the time of our visit the question of decimal versus binary system was under consideration.

General Impression and Remarks : The director, Professor WALTHER, was in the US at the time of our visit. The men in the institute seemed to be intelligent, capable, and interested in their work.

A refreshing desire was noticed to make their computer simple to use, rather than "logical" in construction. This was pleasant to us, since we feel that some of the US machines under construction may be capable of handling prodigious problems, but that a PhD in calculating machines will be a requirement before a problem can be placed on them. This group seemed to be conscious and appreciative of this difficulty.

The operating analyzer was made to do a problem for us.

One unit reads a curve drawn with India ink on paper, and follows the line to 0.1 mm. The paper is about one meter on edge giving a precision of about one part in  $10^4$ .

The final units, two in number, draw the integrated result and its derivative to the same accuracy. The numerical results can also be printed.

Between these two units are a multiplier and an integrator.

The units are electrically coupled.

The machine appeared to be compact, simple, and very useful.

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40. Institute : PEYSIKALISCHES INSTITUT DER TECHNISCHEN HOCHSCHULE.

Place : Darmstadt.

Director : Professor RAU (actually retired).

Date : Wednesday, 4 Oct 50.

Visit Conducted by : Professor Rudolf GEBAUER.

Other Research Workers Encountered : Dipl Phys ULM.

Building : This laboratory functions literally in the cellar of a ruin. From the outside, one has the impression of a totally destroyed and uninhabitable place. The few basement rooms are dirty and crowded. Just now some rebuilding has been undertaken, and a number of light and pleasant rooms will soon be available for research.

Equipment : There exists a good "Werkstatt". Otherwise, we saw only two good Steinheil 3-prism spectrographs, each with the necessary equipment to produce canal rays of hydrogen, and to observe the Stark effect, or the linesplitting in strong electric fields.

General Impression and Remarks : The working conditions in this laboratory are the poorest so far encountered. We were received very cordially by Professor GEBAUER, who seemed to enjoy having a chance to discuss his work. He was very enthusiastic and kept us way over the lunch hour. Professor GEBAUER's main interest is in the study of the Stark effect, which by now has become rather old-fashioned; but his work is good and accurate. Besides, there is some work on centimeter waves.

Mr ULM was one of the few examples of students who talked freely and did not just stand at attention while the professor was present.

Individual Research Problems :

- a. Very nice spectra of the Stark effect in hydrogen were shown, up to field strengths of 14MeV per cm.
- b. The Stark effect in calcium is observed by bombarding a piece of calcium with the hydrogen canal rays.
- c. Hydrogen canal rays are also observed when the electric field is first parallel, then anti-parallel to the direction of the beam, or vice versa. There are puzzling changes in intensity.
- d. If the electric field is at right angles to the beam, but not uniform, the spectra taken simultaneously by two spectrographs from the side of strong and weak fields differ in relative intensity of the Stark components. This is puzzling, and Dr GEBAUER is now intending to study the absorption of the light from one canal ray by another, at slightly different fields.
- e. Calculations on Klystrons are normally made by assuming that the positions where the field changes are infinitely thin. GEBAUER has

Visit Conducted  
by

: Prof. Approved for Release: 2022/06/22 C00010786

Other Research  
Workers  
Encountered

: Dipl Phys ULM.

Building

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- e. Calculations on Klystrons are normally made by assuming that the positions where the field changes are infinitely thin. GEBAUER has made calculations in which he takes into account the fact that the field is zero over a finite distance between the two chambers. The numerical integrations made show that the results are quite different from the simple case, and new conditions of optimum efficiency are obtained.

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41. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAET, FRANKFURT.

Place : Frankfurt.

Director : Professor Marianus CZERNY.

Date : Thursday, 5 Oct 50.

Visit Conducted by : Professor CZERNY, Dr HONERJAEGER and Dr MUESER.

Building : The laboratories consist of about six rooms that have been rebuilt in that portion of the building which was most severely burnt out. The rest of the building is a ruin with a few barely habitable rooms, in one of which the director's office is located. The lecture room is still a ruin of which the steel supporting members of the roof alone have been repaired. The roof still has gaping holes. Repair and rebuilding of the institute is in progress, but apparently slowly and with little intent of completion in calculable time. The few completed rooms were satisfactorily suited for research.

Equipment : Through the use of the shop of the institute, and the construction in the laboratory of pieces of apparatus normally purchased, there is adequate equipment for infrared investigations (CZERNY), high frequency (1 cm to 8 meters) research (HONERJAEGER), and semi-conductor work (MUESER). There was a Rowland 3-meter concave grating. The library was not destroyed, and is quite adequate.

General Impression and Remarks : At first, Dr CZERNY gave the impression of being tired and discouraged with the constant rebuilding and reconstruction (during the war) of the institute. He first showed us the ruins, and the extent of the institute as it had been.

The shop, although still badly housed, appears to be good.

After this somewhat discouraging display he called Doctors HONERJAEGER and MUESER and with them guided us through the research rooms.

Although the institute is obviously handicapped by lack of money there is an enormous energy expended in getting what appears to be very good and first-class work started. Dr HONERJAEGER constructs his own magnetrons, for instance. The spectrographic equipment for infrared work appears to be excellent, although lacking entirely the large automatic recording instruments common in the US.

Individual Research Projects :

a. MUESER. The Hall effect in  $Cu_2O$  as function of the temperature and oxygen pressure is being investigated. The oxygen pressure (which is extremely small) is adjusted by passing almost completely pure  $N_2$  over a mixture of Cu and  $Cu_2O$  at a definite temperature. When the  $Cu_2O$  has an excess of oxygen and the normal Hall effect is expected, and with a deficiency of oxygen the anomalous effect is expected. There are conflicting results in the literature, made without careful control of the  $O_2$  pressure.

b. MUESER. The (very high) photo sensitivity of the Cds conductivity is investigated in single crystals.

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c. HONERJAEGER. The dispersion of K Cl crystals in the region of centimeter waves is being measured. It is intended to determine whether this is due to the 60 mm absorption band alone, or whether there is a lower frequency absorption.

d. HONERJAEGER. Absorption by gases in the centimeter wave length region is measured.

e. HONERJAEGER. Absorption and dispersion by alphanaphthalene liquid over a range of frequencies from a few centimeters to lower wave lengths is measured. This is done to investigate whether the dispersion can be accounted for by a single damping constant.

f. HONERJAEGER. The dielectric constant of the plasma in a discharge tube is measured and used to determine the density of the electron gas in the plasma. The dielectric constant is less than unity by about one part in  $10^{-7}$  but the measurements can be made to an accuracy of as great as one part in  $10^{-7}$ .

g. CZERNY. Very short period bolometers were constructed by evaporating metal onto a thin cellophane sheet and using the change of resistance with temperature as a measure of the radiation intensity. Periods of 1/20 seconds are obtained.

As the metal thickness increases from zero the absorption of the metal film increases, and the reflectivity also. There exists an optimum thickness at which 25% of the energy is reflected, 25% transmitted, and 50% absorbed.

h. The short period detectors are used with infrared modulated (mechanically) with a frequency of a few cycles per second, to measure the absorption of solid and molten glass. The intense uniform emission of the glass is thus eliminated. The thickness of the glass is changed by sending the light vertically down and reflecting it from a platinum mirror at various depths.

i. A thin film having the cumulative characteristic of a photographic plate is being developed for the purpose of obtaining a permanent image of an infrared spectrum. So far the success has been only partial. (This is also investigated by GOBRECHT, Berlin.)

A very thin collodion film is used as a base on which a paraffin oil is evaporated in vacuum. The film is thin enough to show interference fringes. When exposed, like a photographic plate, to the spectrum, the oil evaporates at the intense lines, and the interference colors change. When exposed to the air the high pressure prevents evaporation and a photograph, with ordinary light, of the film can be made.

At present, the films become mottled after exposures longer than two minutes. This prevents use of the cumulative effect.

42. Institute : PHYSIKALISCH-CHEMISCHES INSTITUT DER UNIVERSITÄT, FRANKFURT.

Place : Frankfurt.

Director (Acting) : Professor MAGNUS.

Date : Thursday, 5 Oct 50.

Visit Conducted by : Professor MAGNUS and HARTMANN.

Other Research Workers Encountered : Dr Arnold MUENSTER  
Dr KLAAR

Building : The institute is housed in one repaired wing of the same large ruins in which the physical institute is located. The space is small, and the few, rather well suited rooms, are rather crowded.

Equipment : Most of the equipment is of the modest type most used in physical chemical research. There exists some good spectrographic equipment, namely one three-prism Steinheil spectrograph, 2 quartz spectrometers, 1 fluorite vacuum spectrometer, and they expect to get an infrared spectrograph. The shop is very small, and seems to contain only two small lathes, but appears to have a good master mechanic.

General Impression and Remarks : Professor MAGNUS, who is 70 years old, is probably not an outstanding scientist. He gave the impression of being interested in modern developments, although not understanding them. He probably is a good teacher, and seems to have the ability to recognize good work in others. He is probably an excellent director to work with, and seems to collect excellent talent around him.

HARTMANN seems to have broad theoretical interests, and is probably a very good scientist. His discussion of theoretical problems was interesting, and gave the impression of extreme competence and considerable originality.

MUENSTER appears to be quite young, and is one of the very few scientists in Germany interested in statistical mechanical problems. He is largely self taught (part of his education comes from reading while in a Nazi concentration camp for eight (or ten) years. In view of this history, his grasp of theoretical statistical mechanics would indicate a very good ability.

The workers in the department appear to be on excellent personal terms with each other. One has the impression of a cooperative enterprise, rather than an institute dominated by one chief.

The university is half state and half city supported. Apparently, the city has not always paid its contribution, which accounts for the poverty of the institute.

Individual Research Projects : There were several amusing and simple pieces of apparatus constructed by MAGNUS which demonstrate experimentally laws which are well known to be correct. For instance, an apparatus for measuring the pressure difference at the bottom of two long columns of different gases was present.



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a. MAGNUS. A simple, but very precise bomb calorimeter for measuring heats of combustion with great precision was in operation.

The calorimeter is of copper, and the comparison standard is an aluminum block hung under the calorimeter in vacuum. A multiple element thermocouple capable of detecting  $10^{-2}$  degrees centigrade connects them.

The heat of combustion of various organic aromatics with four or more fused rings have been measured, and compared with theory (Hartmann). The deviations from the theoretically computed values occur only when steric hindrance prevents a planar configuration.

b. The ionization potential of phenyl-monohalides have been measured by a Franck-Hertz method. The results are irregular with the different halides, which is as yet inexplicable. These results check those in the literature which were suspected of being false.

c. HARTMANN. The absorption spectra of crystalline and dissolved ions of transition elements, have been measured in the visible region. The results have been interpreted theoretically. For instance, the lowest D level of  $Ti^{+++}$  splits into two levels in the octahedral field, which calculate to give the separation of the observed violet band. The lower symmetry of  $Ti Cl_2 (H_2O)_4^+$   $Cl^-$  leads to two excited states, of which the transition from the lower explains the green line.

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43. Institute : CHEMISCHES INSTITUT.

Place : Giessen.

Director : Professor WEITZ (Stellvertender).

Date : Saturday, 7 Oct 50.

Visit Conducted  
by : Professor WEITZ and KOHLSCHUETTER.

Other Research  
Workers  
Encountered : One assistant.

Building : About one-third of the original institute has been completely destroyed. Very little repair or reconstruction has taken place, so the institute has inadequate space, and that is old and in disrepair. The praktikum rooms are too small, and not particularly conveniently arranged. We saw only one research room, which is reasonably large, and in which WEITZ and his assistant work.

Equipment : Except for the usual glass bottles, beakers and test tubes there is practically no apparatus. The weighing room has one modern and one old semi-micro balance, one good analytical balance, and several old ones for use of the beginning students. The library was not destroyed, and is adequate.

General Impression  
and Remarks : The physical chemistry institute is temporarily located in Lauterbach. Only after the Leitz Optical Works had endowed a chair in theoretical physics has the Hessen Ministry of Education agreed to keep the institute of physical chemistry. Since no money (250,000 DM per year for the whole university) is allocated for rebuilding it is not clear when, if ever, there will be space to bring the physical chemistry back to Giessen.

Professor WEITZ is beyond the age of retirement, and teaches both at Giessen and Frankfurt. The chemistry at Giessen is thus represented by one-half of a retired professor, and Professor KOHLSCHUETTER, who has apparently no research in progress.

Professor WEITZ is a charming and enthusiastic chemist, who explained his recent work with vigor and clarity, demonstrating most of the effects in the laboratory for our benefit.

Professor KOHLSCHUETTER was quite emphatic that all their efforts were diverted to fighting for enough money to carry on instruction and keeping the institute going. For instance, the few rooms occupied during the vacations were being heated by coal stoves to save the higher cost of central heating.

Individual Research  
Projects : Apparently, the only research work was that carried on by WEITZ with his assistant. This work was interesting, and original.

Many chemical compounds, especially organic dyes, may exist in either an ionic or homopolar form, in which the one form is colored and the other not, or in which the color of the two forms is different. The conditions which favor the ionic or homopolar form can then be studied by observing the color change. The

Other Research  
Workers  
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The examples demonstrated were:

- a.  $\text{HgI}$  colored as homopolar,  
colorless as ionic;
- b.  $\text{C}(\text{C}_6\text{H}_5)_3$  colorless as homopolar,  
colored as ionic;
- c.  $\text{C}(\text{C}_6\text{H}_5)_2 \text{C}_6\text{H}_4 \text{COOH}$  (ortho) colorless as homopolar  
lactone, colored as zwitterion;
- d. para  $\text{NO}_2 \text{C}_6\text{H}_4 \text{NH}_2$  blue as homopolar, yellow as ion;
- e. thio indigo, red as homopolar, blue as ion.

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The chair of Theoretical Physics is, at present, held by Dr DOERING. DOERING is suffering from an over-extensive teaching load. He seems to be an intelligent person. We also met, at a dinner party, his predecessor, Professor Bechert, whom we missed in Mainz. Bechert made a great impression on us. He seems very interesting and intelligent. He is genuinely and deeply interested in the rebirth of a democratic tradition in Germany. This interest is not limited to discussion. He works actively with the students.

Individual Research  
Problems :

a. The fluorescence of materials used in scintillation counters is investigated in several ways.

(1) Kottschak is measuring the life time of the fluorescent state when excited by electron impact. The yield and lifetime does not seem to agree with US results obtained with bombardment by d-particles. The method consists in modulating the electron beam, and sending the fluorescent light through a trough containing progressive supersonic waves of the same frequency. Stripes of light are observed in a microscope, and from their width the lifetime is determined.

(2) Scharmann investigates the lifetimes of the same crystals when the excitation is due to ultraviolet light. The method is similar to that used with electron excitation. The light beam is modulated by passing it through a set of standing supersonic waves, and then through a slit.

(3) Schneider investigates the fluorescence of solutions, exciting them by  $\gamma$ -rays. Various mixtures are examined.

(4) The fluorescence spectra of the mixtures are studied, and the change at different temperatures and mode of excitation is investigated.

b. Polaroid films which polarize ultra-violet light are produced. Intensity ratios of 1:1000 can be obtained. The method consists of stretching polystyrene films and coloring them. Iodine seems to be the best dye.

c. An iron spark in air will deposit iron oxide on a close-lying glass plate. If a magnetic field is applied during this process, the resultant film shows pronounced dichroism. This may be related to the interstellar polarization of light.

d. Northern lights are produced by collision of protons and Helium ions coming from the sun. The radiation observed is due to nitrogen and oxygen, never to hydrogen and helium. With his apparatus for "Northern lights in the laboratory", Hanle shows that this is the expected behavior.

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45. Institute : PHYSIKALISCH CHEMISCHES INSTITUT (GIESSEN).

Place : Lauterbach

Director : Professor NEUMANN.

Date : Thursday, 12 Oct 50.

Visit Conducted by : Professor NEUMANN.

Other Research Workers Encountered : Two students.

Building : The institute is in three small rooms and a hallway of the Hohhaus - a local museum. They manufacture their own gas by blowing air through thermostated gasoline, an installation which blew up two days before the visit. By manufacturing and selling baking powder they had succeeded in roofing the former institute in Giessen, and they hope to be able to move back to that institute in the spring of 1951. The rooms are crowded and eminently unsuited for research.

Equipment : Most of the former poor equipment of the Giessen institute was saved, including a milling machine and lathe, but by attrition due to occupation of the building in Lauterbach by US troops, and later by Polish DP's, about half or more has been lost. Little new equipment has been purchased. There appeared to be little but glass, self-made machined apparatus and a few pumps. The library was not destroyed.

General Impression and Remarks : Professor Neumann is a lively, interested, and enthusiastic, optimist. He is part Swedish and grew up in Sweden. He hopes that no further catastrophe will overtake the world in the near future, but he says that at least this time he sits in the right boat, whereas from 1933 onwards it was depressing to see a catastrophe approaching and to know one sat on the false side.

He was interested in my impression of the general condition of German science compared to US. He has apparently followed much of the recent work in US literature. Professor Neumann's own interests were broad, although the work of the institute is limited to a very narrow field by the poor accommodations.

Individual Research Projects : There are several measurements going on determining the rate of evaporation compared to the equilibrium number of collisions on the condensed phase from the saturated vapor. The range covered corresponds to vapor pressures of  $10^{-4}$  to  $10^{-7}$  or  $10^{-8}$  mm.

The simplest method employed measures, by a micro photograph, the size, at time intervals up to days, of a potassium drop suspended from a silver wire in high vacuum. The neighborhood of the drop is maintained at a known temperature of  $60^{\circ}\text{C}$  to  $120^{\circ}\text{C}$ , and the lower end of the tube is cooled in liquid air. The coefficient of evaporation is measured to be unity, that is between 0.95 and 1.05.

by : Professor NEUMANN.

Approved for Release: 2022/06/22 C00010786

Other Research  
Workers  
Encountered

: Two students.

Building

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Individual Research  
Projects

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The simplest method employed measures, by a micro photograph, the size, at time intervals up to days, of a potassium drop suspended from a silver wire in high vacuum. The neighborhood of the drop is maintained at a known temperature of  $60^{\circ}\text{C}$  to  $120^{\circ}\text{C}$ , and the lower end of the tube is cooled in liquid air. The coefficient of evaporation is measured to be unity, that is between 0.95 and 1.05.

A quartz apparatus to be used with sodium was shown. In this a flat dish of sodium is held in vacuum under a liquid air cooled surface. The absorption of Na resonance light by the space above the dish is to be measured. When the upper surface is warm one measures the vapor pressure; when cooled, the concentration should decrease to half if the evaporation coefficient is unity, or lower if the coefficient is lower.

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46. Institute : PHYSIKALISCHES INSTITUT.

Place : Marburg

Director : Professor WALCHER.

Date : Monday, 9 Oct 50; also visited 8 and 10 Oct 50.

Visit Conducted by : Professor WALCHER, Professor R HUECKEL, Dr BECKER.

Other Research Workers Encountered : Dr KAMKE, Professor VOGT.

Building : The building, up on the mountain, is very pleasant and excellently suited for research. It was not touched during the war, and is rather new among the prewar laboratories. It was finished in 1914, and is perfectly maintained.

Equipment : We were told that when Professor WALCHER took over, about 1947, the equipment was completely old-fashioned and outdated. This has been thoroughly changed. Professor Walcher has completely reorganized the student laboratories. The opinion of the students is that lectures as well as the "Praktikum" are top notch in Marburg. The research equipment, of which there is a lot, is largely of the type which has been constructed in the laboratory itself. I do not recall seeing any major instrument that was industrially manufactured. There are a large number of mass spectrometers of various designs and for various purposes. A chemical separation plant for light isotopes has been constructed. Professor Walcher hopes to acquire a Van der Graaf machine to pursue nuclear studies with separated isotopes.

General Impression and Remarks : This is the only well equipped university laboratory we have seen in the land of Hesse. It was impressed upon us that the support of the laboratory does not come from the land, but from industry. The laboratory undertakes occasional industrial jobs in order to obtain money. Professor Walcher is a very active and skillful director. There are a number of good men in the laboratory, and there are many different lines of research. Professor Walcher's own interest lies in mass spectrometers, and in nuclear research with separated isotopes. He is a man who likes to work in a "team". At present, his work is in close contact with Kopfermann in Goettingen. Dr Becker undertakes those problems, which, in the US, would be called physical chemistry, namely chemical separation of light isotopes (after methods developed by HC Urey), diffusion problems, and measurements of viscosity of hydrogen at low temperatures. Becker is young, enthusiastic and clear and made an excellent impression. Professor Vogt is a left-over from the times of Walcher's predecessor, Grueneisen. He is interested in ferro magnetism. Hueckel, formerly with Debye, is a theoretician for the experimental laboratory. Fluegge, whom we met at Bad Nauheim, is professor of the "Institut for structure of matter" in the same building; considerable, but unsuccessful efforts were spent to see him. Altogether, this is a laboratory in which it would be a pleasure to work.



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a. Dr Becker has constructed a plant for the separation of the isotopes of carbon. The method is that of exchange between gaseous HCN and dissolved Na CN, and follows the method used by Urey for this separation. An enrichment of Carbon 13 up to 12% is obtained. The yield is of the order of some grams per day.

b. The enriched carbon is used partly for biological research. In the physics laboratory it is a means for the study of thermal diffusion, in particular, in conjunction with enriched oxygen.

c. There exist a number of mass spectrometers. One of them is designed for gas analyses of high accuracy, for the work with partially separated isotopes. Several mass spectrometers are mainly used for the study of focusing and improving mass spectrometers. Finally, a large 90° mass spectrometer has been built to separate isotopes. This is part of a team project between Professor Walcher and Professor Kopfermann in Goettingen. The separated isotopes (they are micrograms) are taken to Goettingen for spectroscopic investigation of hyperfine structure and isotope shift. At present, silver is under investigation.

d. Dr Becker also investigated the thermal diffusion of gases at higher pressures. The fact that gases are not ideal increases the diffusion coefficient in some cases by changes up to 800% at about 80 atmospheres. This effect has been neglected in all US work.

e. An apparatus is constructed to determine the difference in viscosity of para and natural hydrogen. Some theories predict a difference of 8%. This is definitely not found. The sensitive apparatus is built along the lines of a Wheatstone bridge. At present, it is filled with a paramagnetic gas, oxygen, to show the "Senftleben effect", namely, the change of viscosity in a magnetic field. This was demonstrated. Pressure differences of  $10^{-4}$  mm on the two sides of the bridge can be detected. A thin aluminum foil diaphragm moves between two condenser plates. The change in capacity is measured by amplifying a high frequency current. The force due to the pressure difference is balanced by a constant electrical potential.

f. Dr Kamke has just finished a study of the reasons for the fact that cathode rays form a thin pencil.

A problem is taken up which goes back to Haxel and Houtermanns. These investigators found that the beta-decay of rubidium is accompanied by very low energy electrons. These are formed here also. The spectrum of the beta-particles is being measured in a proportional counter.

g. Professor Vogt studies the behavior of ferromagnetic alloys, in particular, the magneto-striction. Also, ferromagnetic materials with small grain sizes show interesting effects.

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47. Institute : PHYSIKALISCH CHEMISCHES INSTITUT DER UNIVERSITAET, MARBURG.

Place : Marburg.

Director : Professor JOST.

Date : Monday, 9 Oct 50.

Visit Conducted by : Professor JOST.

Other Research Workers Encountered : Dr HAASE.

Building : Physical chemistry had been housed in part of the chemical institute, which was largely destroyed during the war. Professor Jost had agreed to relinquish the few remaining rooms to move his institute into a private house, providing an addition would be built. No addition was ever built, and during Professor Jost's illness with tuberculosis, the metals institute was moved into his lower floor. He now has only some four rooms in the second floor. The metals institute is now moving out, but the 1000 D-Marks necessary to move his machine shop from its present distant location are not granted.

Equipment : No apparatus except for minor glassware, a few balances, and simple electrical measuring devices, appears to be available. There is one self-constructed interferometer. The budget of 4000 DM per year is inadequate to permit the purchase of new equipment.

General Impression and Remarks : Professor Jost is one of the most capable German physical chemists. I had the impression that his poor treatment by the Nazi Government, the subsequent loss of his institute, and finally a long spell of tuberculosis, had decreased his energy and aggressiveness to the point where he was incapable of building a going institute under the present discouraging conditions due to the Hessian "Kultur Ministerium". Whether a more aggressive man might do so is not clear.

However, his interest in science, and his originality in conceiving and planning new experiments had not suffered. He spoke of several interesting and original problems which he wished to pursue, and the methods which he would like to use, but the necessary modest equipment was not available. One had the feeling that this was a scientist who was unable to be a successful institute's director under present German conditions, but who would do important and successful work in any well run US department. His assistant, Dr Haase, impressed us favorably.

Individual Research Problems : The research centered around the properties of liquid solutions, particularly those of normal organic materials in each other, and an investigation of the causes of small deviations from the laws of regular solutions.

a. Diffusion of two liquids into each other was studied by observing the diffraction bands between two slits, behind which was placed the diffusion cell.

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b. The total vapor pressure of solutions was measured with high precision, using the simplest device of a thermostated mercury manometer read with a cathetometer.

It was remarked that dielectric constant, infrared absorption, or other physical measurements on the vapor would suffice to give the vapor concentration, but the apparatus necessary could not be purchased. It was consequently necessary to limit the measurements to solutions in which only one component had high volatility.

c. The phase diagram of CuBr AgBr was to be studied. The AgBr has NaCl type lattice up to the melting point. CuBr is zinc blende type at low temperature, and has two transitions before melting. Literature data indicates that the high temperature phase forms perfect mixed crystals with AgBr over the whole concentration range. It is conceivable that a continuous transition from zinc blende to NaCl type lattice exists in going through a complete range of solid solutions at low temperature. The enormous electrical conductivity of the highest temperature modification of CuBr (higher than that of the melt) indicates that it is of  $\alpha$ -AgI type lattice.

48. Institute : MAX PLANCK INSTITUT FUER PHYSIKALISCHE CHEMIE.

Place : Goettingen.

Director : Professor BONNHOFER.

Date : Tuesday, 5 Sep and Monday, 16 Oct 50.

Visit Conducted by : Professor BONNHOFER.

Other Research Workers Encountered : Doctors FOERSTER, SCHLEICHER, BRESCHKE, FREISE, FRANK, GERISCHER.

Building : The institute is housed in one of the buildings of the former Aerodynamische Versuchs Anstalt, which was untouched by the war. The building is comparatively new (constructed in the late thirties) and seems to be admirably suited for a laboratory.

Equipment : Like all institutes of the Max Planck Gesellschaft, the funds for apparatus appear to be ample. Although the work of the institute, in the field of classical physical chemistry, does not require elaborate equipment, there appears to be no lack of apparatus to undertake any problem of interest to the workers.

General Impression and Remarks

: Professor Bonnhoefer is one of the outstanding German physical chemists. His anti-Nazi record is well known. Two brothers were killed following the 20 Jul 44 attempt on Hitler's life. Professor Bonnhoefer has no desire to substitute Soviet dictatorship for his previous existence under the Nazis.

We had known Professor Bonnhoefer before the war, and had met him again in Chicago during the Berlin blockade. He received us most cordially.

The institute gave the impression of a good and lively laboratory, undertaking a variety of interesting work. It was not clear to what extent the work was directly due to the inspiration of Bonnhoefer, or to what extent it originated with the various other workers. Bonnhoefer did not speak of any work that he was doing alone, except that Frank's work with the passive iron wire is obviously a continuation of previous work of Bonnhoefer.

Individual Research Problems

a. FOERSTER. Some organic compounds, for instance, aromatic acids and amines, show a sudden change in absorption spectrum and in fluorescent spectrum when the pH is varied. However, the two spectra do not change at the same pH values. This is interpreted as being due to the different dissociation of ground and excited state. The life of the excited state is usually, but not always, long enough to come to equilibrium with respect to dissociation.

b. SCHLEICHER is repeating the Mueller experiment with iron instead of tungsten. The first pattern was obtained while we were there in September 1950. Since then the iron patterns were sufficiently poor that the work has returned to using tungsten.

c. BRESCHKE works on Bacteriophage. Nothing really new.

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d. FREISE works on copperferrocyanide membranes.

e. FRANK works on passivated iron wires. The motion of the disturbance is very much like that in nerves. Nerves of algae are also studied. Frank worked with iron wires in  $H_2SO_4$ , or other iron oxidizing acids, which could be passified by making the wire the anode of a cell.

f. GERISCHER. Electrode processes. The rate of oxidation reduction processes at the electrode surface was being studied. The ferrous - ferri rate is greatly affected by  $Cl^-$  ion concentration.

49. Institute : MAX PLANCK INSTITUT FOR PHYSICS.

Place : Goettingen.

Director : Professor Werner HEISENBERG.

Date : Wednesday, 6 Sep and Tuesday, 17 Oct 50.

Visit Conducted by : Dr HAXEL and Dr HOUTERMANS.

Other Research Workers Encountered : Professor Max VON LAUE, Professor HAHN.

Building : The institute is housed in the compound of the former Aerodynamic Versuchs Anstalt (AVA). The space is ample and well suited to research.

Equipment : Like all Max Planck (or KWI) institutes, there is no lack of money for equipment.

General Impression and Remarks : Quite a few people were away on vacation. HAXEL is leaving for Heidelberg, and HOUTERMANS really belongs to the II Physics Laboratory of the University; consequently, the heart and interest of neither is wholly with the Max Planck Institute. This may be to some extent the cause of the impression we received. After having seen Dr Kopfermann's laboratory, where, with little means, excellent work is done, it seemed that here, with lots of money obtainable, nothing much was happening. We had the feeling, although this was not expressed in so many words, that our guides were not happy about the functioning of the laboratory.

We met HAXEL at Goettingen, Heidelberg, Bad Nauheim and again on our return. He is a keen and very pleasant young man for whom one can have great expectations. HOUTERMANS is a friend of ours of very long standing. He is the kind of person who has many original ideas. His history is presumably known. Since he is one-quarter Jewish, he emigrated to the USSR shortly before the Nazis came to power. In 1937, during a wave of arrests, he decided to leave the Soviet Union, but was captured and arrested. His wife with two children was expelled from the USSR and is now a US citizen. HOUTERMANS was imprisoned and forced to "confess". So he confessed to being an "atomic spy"! He was imprisoned until 1940, and then turned over to the Gestapo and eventually released in Germany. He is thoroughly anti-Soviet and knows a great deal about the Soviet mentality and the attitude of Soviet scientists. For instance, he regrets the publicity given to the hydrogen bomb, because now the Soviet scientists will be forced to work on it.

HAXEL and HOUTERMANS, as well as Professor HAHN were very outspoken about their criticism of Law 22 (see general part of report).

Heisenberg was in the US while we visited Goettingen. We heard his talk at the meeting of "Naturforscher und Arzte" in Muenchen, but somehow failed to see him personally, although we have known him for many years.

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There is probably no living scientist whose promise, at an early age, was so great as that of HEISENBERG. His more recent development has been very disappointing. We have been struck by the lack of enthusiasm for him in the expressions of other physicists. Although very little direct criticism has been expressed, it is clear that he is not held in the esteem that one would have expected from his previous history. For instance, when one speaks of the excellent work now going on in Goettingen, one frequently gets enthusiastic agreement, but always with the remark, "in Kopfermann's institute". HEISENBERG's institute is never lauded.

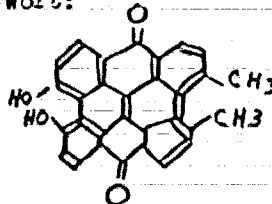
HEISENBERG's failure to bring positive results out of the German Atomic Energy Project during the war is a matter of record. It is curious that he was again chosen to head an experimental institute.

Individual Research  
Problems :

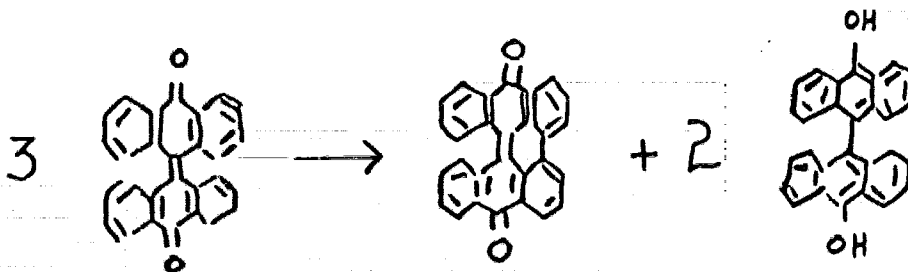
- a. HOUTERMANS works with photographic plates. One of his results was striking: The occurrence of uranium in granite is by no means uniform. The uranium is contained in high concentration in particular crystals. This gives rise to what HOUTERMANS called "porcupine" in a photographic plate. From small spots emerge large numbers of  $\alpha$  - tracks. If this fact is not known, it might be of great industrial importance.
- b. Cosmic ray work is largely aimed at solving the controversy of plural (cascade) or multiple production of mesons. HAXEL's experiments, which seem to show equal amounts of production for equal weights of graphite and paraffine indicate multiple production.
- c.  $\beta$ -ray experiments were in progress. The claim was made that the decay of  $Rb^{90}$  is followed (in coincidence) by a completely converted  $\beta$ -ray of 5keV. The apparatus is a double counter, separated by a thin sheet on which the sample is smeared very thin. Counts on both sides as well as coincidences are measured.
- d. Somebody investigates the effect that a metal plate, when sandpapered, gives off electrons. Interpreted by the assumption the number of active spots are produced on the plate. Oxygen is absorbed, and an electron is given off. The spots have different activation energy. Assumption of a continuum of activation energies gives a decay proportional to temperature and inversely to time. This is essentially what is found. The man doing the experiments is going with HAXEL to Heidelberg.

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50. Institute : CHEMISCHES INSTITUT DER UNIVERSITÄT GOETTINGEN.
- Place : Goettingen.
- Director : Professor BROCKMANN.
- Date : Thursday, 7 Sep and Tuesday, 17 Oct 50.
- Visit Conducted by : Professor BROCKMANN.
- Building : The building, although essentially undamaged by the war, is in horrible condition. Some of the rooms have been little changed in the last century. There has been a little remodeling, but not much. It is hoped that more reconditioning will take place soon. A new biological-chemical building is an annex.
- Equipment : The equipment is modest, and rather inadequate for the number of doctoral students and assistants, which number about 50 altogether. The budget of 12 thousand DM per year amounts to 240 Marks or some US\$60 per research worker per year. This covers chemicals and equipment. The equipment in the modern biological chemical building looked adequate, although not luxurious. The research is presumably considerably hampered by the low budget.
- General Impression and Remarks : The institute had the Nobel Prize Winner, Winkler, as its former director. The work, now as then, is primarily organic, and with a strong biological interest. Since this is not my field I do not feel justified in commenting on the excellence of the research undertaken. All indications were that the level of scientific competence is high, although probably not quite up to the work of Professor BROCKMANN's illustrious predecessor.
- Individual Research Problems : Considerable work is done on mycins. Altogether six hundred species of animals have been isolated. About 60 of these yield antibiotics. Of these three new antibiotics have been isolated.
- The only other single research problem which was of some physical chemical interest is that of the synthesis of a light sensitive dye of St John's Wort:



The quinone splits cut two H<sub>2</sub> groups according to the reaction:





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51. Institute : INSTITUT FÜR THEORETISCHE PHYSIK DER UNIVERSITÄT.

Place : Göttingen.

Director : Professor Richard BECKER.

Date : 17 Oct 50.

Other Research Workers Encountered : Dr LEIBFRIED, Mr KURRI.

Building : One room, adequate.

Equipment : One blackboard, adequate.

General Impression and Remarks : We first met DR BECKER in Bad Nauheim. He was very cordial and pleasant. He is an interesting and intelligent person. This week-end, DR BECKER expects to go to Pittsburgh for a year. It is to be expected that his visit will be a success. Professor BECKER's specialty was magnetism. The only research problem which we discussed concerned the theory of non-ideal gases. Professor BECKER is the successor of Born. He was previously in Berlin but was sent away as punishment (strafversetzt) to Göttingen by the Nazis around 1935.

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52. Institute : I - PHYSIKALISCHER INSTITUT DER UNIVERSITAET.

Place : Göttingen.

Director : Professor POEL.

Date : Tuesday, 17 Oct 50.

Visit Conducted by : Dr PICK.

Other Research Workers Encountered : We talked to Professor POEL at Bad Nauheim.

Building : The Institute occupies the second floor of the large physics building. It has been located at this position for many years, and nothing was destroyed. The large lecture room with store-room and machine shop is on the same floor. All other rooms are used for research.

Equipment : This laboratory is famous for Professor POEL's unequalled lectures to beginning students. Some rooms are stored with the equipment for the excellent demonstrations. Most of this belongs to Professor POEL personally. The equipment for research is modest and has always been that way.

General Impression and Remarks : Professor POEL is an old friend of ours, and greeted us cordially. His outstanding contribution to physics is his truly world-famous demonstration course for beginning students. He is a very skillful experimentalist. The scope of the laboratory is narrow and still in the same groove in which it was 20 years ago. The main concerns are imperfections in the crystal structure of ionic lattices. Among these are color centers. The latter were, I believe, discovered here. This field has now become very modern. Dr PICK implied that the whole field had started here, and other people are now following. To some extent this is true. However, upon reflection, it is somewhat difficult to find any outstanding contribution made by this laboratory. The reason for this lies perhaps to some extent in Professor POEL's contempt for theory and theoreticians. POEL had, for instance, 20 years ago, a hearty dislike for quantum mechanics. He still seems to try to avoid its concepts. Very careful experimentation is performed, but greater theoretical guidance might have brought more results. Professor POEL prefers to have his students construct their own apparatus rather than buying equipment. The reason for this is that he wants the student to understand his equipment thoroughly. Consequently, a PhD candidate receives excellent experimental training.

Dr PICK made a good impression. He gave a very clear and simple explanation of the general field of the work.

Individual Research Problems :

All the problems of the laboratory concern the details of the imperfections in simple ionic crystals which lead to light absorption in the general range between the infrared absorption of the lattice vibrations and the true ultra violet absorption in the 2000

Visit Conducted  
by

: Dr. I. Approved for Release: 2022/06/22 C00010786

Other Research  
Workers  
Encountered

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Building

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Individual Research  
Problems

: All the problems of the laboratory concern the details of the imperfections in simple ionic crystals which lead to light absorption in the general range between the infrared absorption of the lattice vibrations and the true ultra violet absorption in the 2000 Angstrom region. These imperfections also play a role in the ionic conduction of the lattice, and the small photo conduction, which is electronic. Most of the work is done on KCl crystals, although some experiments are made with other crystals, especially the silver halides.

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In the alkali halides the imperfections are due to the naturally occurring vacancies at lattice sites, which may, or may not, be also the location of a trapped electron or a positive charge (missing electron), and also due to the substitution of a foreign ion in place of K or Cl<sup>-</sup>. Crystals have been grown with Ca, Pb, Ba, Sr up to concentrations of about 10<sup>-4</sup> parts per lattice site, in place of K, and with NO<sub>2</sub>, O, in place of Cl<sup>-</sup>. The doubly charged O is produced by treating a dilute single solution of NO<sub>2</sub> or NO<sub>3</sub> in KCl with Cl<sub>2</sub>. Gaseous nitrogen and oxygen accumulate in microscopically visible cubic "bubbles" in the crystal, at concentrations up to three atmospheres.

The transport numbers (ratio of the current carried by the positive ions) which have been previously reported to be above 0.9 for the alkalis of almost all alkali halides are being reinvestigated. It is suspected that the previous results are due to the large concentration of impurities of doubly charged positive ions. (In excess over the doubly charged negative.) This is the more likely since BaCl<sub>2</sub> was used as end-crystal in the experiments. The doubly charged cations produce an equal number of holes in the cation lattice.

The high temperature ionic conductivity is due to the equilibrium number of vacancies. The magnitude of the low temperature conductivity, which always shows a 1/T slope corresponding to an energy of 0.8 eV., is increased greatly by the addition of doubly charged cations.

The difference between the linear thermal expansion coefficient of the lattice, measured by X-rays, and that measured by two scratches on the crystals is observed to be as high as 10% above 400° C. This is suspected to be too large to be due to lattice vacancies, but may be due to an increase in mosaic structure at the higher temperatures. The X-ray measurements are made on a bent crystal with the eighth order lines.

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53. Institute : II PHYSIKALISCHES INSTITUT DER UNIVERSITAET.

Place : Goettingen.

Director : Professor KOPFERMANN.

Date : Monday, 4 Sep and Wednesday, 18 Oct 50.

Visit Conducted by : Professor KOPFERMANN.

Other Research Workers Encountered : Professor HOUTERMANS, Hubert KRUESER.

Building : The laboratory occupies the ground floor and basement of the large physics building. Except for a small library room, a small lecture room and a few rooms used by the theoreticians the whole space is available and is being used for research. (The "praktikum" for students is located on the third floor.) The space is adequate although it is no longer a very modern laboratory. No destruction of any kind occurred during the war.

Equipment : The pride and joy of the laboratory is a 6 MEV betatron, built by Siemens. There is a great deal of spectroscopic equipment - interferometers, etc. Although we did not see it, there exists presumably still a large Rowland grating. Just now, Professor KOPFERMANN has received ERP money to buy a 125,000 DM, 30 MEV betatron.

General Impression and Remarks : This is the laboratory which was formerly directed by Professor James Franck. At that time, it was very widely known. Very many Americans have spent a year at this institute. It is gratifying to see that Professor KOPFERMANN has managed to bring the institute back to its former level as a top flight laboratory. During Franck's directorship, the main interest of the institute was concerned with spectroscopic investigations. Much of that line of investigation has now been taken over by chemists, at least in the US. KOPFERMANN has kept up the spectroscopic tradition but with a new emphasis, namely the determination of nuclear properties by spectroscopy. In addition, he has started several new lines of investigation. At the Physics meeting in Bad Nauheim there were a considerable number of talks, namely eight, contributed by this laboratory. All of them were well presented and interesting.

Professor KOPFERMANN is an old acquaintance of mine from the time when he was an assistant in Franck's laboratory. He is an exceedingly pleasant and upright person, whose fundamental honesty and decency I would not doubt. His record under the Nazis bears this out.

The laboratory, probably the best in Germany, is working on a shoestring; the yearly budget, exclusive of salaries and building maintenance is 10,000 DM. It is amazing that as much good work can be done on so little.

Professor KOPFERMANN's interest lies in measurements of nuclear spins.

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Visit Conducted  
by

: Approved for Release: 2022/06/22 C00010786

Other Research  
Workers  
Encountered

: Professor HOUTERMANS, Hubert KRUEGER.

Building

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The laboratory, probably the best in Germany, is working on a shoestring; the yearly budget, exclusive of salaries and building maintenance is 10,000 DM. It is amazing that as much good work can be done on so little.

Professor KOPFERMANN's interest lies in measurements of nuclear spins, quadrupole movements and isotope shifts. For this purpose, he needs badly some separated stable isotopes in small quantity. These are widely available in the US, but are impossible to obtain here. Professor Walcher in Marburg is undertaking some isotope separation in minute amounts in conjunction with KOPFERMANN's work.

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Individual Research  
Problems :

a. The laboratory has a 6 MEV betatron, constructed by Siemens. The electrons are brought out of the tube by the use of a thin aluminum scatterer, and subsequent use of electrostatic deflection. A 70% yield of electrons is obtained. The electrons are highly monochromatic (to one per mil) from one to six million volts. The current is  $10^{-7}$  amperes. This betatron is said to be an extremely sturdy instrument. The apparatus is used in conjunction with the medical faculty (Martius) for the treatment of surface or near surface cancer. By variation of the aperture through which the electrons pass, and variation of voltage, the depth of the maximum ionization can be varied. This is tested on KCl crystals, by the density of colour centers.

The scattering spectrum of the monochromatic electrons was measured at angles from 0 to 90 degrees, by using a beta ray spectrograph. Also, the dissociation of the deuteron was studied. This work is mainly under Dr Paul.

b. Brix, Spectroscopy.

Determination of magnetic moments, quadrupole moments and isotopic shifts. This is excellent work. It would be highly desirable to make available separated isotopes, which Dr KOPFERMANN does not seem to be able to obtain. In particular, radium D, (Pb <sup>209</sup>) should be supplied.

c. Hubert KRUEGER.

Working on magnetic and quadrupole moments by a variation of the Bloch-Purcell method.

In addition, observation of resonance due to quadrupole moments alone, in cases where no (or almost no) magnetic field exists at the place of a nucleus, but a gradient of an electric field. Such a case would pertain, for instance, at the position of a Cl or I atom in  $\text{SnCl}_4$  or  $\text{SnI}_4$ . In the crystal, the symmetry may be dislocated. In the case of the iodide, spin  $5/2$ , the transitions  $\pm 1/2 \rightarrow \pm 3/2$  and  $\pm 3/2 \rightarrow \pm 5/2$  should have a frequency ratio 112 for the free molecule. A deviation from this ratio is a measure of the local deviation of the magnetic field in the crystal at the point of the atom in question. In the case of  $\text{SnI}_4$ , one I atom sits at a point of undisturbed (trigonal) symmetry, the other 3 do not. Consequently, two sets of lines are found.

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54. Institute : III PHYSIKALISCHES INSTITUT DER UNIVERSITAET.

Place : Goettingen.

Director : Professor E MEYER.

Date : Wednesday, 18 Oct 50.

Visit Conducted by : Professor MEYER and Professor KOENIG.

Other Research Workers Encountered : Dr TAMM, Dr KOPPELMANN.

Building : The institute is located in two separate buildings. One is the old "Angewandte Electricitaet", formerly the building of Professor Reich. It is old, old fashioned and small. A new institute was constructed during the war for Applied Mechanics, formerly Dr Schuler. It consists of an old villa with very considerable additions. It is well suited for the purpose.

Equipment : The equipment seems to be adequate. There exists several sources of ultrasonic waves, and a good Siemens electron microscope.

General Impression and Remarks : In 1947, the former Institutes of Applied Mechanics and Applied Electricity were united to form the third Physikalisches Institut under Dr Reich. The laboratory is very much "applied". It concerns itself with industrial applications. For instance, an instrument for the measurement of amplitudes of ultrasonic waves in metal structures is being constructed for the US Navy. Acoustic design for theaters and lecture halls is undertaken. The main scope of the laboratory is acoustics, with ultra sound, and electromagnetic waves. There exists a good "praktikum" to complement the less technical one given by Kopfermann. Most of the work of this institute is out of our line. Only a few details will be reported.

Individual Research Problems : a. Dr KOENIG directs the work with the electron microscope. His main interest is in details of the preparation of specimens. Benzol absorbed on specimens can be carbonized in an oven, and the specimens later removed, say by acid.

The carbon covering then gives a sufficiently transparent picture to see details in portions which would otherwise be too thick.

By taking pictures at two slightly different angles of the specimens very beautiful stereoscopic pictures can be obtained in which remarkable detail is visible.

b. The absorption of sound in the region 10 to 400 kilo Herz ( $10^4$  to  $4 \times 10^5$  sec<sup>-1</sup>) by water solution of various salts was studied by Dr TAMM. The results were very difficult to interpret. The absorption is not the sum of the absorptions of the ions, even at quite low concentrations. For instance, MgSO<sub>4</sub> absorbs in the region of 6000 whereas both Na<sub>2</sub> SO<sub>4</sub> and MgCl have 1/10th the absorption per mol at low



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Other Research  
Workers  
Encountered

: Dr TAMM, Dr KOPPELMANN.

Building

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The technique is to pass a pulse of given frequency into a large vessel, and observe the decay over a  $10^6$  fold energy range on an oscillograph.

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55. Institute : MAX PLANCK INSTITUTE, DIVISION OF "INSTRUMENTENKUNDE".  
Place : Goettingen.  
Director : Dr Konrad BEYERLE.  
Date : Wednesday, 18 Oct 50.  
General Impression  
and Remarks : This was a purely accidental meeting in a restaurant in  
Goettingen on our last evening. BEYERLE is the older brother  
of a childhood friend of mine, whom I had not seen since I  
was 12 years old, and who then impressed me with his  
"electrical laboratory" in a cellar room. He was very  
cordial, and had a number of interesting things to report.  
During the war, he was associated with Harteck in an attempt  
to separate uranium isotopes with the help of an ultra-  
centrifuge. He is, of course, very much interested to know  
what was done in the US along that line. For other isotopes  
than uranium, this method of separation holds some promise.  
It would be interesting to compare the German advances and technical  
improvements with those made in the US. BEYERLE and Harteck  
(Hamburg) are going on with this work.

A calculating machine using the binary system is being constructed.

Mr BEYERLE is regarded as an unusually competent engineer. This was confirmed in Hamburg (by B Jensen). The ultracentrifuge of Harteck has been, to a large extent, constructed by BEYERLE.

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56. Institute : PHYSIKALISCH CHEMISCHES INSTITUT DER UNIVERSITAET, GOETTINGEN.  
Place : Goettingen.  
Date : Wednesday, 18 Oct 50.

An attempt to visit this institute on this date.

Since Eucken's recent death, the institute has no director. The senior assistant, Dr Wicke, was at the Bunsen Tagung at Karlsruhe on this date, and no other assistant was in the building.

According to second-hand reports, and a few laboratories into which I looked, the institute does not appear to be in first class condition.

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834021-1862

57. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAET.

Place : Hamburg.

Director : Professor FLEISCHMANN.

Date : Thursday, 19 Oct and Friday, 20 Oct 50.

Visit Conducted by : Professors FLEISCHMANN and BAGGE.

Other Research Workers Encountered : Dr SCHOPPER, Dr KOLLATH and, unexpectedly, Professor Hans JENSEN from Heidelberg, who was on a visit.

Building : The Physics Department is located in one side of a building of which the other side is occupied by Chemistry. During the war, a bomb demolished part of the Chemistry wing, and the Physics Institute was badly shaken and burnt. Reconstruction is now under way. The slowness of this process is partly due to the fact that the previous physicist retired in 1945, and FLEISCHMANN has been in Hamburg only two years. A large lecture room and a Van der Graaf machine are being constructed. When all this is finished, the building will be adequate.

Equipment : Preparations are made for a 3 MEV pressure Van der Graaf machine. There are two mass spectrometers, a Wilson camera, counters and a good deal of optical equipment.

General Impression and Remarks : When Professor FLEISCHMANN took over, the laboratory was, as he calls it, a "museum". His predecessor had not been a very active physicist and had collected a great deal of very old-fashioned physical apparatus. Very little money had been spent on physics. FLEISCHMANN seems to have made the government understand that this will have to change.

FLEISCHMANN received us very cordially. He is reported to have been a convinced Nazi during the war, but a "decent" one; that is, he did not denounce anybody. He was Professor in Strasbourg, and thus became the first prisoner of the "Alsos" mission. He spent 18 months imprisoned in the US. FLEISCHMANN is quite worried about the Soviet boundary, only 30 kilometers away. He does not want to leave, but expressed hope that the US occupation forces would not let him fall into the hands of the Soviets!

FLEISCHMANN is a nuclear physicist, and will return to his chosen field when he obtains his 3 MEV pressure Van der Graaf. In the meantime, he has put the optical equipment he inherited to some good use. He is a pupil of Pohl in Goettingen and has resumed some studies of dichroism and other optical phenomena, which have interested him a long time.

Professor BAGGE is relatively young and has the ambition to become a fusion of theorist and experimentalist like Fermi. His interests are cosmic rays.

Professor Jensen (Heidelberg) happened to be in Hamburg on his way from Copenhagen. We had corresponded a good deal during the last year since we had quite independently, published very similar papers. Jensen was extremely cordial and pleasant. He is certainly a very good physicist.

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Individual Research  
Projects

- a. H SCHOPPER, under FLEISCHMANN's direction, is studying the optical constants of thin metallic films. By using a simple new device, requiring two quarter-wave plates, he is able to measure exactly the shift of interference fringes coming from two rays, of which one has traversed or been reflected from a metal film. In this way he can determine independently the refractive index, absorption coefficient and thickness of the film. This is very good experimentation, which could have been, but has not been, performed 60 years ago.
- b. Extremely thin layers of alkali metals on glass or quartz show pronounced dichroism. Light is absorbed when the electric vector is normal to the layer. The occurrence of this layer depends, in an unknown manner, on the surface on which it is absorbed.
- c. Dr KOLLATH wants to determine the dependence of the scattering cross-section of electrons on the direction of the electron spin. This requires an apparatus in which an electron beam is scattered on an atomic beam, and the electrons scattered at right angles are, in turn, scattered by a second atomic beam. It is not clear yet whether at the end there will be enough electrons left to be measured.
- d. Dr BAGGE is interested in determining the ratio of the numbers of positive and negative mesons in the cosmic radiation. For this purpose, he uses some kind of magnetic lens which will collect either the positive or the negative mesons. A counter four meters above and four meters below the lens are in a coincidence circuit. He has been able to measure the positive excess up to  $10^9$  electrons volts of energy.
- e. A Wilson camera is used to determine the scattering of mesons in a leaf plate.
- f. Two mass spectrometers for determination of abundances have just arrived and are being adjusted.

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58. Institute : PHYSIKALISCH CHEMISCHES INSTITUT DER UNIVERSITÄT, HAMBURG.

Place : Hamburg.

Director : Professor HARTECK.

Date : Thursday, 19 Oct 50.

Visit Conducted by : Professor JENSEN of Heidelberg.

Building : The building is the small, but excellent research building constructed by Stern. It contains no rooms for "Praktikum" or lectures, which is a great disadvantage at present since the chemistry institute, next door, has been destroyed by bombing and is not yet rebuilt. The research rooms, however, are excellent.

Equipment : In addition to the usual physical chemical equipment, which appears to be good, there are two large ultracentrifuges for isotope separation. These are described in more detail under "Individual Research Projects".

A hydrogen liquefier is in the building.

General Impression and Remarks : Professor HARTECK was not in town, but was met later (Monday, 23 Oct 50) at the Naturforscher und Ärzte Tagung in Munich. Professor Jensen was staying in Professor HARTECK's office during a short sojourn in Hamburg on his way home to Heidelberg from Stockholm. He took us around the institute, but the visit did not include all research rooms.

The somewhat fragmentary impression was of a busy and excellent laboratory. The main interest of the laboratory seems to be centered on isotope separation. The laboratory is the center of work in this field in Germany. During the war it was here that such work was done as the separation of uranium isotopes. However, Heisenberg had always opposed isotope separation as an industrial process on the German uranium project, so that the work here was on a trivial scale compared with the US effort. Nevertheless, considerable general information has been obtained and techniques were worked out.

HARTECK is a very lively and extremely enthusiastic scientist, somebody who never seems to tire and enjoys "talking shop" at all occasions. His talk at the meeting of "Naturforscher und Ärzte" was rather mediocre. But he seems to be the type of person who has a lot of ideas.

HARTECK was in the US during this year and is returning to the US in December, but not permanently.

Individual Research Projects : a. The most outstanding project is that of the ultracentrifugal separation of gaseous isotopic mixtures. The present apparatus works on a batch system. Two essentially identical centrifuges have been built and are in operation, but they work as single units.

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The single unit is a 150 mm diameter aluminum alloy cylinder, about one meter in length. The cylinder is electrically driven by an axial 660 cycle electric motor from which the centrifuge hangs. Rotational velocities up to 50 thousand rpm are obtained.

The gas is fed into the center of the centrifuge by a steel capillary, and after equilibrium has been obtained it is removed by the same capillary, the lighter isotope enriched gas from the center coming out first.

Selenium isotopes have been enriched by this method, using  $H_2Se$  as carrier gas.

It was originally intended to use the two centrifuges in series as a continuously operating system. By having a system of baffles in the single centrifuge, so that the outer component of one compartment flowed into the inner part of the next compartment, each centrifuge became a multiple stage separator. By running one centrifuge faster than the other it pumped from the second. This is not used at present.

The use of  $H_2$  as stabilizing gas is an important improvement.

Due to small temperature gradients, or changes in speed, the gaseous contents of a centrifuge tend to get into turbulence, upsetting the equilibrium conditions. If considerable  $H_2$  is present, the gases separate quickly so that the average molecular weight of the gas mixture depends strongly on the gravitational field. As a result, the mixture is very stable, and no turbulent convection occurs.

b. An interesting new method of enrichment of deuterium in hydrogen gas has been worked out, using low temperature absorption of the gas on silica gel. The gas pumped off the absorbent is almost purely the light isotope. Single stage enrichment factors of greater than one hundred are obtained. The low temperatures are those of liquid hydrogen.

c. The hydrogen content of the atmosphere has been investigated and found to be 1/45,000 not 1/60,000 as previously reported. Tritium has been found in this hydrogen.

d. There was some discussion of a method for the separation of isotopes which was new to us. It was referred to as the "Isotopen schleuse". Its principle is that evaporated gases of a certain temperature are sent through two rotating slots. The different speeds of the molecules with different isotopes are this way used for the separation.

e. A stationary Wilson cloud chamber. This we did not see, since it is new and Jensen had not heard of it. HARTECK described it to us in Munich. The principle consists of the construction of a vessel with a temperature gradient between a water layer at plus 30 degrees and a layer at minus 30 degrees. At some places, the air is always supersaturated, so that the chamber is always ready and no expansion is required. The great advantage is that there is no limit to the size of this type of cloud chamber.



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59. Institute : MUNICH UNIVERSITY.

Place : Munich.

Directors : Professor BOPP, Theoretische Physik.  
Professor GERLACH, Experimental Physik.  
No director, Physikalische Chemie.

Visit Conducted  
by : Professor BOPP.

Other Research  
Workers  
Encountered : Not at the laboratory, but at a beer party for the Naturforscher  
und Arzte meeting: Professor GERLACH and Professor SOMMERFELD.

Building : The buildings of the university are thoroughly destroyed, and  
little attempt has been made to rebuild them.

Equipment : Extremely poor.

General Impressions  
and Remarks : We visited Professor BOPP, whom we had previously encountered  
in Bad Nauheim. He has a few pleasant rooms in an undestroyed  
part of the university. The main equipment of a theoretician,  
the library, was completely destroyed. However, Professor  
SOMMERFELD put his personal library at the disposal of the  
institute, so that the situation for theoreticians is not too  
bad. Professor BOPP is a young man of some reputation. His  
interest is in quantum electrodynamics.

Professor BOPP painted a very sad picture of the state of affairs  
at Muenchen University. Indeed, he told us that there was  
nothing to see. The experimental physicists have been working  
in some holes in the ruins of the former building. We saw  
those, and it is indeed the worst laboratory in the country.  
At present, their equipment is dismantled, in order to be taken  
to some rebuilt rooms. Professor GERLACH, the director, is,  
for the third time, rector of the university and very busy with  
an infinity of other things.

The physical chemistry laboratory is essentially destroyed.  
Clusius was director, an excellent man. He got an offer from  
the University of Zuerich in 1947, which he could accept only  
by crossing the boundary into Switzerland secretly. It is said  
that the US occupation forces would not have let him leave the  
country. Clusius has not been replaced.

Chemistry seems to exist mainly in some suburbs. We saw a  
student, on a PhD thesis, who did her research work in the  
cellar of her home!

Altogether, the impression is that Muenchen, at present, is  
completely dead.

It was pleasant to see Professor SOMMERFELD again. He has an  
excellent memory for people, and is quite up-to-date on recent  
literature and on US developments.

60. Location : NATURFORSCHER UND AERZTE TAGUNG.  
Place : Munich.  
Date : 22-24 Oct 50.

General Impressionand Remarks

: This meeting is an institution which was founded about 150 years ago. In former years most special meetings, like those of the physicists, of pediatricians, etc, were held in conjunction with it.

This year, the "Tagung" was essentially held to reconstruct the old organization. None of the specialized meetings were held, only the general show-lectures were given. The attendance was relatively small, and mainly composed of physicians.

Of the infinite number of "Begrüßungsansprachen" on Sunday, only one stands out, the lecture by the Bundespräsident, Heuss. It was an excellent free speech of an exceedingly well educated man.

The physics lectures on Monday were devoted to a review of the development of quantum mechanics: Heisenberg, Laue, Harteck. Heisenberg's lecture was not outstanding; the other two, poor. Some comments about a few things that annoyed us are in the general part of the report. On Tuesday, Weyl of Princeton, gave an almost two-hour talk on relativity, which only a few specialists could understand. This was followed by an excellent lecture by Heckmann on cosmology, and an almost equally good one by the astronomer Kienle.

ScientistsEncountered

: a. Professor Heckmann, astronomer, Hamburg.

Heckmann was a good friend of ours in former times. We spent a good deal of time with him. He has since become one of the best astronomers in Germany. That he is held in high regard by US astronomers is borne out by the fact that he was invited to a visit of all major US observatories last spring. Heckmann's lecture at the meeting was truly outstanding. Heckmann may establish an astronomical observatory, run by the Hamburg astronomy department in San Salvador, if observing conditions, as shown by meteorological observations this year, are considered good enough.

Heckmann's record under the Nazi Government was excellent. He is a truly honest, forthright and decent person. He guarded his children against national socialist influences by bringing them up in a religious tradition. He and his family would never cooperate with the USSR.

b. Professor Kienle, astronomer, Heidelberg.

We knew Kienle when he was Professor in Goettingen. He has since been in Potsdam and left there a few months ago, with full Soviet permission, to take the chair in Heidelberg. His budget in Heidelberg will be less than one-tenth of that of the Potsdam observatory. But he felt that he could not stand the life under the Soviet occupation any longer. He felt free to talk about the conditions in the Eastern Zone. His reports were very disquieting, and are discussed in the general part of the report.

[REDACTED]

[REDACTED]

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c. Professor Wolfgang Heubner, pharmacology, Freie Universitaet, Berlin.

How he and his wife kept out of a concentration camp during the Nazi regime is not clear to me. They helped and hid Jews by every method at their disposal. At present, they still talk about the terrible injustices done by the Nazis, but not about their own misfortunes.

d. Professor von Lane.

We also met him in Goettingen. He stayed with us when he received an honorary degree in Chicago. His upright record under the Nazis is well known. He is one of the few surviving physicists who contributed to the great era of science development in Germany.

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61. Institute : PHYSIKALISCHES INSTITUT DER TECHNISCHE HOCHSCHULE, MÜNCHEN.

Place : Munich.

Director : Professor JOOS.

Date : Wednesday, 25 Oct 50.

Visit Conducted by : Professor JOOS.

Building : The building is an elegant, spacious structure of the 1920's. It was damaged, suffered severely from neglect, but is now repaired and enlarged.

Equipment : Most prewar equipment was lost due to neglect and theft. The process of rebuilding apparatus has only just begun.

General Impression and Remarks : JOOS is a cross between an experimentalist and a theorist. Whenever he is mentioned by his colleagues, it is said that he is such a difficult person. To us, he was cordial and pleasant. He has had an unfortunate postwar experience. He came to Muenchen in 1945 and was invited by the Signal Corps to come to the US in 1947. He seems to have had the impression that he was invited to a bona fide research position at Boston University. This was not the case. He was considered a "non-existing alien", his mail was censored and held up. There was no equipment for any kind of research. He was not able to make contacts with other scientists in the US. He left in 1949, although his family would have like to stay. Shortly before he left he was given a regular immigration visa. He holds a "permit to reenter" the US, which could be extended, but he intends to let it lapse. JOOS is quite bitter about this experience. He did not say too much about it to us, but we hear from many sides that he is very vociferous in scolding.

JOOS is not a man with many ideas, but a good physicist. His laboratory suffered during his absence, less from the original damage but from severe neglect of the necessary repairs. It is now in good condition. JOOS has so far spent his efforts more on reconstruction of the teaching facilities than on research. A beautiful new lecture room has been built, although it does not seem as efficient as those constructed by Pohl and his pupils. The rooms and equipment for the "praktikum" are well laid out and designed. Very little actual research is going on.

Individual Research Problems :

a. There is in construction equipment for measuring the neutrons from the D-D reaction. JOOS intends to study methods of making photographs sensitive to neutrons. This could be done, for instance, by bathing the plates in boron. He would like to study neutron diffraction on crystals, and was very disappointed when Lane, at the meeting of the Naturforscher und Aerzte Tag, showed some beautiful US photographs of just this work.

b. JOOS is interested in spectra of crystals. He used to work on rare earth salts, which are now essentially "finished". In Goettingen, he worked on uranyl salts, in which hydrogen was replaced by deuterium. This type of work was extensively pursued during the war in the US. His interest is now in the salts of chromium.

62. Institute : INSTITUT FUER ANGEWANDTE PHYSIK DER TECHNISCHEM HOCHSCHULE, MÜNCHEN.

Place : Munich.

Director : Professor MEISSNER.

Date : Wednesday, 25 Oct 50.

Visit Conducted by : Professors MEISSNER and SCHUBERT.

Building : The institute is in one wing of the enormous Technische Hochschule. This wing was not badly damaged during the war and is large, with large pleasant rooms well suited for research.

Equipment : No very special apparatus was seen, but there seemed to be an adequate supply of electrical equipment, vacuum pumps, etc. The shop was good and quite a bit of apparatus had been constructed in it.

General Impression and Remarks : Professor MEISSNER's main field of work is in super-conductivity, which work is conducted at the laboratory in Herrsching. In this laboratory the emphasis is on diplom and doctoral dissertations. Much of the work is on applications, and some of it done for industrial firms or government bureaus in order to obtain some money for the laboratory.

Professor MEISSNER appears much younger and more vigorous than one would expect for a man of his age (68). He was extremely cordial, and not in the least stiff. One had the impression of greater cooperation and friendship between the chief and the students than is frequently seen. All students were introduced, and asked to explain their work. Although the student was frequently interrupted by MEISSNER, when the explanation was thought to be too detailed or inadequate, this was done in a friendly way. The general atmosphere of this laboratory was hearty.

Professor SCHUBERT was "house theoretician" and has just accepted a call to Mainz as "Extraordinarius". He obviously loves and worships his chief. He gave the impression of considerable ability, although lacking MEISSNER's fire and originality.

Individual Research Problems :

- a. Several of the problems were of purely industrial nature, including a room for the study of the sound absorbing qualities of building materials. One problem, the testing of gaming machine was amusing. Pure chance machines were tested to see if they were honest. Other machines, in which a skill element was supposed to be involved, were also tested.
- b. The heat conductivity of large samples of materials, especially building materials, were determined, both slightly above and below room temperature.
- c. Single crystals of metals, thallium and indium alloys, were grown in the form of thin long samples in glass capillaries. These are for use in experiments on superconductivity. The crystals were then tested to see if they were actually single crystals.

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(1) One method of test is to observe the plane of polarization of the light reflected by the crystal from a polarized incident beam. The crystal is then moved axially so that the position at which the reflection occurs is changed. If the plane of polarization changes, then the crystal is not a single crystal.

(2) An X-ray camera is set up and a photograph of a portion of the wire is taken. The wire is then moved axially so that a new spot is exposed. If the two photographs overlap, then the crystal is single.

(3) Metal wires grown in glass tubes usually show considerable distortion from true single crystals due to the strains produced by the fact that the melt adheres to the glass walls. If the glass is coated on the inside with soot, this does not occur. The soot coating is accomplished by sucking a benzene flame into the capillary.

d. An apparatus following the Purcell method for determining nuclear spins was being constructed.

e. The Benedix effect (see Gobrecht - Berlin) was to be tested, using rings in which the temperature gradient is different on the two sides.

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63. Institute : KAELTE LABORATORIUM DER BAYRISCHEN AKADEMIE DER WISSENSCHAFTEN.
- Place : Herrsching (40 km south of Munich).
- Director : Professor MEISSNER.
- Date : Wednesday, 25 Oct 50.
- Visit Conducted by : Professor MEISSNER, Professor SCHUBERT, Dr Hans MEISSNER (son of Professor MEISSNER).
- Other Research Workers Encountered : Dr SCHMEISSER (?).
- Building : The institute is housed in two small one-story barracks, one of which, the main laboratory, is well constructed; the other, which houses the shop, offices, and some living rooms is of wood. Both buildings were well remodeled for their present use, and the institute although small appeared to be well and pleasantly housed. There is no library, which is a disadvantage since the distance to Munich is not negligible.
- Equipment : The chief equipment of this laboratory consists of good air- and helium-liquefiers. This is the only place, except Erlangen, that we have seen a helium-liquefier in Germany, and it is the only place in which helium is liquefied in quantity.
- The electrical equipment for making magnetic and electrical measurements was also satisfactory and adequate.
- It is intended to purchase a new compressor and construct a hydrogen-liquefier.
- General Impression and Remarks : Professor MEISSNER is one of the world's leading experimentalists in the field of superconductivity. He also has considerable theoretical ability and understanding in this field.
- Professor MEISSNER will keep this laboratory after his retirement from the university.
- MEISSNER's laboratory has been renowned in the past for its excellent machine shop, and the collaboration between shop and scientific workers. This tradition was broken during the war and is being gradually rebuilt. The shop here manufactures the liquefiers, which are reasonably complicated and difficult. In addition, the shop, in collaboration with Dr Hans MEISSNER, had developed wire presses for extruding fine wires of metals such as lead and bismuth, not normally purchasable in wire form.
- We were introduced to the master mechanic as "the soul of the laboratory" and to his assistants. The same hearty cooperative tone that we noticed in MEISSNER's Technische Hochschule institute prevailed here.
- Young Hans MEISSNER impressed us as a skilled experimenter, enthusiastic in his interest, and probably a very excellent physicist. It would be desirable to have him visit the US; he would like to go.

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**Individual Research  
Problems :**

Helium is liquefied by the process suggested by Cellins (US). The compressed helium gas at 30 atmospheres is cooled to liquid air temperatures. One-third of the gas is then diverted to a chamber in which it expands adiabatically, doing work against a piston, to one atmosphere, and thus cooling the gas. This gas is then heat-exchanged against the other two-thirds, which then expands into the liquefier.

This method obviates the need for an intermediate liquid hydrogen stage, and thus no hydrogen liquefier is necessary.

There are two helium liquefiers. They yield helium at a rate of two or three liters an hour, the first liquid appears a half-hour after the start.

They also have a strong pumping system attached to the storage vessel for liquid helium, and have been able to get down to 0.8°K.

Professor KRISNER now has an adequate supply of helium. He was invited to the low temperature conference in Cambridge, Mass last year, and as a result of this visit, Condon and Brickvedde from the Bureau of Standards have sent him cylinders of helium.

The laboratory has been in operation for such a short time that no publishable work has yet been completed. One interesting effect has been noticed. If contact between two relatively dirty lead surfaces is made, the contact resistance may be considerable, but still disappears completely when the lead becomes superconducting.

A test of the Heisenberg theory of superconductivity was being set up.



64. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAET.

Place : Erlangen.

Director : Professor HILSCH.

Date : Thursday, 26 Oct 50.

Visit Conducted by : Professor HILSCH.

Other Research Workers Encountered : Dr BUCKEL and Dr SAUER.

Building : The building is excellent. It was not destroyed, and, in fact, has been added to considerably between the war and the monetary reform.

Equipment : The equipment, likewise is ample and satisfactory. There are a few excellent spectrographs, an X-ray outfit, etc. The soul of the laboratory consists of liquid air, hydrogen, and innumerable helium liquefiers (expansion principle).

General Impression and Remarks : Professor HILSCH is a pupil of Pohl in Goettingen. He definitely bears the Pohl stamp, almost impresses one as a younger edition of Pohl, with Pohl's abilities and faults. HILSCH has the appropriate aggressiveness to get on in the difficult situation in Germany.

During the R-Mark-times he started to enlarge his institute considerably and elegantly. He built a beautiful lecture room for the big physics course, an exact replica of the famous one of Pohl (a student of Pohl can always be recognized by the lecture room he builds). Two stories of laboratories were added, which now also house the mathematicians. Even from the outside the building looks very beautiful, efficient and functional. HILSCH was instrumental in acquiring an adjacent building for an Institut fuer Angewandte Physik, so that Erlangen has now two physicists. HILSCH came to Erlangen in 1940.

During the war, HILSCH had a war contract which was simply called "low temperatures". At that time, he acquired two compressors, for hydrogen and helium. After the war, HILSCH seems to have had at all times the support of the occupation forces. He acquired another compressor, some spectrographs, etc. At present, he receives frequent gifts of helium from Americans, which keep him going.

HILSCH (like Pohl), is hammering away on one particular problem. No attempt at broadening the scope of the work is made (at least we were not shown anything else). The subject is an interesting and fashionable one, namely the investigation of superconducting of metals. The experimental work is excellent. This is one physics laboratory which works with cleaner chemicals than any chemist. There are any number of small helium liquefiers in the various laboratories. These are constructed in such a way that it takes an hour to produce the liquid helium, which will stay in the vessel for 15 hours. The temperature cannot be reduced below 1.2 degrees Kelvin. The apparatus can be warmed up in a short time, so that two measurements can be made in a day. (A measurement of MEISSNER's requires days, although MEISSNER is able to do things which HILSCH cannot.)

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HILSCH has not published much, but the work he has done is very interesting. He works with thin films of metals which are evaporated on quartz plates at various temperatures, from two degrees to room temperature.

HILSCH has also inherited two bad traits from Pohl. He has a contempt for theory. He has something which he calls a theory, but it is really just a working hypothesis, namely that crystal imperfections have something to do with superconductivity. He is not interested in current theories of superconductivity. In contrast, Meissner in Herrsching, is attempting to test, and to prove or disprove, the various somewhat contradictory theories. Secondly, HILSCH seems to be somewhat unpleasant to his underlings. Students were not introduced or spoken to. Assistants were introduced, but treated curtly.

HILSCH has limited the number of students in his laboratory severely. He has four students working for the diploma examination, four for the doctorate, and four assistants. This, of course, produces good working conditions. HILSCH has shed all jobs like dean, etc, and is quite free to work.

We have both known HILSCH since the 1920's when he worked in Goettingen. He is the fifth physicist we met who is married to a school friend of mine. In 1939, while HILSCH was still an assistant in Goettingen, he was offered the professorship in Prague. He declined since he felt that the job was distasteful. Gudden, then in Erlangen, went and perished there during the last days of the war. HILSCH was not a Nazi.

HILSCH made some comments about the ERP money which are worth mentioning. He stands to receive 50 thousand DM. The Notgemeinschaft, which administers the money, requires that he spend it, or at least contracts equipment for it, within three weeks. Since this amount is precisely five times his yearly budget he hates to do this in such a short time. He does not know - and no scientist can know - in what direction his research will lead him, and which apparatus he will need in a year. If the money could be spread over a few years, it would be infinitely more useful.

Individual Research  
Projects :

- a. Thin films of tin evaporated upon a quartz plate, held at two degrees absolute have a much higher transition point to superconductivity than bulk tin, or tin evaporated on a quartz plate at room temperature. Upon heating, the film changes irreversibly, in such a way that the transition temperature is dependent on the highest temperature the film has known. Some of the films are only 300 Angstroms thick, have a resistance of 20 thousand Ohms, which completely disappears below the transition point.
- b. This effect is also observed with other superconducting substances. The percentage change in transition temperature for films which have known no temperature higher than two degrees compared to those which have known room temperature is roughly proportional to the Debye temperature of the metal (for Pb there is no change, for Hg it is negative).

c. The observation of the absorption of films through the super-  
a. Approved for Release: 2022/06/22 C00010786. The experiment is

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HILSCH made some comments about the ERP money which are worth mentioning. He stands to receive 50 thousand DM. The Notgemeinschaft, which administers the money, requires that he spend it, or at least contracts equipment for it, within three weeks. Since this amount is precisely five times his yearly budget he hates to do this in such a short time. He does not know - and no scientist can know - in what direction his research will lead him, and which apparatus he will need in a year. If the money could be spread over a few years, it would be infinitely more useful.

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- c. The observation of the absorption of films through the superconducting point has never shown any change. The experiment is to be repeated with higher accuracy.
- d. SAUER observes the X-ray spectrum of tin films, but not yet at low temperature.

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[REDACTED]

[REDACTED]

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e. It is not quite easy to introduce crystal imperfections into some superconductors. Tin, for instance, does not dissolve copper. HILSCH produces atomically dispersed copper in tin by evaporating both simultaneously on a quartz plate at two degrees. The superconducting transition temperature rises. After the film has been warm, the transition temperature is that of pure tin.

f. In connection with this, some vapor pressure measurements of films and alloys are undertaken.

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65. Institute : PHYSIKALISCH CHEMISCHES INSTITUT DER UNIVERSITAET, ERLANGEN.

Place : Erlangen.

Director : Professor Eric LANGE.

Date : Friday, 27 Oct 50.

Visit Conducted by : Professor LANGE.

Other Research Workers Encountered : Several assistants and students.

Building : The building, apparently untouched by the war, has been re-decorated inside, and was reasonably large, pleasant and well suited for research.

Equipment : The usual physical chemical equipment of thermostats, electrical measuring devices, pumps, etc, appeared to be present in adequate amounts. The most important apparatus consisted of two highly precise differential calorimeters, for the measurement of heats of dilution.

General Impression and Remarks : Professor LANGE is a thermodynamicist. He has recently written a short textbook on chemical thermodynamics, and is a member of the international committee on nomenclature. His work is in the electrochemical side of thermodynamics. Professor LANGE received us cordially and we discussed thermodynamic nomenclature for some time before visiting the laboratory.

The international committee on thermodynamic and electrochemical nomenclature has a US chairman, van Rhysselbergh, of Oregon who, however, has been educated in Belgium. US nomenclature has been remarkably standard for the past 30 years, following that of the classic thermodynamic text of Lewis and Randall.

Van Rhysselbergh has been one of the few exceptions, tending to use one of the several European systems. Since about half the world's research in the field of chemical thermodynamics has been done in the US, and mostly published with the Lewis and Randall nomenclature, it is somewhat unfortunate that none of the enthusiastic proponents of this system, of which there are many, are represented on the committee. It is likely that the committee will make a recommendation which will not be followed in the US.

Following this discussion we visited the laboratory, which gave the impression of good, solid, and precise experimentation.

After visiting the laboratory, I attended a short impromptu seminar given by an assistant of the applied chemistry institute, who was leaving for another position. The work reported was not particularly impressive, and the seminar seemed a little stiff; no member except Professor LANGE made any comments.

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**Individual Research  
Problems :**

a. **Differential Calorimeter:** A multiple element thermocouple, having some two hundred elements in series, with alternate element on the two sides of a flat plate, separates two sides of a cylindrical double walled Dewar. The plane of "plate" is parallel to the axis of the Dewar. The two sides each contain a stirrer, and a gold plated "pipette" which can be opened simultaneously at the top and bottom. The two sides are filled with identical amounts of pure solvent (water) and the pipette of one side with the same solvent, that of the other with a solution of some solute.

The Dewar is placed in thermostat controlled to  $10^{-4}$  degrees. After temperature equilibrium is established the pipettes are opened. Temperature differences as small as  $10^{-7}$  degrees can be measured, although only those of about  $10^{-6}$  degrees are significant. The instrument is probably one of the most precise heat of dilution calorimeters.

b. Volta potential of various surfaces are measured by the condenser method. In particular there was a device by which an iron surface could be scraped clean in vacuum and the Volta potential measured immediately. Even at  $10^{-4}$  mm the oxidation changes the potential in a few minutes.

c. The emission of electrons in vacuum by a newly produced surface (see Goettingen) was investigated by using a stream of liquid mercury. The effect is present, but of short duration.

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66. Institute : GEOCHEMISCHES INSTITUT (THEOLOGISCHE HOCHSCHULE).

Place : Bamberg.

Director : Professor W NODDACK.

Date : Friday, 27 Oct 50.

Visit Conducted by : Dr Eva (Mrs) NODDACK.

Building : According to Mrs NODDACK, the equipment is all personal property of the NODDACKS and very adequate for their purpose.

General Impression and Remarks : The ascension of Bamberg to a "Hochschule" with a science faculty and its aspiration to become a full fledged university is a postwar development. Since Muenchen was thoroughly destroyed, and is, in fact, not yet built up, the two Roman Catholic theological seminaries of Bamberg and Regensburg were asked to handle the entering students in the first semesters. At the other universities, one hears nothing good about either institution. The medical faculties complain that the training of the pre-meds is very poor indeed. We heard from many sides that the Roman Catholic Kultus Minister, Hundhammer, is vitally interested in the two catholic - really Catholic Church - enterprises at Bamberg and Regensburg. He supports them strongly while he tries his best to retard the legitimate Bavarian Universities of Muenchen, Erlangen and Wuerzburg. Regensburg is rumored to have obtained a large electron microscope from ERP money which, it is claimed, is administered by the Bavarian Wirtschaftsministerium. Hundhammer is a native of Regensburg, and the Bavarian Ministerpraesident a native of Bamberg.

In 1946, when great numbers of freshmen entered the universities, it may have been a wise move to get them started in two un-destroyed cities. By now, the usefulness of the two academies is very questionable. The legitimate universities can, by now, handle the beginners easily. It just does not make any difference if there are 50 more students in a large freshman class of two hundred. The trouble of the regular universities begins with the advanced students, when there is not enough laboratory space and equipment to go around. At that stage, the universities have to screen students. Bamberg and Regensburg are not equipped to give this training, and simply increase the troubles of the regular universities.

The science faculty of Bamberg contains the NODDACKS, who are both scientists of repute. NODDACK handles physical chemistry. Some unknown teaches inorganic chemistry. There is a physicist by the name of Vierling. It is typical that the physicists of Wuerzburg and Erlangen did not know his name. With one probable new addition (see later) this comprises the whole physical sciences. It is certainly an inadequate staff to give more than the beginning of training in the sciences.

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Bamberg has offered a professorship in theoretical physics to Pasqual Jordan, and he has accepted. Since, in the meantime, Bamberg has extended his guest professorship, it is not quite certain that he will arrive. Jordan is a very well known man, of the Bonn school. He was a definite, outspoken Nazi, and wrote a number of public statements about "German Physics", etc. He is a persona non grata with Bohr in Copenhagen. After the war, the German universities did not want him, in spite of the fact that there is a great lack of theoreticians of his age and reputation. He has recently published some very wild, and not too well thought out, theories of cosmology. He does not seem to be a very valuable addition to a university, except for enhancing its reputation. Politically and philosophically Jordan is as unstable as ever. We knew Jordan in 1928 in Goettinger heard details about his Nazi records and scientific publications later. On this trip, we did not meet him anywhere.

We came to Bamberg at a somewhat inopportune time. The geochemical laboratory was being moved from a monastery to a castle, and Professor NODDACK was not available. Mrs NODDACK asked us to visit her at her home, which we did. Everybody who has been interested in the cosmological abundance of elements has met the name of the NODDACKS. Their life work has been the chemical analysis of minerals, especially quantitative measurement of the amounts of rare constituents. Their work has not always been correct. Harrison Brown in Chicago has a poor opinion of it; but it is extremely difficult work which can now be done much easier by use of neutrons.

Mrs NODDACK received us quite cordially, but we came away with the impression of a not very pleasant personality. She is the only person we met who was definitely hostile towards the US. She tried to impress us with the fact that the situation in the US was very bad. She claimed that they had an offer to go to the US, but "if one works at a university in the US, one starves (verhungert)". A denial on our part made no impression.

NODDACK was known as a convinced Nazi. He went to Strasbourg in 1943 which is not a recommendation. They fled before Allied troops entered, taking with them all their equipment. Why they landed in Bamberg we could not find out. I have the suspicion that it has something to do with the fact that Bamberg was more inclined to take people with a Nazi record. NODDACK has formed quite a school and has eight students working towards a doctorate, which Bamberg is not allowed to grant. He will send them elsewhere to finish. A new laboratory has been promised, although there seems to be some difficulty to convince the Church Fathers that science needs space and money.



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67. Institute : PHYSIKALISCHES INSTITUT DER UNIVERSITAETS.

Place : Wuerzburg.

Director : Professor KUHLENKAMPF.

Date : Saturday, 28 Oct 50.

Visit Conducted by : Dr LEISEGANG, Dr FETZ.

Other Research Workers Encountered : Professor KUHLENKAMPF, Professor OTT (theoretical physics), and any number of students.

Building : The building was constructed in 1875 and is consequently very old-fashioned. It was somewhat damaged during the war but has been repaired.

Equipment : This is the laboratory where Roentgen discovered the X-rays. It still follows Roentgen's tradition and limits its research to the X-ray field. When KUHLENKAMPF arrived in 1946, there was very little equipment present, due to age and attitude of the previous director. KUHLENKAMPF brought some apparatus with him from Jena. Several high voltage generators exist. Support for the laboratory has been at a minimum. There is hope for the acquisition of a 25 MEV betatron from ERP money.

General Impression and Remarks : In some respects this was the most pleasant visit of any laboratory where we were not well known. We had met Professor KUHLENKAMPF at Bad Nauheim and told him that we would come to visit him. He was out of town when we arrived, but had informed his staff. Dr LEISEGANG and Dr FETZ received us with unusual cordiality and friendliness. They took us through the laboratories, and it was an entirely different visit from the usual one. When they entered a room, they would announce, "Boys, we have visitors from the US", and then introduce us to every last person in the room, including mechanics. Somehow, the students were not at all stiff. The assistants asked the students to explain their apparatus, and did not continually interrupt and take over. The students talked freely and well. There was none of the usual stiffness and shyness. It was apparent that the relations between the assistants and students are much more cordial than with the chief, who has rarely time to enter a students' laboratory. It was indicated that the visit would have been different had KUHLENKAMPF been present. LEISEGANG then decided that all of them would like to hear about the US, and asked all students up to the laboratory to talk to us. So, for the first time, on our last visit to a German laboratory, we sat around a table with about ten students, told them about the US, and listened to their troubles. LEISEGANG was very worried about KUHLENKAMPF's reaction when he heard about it, but we were very pleased.

The troubles of the students and assistants are very real and serious. With the German situation only a handful of

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pleased.

The troubles of the students and assistants are very real and  
serious. With the German university set-up, only a handful of  
physicists have a chance even to become an "Ordinarius". In-  
dustry at present is hardly taking any physicists (although  
Siemens had just engaged a student of Professor OTT, a  
theoretician). In the laboratory the director is a complete  
god, and just about as invisible, since he is burdened by  
classes, exams, and administration. Nobody is consulted about  
matters concerning the whole laboratory.

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They complained that the training of students is poor. The system of the US, where many full professors work in the san laboratory, seemed to them a vast improvement.

The lack of equipment and financial support from the Kulturministerium is very serious. The Landtag of Bavaria wanted to found a second chair for physics in Wuerzburg. However, the Kulturminister, Hundhammer, spoke against it and got them to reconsider! This is really a fantastic state of affairs.

In the afternoon, LEISEGANG and FETZ decided to show us Wuerzburg. In this process, we met KUELENKAMPF, just returning from Erlangen, where he had discussed prices of a betatron with Siemens. We had a long talk with him, and all of them saw us off at the station.

The equipment of this laboratory is definitely very poor. The assistants claimed that only Muenster was worse. The research is very limited to the single field of X-rays. The library belongs mostly to Jena.

Individual Research  
Problems :

- a. SCHUPFERER measures the velocity spectrum in the back-diffusion of electrons of 40 MGV which hit a metal plate.
- b. Somebody tests the "Scherzer formula" for the angular distribution of X-rays produced on very thin aluminum foils.
- c. LEISEGANG intends to determine the degree of polarization of X-rays by measuring tracks of electrons produced by X-rays in a Wilson cloud chamber. This means a stereoscopic measurement of some thousands of tracks. He has to do this himself, although it is work for a technician. He is quite unhappy about it, but it seems to be the chief's suggestion.

- end -

**SECRET**

CENTRAL INTELLIGENCE AGENCY  
WASHINGTON 25, D. C.

16 June 1952

MEMORANDUM FOR: Director, Joint Intelligence Objectives Agency

ATTENTION: Colonel B. W. Heckeneyer

SUBJECT: JIOA Watch List of 17 March 1952

1. We have received a memorandum [redacted] from which the following paragraph is quoted:

1.3 (a) (u)  
C

"The names of personnel given in the referenced document as being associated with biological warfare have been carefully perused by working level personnel

1.3 (a) (u)  
C

[redacted] The resulting consensus is that the personnel enumerated as being worthy of watching because of any possible scientific achievement or direction of policy in the field of biological warfare should be revised. The names of von Sicherer, Kempfer, and Eschenbach are recommended for removal from the list. No additions are recommended at this time."

2. Would you please advise me of what action you can take on this recommendation [redacted]

1.3 (a) (u)  
C

Scientific Intelligence

Approved for Release  
Date 10/19/55

✓ CIA Denial  
201 Fnu von SICHERER  
C/R 201 J. KEMPFER  
C/R 201 (Fnu) ESCHENBACH

[redacted]

834021-1937

CLASSIFICATION [REDACTED]  
CENTRAL INTELLIGENCE AGENCY  
**INFORMATION REPORT**  
SECURITY INFORMATION

REPORT NO. [REDACTED]

CD NO. DAS 1197  
CASE 9318  
DATE DISTR. // FEB 52

COUNTRY Germany (West Zone)/USSR

NO. OF PAGES 3

SUBJECT Soviet Reasons for Return of German  
Specialists/Prospects for a New Paperclip Project

NO. OF ENCLS.  
(LISTED BELOW)

PLACE ACQUIRED [REDACTED]

SUPPLEMENT TO REPORT NO. [REDACTED]

DATE ACQUIRED BY SOURCE Nov 51

DATE OF INFORMATION Nov 51

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
A.	B.	C.	D.	E.	F.	1.	2.	3.	4.	5.	6.
X							X				

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THIS IS UNEVALUATED INFORMATION

SOURCE [REDACTED]

1.3(a)(4)  
C

1. Prior to [REDACTED] November 1951, the Soviets returned to the East Zone about 100 German specialists out of the hundreds that went to the USSR. These returnees were placed in good industrial positions in the East Zone by the authorities and were ordered to remain there. However, about 70 escaped to the West Zone. [REDACTED] there are three main reasons why the Soviets sent these men back.
  2. First, the Soviets sent back only those men who did not sign a document to become members of the Communist Party. Such Germans would always be a special security risk.
  3. Second, all the Germans that went to the USSR had five year contracts which expired during 1951. These men were all well known. They could not disappear without the fact being noticed.
  4. Third, all the Germans in the USSR worked only with top-notch Soviet scientists and engineers who talked the same technical language. No Soviet military man of lower rank than General contacted them. Thus mutual confidence was built up, as a result of which the Germans opened up fully about their past work and planned developments. They now suppose that the Soviets, after these five years, no longer need them in order to continue work along the German lines or otherwise.

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C

DATE OF INFORMATION Nov 51

GRADING OF SOURCE BY OFFICE OF ORIGIN						SOURCE'S OPINION OF CONTENT					
COMPLETELY RELIABLE	USUALLY RELIABLE	FAIRLY RELIABLE	NOT USUALLY RELIABLE	NOT RELIABLE	CANNOT BE JUDGED	TRUE	PROBABLY TRUE	POSSIBLY TRUE	DOUBTFUL	PROBABLY FALSE	CANNOT BE JUDGED
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SOURCE

[REDACTED]

1.3(a)(4)  
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[REDACTED]

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Date 7 NOV 1985

834021-1938

CLASSIFICATION [REDACTED]

STATE	EV	X	NAVY	X	NSRB	DISTRIBUTION							
ARMY		X	AIR	X	FBI	W/OSI	EV	STATE	EV				

✓ CIA Paperclip

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Present Attitude of German Specialists

6. [REDACTED]

7. In Germany, in the past, scientists and engineers that worked one or two years in the guided missiles field became fanatics on the subject. Their chief interest came to be the solution of problems connected with this field. They always considered it a challenge to step ahead on virgin soil. Engineers had an urge to create something new and not just solve problems in a conventional way. That is what made the whole business so interesting. The technical men who worked in this field would still like to start again doing what they love, namely, new guided missiles work, rather than stay in the quiet positions with the security they now have. At present they are for the most part in intermediate or temporary positions where they cannot use their GM experience.

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8. [REDACTED] these technical people would be glad to come to the US when and if they get an offer. They say "If American industry needs us and wants us, why doesn't American industry contact us?" They would come, not only to be on the safe side, but to work in their chosen field.

9. In 1945 the situation was such that the Germans thought everything was lost. The technical men offered themselves to anyone that made an offer and, hence, they were called the scientific mercenaries of the Twentieth Century.

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10. In late 1951, now that Germany is recovering, there is again a proud feeling. It will now be necessary to convince them to take such a turning point in their lives as coming to the US. This can best be done by Germans who have already spent some years in the US. [REDACTED] it is necessary to act now, because [REDACTED] by the spring of 1952, there will be a need for skilled people for rearmament purposes within Germany. At least part of the industry will work on rearmament and will put these experienced people in good positions.

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[REDACTED]

Suggested Procedure for a New "Paperclip" Project

12. [REDACTED] the starting point of a new "Paperclip" project should be to set up an administrative organization made up of Germans [REDACTED] They would first set up a list of specialists willing to come over, which list might contain some 100 names.

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[REDACTED], This list should then be sent to the US industry. After the industry indicates which men it wishes to secure, the first contact can be made with the specialists by the German organization with the help of one or more "Paperclips".

13. After the German organization has convinced the prospective candidate of the desirability of coming to the US, they should be contacted by technical men from US industry who can talk technical matters to them in a way they can understand. Only a technical man can correctly judge the qualifications of another technical man. In this way, from the first moment, there will be confidence between the German who is looking for a job and a representative of US industry. [REDACTED] this approach will be successful in getting specialists to come over.

14. [REDACTED]  
(u)

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1.3(a)(u)  
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C

11.

[redacted]

1.3(a)(u)  
C

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[redacted]

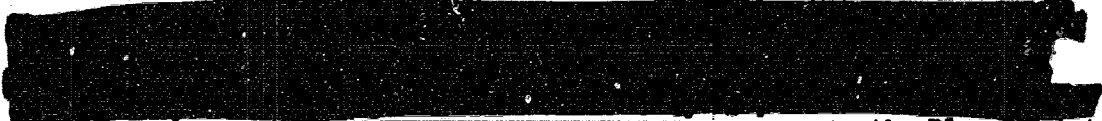
[redacted]

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If the above plan is used, a German will be able to come to the US and get to work in his specialized field promptly after he makes up his mind on the subject.

US Vs German Working Conditions

16.

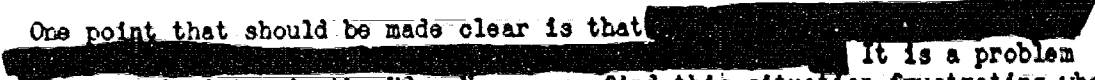
When such a new "Paperclip" project is set up, some German "Paperclip" specialists should be available for these people to talk to, so that they would know what to expect in the US. Everyone coming to a new country finds there are some things that he doesn't like and other that he likes very much. ✓

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17.

One point that should be made clear is that



It is a problem to get a decision in the US. Newcomers find this situation frustrating when they know that something could be done much quicker if they could get someone to make the decision. It is hard sometimes to get a clear cut answer and there is a great deal of uncertainty. The Germans are used to having one man to decide what is to be done. How it is to be done is the problem of the engineer. Such matters should be explained to prospective "Paperclips" before they come over. ✓

-- end --