VIRSÍK, K., MUDr.

[redacted]

The great task of elimination of tuberculosis as a disease of masses. Česk.zdravot. 4 no.2:61-66 Mar. 1956.

1. Oblastný ftiseológ Krajská nemocnica tuberkulósy, Podunajské Biskupice.
(TUBERCULOSIS, prevention and control, in Czech)

--VIRSIK K. Tuberckuloza u studentov na bratislavskych vysoluch slolach Tuberculious among students in Bratislava Slovensky Lenkar, Bratislava 1949, 11/15 (307-387) Graphs 1 Tables 4

The university students in Bratislava showed 6.11% tuberculosis morbidity. Bilateral processes were found in 74.6% of tuverculosis, open (BK direct positive) in 10.6% and active 23,8%. Medical students were the most affected, male 5.8%, females 8.5%.

Graubner--Plzen (XV, 4)

SO: Medical Microbiology and Hygiene Section Iv, Vol. 3, No. 7-12

VIRSIK, Karol

Organization of province center for the treatment of tuberculosis in Podunajske Biskupice. Probl.tub. 37 no.8:22-23 '59.
(MIRA 13:6)

1. Direktor Oblastnoy bol'nitsy po lecheniyu tuberkuleza v Podunayskikh Biskupitsakh, Chekhoslovakiya.
(TUBERCULOSIS hosp. & clin.)

VIRSIK, K.; KLIMENT, V.

Pregnancy and pulmonary tuberculosis. Lek. obzor 3 no.11:639-658 1954.

1. Z krajskej nemocnice tbc v P.Biskupiciach, a II. porodnickej kliniky LFSU v Bratislave.

(PREGNANCY, in various diseases
tuberc., pulm.)
(TUBERCULOSIS, PULMONARY, in pregnancy)

VIRSIK, K.; BAJAN, A.; LIBIK, D.; LITOMERICKY, S.; VAGAC, M.;
KOKOLEVSKA, A.

Results of tuberculin screening tests in pregnant women.
Bratisl. lek. listy 43 Pt. 2 no.6:313-317 '63.

1. Ftizeologicka katedra SUDL v Pod. Biskupiciach, riaditel
MUDr. K. Virsik.

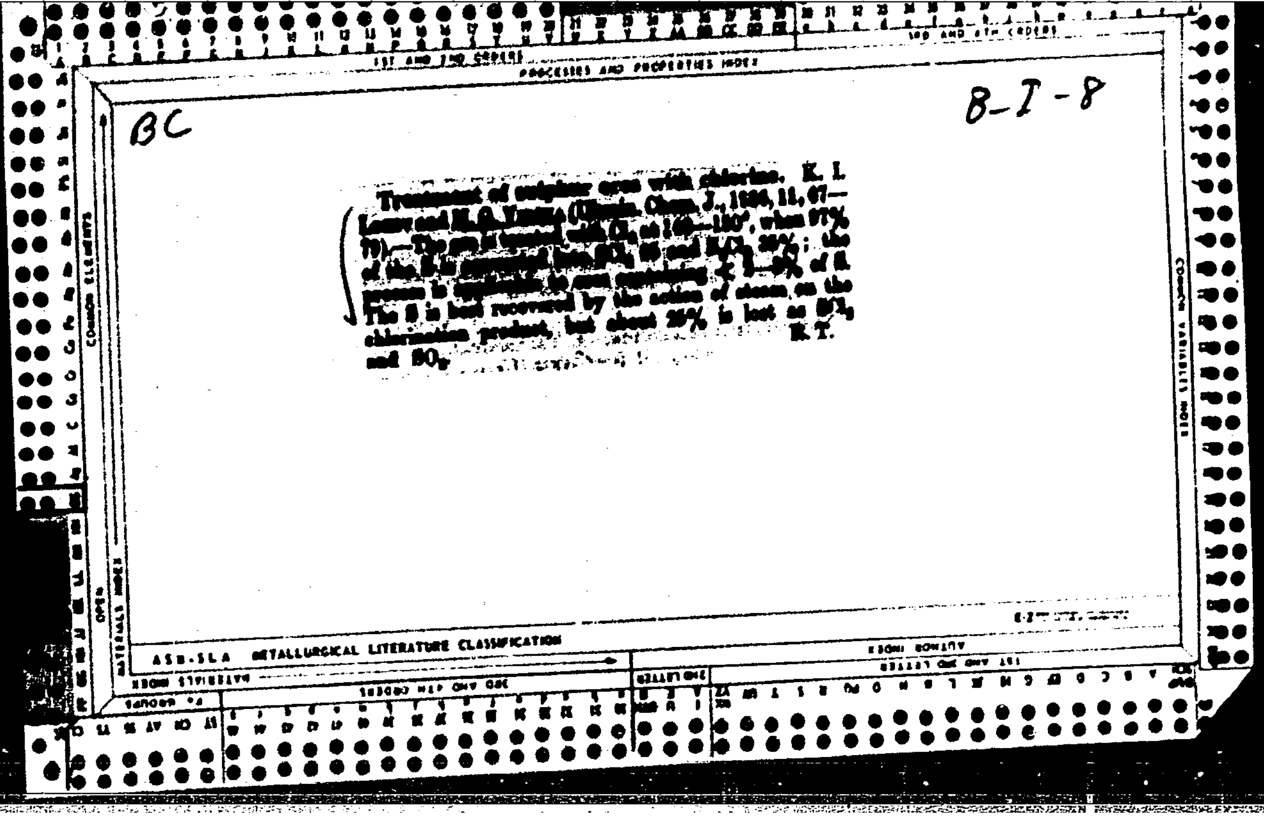
(TUBERCULIN REACTION) (TUBERCULOSIS)
(PREGNANCY COMPL, INFECTIOUS)

VIRSIK, Karol, dr.

Epidemiology of tuberculosis and principal tasks in tuberculosis control in Czechoslovakia. Tuberkulozis 14 no.8:228-231 Ag '61.

1. A Podunajske Biskupice-i megyei tbc korhaz kozlemenye.

(TUBERCULOSIS prev & control)



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

BC

8-I-8

Treatment of sulphur ores with chlorine. K. I. Losev and M. G. Yanina (Ukrain. Chem. J., 1936, 11, 67—79).—The ore is treated with Cl_2 at 140—150°, when 97% of the S is converted into [illegible] and [illegible] 25%; the process is applicable to ores containing [illegible]% of S. The S is best recovered by the action of steam on the chlorination product, but about 25% is lost as H_2S and SO_2. R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

COMMON ELEMENTS

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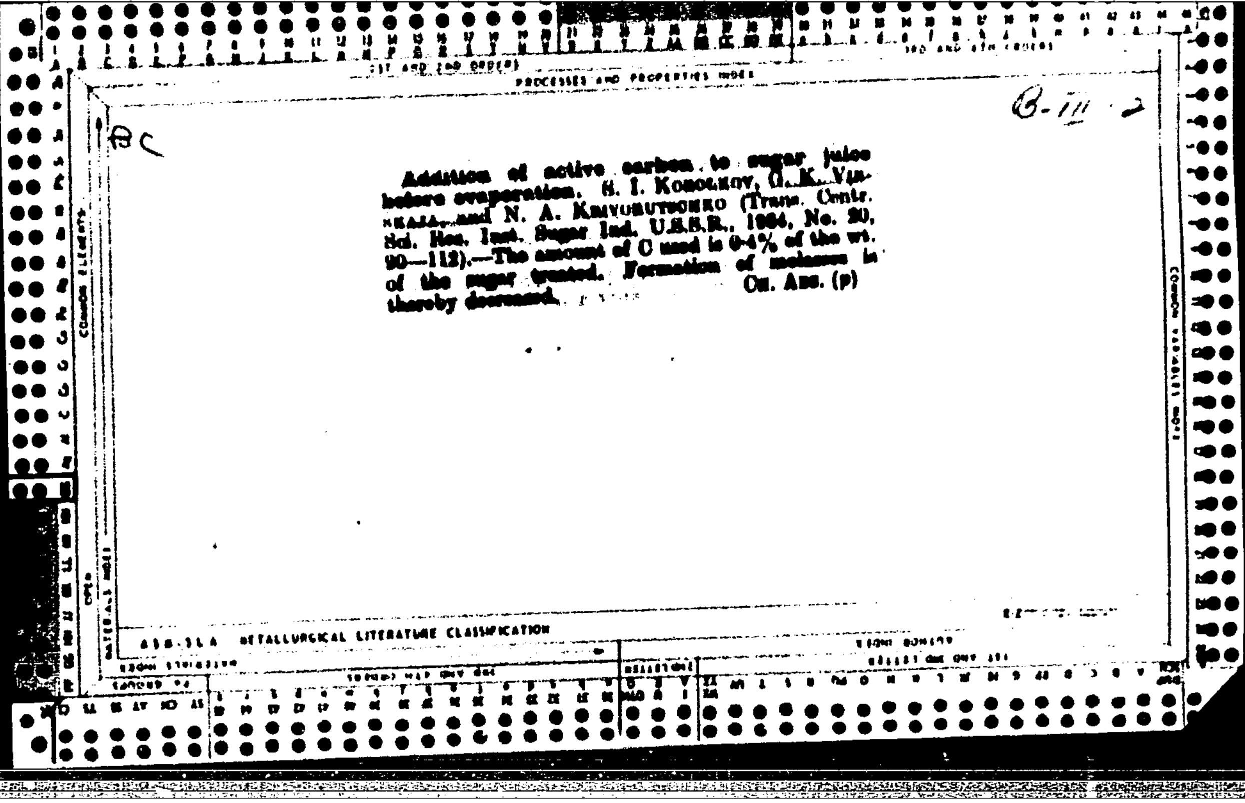
COMMON VARIABLES INDEX

AUTHOR INDEX



1ST AND 2ND ORDER(S)

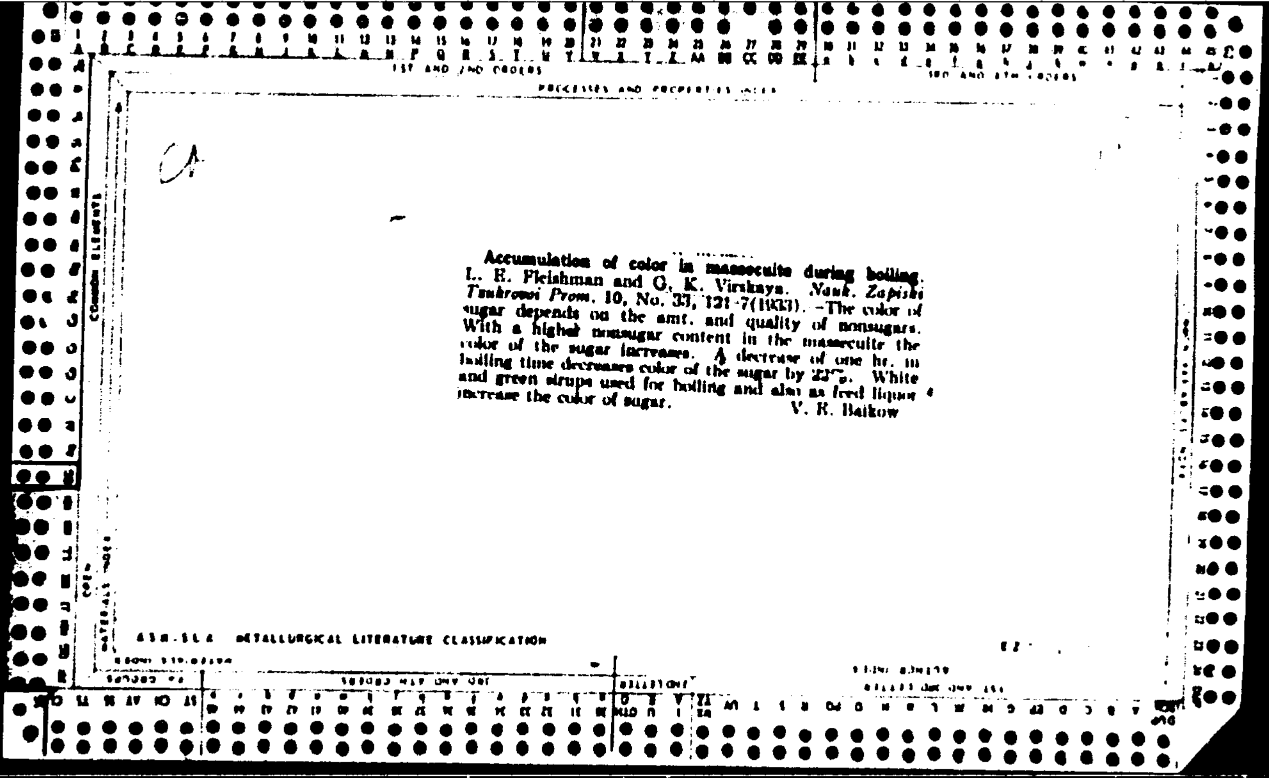
PROCESSES AND PROPERTIES INDEX

BC

B-III-2

Addition of active carbon to sugar juice before evaporation. N. I. Kobolkov, G. K. Vunkaja and N. A. Krivobutschko (Trans. Centr. Sci. Res. Inst. Sugar Ind. U.S.S.R., 1934, No. 20, 90—112).—The amount of C used is 0·4% of the wt. of the sugar treated. Formation of molasses is thereby decreased. Ch. Abs. (p)

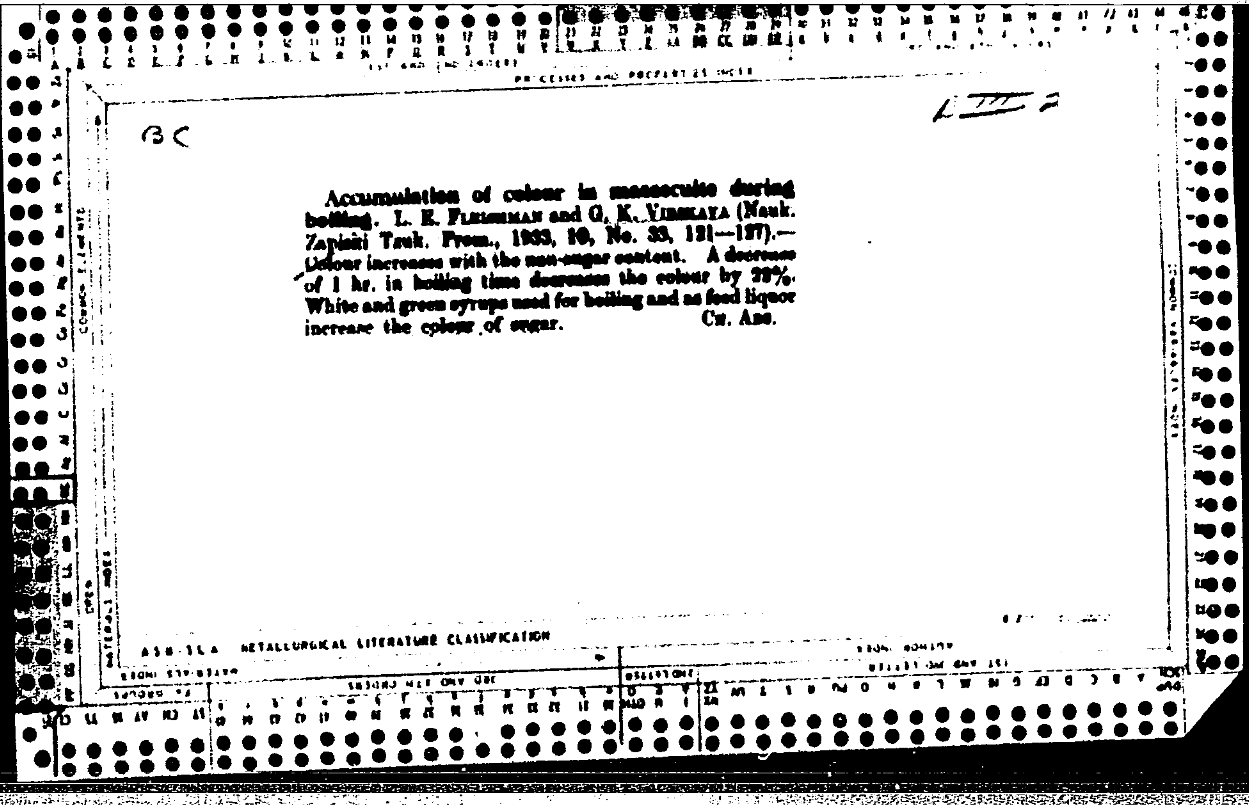
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS
PROCESSES AND PROPERTIES INDEX
3RD AND 4TH ORDERS
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Accumulation of color in massecuite during boiling. L. E. Fleishman and G. K. Virskaya. *Nauk. Zapiski Tsukrovoi Prom.* 10, No. 33, 121-7(1933).—The color of sugar depends on the amt. and quality of nonsugars. With a higher nonsugar content in the massecuite the color of the sugar increases. A decrease of one hr. in boiling time decreases color of the sugar by 22%. White and green sirups used for boiling and also as feed liquor increase the color of sugar.

V. R. Baikow

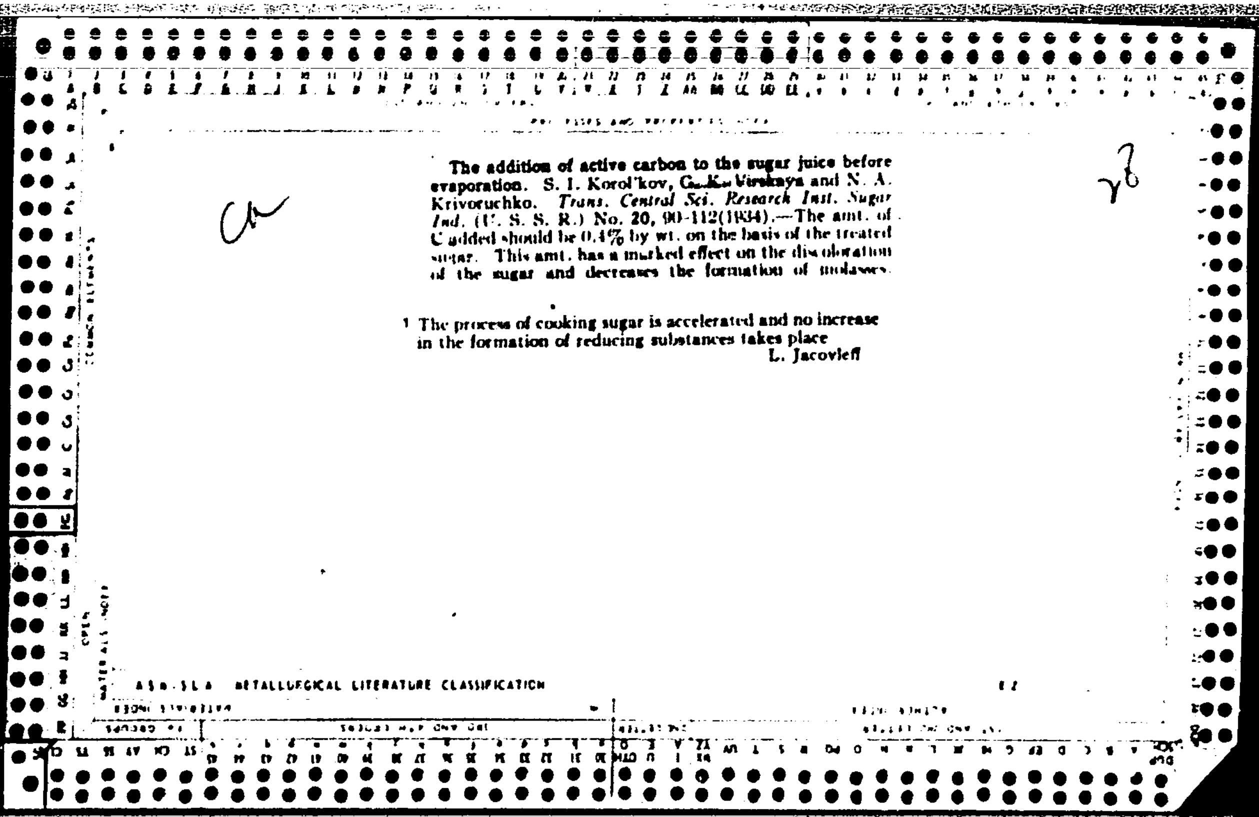


BC

PROCESSES AND PROPERTIES INDEX

Accumulation of colour in massecuite during boiling. L. E. Fleishman and G. K. Virskaya (Nauk. Zapiski Tsuk. Prom., 1933, 10, No. 33, 121—127).—Colour increases with the non-sugar content. A decrease of 1 hr. in boiling time decreases the colour by 28%. White and green syrups used for boiling and as feed liquor increase the colour of sugar. Ch. Abs.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



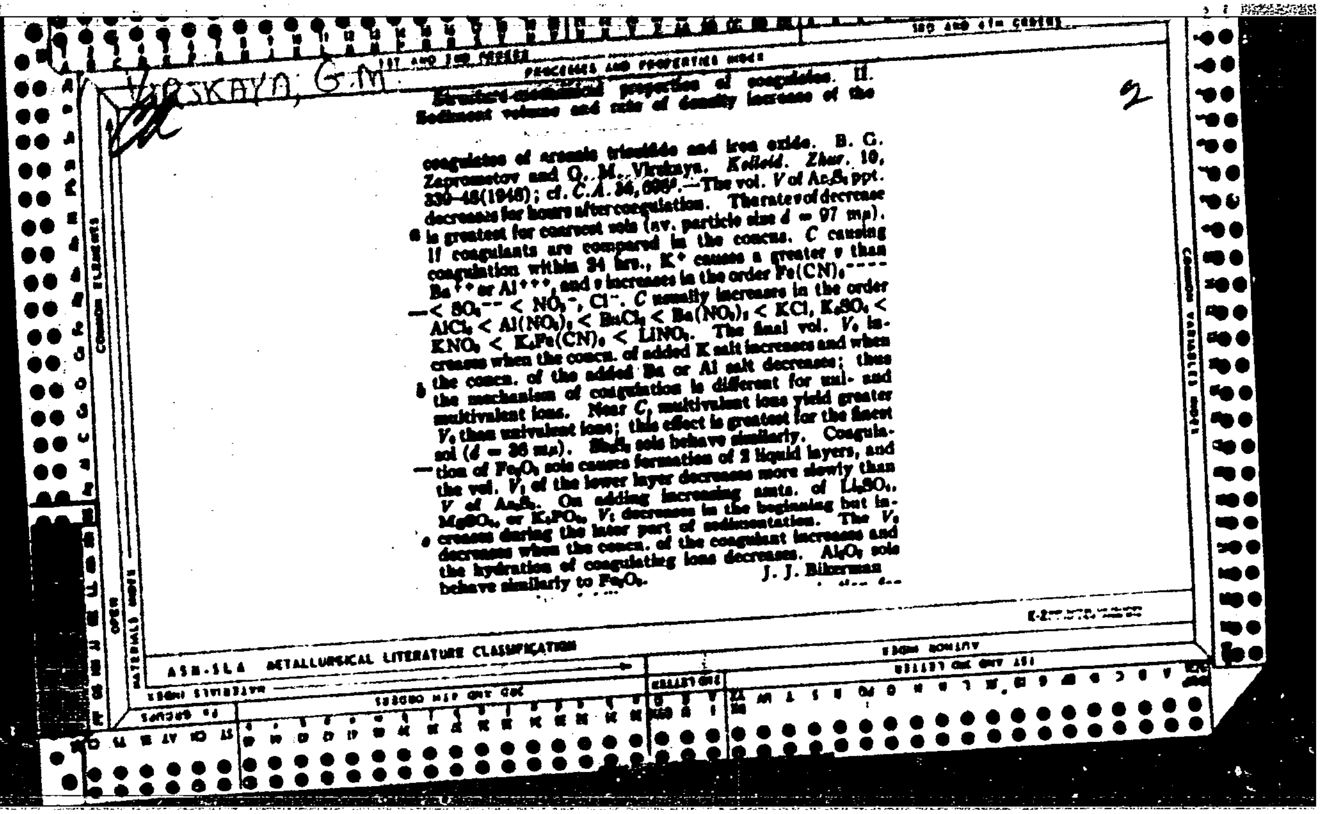
Ca

7b

The addition of active carbon to the sugar juice before evaporation. S. I. Korol'kov, G. K. Virskaya and N. A. Krivoruchko. *Trans. Central Sci. Research Inst. Sugar Ind.* (U. S. S. R.) No. 20, 90-112(1934).—The amt. of C added should be 0.4% by wt. on the basis of the treated sugar. This amt. has a marked effect on the discoloration of the sugar and decreases the formation of molasses. The process of cooking sugar is accelerated and no increase in the formation of reducing substances takes place.

L. Jacovleff

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION



1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

VIRSKAYA, G.M.

2

Structural-mechanical properties of coagulates. II. Sediment volume and rate of density increase of the

coagulates of arsenic trisulfide and iron oxide. B. G. Zaprometov and G. M. Virskaya. *Kolloid. Zhur.* 10, 339-48(1948); cf. *C.A.* 34, 000?.—The vol. *V* of As_2S_3 ppt. decreases for hours after coagulation. The rate *v* of decrease is greatest for coarsest sols (av. particle size d = 97 mμ). If coagulants are compared in the concns. *C* causing coagulation within 24 hrs., K^+ causes a greater *v* than Ba^{++} or Al^{+++}, and *v* increases in the order $Fe(CN)_6^{----}$ $< SO_4^{--} < NO_3^-, Cl^-$. *C* usually increases in the order $AlCl_3 < Al(NO_3)_3 < BaCl_2 < Ba(NO_3)_2 < KCl, K_2SO_4 <$ $KNO_3 < K_4Fe(CN)_6 < LiNO_3$. The final vol. V_0 increases when the concn. of added K salt increases and when the concn. of the added Ba or Al salt decreases; thus the mechanism of coagulation is different for uni- and multivalent ions. Near *C*, multivalent ions yield greater V_0 than univalent ions; this effect is greatest for the finest sol (d = 36 mμ). Sb_2S_3 sols behave similarly. Coagulation of Fe_2O_3 sols causes formation of 2 liquid layers, and the vol. V_1 of the lower layer decreases more slowly than *V* of As_2S_3. On adding increasing amts. of Li_2SO_4, $MgSO_4$, or K_3PO_4, V_1 decreases in the beginning but increases during the later part of sedimentation. The V_0 increases when the concn. of the coagulant increases and decreases when the hydration of coagulating ions decreases. Al_2O_3 sols behave similarly to Fe_2O_3. J. J. Bikerman

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

AKHMEDOV, K.S.; [illegible], M.; SAIDOV, F.

Variation of maximum shearing stress in polyvinyl chloride gels over a period of time and as a result of the addition of plasticizers. Nauch.trudy TashGU no.257.Khim.nauki no.12:75-77 '64.

(MIRA 28:8)

VIRSKAYA, G.M.; AKHMEDOV, K.S.; ISLAMKHODZHAYEVA, A.

Temperature dependence of the swelling of polyvinyl chloride in diethyl oxalate and its mixture with dichloroethane. Nauch.trudy TashGU no.257.Khim.nauki no.12:73-81 '64.

(MIRA 18:8)

VIRSKAYA, G.M.; AREF'YEVA, M.M.

Colloids of cottonseed hull hydrolyzates. Uzb. khim. zhur. no.1:45-51 '60. (MIRA 14:4)

1. Sredneaziatskiy gosuniversitet imeni V. I. Lenina. (Colloids) (Cottonseed)

VIRSKAYA, G.M.; AKHMEDOV, K.S.; DAMINOVA, M.

Swelling and dissolving of polymer powders in vapors and liquids. Uzb.khim.zhur. no.5:35-37 '59. (MIRA 13:2)

1. Sredneaziatskiy gosuniversitet im. V.I.Lenina.
(Polymers) (Ethylene)

VIRSKAYA, G.M.; AKHMEDOV, K.S.; GNEZDILOVA, R.A.

Swelling and dissolving of polyvinyl chloride powder in dichloroethane and dioxane. Uzb.khim.zhur. no.6:35-39 '58.
(MIRA 12:2)

1. Sredneaziatskiy gosudarstvennyy universitet im. V.I.Lenina.
(Ethylene) (Ethane) (Dioxane)

VIRSKAYA, G. M.

USSR/Chemistry Colloids Coagulation Sep/Oct 49

"Structural and Mechanical Properties of Coagulates: II, Sizes of Precipitates and the Rate of Thickening of the Coagulates of Arsenic Sulfide and Ferric Oxide," B. G. Zaprometov, G. M. Virskaya, Cen Asia State U, Lab of Colloid Chem, Tashkent, 10 pp

"Kolloid Zhur" Vol X, No 5

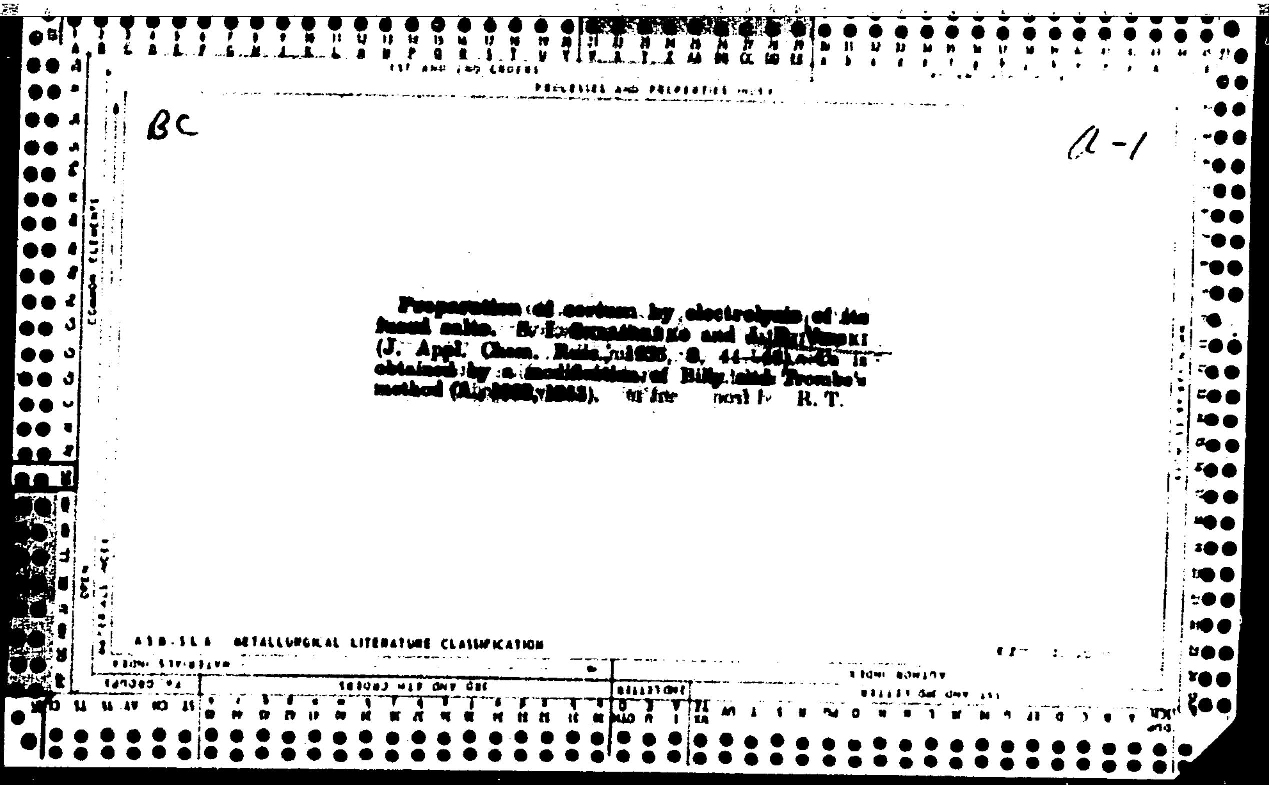
Sizes of coagulates from hydrosols of As_2S_3 rise as valency of either ion of the coagulant is increased, increasing degree of dispersion. Increase in concentration of potassium salts leads to more voluminous precipitates, while with Ba or Al salts a reverse effect (contraction) is observed. If concentration of coagulant is raised, coagulate has a looser structure in first stage, but a higher density in final stage

PA 2/50T37

ZAPROMETOV, B.G.; VIRSKAYA, G.M.; SHPILEVSKAYA, I.N.

Sorptive activity of mixed sorbents. Trudy SAGU no.27:13-24 '51.
(MLRA 9:5)

(Sorbents)



PROCESSES AND PROPERTIES INDEX

BC

a-1

Preparation of cerium by electrolysis of its fused salts. By [illegible] and [illegible]ski (J. Appl. Chem. Russ. 1935, 8, 44–[illegible]).—Ce is obtained by a modification of Billy and Trombe's method ([illegible]). [illegible] R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VIRSKIY, A.A.

Method for studying slope asymmetry. Nauch. zap. Vor. otd. Geog. ob-va;60-64 '63. (MIRA 17:9)

VIRSKIY, A.A.

Development of the main water divide in the central part of the Central Russian Upland. Izv.Vor.otd.Geog.ob-va no.3:101-110 '61.
(MIRA 15:11)

(Central Russian Upland--Erosion)

VIRSKIY, A.A.

Erosion complex and its development. Izv. vses. geog. ob-va 92 no.6:473-481 N-D '60. (MIRA 14:1)

(Erosion)

31449 [illegible]

Rol' «Kombinirovannogo» naklona v formirovanii struktury erozionnogo rel'yefa.
Trudy Vtorogo Vsesoyuz. geogr. s"yezda. T. I.M., 1948, s. 152 - 61

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

VIRSKIY, A.A.

Course of development of erosion relief of plains. Geog. sbor. 1:25-35 '52. (MLRA 6:7)
(Physical geography)

VIRSKIY , A. A.

Virskiy, A. A. - " How American geomorphologists understand the erosion process and how it takes place in actuality," Izvestiya Voronezhsk. gos. ped. in-ta, Vol. X, Issue 2, 1948, p. 57-87 --- Bibliog: 18 items

So: U-3566, 15 March 53, (Letopis 'Zhurnal 'nykh Statey, No. 13, 1949)

VIRT, Svatopluk

[redacted]

Nephelometric determination of the thymol test. Cas. lek. cesk. 94 no.44:1200-1201 28 Oct 55.

1. Ustredni laboratore Zavodniho ustavu nar. zdravi Zavodu V. I. Lenina, Plzen.

(CHEMICAL ANALYSIS
nephelometry in thymol turbidity test.)

(THYMOL
turbidity test, nephelometric determ.)

LAVICKA, J.; BLAHOS, J.; BRABENCOVA, H.; SITAJ, S.; VIRT, S.; MIKUS, F.; KRESANEK, E.; Spolupracovali: MESTAN, J., MUDr., SFN - transfuzni stanice, Praha 10; KULICH, Vl., MUDr., TS - Plzen; DZAVIK, Vl., MUDr., TS Gelnica; ZOLLNAYOVA, Trencin, MUDr.; Laboratorni prace: PREUSOVA, H.; NOVAKOVA, A.; LUSKOVA, K.

Normal levels of blood uric acid in various regions of Czechoslovakia. Cas. lek. cesk. 102 no.34:937-941 23 Ag '63.

1. Klinika chorob vnitrnich lekarske fakulty KU v Plzni, prednosta prof. dr. K. Bobek Vyzkumny ustav endokrinologicky v Praze, reditel doc. dr. K. Silink Vyzkumny ustav chorob revmatickych v Piestanech, reditel doc. dr. S. Sitaj Interne oddelenie OUNZ, Gelnica, veduci MUDR. F. Mikus.

(URIC ACID) (BLOOD CHEMICAL ANALYSIS)

VIRT, J.

EXCERPTA MEDICA Sec.2 Vol.9/9 Physiology,etc.Sept56

3937. VIRT S. Ústřední Lab. Závodníhu Ústavu nár. zdraví Závodů. *Nefelometrické měření thymolového testu. Nephelometric measurement of the thymol test ČAS.LÉK.ČES. 1955, 94/44 (1200-1201)

The usual thymol turbidity test is read in a Zeiss Pulfrich nephelometer.

Heyrovský - Prague

VIRT, Svatopluk

Nephelometric measurement of the thymol turbidity test. Svatopluk Virt (Závody V. I. Lenina, Plzeň, Czech.). *Časopis Lékařů Českých* 94, 1200-1(1955).—Zeiss nephelometer which has been adapted from a usual Pulfrich photometer is used for the measurement of the thymol turbidity test. The procedure is facilitated by the use of gray filters. Calibration is made with the usual $BaSO_4$ standard.

I. M. Hais

1

SAMAN, K.; LAHN, V.; VIRT, S.; technicka spoluprace SPEVACKOVA, J.

Excretion of 5-hydroxyindolacetic acid in glaucoma patients. Cesk. ofth. 17 no.7:487-494 N '61.

1. Ocni klinika lekarske fakulty KU v Plzni, prednosta prof. dr. R. Knobloch Interni klinika lekarske fakulty KU v Plzni, prednosta prof. dr. K. Bobek.

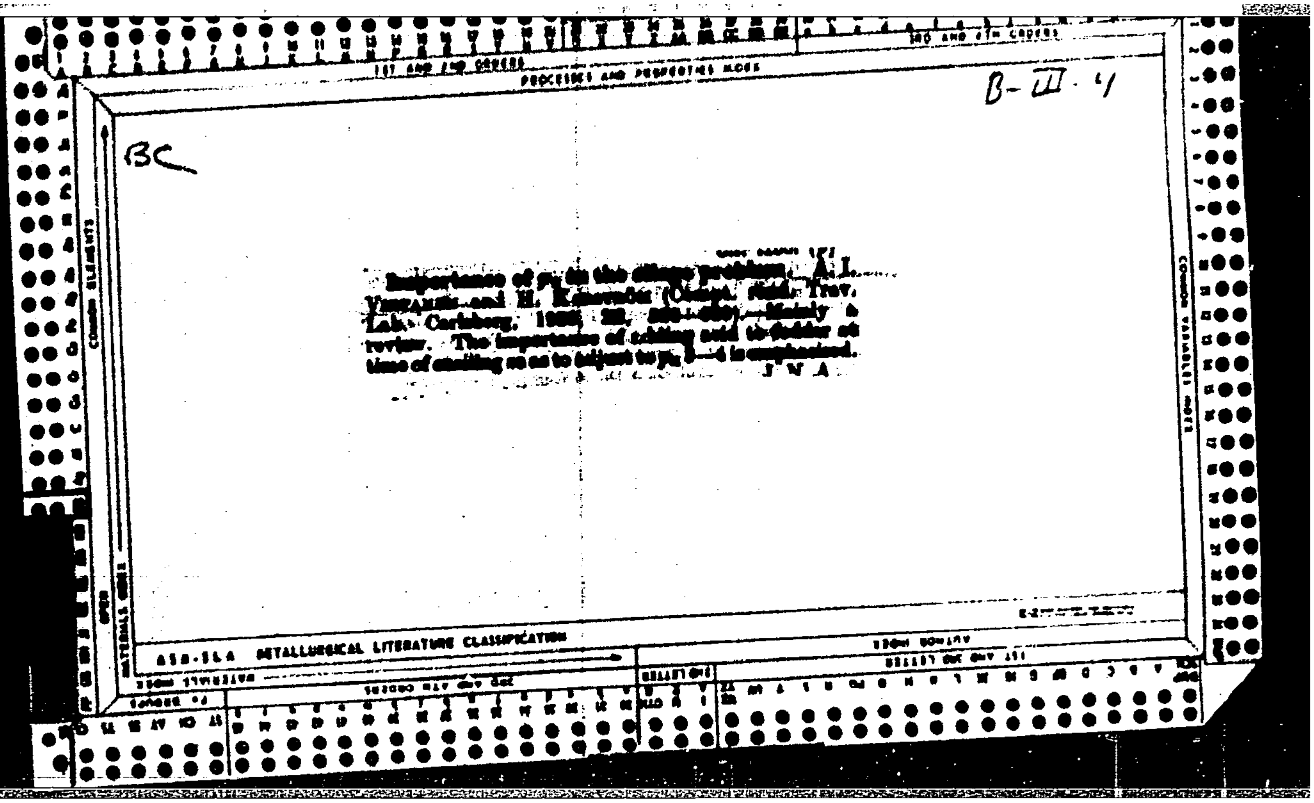
(GLAUCOMA urine) (INDOLACETIC ACID urine)

VIRTA, Nik.; ANTIPINA, L., red.; KURLYKOVA, L., tekhn. red.

[Powerful grain] Moguchee zernyshko. Moskva, Izd-vo "Molodaia gvardiia," 1961. 15 p. (MIRA 14:9)
(Grain)

VIRTA, Nik.; ANTIPINA, L., red.; KURLYKOVA, L., tekhn. red.

[Desired water] Zhelannaia voda. Moskva, Izd-vo "Molodaia gvardiia," 1961. 16 p. (MIRA 15:1)
(Irrigation)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ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

B-III-4

BC

Importance of pH in the ensilage problem. A. I. Virtanen and H. Karström (Compt. rend. Trav. Lab. Carlsberg, 193[illegible], 22, [illegible]).—Mainly a review. The importance of adding acid to fodder at time of ensiling so as to adjust to pH 3—4 is emphasized. J. N. A.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Cb

12

Disappearance of acetylmethylcarbinol and biacetyl caused by microörganisms. A. I. Virtanen and P. Kontio. *Ylipainos Karjantuotteista* 1939, No. 8 (English summary); *Dairy Sci. Abstracts* 2, No. 1, 52(May, 1940).—Three-hundred-ml. portions of milk were autoclaved, 42 to 53 mg. of biacetyl or 33 to 38 mg. of acetylmethylcarbinol added, inoculated with various organisms isolated from butter, and incubated at 19 to 21° for 70 or 100 hrs. *B. punctatum* destroyed about 90% of both compds. and *B. vulgatus* destroyed the same amt. of the acetylmethylcarbinol but only 40 to 60% of the biacetyl. A nonproteolytic coccus and *B. fluorescens* destroyed 30 to 50% of the biacetyl but only 9% of the carbinol. A mixt. of yeasts destroyed 30 to 40% of the biacetyl and up to 30% of the carbinol. C. L. B.

COMMON ELEMENTS

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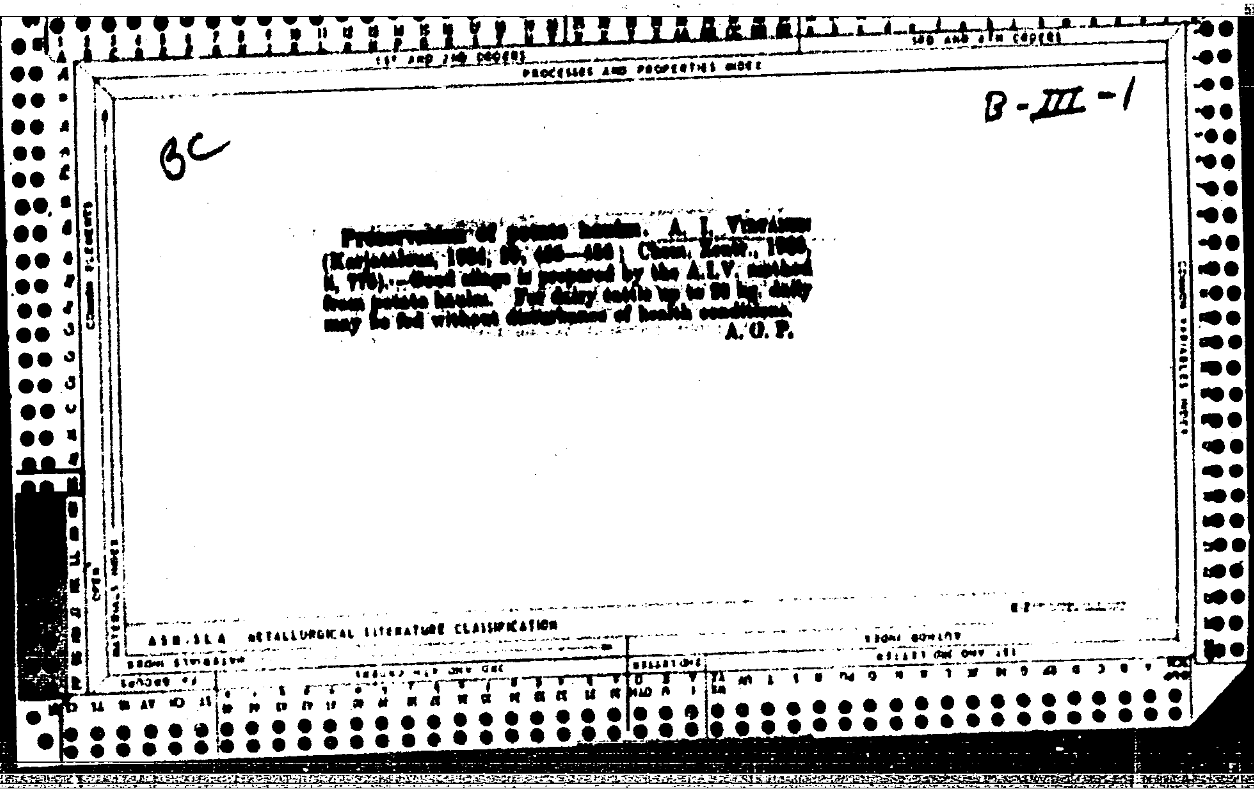
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION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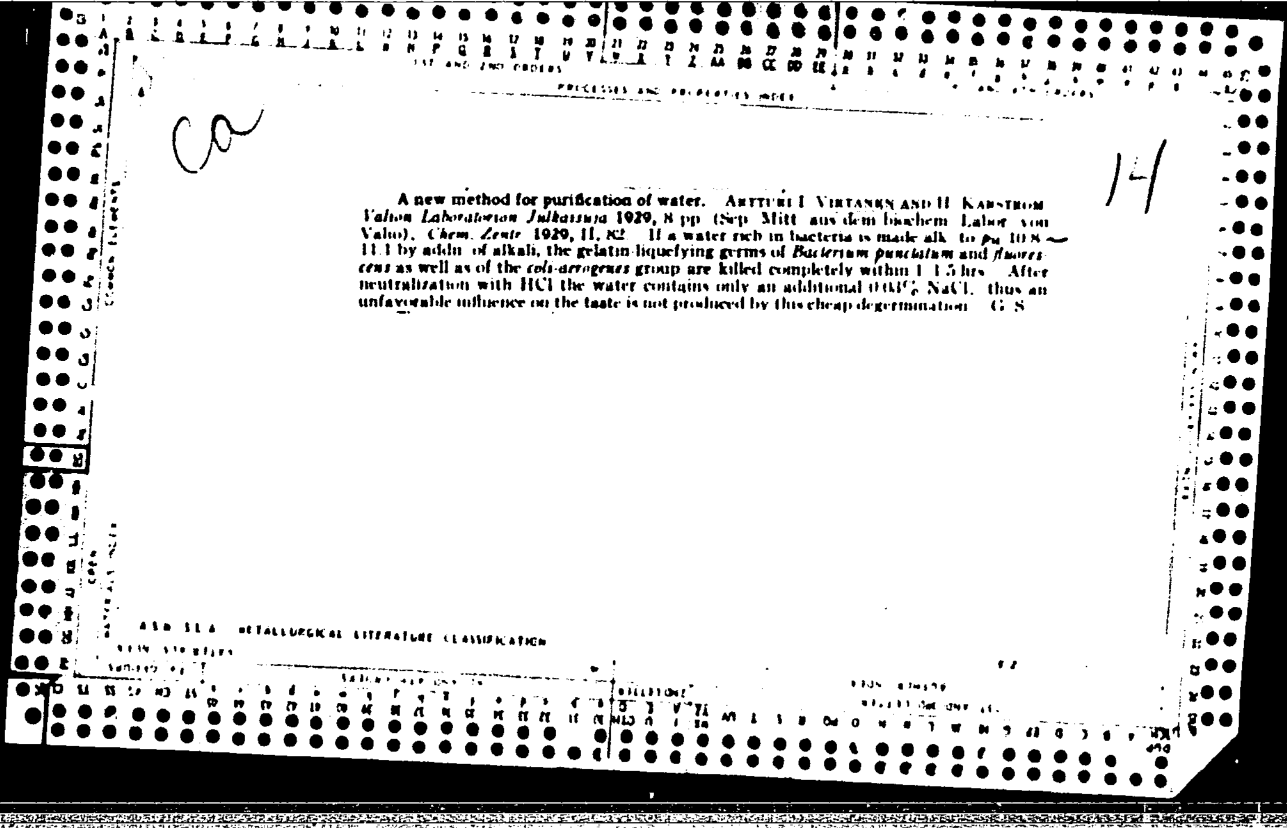
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

BC

B-III-1

Preservation of potato haulms. A. I. Virtanen (Kartoffelbau, 1934, 18, 485—486; Chem. Zentr., 1935, I, 776).—Good silage is prepared by the A.I.V. method from potato haulms. For dairy cattle up to 20 kg. daily may be fed without disturbance of health conditions.

A. G. P.



PROCESSES AND PROPERTIES INDEX
ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

Ca

14

A new method for purification of water. Artturi I. Virtanen and H. Karstrom. *Valion Laboratorion Julkaisuja* 1929, 8 pp. (Sep. Mitt. aus dem biochem. Labor. von Valio). *Chem. Zentr.* 1929, II, 82.—If a water rich in bacteria is made alk. to p_H 10.8–11.1 by addn. of alkali, the gelatin-liquefying germs of *Bacterium punctatum* and *fluorescens* as well as of the *coli-aerogenes* group are killed completely within 1–1.5 hrs. After neutralization with HCl the water contains only an additional 0.01% NaCl, thus an unfavorable influence on the taste is not produced by this cheap degermination. G. S.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

Ca

11 Q

Excretion of *l*-aspartic acid from the root nodules of leguminous plants. Artturi I. Virtanen and T. Laine. *Suomen Kemistilehti* **10B**, 32(1937)(in English).—The major part of the amino N extd. from quartz sand culture of inoculated peas before flowering is *l*-aspartic acid N while if the peas are almost mature, chiefly β-alanine is found in the culture. E. E. Jukkola

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

The effect on plant growth of substances which lower the oxidation-reduction potential. Artturi I. Virtanen and Synnöve Saubert v. Hausen (Biochem. Inst. Helsinki, Finland). *Z. Pflanzenernähr. Düngung u. Bodenk.* 45, 11-22(1940); cf. C.A. 43, 5827f. In expts. with cotyledon-free peas in nutrient soln. with nitrate as N source growth is very poor. Addn. of ascorbic acid (I) (100-200 γ per plant in 1 l. of nutrient soln.) gives a growth comparable to normal plants. With $(NH_4)_2SO_4$ as N source on endosperm-free wheat, I is ineffective. It is believed that the effect of I on plant growth depends upon its reducing effect on nitrates. Other reducing compds., i.e., glutathione, cysteine, and Na_2S, were tested on cotyledon-free peas and showed results comparable with I. It is possible that I functions as a H donor and the -SH compds. reduce the dehydro-I. Thus, the addn. of -SH compds. may result in more effective use of the small amt. of I present in the cotyledon-free embryos. C. K.

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

CA

11C

Formation of cadaverine from lysine. Artturi I. Virtanen and T. Laine. *Suomen Kemistilehti* 9B, 17-18 (1936)(in English).—Cadaverine is produced from lysine by a strain of *B. coli* and also by *B. fluorescens liquefaciens*. Lysine probably is an excretion product of leguminous root nodules and it is possible that cadaverine is formed in the soil during the growth of legumes. E. R. J.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

11 D

CA

Influence of reducing substances on the reduction of nitrate in normal pea plants. Artturi I. Virtanen and Synnove Saubert-v. Hausen (Biochem. Inst., Helsinki, Finland). *Suomen Kemistilehti* **23B**, 63-4(1950)(in English); cf. C. A. 44, 9921e. In a normal pea plant grown on nitrate N a considerable accumulation of nitrate occurs unless ascorbic acid be added to the nutrient. This indicates that during germination of the pea reducing substances (ascorbic acid, glutathione, mercaptans) are not formed in optimum amts., which explains why pea growth is improved by addn. of ascorbic acid. G. Sprengling

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

Formation of β-alanine from aspartic acid through the legume bacteria. Artturi I. Virtanen and T. Laine. *Suomen Kemistilehti* 10B, 2(1937)(in English).—The authors have shown that lysine is not excreted from the nodules of leguminous plants as previously assumed. They have shown that the root-nodule bacteria split off CO_2 from aspartic acid to produce β-alanine. K. E. Jukkola

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

3RD AND 4TH ORDERS

12

PROCESSES AND PROPERTIES INDEX

CA

Fermentation taste of butter. ARTTURI I. VIRTANEN. *Valion Laboratorion Julkaisuja*, Separate 1929, 12 pp.; *Chem. Zentr.* 1929, II, 361.—Some butter samples from a certain dairy had a fruit-like odor and a putrid and fruit-like taste. In other samples a vinegar-like taste was observed. Gelatin-liquefying bacteria, apparently *B. punctatum*, which on sugar-free gelatin soon produced a pronounced odor of fruit ester, were the cause of the 1st phenomenon. They were also found in the water used. The examn. of the strongly acid butter yielded, in addn. to a large amt. of yeast, these bacteria, which, however, soon died because of their sensitiveness to acid. It was further found that the disturbances only occurred with butter which was slightly salted or not at all. Relief is brought by pasteurization of the dairy water, at least during prolonged rainy periods, when the surface water can penetrate to the ground water.

G. SCHWOCH

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

VIRTANEN, O. Erik

Chem Abs
v.48 25 Jan 54

Microbiology

The biochemistry of penicillin formation. O. Erik Virtanen. *Suomen Kemistilehti* 26A, 117-28(1953).—A rev [illegible] production methods and recent literature.

VIRTEJ, Constantin

A new group of apprentices stepping into life. Constr Buc 14 no.649: 4 16 Je '62.

1. Scoala profesionala de ucenici no.1, Turda.

GOLOVNINA, M.V. [Holovnina, M.V.], prepodavatel'; CHERNITSKAYA, M.V. [Chernyts'ka, M.V.]; prepodavatel'; RUDA, O.Ya., prepodavatel'; PANCHENKO, Z.P., prepodavatel'; OLEYNIKOVA, G.F. [Olieinykova, H.F.], prepodavatel'; VIRTEL', L.M., prepodavatel'; YAMPOL'SKAYA, A.M. [IAmpol's'ka, A.M.], prepodavatel'; ALEKHNO, S.T., prepodavatel'; OKREPILOVA, E.P. [Okrepylova, IE.P.], prepodavatel'; SIMONENKO, Ye.M. [Symonenko, IE.M.], prepodavatel'; TSIGEL'MAN, F.M., prepodavatel'; SHCHEPELYAYEVA, O.P. [Shchepeliaieva, O.P.], prepodavatel'; ZAIKA, N.P., prepodavatel'; BARSUKOVA, M.M., prepodavatel'; IZAROVA, N.O., prepodavatel'; IVCHENKO, T.P., prepodavatel'; NEKRASOVA, K.S., prepodavatel'; ALEKSEYEVA, P.O. [Aleksieieva, P.O.], prepodavatel'; GAVRILOVA, G. [Havrylova, H.], red.; GORKAVENKO, L. [Horkavenko, L.], tekhn.red.

[Dressmaking] Krii ta shyttia. Vyd.6, perer. i dop. Kyiv, Derzh.vyd-vo tekhn.lit-ry URSR, 1960. 692 p.

(MIRA 14:2)

(Dressmaking--Pattern design) (Sewing)

VIRTELI, George; POPESCU, Nicolae

Moral wear of the means of production, and state of the machines and equipment in iron foundries. Metalurgia constr mas 13 no.9: 807-812 S '61.

(Machinery in industry) (Labor productivity)
(Iron founding)

VIRTS, G

USSR/ Chemistry - Crystallization

Card 1/1	Pub. 145 - 7/10
Authors	Virts, G.
Title	Remark on the method of fine crystallization of binary magnesium nitrates of rare earth elements
Periodical	Zhur. anal. khim. 9/5, 299-303, Sep-Oct 1954
Abstract	The effect of the crystallization method of the effectiveness of fractionating cerite-earth mixtures, during fine crystallization of magnesium nitrates, was investigated. The splitting of cerite earth into less soluble Nd, Pr, La and better soluble Sm was quantitatively determined by means of radioactive Eu. Three crystallization methods are described. The third method, consisting of priming the hot solution and chilling during intensive mixing, was found to offer the most effective fractionation. Fine crystallization makes possible rapid elimination of Sm elements from cerite. Two USSR references (1951 and 1952). Tables.
Institution	.....
Submitted	May 13, 1954

VIRU, J.

Methods of calculating the labor resources of the collective farms. p.492

SOTSIALISTLIK POLLUMAJANDUS. Tallinn, Estonia. Vol. 14, no. 11, June 1959

Monthly List of East Eruopean Accessions (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

VIRUBOV, D. N., BLUDOV, V. P., et al

"General Heat Technology" Gosenergoizdat, Moscow (1948)

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

a-1

BC

Determination of small quantities of bismuth in organic substances without decomposing them. N. A. [illegible] and [illegible] (Ukrain. Chem. J., 1930, 5, [Sci.], 275—[illegible]).—The organ is comminuted, and 20 g. of the mince are suspended in water; 5 c.c. of hydrochloric acid and 5 c.c. of 1% cupric chloride are added, and the mixture is boiled for 1 hr. with a copper plate (4 sq. cm. per mg. Bi). The plate is then washed and dissolved in nitric acid, and the solution is neutralised by addition of ammonia, 12—15 drops of dilute hydrochloric acid are added, and it is heated at 100° for 1 hr. The precipitate of bismuth oxychloride is washed and dissolved in sulphuric acid, and 15 drops of 5% sulphurous acid and 3 c.c. of 10% [illegible] potassium iodide solution are added. The colour obtained is compared with that of a standard, and the bismuth content is hence calculated. This method serves for the detection of 0·5 mg. of bismuth per 100 g. of organ, and for the determination, with an error of ±1%, of 2—10 mg. per 100 g. of organ. R. Truszkowski.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

1ST AND 2ND ORDERS

PROCESSES AND PROPERTIES INDEX

3RD AND 4TH ORDERS

BC

B Z //

Mechanism of electro-osmotic purification of water. I. Influence of hydrogen- and hydroxyl-ion concentration in the electrode chambers in the course of the process. I. S. [illegible] and A. V. Vinvo (J. Appl. Chem. Russ., 1935, 8, 953—964).—The rates of flow of H_2O in the anode and cathode chambers should be varied for each individual salt, depending on the relative concns. of the acid and base formed from the salt during electrolysis. Thus, in the case of Na_2SO_4 the rates should be as 5 : 1 in the anode and cathode chambers, respectively, whilst in that of $Ca(HCO_3)_2$ the corresponding ratio is 1 : 5, and in the case of tap-H_2O it should rise from 4·5 : 1 in the first cell to 7·6 : 1 in the last.

R. T.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

Mechanism of electroösmotic purification of water. I. Effect of hydrogen- and hydroxyl-ion concentrations in the electrode chambers in the course of the process. I. S. Katzen and A. V. Virvo. *J. Applied Chem.* (U. S. S. R.) 8, 953-64(1935).—The rates of flow of water in the anode and cathode chambers should be varied for each individual salt, depending on the relative concns. of the acid and base formed from the salt during electrolysis. Thus, in the case of Na_2SO_4, the rates should be as 5:1 in the anode and cathode chambers, resp., while in that of $Ca(HCO_3)_2$ the corresponding ratio is 1.6, and in the case of tap water it should rise from 4.5:1 in the first cell to 7.6:1 in the last. H. C. A.

METALLURGICAL LITERATURE CLASSIFICATION

VIRVA, M.G. [Vyrva, M.H.]

Poultry cages with remote control. Mekh. sil'. hosp
12 no.11:26 N '61. (MIRA 14:11)

1. Ukrainskiy nauchno-issledovatel'skiy institut ptitsevodstva.
(Poultry houses and equipment)

AGRANOVSKIY, Yu., inzh.; VIR'YANSKIY, [illegible], inzh.

New system of controlling the mechanisms of portal and floating electric cranes. Rech. transp. 21 no.8:15-16 Ag '62.
(MIRA 18:9)

VIR'YANSKIY, Z., inzh.; KITSIS, S., inzh.

Valuable manual ["Automatic control of loading and unloading equipment in harbors" by K.A.Egorov. Reviewed by Z.Vir'ianskii, S.Kitsis]. Rech.transp. 20 no.6:58 Je '61. (MIRA 14:6)
(Cargo handling--Equipment and supplies) (Automatic control)
(Egorov, K.A.)

1. VIRYASON, K.

2. USSR (600)

4. Europe, Eastern - Economic Conditions

7. Successful development of the economy of the European people's democracies.
Vnesh. torg. 23, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KLOCHEK, V., VIKTASOV, K.

Commerce

Economic cooperation of countries in the socialist camp, Vnesh. torg, 22 No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

MARTYNOV., V., VIRYASOV, K.

Albania - Economic Conditions

Progress of the people's Republic of Albania. Vnesh. torg. No. 1, Ja '52.

Monthly List of Russian Accessions, Library of Congress, March 1952, Unclassified.

[illegible], [illegible], [illegible], A.

Economic Policy

Economic cooperation of countries in the socialist camp, Vnesh. torg, 22, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. Unclassified.

SOV/1[illegible]-58-2-9/37

AUTHORS: Viryasov, N. M. and Pisareva, L. P.

TITLE: Measurement of the Ionisation of Fast Particles in the Nuclear Emulsion R-NIKFI (Izmereniye ionizatsii bystrykh chastits v yadernoy emul'sii R-NIKFI)

PERIODICAL: Pribory i Tekhnika Eksperimenta, 1958, Nr 2, pp 17-21 (USSR)

ABSTRACT: The ionisation produced by protons having energies of 148, 198, 250, 302, 464, 657 and π-mesons having an energy of 300 Mev has been measured and compared with theoretical calculations. The 660 ± 5 Mev proton beam at the United Institute of Nuclear Studies was used for this purpose. The lower energies were obtained by placing aluminium absorbers in the path of the beam and subsequent magnetic analysis. The maximum energy spread at 148 Mev and was 3%. At 657 Mev the energy spread was ± 5 Mev. The plates were 400 microns thick. In order to obtain information on the effect of the conditions of development each plate was cut into three equal pieces and each of the pieces was given a different time in the dry "hot" stage. The actual times were 25 minutes (under-developed), 40 minutes (normal) and 55 minutes (over-developed). It was found that for energies greater than 300 Mev the experimental data agree

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SOV/120-58-2-3/37

Measurement of the Ionisation of Fast Particles in the Nuclear Emulsion R-NIKFI.

well with theoretical calculations if the measurements are carried out with an accuracy of a few percent. In this region the grain density does not differ from true relative ionisation by more than 2%. For energies less than 300 Mev a correction is necessary for the effect of overlapping of grains. A method of applying this correction is described. The correction is carried out in terms of a parameter d which plays the role of an effective grain size. The following persons are thanked for their interest and help: M.I.Podgoretskiy, L.I.Fedorova, K.I.Zhabina and D.V.Makarova. There are 5 tables and 1 Soviet, 2 English references.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (United Institute for Nuclear Studies)

SUBMITTED: May 6, 1957.

1. Particles--Ionization 2. Measurement---Applications
3. Proton beams--Performance 4. Nuclear physics

Card 2/2

83755

S/056/60/038/004/048/048
B006/B056

24.6900

AUTHORS: Van Gan-chan, Van Tsu-tszen, Veksler, V. I., Viryasov, N.M., Vrana, I., Din Da-tsao, Kim Khi In, Kladnitskaya, Ye. N., Kuznetsov, A. A., Mikhul, A., Nguyen Din Ty, Nikitin, A. V., Solov'yev, M. I.

TITLE: Production of a $\bar{\Sigma}^-$-Hyperon 19 by Negative π^--Mesons With a Momentum of 8.3 Bev/c

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 4, pp. 1356 - 1359

TEXT: In the present "Letter to the Editor", the authors give a detailed report on the case of a $\bar{\Sigma}^-$-production and decay discovered by them for the first time among 40,000 bubble-chamber photographs. The chamber happened to be in a 13,700-oe magnetic field. The photograph concerned is represented as well as the track scheme. The tracks are numbered, and the individual stars are denoted as "point A, B, O, ..". The exact data of the tracks and stars, respectively, are given in tables (Table 1: "Kinematics at point A"; Table 2: "Kinematics at point B"; Table 3:

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83755

Production of a $\bar{\Sigma}^-$-Hyperon by Negative π^--Mesons With a Momentum of 8.3 Bev/c

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B006/B056

"Kinematics at point O"; and Table 4: "Kinematics at points O' and O" "). The individual tracks are identified, and the charges and momenta (measured and calculated) of the particles, the kinetic and mass energies, and the total energy are given. For the stars B and O also the energy balance is given. For B, the following is considered to be the most probable reaction: $\bar{n} + C \rightarrow He_2^4 + 4p + 3n + \pi^+ + \pi^- + n\pi^0$. For the primary star (Tables 3 and 4) the following reaction is assumed: $\pi^- + C \rightarrow \bar{\Sigma}^- + K^0 + \bar{K}^0 + K^- + p + \pi^+ + \pi^-$ + recoil nucleus. The lifetime of the $\bar{\Sigma}^-$-hyperon was calculated to be $(1.18 \pm 0.07) \cdot 10^{-10}$ sec. G.A. Blinov and S. Z. Otvinovskiy are mentioned. There are 2 figures, 4 tables, and 4 references: 3 Soviet and 1 US.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: March 24, 1960

Card 2/2

ViRyASov, N. M

82019
S/056/60/038/02/20/061
B006/B011

24.6810

AUTHORS: Viryasov, N. M., Vovenko, A. S., Vorob'yev, G. G., Kirillov, A. D., Kim Khi In, Kulakov, B. A., Lyubimov, A.L., Matulenko, Yu. A., Savin, I. A., Smirnov, Ye. V., Strunov, L. N., Chuvilo, I. V.

TITLE: Channel for Antiprotons With a Momentum of 2.8 Bev/c 19

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, 1960, Vol. 38, No. 2, pp. 445-448

TEXT: The authors of the present paper describe a channel built for the investigation of the interaction of antiprotons in a cloud chamber. Antiprotons were produced by 9-Bev protons in a target. Fig. 1 is a schematic representation of the channel described in the following. The antiprotons were identified from their velocity ($\beta = 0.95$) by means of three Cherenkov counters, each of which was provided with two photomultipliers of the type ФЭУ-33 (FEU-33) whose efficiencies are specified in Table 1. The efficiencies attained with different coincidence combinations are given in Tables 2 and 3. Fig. 2 shows a block diagram of the electronic

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Channel for Antiprotons With a Momentum of 2.8 Bev/c

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system, and respective data are supplied in Table 4. The efficiency of the scheme described with respect to antiprotons is found to be 60-40%. Some tests are briefly described next. By the system discussed here, the authors determined the ratio of the number of $\bar{p}$ with momenta of (2.8±15) Bev/c to the number of all remaining particles (which were chiefly π^--mesons) from the beryllium target (36g/cm^2) under the angles 0 and 7°, and from a copper target (~180 g/cm^2) under 7° with respect to the primary proton beam (8.1 - 8.9 Bev). At an intensity of 10^9p of the inner beam, an average of 1 $\bar{p}$ was recorded within four minutes. Results:

Angle	target	proton beam intensity	particle number in the channel	relative number of antiprotons in the beam
0°	Be	10^9	1000	$(1.03\pm0.13).10^{-4}$
7°	Be	10^9	~700	$(1.37\pm0.18).10^{-4}$
7°	Cu	10^9	~700	$(2.42\pm0.53).10^{-4}$

The number of particles recorded in the channel agrees with data concern-

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Channel for Antiprotons With a Momentum of 2.8 Bev/c

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ing 9-Bev proton interactions in emulsions (Ref. 4). The increase in the relative number of antiprotons in the transition from 0 to 7° in the laboratory system agrees with predictions made on the strength of the statistical theory. By considering pion absorption ($\sigma_t \sim 30$ mb) and antiproton absorption ($\sigma_t \sim 60$ mb) as well as the attenuation of the beam of primary protons ($\sigma_{in} \sim 30$ mb), the ratio of the differential production cross sections of $\bar{p}$ and π^--mesons with 2.8 Bev/c under 0° in the laboratory system is found to be $\frac{d^2\sigma_{\bar{p}}}{d\Omega dp} \Big/ \frac{d^2\sigma_{\pi}}{d\Omega dp} \approx 1.5 \cdot 10^{-4}$.

There are 2 figures, 5 tables, and 4 references: 3 Soviet, 1 Italian, and 1 International (CERN).

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy
(Joint Institute of Nuclear Research)

SUBMITTED: September 3, 1959

Card 3/3

C/026/61/017/005/001/006
F050/F004

AUTHOR: Wang, Kang-ch'ang (3769/3227/2490); Wang, Chu-hsiang (3769/4376/5046); Viryasov, N. M.; Ting, Ta-chao (0002/1129/6856); Kim, Hi-in (6855/5593/0088); Kladnitskaya, Ye. N., Kuznetsov, A. A.; Mikhul, A.; Nguyen, Din-ti (7086/0002/6337); Nikitin, A. V.; and Solov'yev, M. I.

TITLE: Production of Ξ^- hyperons by the use of π^- mesons with a momentum of 7000 Mev/c and 8000 Mev/c

PERIODICAL: Wu Li Hsüeh Pao, v. 17, no. 5, 1961, 205-213

TEXT: The productive cross section σ ($\sigma = 3.6 {}^{+2.5}_{-2.1} \mu\delta/N$ at 6800 Mev/c, $\sigma = 10.6 {}^{+4.4}_{-3.2} \mu\delta/N$ at 8000 Mev/c), mass M_{Ξ^-} ($M_{\Xi^-} = 1317.0 \pm 2.2$ Mev), and lifetime τ_0 ($\tau_0 = 3.5 {}^{+3.4}_{-1.2} \times 10^{-10}$ sec) of Ξ^- hyperson were determined by the use of π^- mesons having momentums of 6800 Mev/c and 8000 Mev/c. In early investigations Ξ^- hyperons

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were found by experiments with cosmic rays. A butane bubble chamber 24 liters in volume in a permanent magnetic field of 13700 gauss was used. The chamber was irradiated by a bundle of mesons with momentums of 7000 Mev/c and 8000 Mev/c. The result was 27,000 and 75,000 negatives obtained recording momentums of 6800 ± 600 Mev/c and 8000 Mev/c of π^- mesons. A three-dimensions amplifier and projector were used to trace the negatives twice and some negatives were traced three times. In the tracing process those events which could be classified with Ξ^- hyperon decay scheme $A \longrightarrow V^0 + B$, $V^0 \longrightarrow C + D$, by appearance were selected. The following standards were applied in the determination of Ξ hyperons: (1) V^0 must coincide with kinematics of the decay scheme $\Lambda^0 \longrightarrow p + \pi^-$. (2) The refraction point must be within the Λ^0 decay plane. The vertical momentum of π^- meson and proton p, which came from Λ^0 decay relative to the projecting direction of Λ^0, must be in equilibrium. (3) The Λ^0 decay particles should lie on the plane formed by particles A and B. (4) At the refraction point, the vertical momentum of particles Λ^0 and B particle must be in equilibrium. (5) The events must satisfy kinematics of Ξ^- hyperon decay scheme

$$\Xi^- \longrightarrow \Lambda^0 + \pi^- + 65 \text{ bev}$$

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Production of Ξ^- hyperons by ...

Among all the events there were 11 events which satisfied all 5 standards. Three events coincided well with the kinematics of Ξ^- decay and have been classified with Ξ^- hyperon. Of all Ξ^- hyperons, one was obtained by the bundle of π^- mesons with 6800 Mev/c and then were obtained by the bundle of π^- mesons with 8000 Mev/c. The results of this experiment are listed in four tables: (1) Table 1 lists data of defined Ξ^-. All these data were average values which were obtained by using a microscope to measure two — four times independently. It also lists the decay energy Q and lifetime of all Ξ^- hyperons found in their own coordinate system. (2) Table 2 lists all data concerning the primary stars. These stars have been analyzed as the source of Ξ^- hyperons. (3) Table 3 lists the momentum p^* in a π^- N mass center system, vertical momentum $p^{\perp}$, and projecting angle θ^* of Ξ^- hyperons (suppose Ξ^- hyperons were produced by the impact of π^- mesons to free nuclei). The average vertical momentum ($p^{\perp}_{\Xi^-}$) of Ξ^- hyperon is equal to 318 ± 35 Bev. This value is approximate to the vertical momentum of proton and Λ hyperon. This table also lists the characteristics of the following angles: (a) θ^*_{Λ} is the projecting angle of Λ^0 which is projected out from Ξ^- hyperon decay process under its equilibrium

Production of Ξ^- hyperons by ...

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system. (b) θ_p^* is the projecting angle of p which was projected out from the decay process in its equilibirum system. (c) $\omega_{\Xi^-\Lambda^0}$ is the intersection angle between Ξ and Λ^0 decay planes. In the distribution of θ_Λ^* and $\omega_{\Xi^-\Lambda^0}$, no asymmetry was observed. (4) Table 4 lists the events which seems to be Ξ^-. Among these events, four were in the same plane and fourteen were in different planes. Most of these events in the same plane were induced by $\pi^+\pi$ mesons; the others in different plane events may have been induced by π^+, π^- or K^- mesons. Thanks are extended to V. I. (Wei Ke Shih Lai Erh), I. V. (Chi Wei Lo), L. P. (Chi Lo Wei Yeh Fu), N. I. (Pa Pu La Fe), K. V. (Chi Ho Lo Fu), and L. N. (Chü Lao Yeh Fu). There are 3 figures and 4 tables. The English-language references read as follows: C. Franzinetti and G. Morpurgo. Suppl. Nuovo Cim. 6 (1957), 565; W. B. Fowler et al. Nuovo Cim. 11 (1959), 428.

SUBMITTED: March 20, 1961

Card 4/4

22124

S/056/61/040/003/004/031
B102/B202

24.6900 (1138,1191,1559)

AUTHORS: Wang Kang-ch'ang, Wang Ts'u-tseng, Viryasov, N.M., Ting Ta-ts'ao, Kim Khi In, Kladnitskaya, Ye.N., Kuznetsov, A.A., Mikhul, A., Nguyen Din Ty, Nikitin, A.V., Solov'yev, M.I.

TITLE: Production of Ξ^- hyperons by π^- mesons with the momenta 7 and 8 Bev/c

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 40, no. 3, 1961, 734 - 740

TEXT: The authors present comprehensive material concerning the production of Ξ^--hyperons by negative high-energy pions in a 24-l propane bubble chamber which was in a constant field of 13,700 oe. These experiments have already been described in an earlier paper (ZhETF, 38, 426, 1960). 27,000 photographs were evaluated 2 - 3 times for pions with 6.8 ± 0.6 Bev/c and 75,000 for pions with $\approx$ 8Bev/c. The authors chose those events which corresponded to a decay of cascade particles according to the mode

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Production of Ξ^- hyperons by ...

$A \rightarrow V^0 + B$, $V^0 \rightarrow C + D$ as well as all singly-pronged stars from the vertex of which a V^0 particle departed. Altogether, 90 events were chosen; they were measured by means of УИМ-21 (UIM-21) microscopes, and the results were evaluated by means of an electronic computer of the type "Ural"; 11 events of a Ξ^- -decay ($\Xi^- \rightarrow 1^0 + \pi^- + 65$ Mev) were identified according to rigorous criteria. The angular and momentum characteristics of the identified Ξ^- hyperons are given in Table 1. The events nos. 171-218 and nos. 19-179 are schematically shown in Figs. 1 and 2, respectively. The Table gives the data concerning the decay energy Q and the lifetime (until the decay) of the Ξ^- hyperons. The mean value of Q from the 11 Ξ^- decay events was $Q = 61.9 \pm 2.2$ Mev from which the hyperon mass $M_{\Xi^-} = 1317.0 \pm 2.2$ Mev was calculated. The mean lifetime was $\tau_0 = (3.5^{+3.4}_{-1.2}) \cdot 10^{-10}$ sec. The mean free path of the π^- mesons in Ξ^--hyperon formation in propane was $l = (2.02^{+2.86}_{-0.84})$ cm for a momentum of 6.8 Bev/c and $l = (0.68^{+0.29}_{-0.20})$ cm for $\sim$ 8Bev/c. Assuming that the Ξ^--hyperon production cross section in nu-

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clei is $\sim A^{2/3}$, $\sigma = 3.6^{+2.5}_{-2.1}\,\mu b$ is obtained with 6.8 Bev/c and $\sigma = 10.6^{+4.4}_{-3.2}\,\mu b$ with ~ 8 Bev/c. Table 2 gives data on the primary stars with Ξ^- hyperon production. Table 3 shows the momentum (p^*), transverse momentum ($p^*_\perp$), angle of departure (θ^*) of the various particles as well as the angle between the decay planes (ω^o). Table 4 presents data on the "background" events (4 complanar and 4 noncomplanar ones) where V^0 particles were identified as Λ particles. Finally, the authors thank V.I. Veksler and I.V. Chuvilo for discussion, L.P. Zinov'yev, N.I. Pavlov, K.V. Chekhlov, L.N. Belyayev and various teams of technicians for their assistance. There are 3 figures, 4 tables, and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: September 30, 1960

Card 3/~~4~~ 3

BELYAKOV, V.A.; VAN YUN-CHAN [Wang Yung-chang]; VIRYASOV, N.M.; DU YUAN'-TSAY [Du Yuan-cai]; KIM KHI IN; KLADNITSKAYA, Ye.N.; KUZNETSOV, A.A.; NGUYEN, DIN TY [Nguyen Dinh Tu]; PENEV, V.N.; SOKOLOVA, Ye.S.; SOLOV'YEV, M.I.

[Properties of π^{0}-mesons produced together with strange particles in π^{-}-p and π^{-}-c-interactions] Izuchenie svoistv π^{0}-mezonov, rozhdaiushchikhsia so strannymi chastitsami v π^{-}-p i π^{-}-c vzaimodeistviiakh. Dubna, Ob"edenennyi in-t iadernykh issledovanii, 1962. 10 p. (MIRA 16:10)

(Mesons)

VEKSLER, V.I.; VIRYASOV, N.M.; VRANA, I.; KIM KH IN; KLADNITSKAYA, Ye.N.; KUZNETSOV, A.A.; NGUYEN DIN TY; SOLOV'YEV, M.I.; KHOFMOKL', T.; CHEN LIN-YAN'; SARANTSEVA, V.R., tekhn. red.

[Polarization of Λ-hyperons produced in π^--p-interactions at an energy of 7-8 Bev]Izuchenie poliarizatsii Λ-giperonov pri rozhdenii v π^--p-vzaimodeistviiakh s energiei 7-8 Bev. Dubna, Ob"edinennyi in-t iadernykh issl., 1962. 23 p. (MIRA 15:10)
(Hyperons—Decay) (Masons—Decay) (Protons)

VIRYASOV, N.M.

BELYAKOV, V.A., WANG YUNG-CHANG, VEKSLER, V.I., VIRYASOV, N.M., DU YUAN-TSAI,
KIM HI IN, KLADNITSKAYA, Ye. N., KUZNETSOV, A.A., MIHUL, A., NGUYEN, DIN TI, PENEV, V.N.,
SOKOLOVA, Ye. S., SOLOVYEV, M. I.

"Study of ΛK and $K_1^0 \bar{K}_1^0$ Pair Production if $\pi^- p$ and $\pi^- C$ Interactions at the 7-8 Gev/C Momentum of π^- Mesons"

report presented at the Intl. Conference on High Energy Physics, Geneva,
4-11 July 1962

Joint Institute for Nuclear Research
Laboratory of High Energy Physics

BELYAKOV, V.A.; BOYADZHIYEV, A.V.; VAN YUN-CHAN[Wang Yung-ch'ang]; VEKSLER, V.I.; VIRYASOV, N.M.; KIM KHI IN; KLADNITSKAYA, Ye.N.; KUZNETSOV, A.A.; MAL'TSEV, V.M.; NGUYEN, DIN TY; PENEV, V.N.; SOLOV'YEV, M.I.; ZRELOVA, N.N., tekhn. red.

[Production of $\Lambda(\Sigma^0)$-hyperons and K^0-mesons in the interaction of 7 Gev. π^--mesons with carbon] Rozhdenie $\Lambda(\Sigma^0)$-giperonov i K^0-mezonov pri vzaimodeistvii π^--mezonov s energiei 7 Gev s uglerodom. Dubna, Ob"edinennyi in-t iadernykh issledovanii, 1963. 18 p. (MIRA 17:2)

BELYAKOV, V.A.; VAN YUN-CHAN [Wang Yung ch'ang]; VEKSLER, V.I.;
VIRYASOV, N.M.; VRANA, I.; DU YUAN'-TSAY [Tu Yuan ts'ai];
KIM KHI IN; KLADNITSKAYA, Ye.N.; KUZNETSOV, A.A.;
MIKHUL, E.; NGUYEN, DIN TY; PATERA, I.; PENEV, V.N.;
SOKOLOVA, Ye.S.; SOLOV'YEV, M.I.; KHOFMOKL', T.;
MIKHUL, A.

[Production of Λ-hyperons and K^0-mesons in π^-p-interactions at an energy of 7-8 Bev] Issledovanie protsessov rozhdeniia Λ-giperonov i K^0-mezonov v π^-p- vzaimodeistviiakh pri energii 7-8 Bev. [n.p. n.d.] 26 p. (MIRA 16:10)

(Mesons) (Hyperons)

S/056/63/044/001/017/067
B108/B180

AUTHORS: Veksler, V. I., Viryasov, N. M., Vrana, I., Kim Khi In, Kladnitskaya, Ye. N., Kuznetsov, A. A., Nguyen Din Ty, Solov'yev, M. I., Khofmokl', T., Chen Ling-yen

TITLE: The polarization of Λ-hyperons produced in π^-p-interactions at an energy of 7 - 8 Bev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 84 - 99

TEXT: 60000 photographs were examined of the interaction of π^--mesons of 7 - 8 Bev/c with protons in a 24-liter propane bubble chamber in a permanent magnetic field of 13,700 oe. Method and apparatus have already been described (Wang Kang-ch'ang, M. I. Solov'yev, Yu. N. Shkobin. PTE, 1, 41, 1959; M. I. Solov'yev, Proc. of the 1960 Ann. Int. Conf. on High Energy Physics at Rochester, p. 388; Wang Kang-ch'ang et al. ZhETF, 39, 1854, 1960). The Λ-hyperons were unpolarized during their production. This follows from the fact that there is no asymmetry in the angular distributions of the protons from the decay of the Λ-hyperons relative to the hyperon momentum. The angular distributions of the Λ-hyperon produc-

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The polarization of Λ-hyperons ... S/056/63/044/001/017/067
B108/B180

tion planes relative to the production planes of the K-mesons and pions are nearly isotropic. The results agree with the law of conservation of parity in strong interactions involving strange particles. There are 13 figures and 4 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: July 31, 1962

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S/056/63/044/002/007/065
B102/B186

AUTHORS: Belyakov, V. A., Wang Yung Ch'ang, Veksler, V. I., Viryasov, N. M., Vrana, I., Tu Yüan-ts'ai, Kim Khi Ying, Kladnitskaya, Ye. N., Kuznetsov, A. A., Mikhul, E. Nguyen Din Ty, Patera, I., Penev, V. N., Sokolova, Ye. S., Solov'yev, M. I., Khofmokl', T., Cheng Ling-yen, Mikhul, A.

TITLE: Investigation of Λ-hyperon and K^o-meson production processes in π^-p interactions at 7-8 Bev

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 2, 1963, 431-443

TEXT: The c.m.s. momentum and angular distributions determined for the Λ and K^o particles produced in πp interactions are given and discussed. The measurements were made using a 24-liter propane bubble chamber in a field of 13,700 oe. The total momentum spectrum of the Λ-hyperons produced in the reactions

$$\pi^- + p \rightarrow \Lambda(\Sigma^0) + K^0 + n\pi, \qquad (1)$$

$$\pi^- + p \rightarrow \Lambda(\Sigma^0) + K^+ + n\pi \qquad (2)$$

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are shown in Fig. 1, compared with theoretical results. As it may be seen the statistical theory describes the experimental curve very well if the isobars and, the cases with $p_p - p = \Delta < 700$ Mev are neglected. $\Delta < 700$ Mev corresponds to $\sim 30\%$ of all Λ, these being produced in peripheral interactions. The Λ angular distribution has a distinct backward peak ($\overleftarrow{n}_\Lambda / n_\Lambda = 0.18 \pm 0.02$). With increasing multiplicity n_s the agreement between experiment and statistical theory improves. The Λ angular distribution and the distribution with respect to $p_\perp$ is virtually independent of n_s. The overall mean of the transverse momentum is 383 ± 12 Mev/c; for $\Delta < 700$ Mev, $\overline{p}_{\Lambda_\perp} = 295 \pm 14$ Mev/c and for $\Delta \geqslant 700$ Mev, $\overline{p}_{\Lambda_\perp} = 432 \pm 18$ Mev/c. For the $K^o(\overline{K}^o)$ mesons produced in the reactions

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S/056/63/044/002/007/065
B102/B186

Investigation of Λ-hyperon ...

$$\pi^- + p \rightarrow \begin{cases} K^0 + \Lambda(\Sigma^0) + n\pi, & (1) \\ K^0 + \overline{K}^0 + N + n\pi, & (3) \\ K^0 + K^- + N + \pi n, & (4) \\ \overline{K}^0 + K^+ + N + n\pi, & (5) \\ K^0 + \Sigma^\pm + n\pi. & (6) \end{cases}$$

the total momentum spectrum measured (Fig. 4) is weaker than that calculated according to the statistical theory. The angular distribution (Fig. 5) has, besides the isotropic part, a forward peak ($\overrightarrow{n}_{K^0}/\overleftarrow{n}_{K^0}$ = 1.61 ± 0.15). The forward-backward ratio decreases with increasing n_s. For the charged pions arising in Λ-production events the momentum distributions are, for $p^*_\pi \geqslant 400$ Mev/c, well described by the statistical theory without taking the isobars into account; for $p^*_\pi < 400$ Mev/c it is higher than that obtained from theory. The angular distributions for n_s = 2, 4, 6 are characterized by

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S/056/63/044/002/007/065
B102/B186

Investigation of Λ-hyperon ...

$$\vec{n}_{\pi^+}/\overleftarrow{n}_{\pi^+} = 1.10 \pm 0.12, \qquad \vec{n}_{\pi^-}/\overleftarrow{n}_{\pi^-} = 1.40 \pm 0.13.$$

The mean number of π^0 mesons produced per π^-p interaction with Λ production is 1.23 ± 0.14. The angular distribution of π^- arising in stars with K^0 production has a flat forward maximum ($\vec{n}_{\pi^-}/\overleftarrow{n}_{\pi^-} = 1.10 \pm 0.10$). The mean number of charged particles produced together with Λ is $n_s = 2.22 \pm 0.13$ which agrees closely with the statistical theory without the isobars. The main part of Λ and K^0 is produced in two-pronged stars. The admixture of $K^0\Sigma^{\pm}$ pairs amounts to less than 20% of the number of $K^0K^- + K^0K^+$ pairs. The momentum distribution of charged pions from π^-p interactions with Λ-hyperon production are characterized by $\bar{p}^*_{\pi^+} = 425 \pm 16$ Mev/c and $\bar{p}^*_{\pi^-} = 444 \pm 15$ Mev/c. From a comparison of these angular distributions it is concluded that processes involving ΛK or $K\bar{K}$ pair production are more central than the usual ~~processes~~ of multiple pion production. If one divides the π^-p interactions with strange particle production into head-on

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and peripheral collisions one can say that those involving $K\bar{K}$ pair production are rather of the head-on type than those with ΛK pair production. There are 15 figures and 2 tables.

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Fig. 1. Total momentum spectrum of hyperons; dashed line: without correction for recording probability; shaded area: events with $\Delta < 700$ Mev; curves obtained from statistical theory with (I) and without (II) isobars, and without the events with $\Delta < 700$ Mev (II').

Fig. 4. K^0 total momentum spectrum.

Fig. 5. K^0 total angular distribution.

L 10238-63 FCS(f)/EWT(m)/BDS--AFFTC/ASD

ACCESSION NR: AP3000037 S/0056/63/044/005/1474/1480

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61

AUTHOR: Belyakov, V. A.; Wang Yung-ch'ang; Viryasov, N. M.; Tu Yuan-ts'ai; Kim Khi In; Kladnitskaya, Ye. N.; Kuznetsov, A. A.; Nguyen Din Ty; Penev, V. N.; Sokolova, Ye. S.; Solov'yev, M. I.

TITLE: A study of the properties of neutral pions 19 produced with strange particles in negative pion proton and negative pion carbon interactions.

SOURCE: Zhurnal eksper. i teoret. fiziki, v. 44, no. 5, 1963, 1474-1480

TOPIC TAGS: Neutral pions, strange particle interactions

ABSTRACT: An earlier investigation on the production of strange particles by 7-8 Bev negative pions on hydrogen and carbon was continued with a 24 - liter propane bubble chamber. The properties of the neutral pions inferred from the photons accompanying the LAMBDA hyperon and neutral kaon production are given and are compared with the properties of the pions (positive and negative) emitted in LAMBDA and neutral-kaon production processes. In calculating the total number of photons, corrections were introduced for the loss of photons

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ACCESSION NR: AP3000037

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emitted at large azimuthal angles and for the asymmetry of the incident beam relative to the longitudinal axis of the chamber. The possibility of a resonance with radiative decay is noted. "In conclusion, the authors wish to thank Academician V. I. Veksler, Professor Chang Weng-yu, M. I. Podgoretskiy, A. M. Baldin, A. V. Nikitin, V. B. Lyubimov and Yen Wu-kuang for useful discussions and many valuable remarks, the staff of the computation center for the calculations, and the laboratory assistants for the measurements. Orig. art. has: 4 figures, 9 formulas, and 4 tables.

ASSOCIATION: Ob"yedinennyy institut yadernykh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 07Dec62 DATE ACQ: 12Jun63 ENCL: 00

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Card 2/2

L 15462-63 FCS(f)/EWT(m)/BDS AFFTC/ASD

ACCESSION NR: AP3005248 S/0056/63/045/002/0088/0089 64
63

AUTHORS: Belyakov, V. A.; Veksler, V. I.; Viryasov, N. M.; Vrana, I.; Kim Khi In; Kladnitskaya, Ye. N.; Kuznetsov, A. A.; Mikhul, A.; Nguyen Din Ty*; Solov'yev, M. I.; Hofmokl, T.; Ch'eng Ling-yen

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TITLE: Antilambda hyperon production by 7-8 GeV negative pions on hydrogen

SOURCE: Zhur. eksper. i teoret. fiz., v. 45, no. 2, 1963, 88-89

TOPIC TAGS: hyperon production, antilambda, negative pion decay, cross section

ABSTRACT: The production and decay of $\bar{\Lambda}$ hyperons by 7--8 BeV negative pions are reported, on the basis of 42 V^0 events in which the momentum of the negative particle from the decay was greater than the momentum of the positive particle and the transverse momentum of the decay products was less than or equal to 100 MeV. Selection of the $\bar{\Lambda}$ hyperons was by kenemativ criteria, measurement of ionization, and determination of the δ-electron energy. The cross section for the production of Λ hyperons is found not to differ much from the cross section of NN production, or about 3 μb. Orig. art. has 1 figure and 1 table.

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L 15462-63

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ASSOCIATION: Ob"yedinenny*y institut yaderny*kh reaktsiy (Joint Institute of Nuclear Research)

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Card 2/2

BELYKOV, V.A.; VAN YUN-CHAN [Wang Yung-ch'ang]; VEKSLER, V.I.; VIRYASOV, N.M.;
DU YUAN'-TSAY [Tu Yüan-ts'ai]; KIM KHI IN; KLADNITSKAYA, Ye.N.;
KUZNETSOV, A.A.; NGUYEN DIN TY; PENEV, V.N.; SOLOV'YEV, M.I.

Polarization of Λ-hperons produced in π^-C-interactions at 7 Bev.
Zhur. eksp. i teor. fiz. 45 no.2:90-92 Ag '63. (MIRA 16:9)

1. Ob"yedinennyy institut yadernykh issledovaniy.
(Nuclear reactions) (Hyperons)

ACCESSION NR: AP4037568 S/0056/64/046/005/1586/1597

AUTHORS: Belyakov, V. A.; Boyadzhiyev, A. V.; Wang, Yung-ch'ang; Veksler, V. I.; Viryasov, N. M.; Kim Khi In; Kladnitskaya, Ye. N.; Kuznetsov, A. A.; Mal'tsev, V. M.; Nguyen Din Ty*; Penev, V. N.; Solov'yev, M. I.

TITLE: Production of $\Lambda(\Sigma^0)$ hyperons and K^0 mesons in interaction between 7 GeV negative pions and carbon

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 5, 1964, 1586-1597

TOPIC TAGS: Λ hyperon, Σ^0 hyperon, neutral kaon, negative pion carbon interaction, hyperon production, kaon production, pion proton interaction, bubble chamber, secondary interaction fraction, angular distribution, momentum distribution, cascade model

ABSTRACT: The production of $\Lambda(\Sigma^0)$ hyperons and K^0 mesons by negative pions on carbon was investigated and compared with earlier results

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(ZhETF v. 40, 464, 1961) from π^-p interactions at the same pion momentum. A 24-liter propane bubble chamber in a constant field of 13,700 Oe was used in accordance with a procedure described before (ZhETF, v. 38, 426, 1960). The purpose of the experiment was to estimate the fraction of the secondary interactions. An estimate was made for the first time of the fraction of strange particles produced in the secondary processes. The momentum spectrum of the Λ hyperons (in the pion-nucleon center of mass system) was compared with the spectrum for the π^-p interactions. The following distribution of events over the reaction channels was obtained

	Y^0K^0	Y^0K^+	$K^0\overline{K^0}$	$K^0K^- + K^+\overline{K^0}$	$\Sigma^\pm K^0$	Y^0Y^0KK
Number of events	427±60	223±81	147±52	323±127	80±31[3]	4[4]
Cross section, mb	4,8±0,8	2,5±0,9	1,7±0,6	3,6±1,4	0,9±0,4	0,04

and the cross section for each interaction event with the carbon was calculated to be 0.0113 mb. This yielded the following cross sections

$$\sigma(Y^0K^{0,+}) = 7,3 \pm 1,2 \quad \text{and} \quad \sigma(K^0\overline{K}) = 5,3 \pm 1,5$$

The good agreement between the calculated and experimental values of the spectra of the Λ hyperons and K^0 mesons gives grounds for assuming that the cascade model holds true for these phenomena. It also is concluded that the previously observed hard part of the momentum spectrum of the Λ hyperons in the pion-nucleon center of mass system in π^-p interactions is due to an admixture of carbon events, and that the role of the secondary processes which lead to the production of strange particles is quite appreciable even on the carbon nucleus. "The authors are grateful to I. Klugov and M. Shneyeberger for help at the beginning of the work, to V. S. Barashenkov, I. V. Chuvilo, and M. I. Podgoretskiy for discussion and valuable remarks, to Ye. P. Zhidkov, G. A. Ososkov, and K. N. Danilova for help with the calculations, and to the laboratory group for the measurements." Orig.

ACCESSION NR: AP4037568

art. has: 5 figures, 7 formulas, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

SUBMITTED: 02Dec63 DATE ACQ: 09Jun64 ENCL: 02

SUB CODE: PH NR REF SOV: 013 OTHER: 008

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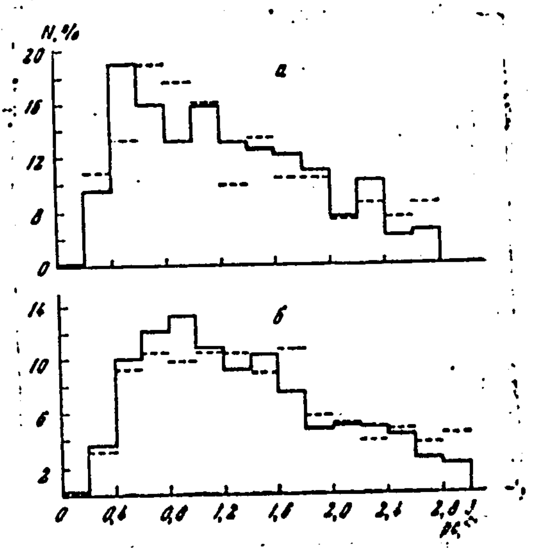
Particle type	Particle number	Particle type	Particle number
Λ	198	$\Lambda + \Lambda$	1
K^0	248	$K^0 + K^0 + \Lambda$	1
Λ [illegible] K^0	45	$K^0 + (\Lambda$ [illegible] $K^0)$	5
$\Lambda + K^0$	39	$\Lambda \pm (\Lambda$ [illegible] $K^0)$	1
$K^0 + \overline{K^0}$	9	$\overline{\Lambda}$ или K^0	3

Distribution of events

ACCESSION NR: AP4037568 ENCLOSURE: 02



Momentum distribution of Lambda hyperons (a) and kaons (b) from pion-carbon interaction at 7 GeV/c

solid - experimental
dashed - Monte Carlo calculation

Card 6/6

ACCESSION NR: AP4042554 S/0056/64/046/006/1967/1978

AUTHORS: Balyakov, V. A.; Veksler, V. I.; Viryasov, N. M.; Kladnitskaya, Ye. N.; Kopy*lov, G. I.; Penev, V. N.; Sokolova, Ye. S.; Solov'yev, M. I.

TITLE: Pion resonances produced simultaneously with strange particles in negative pion proton interactions at 7.5 GeV/c

SOURCE: Zh. eksper. i teor. fiz., v. 46, no. 6, 1964, 1967-1978

TOPIC TAGS: pion, negative pi meson, strange particle, resonance scattering, omega meson, proton reaction

ABSTRACT: Continuing a series of earlier research on the generation of strange particles and pions in a beam of 7.5 GeV/c negative pions (ZhETF v. 43, 815, 1962; v. 44, 431 and 1474, 1963; Proc. 1960 Rochester Conf., 1961, p. 388), the authors investigated with the aid of 24-liter propane bubble chamber the pion resonances produced simul-

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ACCESSION NR: AP4042554

taneously with strange particles. Pion resonances produced in interactions of the type

$$\pi^- + p \rightarrow \begin{cases} \Lambda(\Sigma^0) + K^0 + m\pi \\ \Lambda(\Sigma^0) + K^+ + m\pi \\ K^0 + \tilde{K}^0 + p(n) + m\pi \\ K^0 + K^- + p(n) + m\pi \\ \tilde{K}^0 + K^+ + p(n) + m\pi \\ K^0 + \Sigma^+ + m\pi \\ K^0 + \Sigma^- + m\pi \end{cases}$$

were investigated (m -- number of pions). Simultaneous production of ρ^0 mesons and ΛK pairs was observed in events characterized by a charged particle multiplicity $n_s = 4$ and having cross sections of 20 ± 8 microbarns. Cross sections for the production of ω and η resonances are presented. It is concluded that the four-pion effective

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ACCESSION NR: AP4041554

mass distribution has a peak at 1340 MeV and several possible reasons for this peak are suggested. "We are greatly indebted to M. I. Podgoretskii and I. V. Chuvilo for assistance and valuable discussion, to Tu Yuan-ts'ao, A. A. Kuznetsov, Kim Hi In, Nguyen Dinh Tu, and Wang Yung-ch'ang for participating in the first stage of the work, to N. N. Govorun and N. F. Markova of the computing center of OIYaI and to G. M. Korotkova, S. N. Komarova and L. M. Zhukova for measurements and calculations." Orig. art. has: 11 figures, 11 formulas, and 1 table.

ASSOCIATION: Ob"yedinenny*y institut yaderny*kh issledovaniy (Joint Institute of Nuclear Research)

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