

"APPROVED FOR RELEASE: 06/08/2000

CIA-RDP86-00513R000205010008-5

DEKADYON II, V. 11

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CIA-RDP86-00513R000205010008-5"

BERLOVSKIY, V.M., inzh.; SHPIL'BERG, G.I., inzh.

Electric speed limiters for mine hoisting machinery. Ugol'prom.
no.1:61-65 Ja-F '62. (MIRA 15:8)

1. Khar'kovskiy elektromekhanicheskiy zavod.
(Hoisting machinery) (Electric controllers)

BERLOVSKIY, V.M.

Rack-type PGKh6010 and PGKh6014 stations for regulation of asynchronous electric motors. Energ. i elektrotekh. prom. no.1:61-63 Ja-Mr '63. (MIRA 16:5)

1. Khar'kovskiy elektromekhanicheskiy zavod.
(Electric motors, Induction--Starting devices)

BERLOVSKIY, V.M.; BOGOPOL'SKIY, B.Kh.

Automated electric driving sets for mine hoisting machines.
Ger. zhur. no.549 My '64. (MIRA 17:6)

1. Khar'kovskiy elektromekhanicheskiy zavod (for Berlovskiy).
2. Gosudarstvennyy proyektno-konstruktorskiy institut avtomatizatsii
rabot v ugol'noy promyshlennosti (for Bogopol'skiy).

BERLOVSKIY, V.M., inzh.; SHTEPA, Ye.P., inzh.; TRET'YAKOVA, I.V., inzh.;
MINEVICH, A.B., inzh.

Generator-motor unit with parallel power transmission for mine
hoisting systems. Elektrotehnika 36 no.6:29-32 Ja '65.

(MIRA 18:7)

MEL'KUMOV, Lev Georgiyevich; BOGOPOL'SKIY, Boko Khaimovich;
BERLOVSKIY, Vyacheslav Mikhaylovich; KOVALEV, Yuriy
Sergeyevich; KOZIN, Yuriy Vladimirovich; NAYMAN, Artur
Yefimovich; FEL'DMAN, Yelizar Samoylovich; SHUVAYEV,
Anatoliy Andreyevich [deceased]; KORENDYAYEV, G.V., otv.
red.; BELOV, V.S., red. izd-va; LOMILINA, L.N., tekhn.
red.; IL'INSKAYA, G.M., tekhn. red.

[Automatic control of mine compressor stations] Avtomati-
zatsiya shakhtnykh kompressornykh stantsii. Moskva, Gosgor-
tekhizdat, 1963. 151 p. (MIRA 16:8)

(Automatic control) (Air compressors)

BERLOVSKIY, V.M.; BOGOPOL'SKIY, B.Kh.; FEL'DMAN, Ye.S.

Maximum speeds in starting and slowing multirope hoists. Gor. zhur.
no.3:43-45 Mr '63. (MIRA 16:4)

1. Khar'kovskiy elektromekhanicheskiy zavod (for Berlovskiy). 2.
Gosudarstvennyy proyektno-konstruktorskiy institut avtomatizatsii
rabot v ugol'noy promyshlennosti (for Bogopol'skiy, Fel'dman).

BERLOVSKIY, V.M., inzh.

Stations series PGKh5000T for controlling electric meters with short-circuited rotors in tropical conditions. Ger. zhur. no.8:48 Ag '63.
(MIRA 16:9)

1. Khar'kovskiy elektromekhanicheskiy zavod.
(Mining machinery—Electric driving)

BERLOVSKIY, V.M., inzh.; KHEML'NITSKIY, R.S., inzh.

Using induction transducers in the electric driving of mine
hoisting machinery. Gor. zhur. no.7:50-53 J1 '64. (MIRA 17:10)

1. Khar'kovskiy elektromekhanicheskiy zavod.

BERLOVSKIY, V.M., inzh.

Standard remote control units made by the Kharkov Electric
Machinery Plant. Gor.zhur. no.10:59-60 0 '64.

(MIRA 18:1)

1. Khar'kovskiy elektromekhanicheskiy zavod.

BERLOVSKIY, V. M., inzh.

Standard unit equipment manufactured by the Kharkov electromechanical
plant. Gor. zhur. no.4:54-56 Ap '65. (MIRA 18:5)

1. Khar'kovskiy elektromekhanicheskiy zavod.

BERLOVSKIY, V.M., inzh.; BOZDYAK, Yu.G., inzh.; SHTEPA, Ye.P., inzh.;
MINEVICH, A.B., inzh.

Automated electric driving of mine hoisting machines with a
revolving stator. Gor. zhur. no. 12:49-52 D '65.

(MIRA 18:12)

1. Khar'kovskiy elektromekhanicheskiy zavod.

POLAND

BERLOWICZ, Aleksandra and SZOSTEK, Mieczyslaw, Department of Pathological Anatomy (Zaklad Anatomii Patologicznej) (Acting director: Docent, Dr. R. STANCZYKOWA) and the First Surgical Clinic (I Klinika Chirurgiczna) (Director: Docent, Dr. Jan NIELUBOWICZ), both of the AM [Akademia Medyczna, Medical Academy] in Warsaw

"Liver rupture at the Site of the Gallbladder Cancer Metastasis. Case Report."

Warsaw, Polski Tygodnik Lekarski, Vol 18, No 21, 20 May 63, pp 756-757

Abstract: [Authors' English summary] Authors report a case of tumor of the gall bladder where bleeding from the digestive tract (sedes cruenta) was observed. Death was due to the severe internal hemorrhage caused by the liver rupture at the site of the tumor metastasis. Autopsy confirmed this diagnosis. There are 12 references, of which one is Polish and the others Western.

1/1

BERLOWICZ, Aleksandra; SZOSTEK, Mieczyslaw

Rupture of the liver at the site of the metastasis of
cholecystic cancer. Pol. tyg. lek. 18 no.21:756-757 20 My '63.

1. Z Zakladu Anatomii Patologicznej AM w Warszawie; p.o.
kierownika: doc. dr R. Stanczykowa i z I Kliniki Chirurgicznej
AM w Warszawie; kierownik: doc. dr Jan Nielubowicz.

(LIVER NEOPLASMS) (LIVER DISEASES)
(GALLBLADDER NEOPLASMS) (NEOPLASM METASTASIS)

Berlowski, J.

OLEŚ, Andrzej; KURZEJA, Kazimierz; BERLOWSKI, Józef

Clinical and serological survey of convalescents following Q fever.
Przegl. epidem., Warsz. 12 no.2:171-176 1958.

1. Z Wojewódzkiej Stacji San.-Epidemiologicznej w Rzeszowie Dyrektor:
dr Z. Mazurek.

(Q FEVER,

convalescence, clin. & serol. aspects (Pol))

YE DU-CHZHEN [Yeh Tu-cheng]; CHZHU BAO-CHZHEN' [Chu Pao-chen];
BERLUTSKIY, R.F. [translator]; GIRS, A.A., red.; PROTOPOPOV,
V.S., red.; SOLOVEYCHIK, A.A., tekhn. red.

[Some important problems in the general circulation of the
atmosphere] Nekotorye vazhneishie voprosy obshchei tsirkulyatsii atmosfery. Pod red. A.A.Girsa. Leningrad, Gidrometeor. izd-vo, 1961. 239 p. (MIRA 15:3)
(Atmosphere)

BERLIAN, S.S.

[How varieties of cultivated plants are developed] Kak
sozdaiutsia sorta kul'turnykh rastenii. Moskva, Gos.
izd-vo sel'khoz. lit-ry, 1960. 62 p. (MIRA 15:4)
(Plant breeding) (Plants, Cultivated)

BERLYAND, A.S.

Berlyand, A.S. and Gordin, G.A. "On a method of determining the speed of blood circulation",
Vracheb. delo, 1949, No. 1, paragraphs 33-36

SO: U-3042, 11 March 53, (Letopis 'nykh Statey, No. 9, 1949)

BERLYAND, A. S.

22011 Berlyand, A. S. K patologii nadpochrechnikov. Vracheb delo, 1949, No. 7, str 611-14

SO: Letopis' Zhurnal'nykh Statey, No. 29, Moskva, 1949.

BERLYAND, A. S.

35465. O roli nadpochechnikov v patogeneze gipertonicheskoy bolezni.
Vracheb. delo, 1949, No. 11, stb. 981-84.

Letopis' Zhurnal' nykh Statey, Vol. 48, Moskva, 1949

BERLYAND, A.S.

**Association of pulmonary and genitourinary tuberculosis according to
autopsy data. Probl. tuberk., Moskva No.6:30-37 Nov-Dec 51. (GLML 21:4)**

**1. Candidate Medical Sciences. 2. Of Moscow Municipal Tuberculosis
Institute (Director—Prof. V.L. Bynis).**

BERLYAND, A.S.; VELIKORETSKIY, A.N.

[First aid in accidents and sudden illnesses] Pervaya pomoshch' v
neschastnykh sluchaiakh i pri vnezapnykh zabolevaniakh. Moskva,
Medgiz, 1957. 159 p. (MIRA 11:5)
(FIRST AID IN ILLNESS AND INJURY)

BERLYAND, A.S., kand.med.nauk

Organizing temporary disability examinations in hospitals. Sov.
zdrav. 16 no.12:21-24 D '57. (MIRA 11:1)

1. Iz kafedry organizatsii zdravookhraneniya (zav. - prof. N.A.
Vinogradov) Tsentral'nogo instituta usovershenstvovaniya vrachey
(dir. V.P.Lebedeva).

(DISABILITY EVALUATION,
in temporary incapacity in hosp. (Rus))

BERLYAND, A.S., kand.med.nauk (Moskva)

Disability evaluation in the feldsher's work. Fel'd. i akush.
23 no.9:31-36 S'58 (MIRA 11:10)
(DISABILITY EVALUATION)

BERLYAND, Abram Solomonovich

[Home care of patients] Ukhod za bol'nym na domu. Moskva,
Medgiz, 1959. 63 p. (MIRA 13:9)
(HOME NURSING)

BERLYAND, Abram Solomonovich; KAZIYEV, M.Ya., red.; ROMANOVA, Z.A., tekhn.
red.

[Expertise on the temporary loss of capacity to work] Ekspertiza vremen-
noi netrudosposobnosti. Izd.2., ispr. i dop. Moskva, Gos. izd-vo med.
lit-ry Medgiz, 1961. 175 p. (MIRA 14:8)
(DISABILITY EVALUATION)

DOBROSEL'SKIY, K.M.; ANTONOV, F.I.; USPENSKIY, V.I.; BERLYAND, A.U.,
redaktor; KANDYKIN, A.Ye., tekhnicheskij redaktor

[The work of the station in winter] Rabota stantsii zimoi. Moskva,
Gos. transp., zhel.-dor. izd-vo, 1951. 175 p. (MLRA 10:3)
(Railroads--Stations)

BERLYAND, A.U., inzhener; BUKANOV, M.A., redaktor; KHITROV, P.A.,
tekhnicheskiiy redaktor

[Railroad switchman's manual] Rukovodstvo strelochniku. Izd.
2-e. Moskva, Gos.transp. shel-dor. izd-vo, 1955. 224 p.

(MIRA 9:2)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
(Railroads--Switches)

BERLYAND, Aleksandr Usherovich, inzh.; TSARENKO, A.P., inzh., red.;
KHITROV, P.A., tekhn.red.

[Switchman's manual] Rukovodstvo strel'nochniku. Izd.3. Moskva.
Vses.izdatel'sko-poligr.ob"edinenie M-va putei soobshcheniia,
1960. 254 p. (MIRA 13:5)
(Railroads--Switches)

BERLYAND, A.U. otv. za vypusk; KRISHTAL', L.I., red.; VOROTNIKOVA,
L.F., tekhn. red.

[Materials on traffic safety] Sbornik materialov po bezopasnosti dvizheniia; vyderzhki iz prikazov i ukazanii Ministerstva putei soobshcheniia po bezopasnosti dvizheniia. Po sostoiianiiu na 1 iuliia 1962. g. Moskva, Transzheldorizdat, 1962. 194 p.

(MIRA 15:12)

1. Russia (1923- U.S.S.R.) Upravleniye glavnogo revizora po bezopasnosti dvizheniya. 2. Starshiy pomoshchnik glavnogo revizora po bezopasnosti dvizheniya Ministerstva putey soobshcheniya (for Berlyand).

(Railroads---Safety measures)

BERLYAND, Aleksandr Usharovich; TSARENKO, A.P., inzh. red.; VASIL'YEVA,
N.N., tekhn.red.

[Handbook of the switchman] Rukovodstvo strelochniku. Izd.3.
Moskva, Transzheldorizdat, 1962. 258 p. (MIRA 15:11)

1. Russia (1923- U.S.S.R.) Ministerstvo putey soobshcheniya.
(Railroads--Switches) (Railroads--Signaling)

BERLYAND, A.U., otv. za vypusk; KRISHTAL', L.I., red.;
VOROTNIKOVA, L.F., tekhn. red.

[Collection of materials on traffic safety; excerpts from orders and instructions issued by the Ministry of Railroad Transportation on traffic safety] Sbornik materialov po bezopasnosti dvizhenia; vyderzhki iz prikazov i ukazanii Ministerstva putei soobshchenia po bezopasnosti dvizhenia. Izd.2. Moskva, Transzheldorizdat, 1963. 206 p.

(MIRA 17:2)

1. Russia (1923- U.S.S.R.) Upravleniye glavnogo revizora po bezopasnosti dvizheniya. 2. Starshiy pomoshchnik glavnogo revizora po bezopasnosti dvizheniya Ministerstva putey soobshcheniya SSSR (for Berlyand).

BERLYAND, Aleksandr Usherovich; BUKANOV, M.A., red.

[Manual for the switchman] Rukovodstvo strelochniku. Izd.4.,
perer. i dop. Moskva, Transport, 1965. 253 p.

(MIRA 18:3)

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15/ KLEYMAN, S. L.

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POPKOV, V.I., kand. tekhn.nauk, otv. red.; BERLYAND, I.Ya., red.

[Technological instructions for the manufacture of head-gear from woven materials] Tekhnologicheskie instruktsii po izgotovleniiu golovnykh uborov iz tkanykh materialov. Moskva, Gosbytizdat, 1963. 169 p. (MIRA 17:9)

1. Tsentral'nyy nauchno-issledovatel'skiy institut shveyroy promyshlennosti.

BERLYAND, K.T.

Bibliographic index of published works completed by the scientific workers of the Tashkent Scientific Research Institute of Vaccines and Sera for a five year period (1954-1958). Trudy TashNIIVS 6:281-293 '61. (MIRA 15:11)
(BIBLIOGRAPHY--VACCINES) (BIBLIOGRAPHY--SERUM)

SOV/44-58-4-2959

Translation from: Referativnyy zhurnal, Matematika, 1958,
Nr 4, p 76 (USSR)

AUTHOR: Berlyand, Kh. L.

TITLE: A Solution of Certain Problems of the Heat-conducting
Equation (Resheniye nekotorykh zadach uravneniya
teploprovodnosti)

PERIODICAL: Nauk. zap. Kam'yanets'-Podil'sik. derzh. ped. in-t,
1956, Nr 2, pp 15-19

ABSTRACT: A solution is given for certain boundary problems for
the equation

$$\frac{\partial u}{\partial t} + \frac{1}{2} \frac{\partial^2 u}{\partial s^2} = 0$$

by the method of superimposing the solutions. The value of
the solution of a boundary problem is given at the origin of
coordinates.

Card1/1

V. Ya. Skorobogat'ko

BERLYAND, M. A., ORLOVA, N. N. and DREYZIN, R. S.

"Concerning the Laboratory Diagnosis of Influenza and Application of the
Diagnosis in the Practical Laboratory, pp. 15-16 of the book The Problem of
Influenza and Acute Catarrhs of the Upper Respiratory Tract, Moscow, 1952

BERLYAND, Mordukhay Yevseyevich

BERLYAND, Mordukhay Yevseyevich (Main Geophysical Observatory imeni Voyeykov GUGMS of the Council of Ministers USSR) - Academic degree of Doctor of Physico-Mathematical Sciences, based on his defense, 13 June 1955, in the Council of Leningrad Order of Lenin State U imeni Zhdanov, of his dissertation entitled: "Forecasting and Regulation of the Temperature of the Lowest Strata of the Atmosphere." for the Academic Degree of Doctor of Sciences

SO: Byulleten' Ministerstva Vysshego Obrazovaniya SSSR, List No. 3, 4 February 1956.
Decisions of the Higher Certification Commission Concerning Academic Degrees and Titles.

JPRS/NY 554

BERLYAND, M. Ye.

"Determination of the Horizontal Component of the Coefficient of Turbulent Diffusion," Iz. Ak. Nauk SSSR, Ser. Geograf. i Geofiz., No.1-6, 1944

Central Geophysical Observatory, Red Army

BERLIAND, M. Ye.

Meteorological Abst.
Vol. 4 No. 2
Feb. 1953
Bibliography on Turbulent
Exchange

4B-143 ✓
*Berliand, M. E. Teoriia izmeneniia vetra s vysotol. [Theor. of wind variation with height.]
U.S.S.R. Glavnoe Upravlenie Gidrometeorologicheskoi Sluzhby. Trudy Nauchno-Issledovatel'skikh
Uchrezhdenii, Ser. 1, Meteorologiya, No. 25, Fizika Prizemnogo Sola Atmosfery, p. 14-67, 1947,
18 figs., 8 tables, 32 refs. DLC—The problem of constructing the wind profile up to 1000 m, based
on observations at two levels near the ground, is studied. Theoretical basis is discussed at length,
and a valuable comparison with observational results is given (relationships between gradient wind
and wind velocity at 1 m height, between wind deviation angle and temperature gradient 20 cm-
150 cm, between height of friction layer and wind velocity, wind profile, etc.) Subject Heading:
1. Friction layer 2. Boundary layer 3. Wind profiles.—A.A.

1. BERLYAND, M.Ye.
2. USSR (600)
4. Frost
7. Theoretical principles in protecting plants from frosts by smudge curtains, Trudy GGO no. 12, 1948.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

1. BERLYAND, M.Ye.; KRASIKOV, P.N.
2. USSR (600)
4. Frost
7. Studying smudge methods as a means of frost control M.Ye. Berlyand, P.N. Krasikov, Trudy GGO no. 12, 1948.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

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BERLYAND, M. Ye.

Meteorological Abst.
Vol. 4 No. 3
Part 2
Mar. 1953
Bibliography on Frost and
Frost Forecasting

SC-388 ✓
Berlyand, M. E. and Krasikov, P. N., Issledovanie effektivnosti osnovnykh metodov bor'by s zamorozkami. [Investigation on the efficiency of the principal methods of frost damage prevention.] 551.509.02
Leningrad, Glavnaia Geofizicheskaiia Observatoriia. Trudy, 19(81):5-13, 1950. 10 refs., eqs. DLC
A report on experimental investigations carried out by the Central Geophysical Observatory in 1946. During 1946-1949 various methods of damage prevention were tried and the effectiveness of white and black smoke for this purpose was established. Theoretical and experimental work for the determination of the fuel quota were carried out. Subject Heading: 1. Frost prevention.

EH 5/21/54

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guc

Berliand, M. E.

✓ 3.6-167

551.584:551.524J

Berliand, M. E. K teorii teplovogo rezhima prizemnogo sloia vozdukh. [The theory of the heat regime of the atmospheric layer near the ground.] Leningrad, Glavnaia Geofizicheskaia Observatoriia, Trudy, No. 23(85):10-48, 1951. 3 figs., 4 refs., 27 equations. DTC

After a brief critical review of various methods for determining theoretically the change of temperature in the lower atmospheric layer near the ground, it is concluded that the most promising approach is the one involving solution of the equations of heat conduction given the initial distribution of temperature in the air and soil and the radiational balance. The method of the general solution of these equations and a comparison of the actual march of temperature in the lower atmosphere with the theoretically calculated march are shown. Subject Headings: 1. Micrometeorology 2. Temperature variations.--I.L.D.

rec #

BERLYAND, M. Ye.

3.6-166
Berlyand, M. Ye. K teorii izmeneniia vetra v prizemnom sloe atmosfery. [The theory of wind variation in the atmospheric layer near the ground.] *Leningrad, Glavnyi Geofizicheskii Observatorii, Trudy*, No. 23(85):66-75, 1951. 2 figs., 5 refs., 29 equations. DLC - This is a theoretical analysis of: 1) the daily march of the wind and 2) the determination of the variation of wind velocity with time if the initial height distribution of the wind and the variation of the gradient wind are known. General equations for determining these phenomena are derived. Subject Headings: 1. Meteorology 2. Diurnal wind variations 3. Wind velocity. - I.L.D.
480 ~~PNY~~

551.584:551.553

BERLYAND, M

USSR/Geophysics - Terrestrial Radiation Jan/Feb 52

"Determining the Earth's Effective Radiation Taking the Influence of Cloudiness Into Account,"
M. Berlyand, T. Berlyand, Main Geophys Obs

"Iz Ak Nauk SSSR, Ser Geofiz" No 1, pp 64-78

Suggests a theoretical method for computing the effective terrestrial radiation under actual conditions taking into account the influence of cloudiness. Discusses comparison and analysis of some known empirical relations. Gives tables and simple formulas for cloudy and clear sky. Explains effect of cloudiness in various climates. Authors thank M. I. Budyko and Prof M. I. Yudin for advice. Submitted 3 May 51.

205T45

HERLIAND, M. Ye., kandidat fiziko-matematicheskikh nauk; GOL'TSBERG, I. A.
kandidat sel'skokhozyaystvennykh nauk; DAVITAYA, P. F., doktor
sel'skokhozyaystvennykh nauk; KRASIKOV, P. N., kandidat fiziko-
matematicheskikh nauk.

Combating frosts in the U.S.S.R. Meteor. i gidrol. no. 2:17-23
F '52. (MIRA 8:9)

1. GUGMS pri Sovete Ministrov SSSR, Leningrad, Glavnaya geo-
fizicheskaya observatoriya.
(Frost) (Crops and climate)

BERLYAND, M. YE.

USSR/Meteorology - Meetings

Aug 52

"Meeting on Problems of Investigation of Transformation of Air," M. Ye. Berlyand, Ye. M. Dobryshman

"Meteorol i Gidrol" No 8, pp 49, 50

A meeting on studies of air transformation was held in Leningrad at the GGO (Main Geophys Obs). Representatives of the TsAO (Cen Meteorol Obs), TsIP (Cen Inst of Forecasting), and Tashkent, Kiev, and Minsk research centers participated in the conferences. A number of reports by representatives of the above-mentioned institutions were

229T108

discussed. At the conclusion Kh. P. Pogorsyan, Pres, of the Hydrometeorol SV, was asked to either evaluate the results of discussions or to call a new conference in 1953.

229T108

Berlyand, M. Ye.

Berlyand, M. Ye.

Scattering of long-wave radiation in aerosols and the selection of
efficient smoke varieties for frost control. Trudy GGO no. 29:61-71
'52. (MIRA 11:1)

(Frost protection)

BERLYAND, M. YE.

~~BERLYAND, M. Ye.~~

Step-by-step defrosting of plants following frost. Trudy 000 no.29:
72-77 '52. (NIRA 11:1)

(Frost protection)

Berlyand, M. Ye.

BERLYAND, M.Ye.; KOROTIKH, G.I.; KRASIKOV, P.N.

~~Feasibility of using oil fog for the frost protection of plants.~~

(MIRA 11:1)

Trudy GGO no.29:101-104 '52.

(Frost protection)

~~BERLYAND, M.Ye.~~

Heat transformation of moving air masses. Trudy GGO no.33:46-56
Trudy GGO no.33:46-56 '52. (MIRA 11:1)
(Atmospheric temperature) (Winds)

BERLYAND, M.Ye.; ZAVARINA, M.V.

Analysis of the heat transformation of moving air masses.

Trudy GGO no.33:57-70 '52.

(MIRA 11:1)

(Atmospheric temperature) (Winds)

BERLYAND M. Ye.

water that in the water or air near the ground there is almost always a temperature change and this condition is used for simplifying the problem. Formulas
or developed and tables are constructed for each case.

BERLYAND, M. Ye.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

<u>Name</u>	<u>Title of Work</u>	<u>Nominated by</u>
Eudyko, M.I.	"Physical Rules of the	Main Geophysics Observatory
Leykhtman, D.L.	Microclimate of Agricul-	inani A.I. Vayaykov
Yudin, M.A.	tural Fields, Its Forecast-	
Kucherov, N.V.	ing and Regulation" (series	
Berlyand, M.Ye.	of articles)	
Krasikov, P.M.		
Tinofeyev, M.P.		
Gayevskiy, V.L.		
Vorontsov, P.A.		

SO: W-30604, 7 July 1954

BERLYAND, M. Ye.

"Formation of Dew and Evaporation From Soil and Their Influence Upon
Temperature and Humidity of the Layer of Air Near the Ground".
Trudy Gl. geofiz. observ., No 28, pp 65-83, 1954.

The problem of evaporation and condensation upon a horizontal underlying surface is reduced to the solution of two interrelated systems of differential equations of heat and moisture exchange. One of these systems describes only the change of temperature during the period of time when evaporation or condensation can be disregarded, and the other system describes the joint variation of temperature and humidity. Solution of the formulated problem for the case of various characteristics of the regime (various values of the coefficients of heat conduction, various forms of functions holding true under the boundary conditions, various make-up of the differential equations and boundary conditions) represents great difficulty even under conditions of numerical integration.

The author proposes a method for solving problems of this type, the method consisting of two stages but permitting one to avoid the indicated difficulties. For the problem of the dew the author assumes that the coefficients of exchange during the period from the initial moment of time up to the moment of onset of the dew point and during the time

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after the onset of the dew point near the earth are identical. For the problem of the evaporation the proposed solution is allowed to take into account the differences in the quantities of the exchange coefficients during the course of both periods. Analysis of the obtained formulas makes it possible to determine the amount of dew through the night, which amount turns out to be larger the wind velocity under otherwise equal conditions, since here the flow of moisture toward the earth's surface in-soils than on moist soils. (RZhGeol, No 7, 1955)

SO: Sum No 884, 9 Apr 1956

BERLYAND, M. Ye.

"Daily Variation of Temperature, Turbulent Exchange and Radiation Balance".
Tr. Gl. Geofiz. observ., No 48, pp 26-55, 1954

Forms a periodic solution of a system of equations for temperature, moisture and the coefficient of turbulent exchange. Application of the hypothesis of "Quasistationariness" of a process in the lower atmosphere (30-50 m) makes calculated formulas sufficiently simple. (RZhMekh, No 8, 1955)

SO: Sum No 812, 6 Feb 1956

BERLYAND, M. Ye.

Dew formation and evaporation from the soil and the effect of these phenomena on the temperature and moisture of air layers near the ground. Trudy GGO no.48:65-83 '54. (MIRA 10:7)
(Atmosphere) (Dew)

BERLYAND, M . Ye.

"Method for Prediction of Radiational Fogs"

Trudy Gl. geodiz. observ., No 48, 1954, 84-92

The method is based on the determination of decrease in temperature ΔT at night and evening , which decrease is necessary for the attainment of the dew point. This temperature decrement ΔT depends upon the onditions for heat balance A and upon the temperature distribution in soil along the vertical P in the following way: $\Delta T = A/P$. The author presents monograms and tables necessary for computations, and also an approximate method for the determination of the height of the fog. Conducted verification of fog forecasts by this method determines the justifiability of these forecasts, which is equal to 85%. (RZhGeol, No 9, 1955)

SO: Sum-No 845, 7 Mar 56

SOV/124-58-1-856

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 114 (USSR)

AUTHOR: Berlyand, M. Ye.

TITLE: On the Prediction and Control of the Thermal Regime of the Surface Air Layer (O predskazanii i regulirovanii teplovogo rezhima prizemnogo sloya vozdukha)

PERIODICAL: Tr. Ukr. n. -i. gidrometeorol. in-ta, 1955, Nr 3, pp 64-72

ABSTRACT: A survey of published works by the author on the heat and moisture exchange in the surface air layer. A detailed presentation of all these results is available in the author's monograph "Predskazaniye i regulirovaniye teplovogo rezhima prizemnogo sloya atmosfery" ("The Prediction and Control of the Thermal Regime of the Atmospheric Surface Layer", Gidrometeoizdat, 1950).

Ye. M. Dobryshman

Card 1/1

Subject : USSR/Meteorology

AD P - 3192

Card 1/1 Pub. 71-a - 19/23

Authors : Berlyand, M. E., Yefimova, N. A. and Yanishevskiy, Yu. D.

Title : Kondrat'yev, K. Ya, Luchistaya energiya solutsa (Radiation energy of the sun) Gidrometeoizdat, 1954. (Book review)

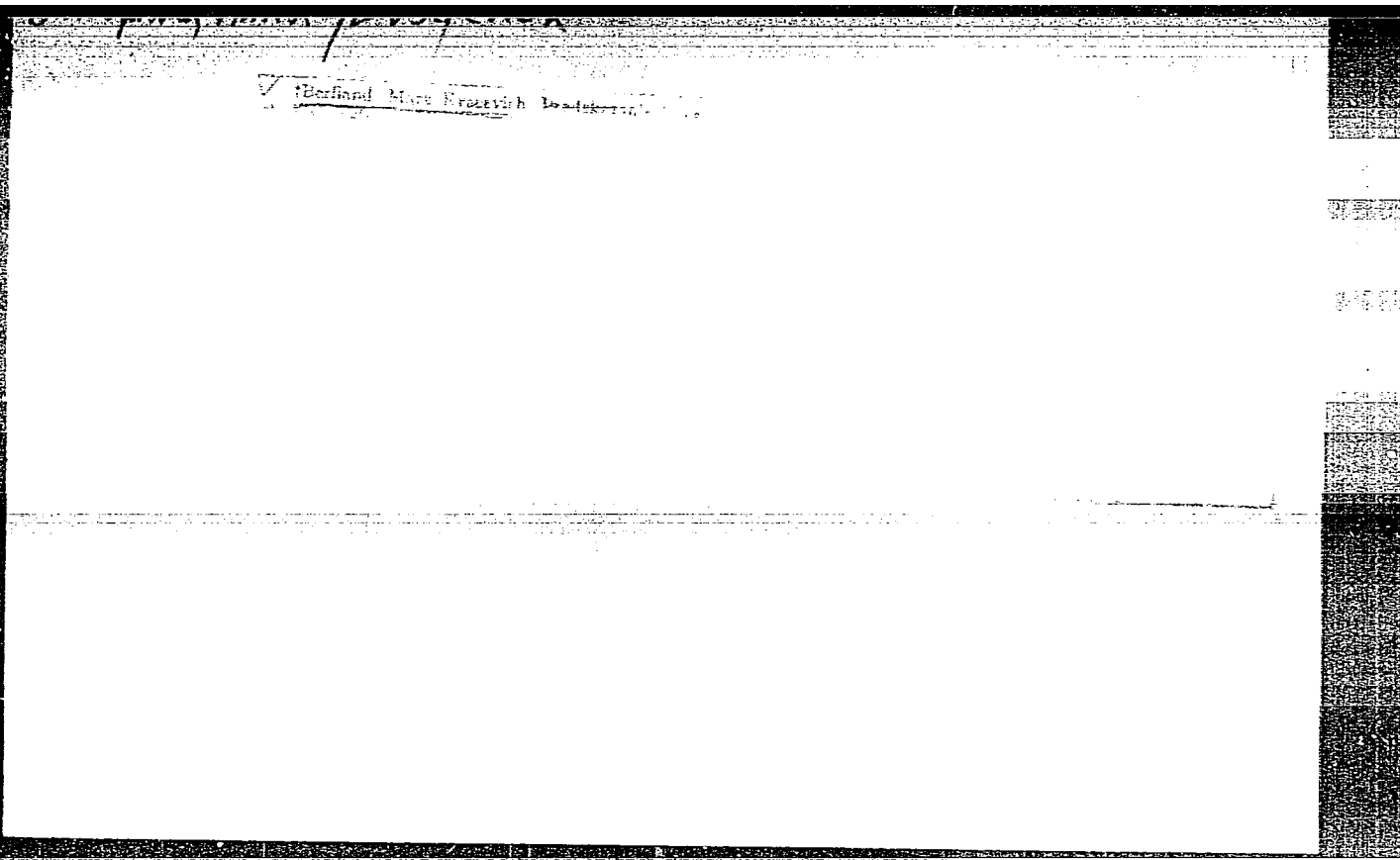
Periodical : Met. i. gidr., 5, 63-64, S/O 1955

Abstract : The book reviewers give a very favorable criticism of the manual. It is considered the first good book on actinometry to be compiled on the basis of extensive research. However, the book offers some contradictory and/or erroneous statements listed by the reviewers.

Institution : None

Submitted : No date

Translation M-1181, 26 Jul 56



PHASE I BOOK EXPLOITATION

782

Beryland, Mark Yevseyevich

Predskazaniye i regulirovaniye teplovogo rezhima prizemnogo sloya atmosfery
(Forecasting and Control of Thermal Conditions in the Near-surface Layer
of the Atmosphere) Leningrad, Gidrometeoizdat, 1956. 434 p. 3,000
copies printed.

Resp. Ed.: Yudin, M.N.; Ed.: Maksimova, I.G.; Tech. Ed.: Braynina, M.I.

PURPOSE: The book is intended for meteorologists, physicists, instructors,
students, heat technologists, agricultural experts, and all those interested
in the forecasting and control of temperature in the near-surface layer of
the atmosphere.

COVERAGE: The author discusses basic problems in the heat balance of the near-
surface layer of air, and the associated phenomena of evaporation, condensation,
radiation currents, and the transformation of air masses. The intensity of
turbulence, changes in humidity content, the wind, and other meteorological
elements depend to a very great extent on thermal conditions in the near-

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Forecasting and Control of Thermal Conditions (Cont.)

782

surface layer. Temperature changes in this layer are basically determined by the radiation balance of the adjacent surface, by turbulent and convective exchanges in the atmosphere, evaporation from and heat exchange in the soil. An analysis of the effect of these factors on the temperature of the air makes it possible to work out basic principles in forecasting and controlling thermal conditions in the near-surface layer on a physical basis alone. Emphasis is placed on underlying principles and on practical instructions in forecasting and controlling thermal conditions in the near-surface layer of air. The material is presented so that the mathematical discussions may be omitted by readers not having the necessary background with no loss in understanding the physical processes involved, the conclusions reached, or the practical recommendations made. The author expresses his thanks to M.I. Yudin of the Main Geophysical Observatory, M.I. Budyko, F.F. Davitay, A.S. Dubov and others for their assistance, and particularly to M.V. Zavarina for her studies on the transformation of air masses, and P.N. Krasikov for his studies on methods of counteracting the destructive effects of early frosts on plant life. In addition Krasikov collaborated with the author in writing Sections 1, 2 and 6 of Chapter X and Sections 1, 7, and 10 of Chapter XI. Krasikov alone is responsible for Section 3 of Chapter XI. The book was reviewed and corrected by K.Ya. Kondrat'yev, D.L. Laykhtman, Ye.S. Lyapin and P.N. Tverskaya.

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Forecasting and Control of Thermal Conditions (Cont.) 782

There are 24 tables; 94 photographs, diagrams and graphs; and 525 references of which 384 are Soviet, 80 English, 58 German, and 3 French.

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11-25-58

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otv.red.; ZHDANOVA, L.P., red.; SERGEEV, A.N., tekhn.red.

[Frost prediction and control] Predskazanie zamorozkov i bor'ba
s nimi. Izd.2., dop. Leningrad, Gidrometeor.izd-vo, 1960. 146 p.
(MIRA 14:3)

(Frost protection)

3,5000

S/044/62/000/008/034/073
C111/C222

AUTHOR: Berlyand, M.Ye.

TITLE: On the numerical prediction of temperature and moisture
in the atmospheric layer in the neighborhood of the earth

PERIODICAL: Referativnyy zhurnal, Matematika, no. 8, 1962, 70,
abstract 8B320. ("Materialy Soveshchaniya Koordinats.komis.
po chisl. metodam prognoza". L., Gidrometeoroizdat, 1961,
106-112)

TEXT: In order to carry out a numerical prediction of temperature
and moisture in the lower atmospheric layers, the system of equations
for the turbulent heat and moisture exchange in the atmospheric layer
in the neighborhood of the earth is solved. For the solution of this
system according to the difference method, the convergence and
stability conditions do not allow to carry out the calculation with a
great timely step. In order to avoid this difficulty, it is proposed
to solve the system according to the straight line method, where the
timely derivatives are replaced by differences. An essential difficulty
in the application of the obtained formulas consists in the fact that
Card 1/2

✓
B

On the numerical prediction ...

S/044/62/000/008/034/073
G111/G222

the integrals occurring in these formulas must be calculated which contain complicated expressions in the solution of the preceding step. In order to overcome this difficulty, the solutions of the preceding step are presupposed under neglect of the variations caused by the height in the last but one step, which essentially simplifies the calculation of the mentioned integrals. With the aid of this artifice it becomes possible to enlarge essentially the timely step. ✓

[Abstracter's note : Complete translation.]

Card 2/2

BERLYAND, M.Ye.

Determining the coefficient of turbulent exchange by the countour of
smoke issuing from factory smokestacks. Meteor.i gidrol. no.6:13-20
Je '61. (MIRA 14:1)

(Atmospheric turbulence)

(Smoke)

BERLYAND, A.Ye.; SOLOMATINA, I.I.

Theory of diurnal humidity and air temperature variations in
the lower atmospheric layer. Trudy GGO no.123:62-69 '61.
(MIRA 14:8)

(Humidity)
(Atmospheric temperature)

BERLYAND, M.Ye.; GRACHEVA, V.P.

Forecasting night-time temperature variations in the surface air layer.
Trudy GGO no.127:35-47 '62. (MIRA 15:7)

(Atmospheric temperature)

BERLYAND, M.Ye.; GRACHEVA, V.P.; FATEYEVA, G.A.

Local prognosis of fog formation. Trudy GGO no.127:57-68 '62.
(MIRA 15:7)

(Weather forecasting) (Fog)

L 18374-63

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AFPTC/ASD/ESD-3

RB

ACCESSION NR: AP3005875

S/0050/63/000/008/0003/0010

59
58

AUTHOR: Berlyand, M. Ye.; Onikul, R. I.; Genikhovich, Ye. I.; Lozhkina, V. P.

TITLE: Contamination of the atmosphere by industrial wastes under anomalous stratification conditions

SOURCE: Meteorologiya i gidrologiya, no. 8, 1963, 3-10

TOPIC TAGS: aerosol, aerosol diffusion, atmospheric inversion, atmospheric contamination, temperature exchange coefficient

ABSTRACT: The diffusion of light and heavy aerosols has been investigated for the complex case of an anomalously stratified atmosphere above the level of the source and for certain related cases. The inversion layer is characterized by weak vertical exchange; the exchange coefficient k_z decreases sharply in the intercepting layer and increases farther aloft; in normal stratification k_z increases to the top of the surface layer and remains constant above it. The dependence of the exchange coefficient on height is complex and must be determined numerically. The distribution of the aerosol concentration is essentially dependent on the k_z profile. When the inversion layer is considerably

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L 18374-63

ACCESSION NR: AP3005875

higher than the source, the influence of the layer at short distances is not great, even if k_2 within the inversion layer is extremely small. If the lower boundary of the inversion layer approaches the level of the source, the intercepting effect increases appreciably, but can be detected only at a considerable distance from the source. The anomalous stratification associated with an inversion layer aloft does not always lead to a significant enhancement of the surface concentration. If the source is sufficiently high above the ground and the intercepting layer is sufficiently high above the source, a relatively small intensification of the surface concentration occurs within a zone of several kilometers from the source. If the source is not high above the ground, and an inversion layer is directly above it, the intercepting effect of the inversion layer will be highly significant; at sufficiently great distances from the source the surface concentration may increase by a factor of more than 2. When the source is within or above the inversion layer, the penetration of the aerosol into the surface layer is slight, even at great distances from the source. Gravitational settling must also be considered in a study of the propagation of heavy aerosols. This problem is solved numerically. In the absence of an inversion, the surface concentration near

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ACCESSION NR: AP3005875

the source will be greater for a heavy aerosol than for a light aerosol. The influence of an inversion above the source is less for the former. The downward propagation of a heavy aerosol is not hindered by lower-lying inversions to the same extent as is the downward propagation of a light aerosol. Orig. art. has: 12 formulas and 4 tables.

ASSOCIATION: Glavnaya geofizicheskaya observatoriya (Main Geophysical Observatory)

SUBMITTED: 00

DATE ACQ: 06Sep63

ENCL: 00

SUB CODE: AS

NO REF SOV: 004

OTHER: 000

Card 3/3

BERLYAND, M.Ye.; ONIKUL, R.I.; GENIKHOVICH, Ye.L.; LOZHKINA, V.P.

Pollution of the atmosphere by industrial refuse under the anomalous conditions of stratification. Meteor.i gidrol. no.8:3-10 Ag '63.
(MIRA 16:10)

1. Glavnaya geofizicheskaya observatoriya.

KIRYUKHIN, Boris Viktorovich; KRASIKOV, Pavel Nikolayevich; BERLYAND,
Mark Yevseyevich, otv. red.; VAYTSMAN, A.I., red.;
RUSAKOVA, G.Ya., red.; IVKOVA, G.V., tekhn. red.

[Rain and snow by the will of man] Dozhd' i sneg po vole
cheloveka. Leningrad, Gidrometeoizdat, 1963. 164 p.
(MIRA 17:3)

BERLYAND, M.Ye.; GENIKHOVICH, Ye.L.; LOZHKINA, V.P.; ONIKUL, R.I.

Numerical solution of the turbulent diffusion equation and
calculation of atmospheric pollution near industrial
enterprises. Trudy GGO no.138:3-17 '63. (MIRA 17:2)

BERLYAND, M.Ye.

Turbulent diffusion theory. Trudy GGO no.138:31-37 '63.
(MIRA 17:2)

BERLYAND, M.Ye.; PANFILOVA, G.A.

Forecasting the time of fog dissipation. Trudy GGO no.138:
73-81 '63. (MIRA 17:2)

BERLYAND, M.Ye.; DUBOV, A.S.

Mikhail Isaakovich Iudin; on his 50th birthday. Meteor. i
gidrol. no.12:55-56 D '63. (MIRA 17:3)

ACCESSION NR: AT4004714

S/2922/63/007/000/0078/0088

AUTHOR: Berlyand, M. Ye.

TITLE: Allowance for advection while forecasting diurnal temperature and humidity fluctuations in the boundary layer of the atmosphere

SOURCE: Vses. nauchn. meteorologich. soveshch. Trudy*, v. 7. Fizika prizemnogo sloya. Leningrad, 1963, 78-88

TOPIC TAGS: meteorology, forecasting, atmospheric boundary layer, temperature fluctuation, humidity fluctuation, advection, advection calculation, diurnal temperature fluctuation, diurnal humidity fluctuation, synoptic meteorology

ABSTRACT: Computations of local and advective values of temperature and humidity are generally arrived at by an application of the results of the theory of the non-stationary transformation of air masses. Even as an approximation, an allowance for advection considerably increases the correctness of forecasting fogs, the appearance of dew and the intensity of nighttime inversions. The formulas for computing the inter-diurnal variations in air temperature and humidity are not applicable to the computation of the intra-diurnal fluctuations of T and q with allowance for advection. The latter are computed by a combination of the results of local forecasting and the transformation of

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ACCESSION NR: AT4004714

moving air masses. The author first considers the allowance for advection while forecasting nightly changes in air humidity. The basic equation is:

$$\frac{\partial}{\partial z} (v_0 + k_1 z) \frac{\partial q_1}{\partial z} = 0 \quad (0 < z < h); \quad (1)$$

$$\frac{\partial q_2}{\partial t} = k_2 \frac{\partial^2 q_2}{\partial z^2} + A, \quad (z > h).$$

with the limiting conditions

where $z = 0$, $\frac{\partial q_1}{\partial z} = 0$, and $z = h$. Limitation of the solution for infinity and for initial

conditions impose the constraints $t = 0$ and $q_2 = q_2'$. Aq is the moisture advection; q_2 is the initial distribution of the moisture in the layer $z \geq h$; $\infty + k_1 z$ and k_2 are the variable coefficients in the layers $z \leq h$ and $z \geq h$. Aq is some known function. The problem can then be solved in terms of two items: one satisfies the homogeneous equations (1) where $Aq = 0$ and also satisfies the heterogeneous initial condition $t = 0$ and $q_2 = q_2'$, standing for humidity variations in the absence of advection. The second item, q_1 , satisfies the heterogeneous equations (1) and the homogeneous initial conditions. Then q_1

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ACCESSION NR: AT4004714

is the solution of the equation system for Equation (1) with the limiting conditions $z = 0$ and $dq_1 = 0$ and the initial conditions $t = 0$ and $q_2 = 0$. Aq' comes from $Aq = Cq + Aq'$,

where Cq represents the phonic advection and Aq' the advection conditioned by humidity variations under the influence of the underlying surface, whereby it is assumed that Aq depends on Q_2 = average diurnal variations of the humidity quantity. Cq comes from $Cq = u \Delta Q$, where x is the distance of the shifting of the air mass, u the velocity of shifting and ΔQ the difference of the humidity values between the initial and end points of the trajectory at 850-700 mb. Then $Aq' = -u \frac{\partial Q_1}{\partial x}$. Q_2 is derived from the differential

equations (2) and the limiting conditions (3)

$$\begin{aligned} \frac{\partial}{\partial x} (z_0 + k_1' z) \frac{\partial Q_1}{\partial x} &= 0; \\ \frac{\partial Q_1}{\partial t} + u \frac{\partial Q_1}{\partial x} &= k_2' \frac{\partial Q_1}{\partial x^2}. \end{aligned} \quad (2)$$

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where $z = z_1$ $Q_1 = \psi(x)$; where $z \rightarrow \infty$ $Q_2 \rightarrow 0$ (3)

z_1 is the level of the meteorological box, $\psi(x)$ a known function and Q_1 the deviation of the average diurnal humidity value from the humidity values at the points $x = 0$. The q_1 and Q_1 values are found by a Laplace transformation. The transformation of the functions of Equations (1) and (2), and a change of the equation system of particular derivatives to ordinary differential equations, yields the following equation:

$$\bar{q}_1 = \frac{u \psi_1 A_1'}{p' (A_1' + \sqrt{u p'}) p'^{1/2} \left(\sqrt{p} + \sqrt{\frac{u p' k_2}{k_1}} \right)} \quad (4)$$

It applies whenever the development of humidity variations remains stationary during the preceding period. Its p and p' are converted according to rules of operational calculations. The variations of humidity related to phonic advection are considered. $q_1 = \Delta q_a$ is the humidity due to advection. By converting the obtained representative functions, the following equations are derived:

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where

$$\Delta q_0 = -F\Delta Q - F_0\Delta Q_0$$

$$F = F_1 + F_2; \quad F_0 = \eta - F; \quad \eta = \frac{ul}{x};$$

$$F_1 = \frac{2}{\pi} \sqrt{\frac{k_2'}{k_1}} + \frac{1}{2} \left(\eta - \frac{k_2'}{k_1} \right) - \frac{1}{\pi} \left(\eta + \frac{k_2'}{k_1} \right) \arcsin \frac{\eta - \frac{k_2'}{k_1}}{\eta + \frac{k_2'}{k_1}};$$

$$F_2 = 2 \sqrt{\frac{k_2'}{k_1 k_2}} r(\sqrt{\theta_A}) + \frac{2k_2'}{k_1 \sqrt{\theta_A}} \left(1 - \sqrt{\frac{k_2'}{k_1} - 1} \right) - \frac{k_2'}{k_1 \theta_A} \left[1 - r(\sqrt{\theta_A}) \right] + \frac{k_2'}{\theta_A k_1 \sqrt{\pi}} w_1(\theta_A, \theta_A); \quad r(y) = e^y \operatorname{erfc} y; \quad (5)$$

$$\theta_A = A_1^2 \frac{x}{a}; \quad \theta_A = A_1^2 \frac{k_2}{k_1} t; \quad w_1(\theta_A, \theta_A) = \int_0^{\theta_A} \frac{r(\sqrt{t})}{\sqrt{\theta_A + \theta_A - t}} dt;$$

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The expected humidity near the ground is ΔQ . The values of w_1 (Da' , Da) are indicated. A table shows the calculations for F and all its components. $\frac{x}{u} = 1$ diurnal period; t , k_1 , k_1' have different values. An analysis of the table indicates that with t , or rather with the size of $\frac{tu}{x}$, F increases because Aq remains constant with time. The longer the time, the greater the humidity changes conditioned by advection. Δq_a in the boundary layer $Z < h$ is independent of height. The influence of the turbulence variable is related to k_1 . The greater the k_1 , the smaller F . When $\frac{x}{u}$ and t are very large.

F_2 becomes small and q_1 is determined by F_1 . In practice, F_2 is only 20-30% of F , when $\frac{x}{u} = 1$ diurnal period and $t > 10$ hours. For F_1 increases also with the size of the

relationship $\frac{tu}{x}$ and $\frac{k_1'}{k_1}$, thus increasing the influence of advection. The author then

considers the allowance for advection while forecasting diurnal fluctuations in air temperature. In the computation of the allowance for advection by the local forecasting of temperature in the boundary layer, the author uses an analogous set of equations:

ACCESSION NR: AT4004714

$$\left. \begin{aligned} \frac{\partial}{\partial z} (v_0 + k, z) \frac{\partial T_1}{\partial z} &= 0 \quad (0 < z < k) \\ \frac{\partial T_2}{\partial t} &= k_2 \frac{\partial^2 T_2}{\partial z^2} + A_T \quad (k < z < \infty) \\ \frac{\partial T_3}{\partial t} &= k_3 \frac{\partial^2 T_3}{\partial z^2} \quad (-\infty < z < 0) \end{aligned} \right\} \quad (6)$$

wherein A_T is temperature advection, and the limiting conditions are: $z=0 \quad T_1=T_3$;

$$-\lambda_1 \frac{\partial T_1}{\partial z} + \lambda_3 \frac{\partial T_3}{\partial z} = B.$$

Again humidity variations for T_1 are represented as two items: the independence of A_T of T_1 under heterogeneous initial and limiting conditions; the dependence of T_1 on A_T under homogeneous conditions. Again, only the second item is connected with advection influence; phonic advection is noted also. By pursuing analogous mathematical reasoning, procedures, and solutions of differential equations, the formula below is obtained:

$$\Delta T_a = D \Delta \theta - D \varphi \Delta \theta \varphi,$$

constituting variations of temperature due to advection. Δa , the expected size of the temperature advection of the earth, is determined by the difference between the initial and end points of the trajectory. The values of D for $z=0$ and $z=2 \text{ M}$ are tabulated.

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Again, $\frac{tu}{X}$ increases for given values of k_1 and k_1' , the temperature advection rate increases linearly. Since the influence of temperature variations due to ΔT_a is not great, one can make use of the approximate dependence of k_1 and k_1' on wind velocity, or limit oneself simply to some average values of k_1 and k_1' . Orig. art. has: 2 tables, 1 figure, and 24 formulas.

ASSOCIATION: GGO

SUBMITTED: 00

DATE ACQ: 27Dec63

ENCL: 00

SUB-CODE: *ES*

NO REF SOV: 005

OTHER: 000

Cord 8/8

BERLIAND, M.Ye.; GENIKHOVICH, Ye.L.; ONIKUL, R.I.

Determining the atmospheric pollution by fumes from chimneys of
electric stations. Trudy GGO no.158:3-21 '64. (MIRA 17:9)