SHTEPAN, S. Ye.

"Investigating the Elastic Anisotropy of Rock Salt." Cand Phys-Math Sci, Odessa State U, Odessa, 1954. (RZhKhim, No 6, 1955)

So: Sum. No 670, 20 Sept 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

Shtepan S Ye

70-6-11/12

AUTHOR: Shtepan, S. Ye.

TITLE: On the Question of the Elastic Anisotropy of Crystals of the Cubic System for the hkl planes. (K voprosu ob uprugoy anizotropii kristallov kubicheskoy sistemy v ploskosti (hkl).)

PERIODICAL: Kristallografiya, 1957, Vol.2, No.6, pp. 776-777 (USSR).

ABSTRACT: For cubic crystals:

$$s'_{11} = s_{11} - (2s_{11} - 2s_{12} - s_{44}) \cdot \psi_1$$

$$s'_{12} = s_{12} - (2s_{11} - 2s_{12} - s_{44}) \cdot \psi_2$$

$$s'_{44} = s_{44} + 2(2s_{11} - 2s_{12} - s_{44}) \cdot \psi_3$$

where:

$$\psi_1 = \alpha_1^2\alpha_2^2 + \alpha_2^2\alpha_3^2 + \alpha_1^2\alpha_3^2$$

$$\psi_2 = \alpha_1\alpha_2\beta_1\beta_2 + \alpha_1\alpha_3\beta_1\beta_3 + \alpha_2\alpha_3\beta_2\beta_3$$

$$\psi_3 = \beta_1^2\gamma_1^2 + \beta_2^2\gamma_2^2 + \beta_3^2\gamma_3^2$$

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On the Question of the Elastic Anisotropy of Crystals of the Cubic System for the hkl planes.

and α_i , β_i and γ_i are the direction cosines of the coordinate system in which the elastic coefficients s'_{11} , s'_{12} and s'_{44} are measured. If these three directions lie in the plane hkl then γ_1 , γ_2 and γ_3 can be expressed in terms of their indices as follows:

$$\psi_i = A_i\mu^2 + B_i\mu^4 + C_i\mu(1 - \mu^2)^{1/2} + D_i\mu^3(1 - \mu^2)^{1/2} + E_i$$

where:

$$A_1J_2^2J_3^2 = J_2^3(k^2 + l^2 - h^2) + h^2\left[(l^4 + k^4 - 4k^2l^2)J_3 - 2h^2k^2l^2\right]$$

$$B_1J_2^2J_3^2 = -J_2^4 - h^2\left[(l^4 + k^4 - 4k^2l^2)J_3 - h^2k^2l^2\right] + l^2k^2J_3^2$$

$$C_1J_3^{3/2}J_2^2 = 2h^3kl(k^2 - l^2)$$

Card2/4 $$D_1J_2^2 = 2hkl(k^2 - l^2)(2h^2 + k^2 + l^2)$$

On the Question of the Elastic Anisotropy of Crystals of the Cubic System for the hkl Planes.

$$E_1 J_3^2 J_2^2 = h^2 \left[J_2^3 + h^2 k^2 l^2 \right]$$

$$A_2 = -B_2 = -\frac{J_2}{J_3} + \frac{h^2 J_2}{J_3^2} - \frac{h^2(k^4 - 4k^2 l^2 + l^4)}{J_2^2 J_3} + \frac{l^2 k^2}{J_2^2} + \frac{h^4 k^2 l^2}{J_2^2 J_3^2}$$

$$C_2 J_2^2 J_3^{3/2} = hkl(k^2 - l^2)(2h^2 + k^2 + l^2), \quad D_2 = -2C_2$$

$$E_2 J_2^2 J_3 = -h^2 k^2 l^2$$

$$A_3 J_2 J_3^2 = 2h^2(k^4 + l^4) - 2l^2 k^2 (k^2 + l^2), \quad B_3 = 0,$$

$$C_3 J_2 J_3^{3/2} = 2hkl(l^2 - k^2), \quad D_3 = 0$$

$$E_3 J_2 J_3 = 2l^2 k^2$$

$$J_2 = k^2 + l^2, \quad J_3 = h^2 + k^2 + l^2$$

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On the Question of the Elastic Anisotropy of Crystals of the Cubic System for the hkl planes.

Here, μ is the cosine of the angle between the direction considered and a fixed direction in the plane hkl. Analysis of these functions shows that the planes hhh are isotropic for the coefficients s_{11} and s_{22} and that the 100 planes are isotropic for the coefficient s_{44}.

(This is a full translation).

ASSOCIATION: Zaporozh'ye Pedagogical Institute im. M.V. Lomonosov (Zaporozhskiy Pedagogicheskiy Institut im. M.V. Lomonosova)

SUBMITTED: April 2, 1956.

AVAILABLE: Library of Congress.

Card 4/4

SHTEFAN,V8 600

1. SHTEFAN, V.

2. USSR (600)

"Bibliography (Reviews)," Astron. Zhur., 17, No. 4, 1940. Saratov University. (submitted 17 Apr 1940)

9. [redacted] Report U-1518, 23 Oct 1951

[illegible], [illegible]

"Angular velocities of telescopic meteors," Astron. Zhur., 1[illegible], No. [illegible], 193[illegible].

Report [illegible], [illegible] 1951.

SHTEPAN, V. Ye.

Solar System, Meteors (3986)

Izv. AN Turkmenskoy SSR, No 5, 1953, pp 98-100
Shtepan, V. Ye.
Some results of Investigation of Telescopic Meteors

Lists data obtained from observations of telemeteors in 1952 and 1953 in the city of Chardzhou: daily variations, distribution in visible brightness and color, and a catalog of 10 radiants.

SO: Referativnyy Zhurnal -- Astronomiya i Geodeziya, No 6, 1954 (W-30976)

SHTEPAN, V.

SHTEPAN, V. (Chardzhou)

Observations of telescopic meteors in Turkmenistan. Astron.tsir. no.141:12-13 S '53. (MLRA 7:7)
(Meteors)

SHTEPAN, V.

Relationship between the position of maximal brightness of telemeteors and their other physical characteristics. Astron. tsir. no.153:22-24 O '54. (MLRA 8:5)
(Meteors)

SHTEPAN, V. (Chardzhou)

Influence of the midnight effect on the darkening of meteors.
Astron.tsir. no.153:24-25 O '54. (MLRA 8:5)
(Meteors)

SHTEPAN, V.Ye.

Catalogue of telescopic meteors. Trudy Inst. fiz. i geofiz. AN Turk.SSR 1:73-99 '55. (MLRA 9:12)

(Meteors--Catalogs)

SHTEPAN, V.Ye.

Change of relative altitudes of telescopic meteors in relation to the time of year and day. Izv.AN Turk.SSR. no.1:97 '55. (MLRA 9:5)

1. Institut fiziki i geofiziki AN Turkmenskoy SSR.
(Meteors)

SHTEPAN, V.Ye.(Chardzou)

Problem of studying telescopic meteors. BIUL.VAGO no.16: 39-42 '55. (MLRA 8:6)
(METEORS)

Trans.- 563369

SHTEPAN, V. Ye.

SHTEPAN, V.Ye. (gor. Chardzhou)

Telescopic meteorites. Nauka i zhizn' 22 no.2:35 F '55. (MLRA 8:3)
(Meteorites)

SHTEPAN, V.

Telescopic meteors of the Geminid stream. Astron.tsir.no.166: 23-24 Ja '56. (MLRA 9:7)
(Meteors--December)

SHTYRPAN, V.Ye.

Orionids in 1954 and 1955 as observed through binoculars. Astron. tsirk. no.167:27-28 F '56. (MLRA 9:9)

1. Turkmenskaya SSR, g. Chardzhou.
(Meteors--October)

SHTEPAN, V. (Chardzhou).

Visual observation of a diurnal shower of Arietids. Astron. tsirk. no.171:28 Jl '56. (MLRA 9:12)

(Meteors)

SHTEPAN, V.Ye.

Data on a two-year observation on telescopic meteors in the zenithal region of the sky. Trudy Inst. fiz. i geofiz. AN Turk. SSR 3:64-81 '57. (MLRA 10:9)

(Chardzhou--Meteors)

SHEFFAN, V. (Chardzhou)

Observations of Lyrids in 1957. Astron. tsir. no.181:22-23 Je '57.
(MIRA 13:3)
(Meteors--April)

SHTEPAN, V. (Chardzhou).

Observing telescopic meteors of the Southern Hemisphere. Astron. tsir. no.182:17-18 Je '57. (MIRA 11:3)
(Meteors)

SHTEPAN, V. (Chardzhou).

Radiants of telescopic meteors in the North Polar Region. Astron. tsir. no.182:19-20 Je '57. (MIRA 11:3)
(Meteors)

SHTEPAN, V.Ye.

Catalog of the radiants of telemeteors. Biul. Kom. po komet i meteor. AN SSSR no.3:33-36 '58 (MIRA 13:3)

1. Chardzhouskiy gosudarstvennyy pedagogicheskiy institut.
(Meteors--Catalogs)

81466

3.1550

SOV/35-59-8-6480

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1959, Nr 8, pp 54 - 55

AUTHOR: Shtepan, V.Ye.

TITLE: On Telescopic Observations of Comet Radiants

PERIODICAL: Astron. tsirkulyar, 1958, October 16, Nr 196, pp 13 - 15

ABSTRACT: Comet radiants, published by Ye.N. Kramer (RZhAstr, 1957, Nr 1, 617), are observed with the aim of identification with them of telescopic meteors. The study has been planned for 1959 - 1960. First observations were conducted in August - September, 1958. Two radiants, π Cas and ω Psc, were observed. The first radiant did not contain a single meteor, but it was observed insufficiently; its additional checking is necessary. The ω Psc radiant shows telescopic meteors. Apparently this radiant is connected with the comet 1766 II.

N.P.K.

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SHTEPAN, V.

Observations of Ursids of December 22, 1957. Astron. tsir. no.189:19 F '58. (MIRA 11:8)
(Meteors--December)

SHTEPAN, V.Ye. (g.Chardzhou, Turkmeniya)

Lacertid meteoric shower. Astron. tsir. no.191:21-22 My '58.
(Meteors--February) (MIRA 11:9)

SHTEPAN, V.Ye. (Chardzhou); MUKUMOV, S. (Chardzhou)

Draconids in 1958. Astron.tsir. no.197:13-14 N '58.
(MIRA 12:7)

(Meteors--October)

SHTEPAN, V.Ye. (Chardzhou, Turkmenskaya SSR)

October Arietids. Astron.tsir. no.197:14-16 N '58.
(MIRA 12:7)

(Meteors--October)

SHTEPAN, V.Ye.

Scintillating meteors. Astron.tsir. no.207:21-22 D '59. (MIRA 13:6)

1. Pedinstitut, kafedra fiziki, Chardzhou, Turkmenskaya SSR.
(Meteors)

04500

S/035/60/000/009/013/016
A001/A001

9,6170
Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, p. 77, # 9142

AUTHOR: Shtepan, V.Ye.

TITLE: Scintillating Meteors

PERIODICAL: Astron. tsirkulyar, 1959, dek. 20, No. 207, pp. 22-23

TEXT: During the observations of meteors in 1952-1959, 1,700 meteors were recorded in 832 hours, of which 36 were scintillating ones. The author presents the meteor distribution by months, dates and hours of local time. It was found out that the maximum number of scintillating meteors occur during the last months of the year and in the hours preceding midnight. As to their luminosities, the maximum number of scintillating meteors are of the magnitudes 3^m to 6^m. The speeds of scintillating meteors are from 2.0 to 11.1 degrees per sec.

N.F.K.

Translator's note: This is the full translation of the original Russian abstract.

Card 1/1

84579

S/035/60/000/009/012/016
A001/A001

9,6170

Translation from: Referativnyy zhurnal, Astronomiya i Geodeziya, 1960, No. 9, pp. 75-76, # 9131

AUTHOR: Shtepan, V.

TITLE: On the Relation Between the Outline and Colors of Meteors

PERIODICAL: Astron. tsirkulyar, 1960, yanv. 30, No. 208, pp. 23-25

TEXT: Colors and outlines of 1283 meteors observed from 1952 to 1959 were estimated. The following results were obtained: 1) Weak meteors were outlined somewhat better than bright ones; 2) white color occurs most frequently, yellow - more seldom; yellow color is observed oftener than white one in brightest meteors; 3) the percentage of white meteors increases with a decrease in brightness, and the percentage of all other colors decreases; 4) meteors of white color are outlined poorer than all others.

N.P.K.

Translator's note: This is the full translation of the original Russian abstract.

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20899

S/034/60/000/208/004/004
E032/E314

3,1550 (1060, 1080, 1184)

AUTHOR: Shtepan, V.Ye.

TITLE: Ionised Meteor Trails

PERIODICAL: Astronomicheskiy tsirkulyar, 1960, No. 208, pp. 25 - 26

TEXT: In the case of "telescopic" meteors the ionised trails of meteors are relatively rare. Bright meteors, on the other hand, entering the field of view of binoculars or a telescope might frequently take the form of a luminous trail which remains visible for several seconds. The deformation and displacement of the trail can also be seen occasionally. The trails are formed at altitudes in excess of 80 km and the phenomenon is associated with the ionisation of the medium. This ionisation occurs along the path of the meteor. The resulting ionised trail is in the form of a cylinder which gradually expands owing to diffusion. If the cylinder is hollow, then the edges of the trail are brighter and the trail occasionally appears to be double. The trail is not normally formed instantaneously and some fractions of a second are necessary (after the passage

Card 1/7

Ionised Meteor Trails

of the meteor) for the brightness to reach a maximum. Prolonged observations over many years did not reveal a single meteor of a magnitude greater than zero nor a trail existing longer than 10 sec. However, one can occasionally observe trails which exist for longer time intervals by looking with the naked eye for bright meteors and then immediately examining it with binoculars. Tables 1 and 2 show some of the regularities found for meteors observed between August, 1952, and September, 1959, at Chardzhou. The empirical formula relating the lifetime of a trail r_s^o and the stellar magnitude of the meteor m was found to be

$$r_s^o = 5.8 - 0.7\ m \qquad (1) .$$

According to this formula, telemeteors weaker than $8^m.3$ should have trails unobservable through binoculars. In the case of the naked eye, trails are observed only for meteors

brighter than 2.3, which leads to the formula

$$r_s = 5.4 - 2.4\ m \qquad (2)$$

which was obtained by I.S. Astapovich (naked-eye observations). Eliminating m between these two equations, one finds that:

$$r_s^o = 0.3 r_s + 4.2 \qquad (3)\ .$$

Eq. (6) shows that when $r_s > 6^s$ we are led to the result $r_s^o < r_3$, which is clearly impossible. It must therefore be assumed that second-order terms enter into Eqs. (1) and (2). Table 3 shows the colours of the meteor and the trail for 19 brightest trails. There are 3 tables.

20899

S/034/60/000/208/004/004
E032/E314

Ionised Meteor Trails

ASSOCIATION: Turkmenskiy pedinstitut im. V.I. Lenina, Kafedra fiziki (The Turkmenian Pedagogic Institute, Chair of Physics)

SUBMITTED: November, 1959

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87019

S/034/60/000/209/006/009
E032/E114

550 (1057, 1062, 1129)

AUTHOR: Shtepan, V. Ye.

TITLE: Southern Meteor Stream Observations in 1959

PERIODICAL: Astronomicheskiy tsirkulyar, 1960, No. 209, pp. 30-31

TEXT: The observations were carried out using a seven stage prismatic binocular with objective diameters of 50 mm. The meteors were marked on the 1952 charts of the stellar atlas of A.A. Nikhaylov containing stars up to $8^m.25$. A total of 237 meteors was recorded in 94 hours, of which 67 turned out to belong to 19 radiants. The following table gives a list of the 19 radiants (Universal time, the coordinates refer to the epoch 1900.0 without the introduction of any corrections). The last three columns give the ratio of the angular length to the elongation of the head, the angular velocity, and the number of meteors in the given radiant respectively.

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87019

S/034/60/000/209/006/009
E032/E114

Southern Meteor Stream Observations in 1959

List of radiants

χ	Date	α	δ	z	mag.	Definition (0-5 scale)	λ/ψ	ω	n

Список радиантов.
List of radiants

№	Дата	α	δ	z	ярк.	очерч.	λ/ψ	ω	n
1	май 7.77	228.3	- 8.2	52°	8m.0–8m.5	4–5	0.5–0.8	2.9–4.6	3
2	" 11.69	230.4	- 0.3	60	3.0–7.5	3	> 0.2	4.2–5.7	3
3	июнь 9.79	245.3	-21.4	61	6.5–8.5	3–4	0.5–0.7	5.6–7.8	3
4	" 10.75	244.2	-20.8	61	7.0–7.5	2–3	0.5–0.7	5.6–7.8	3
5	" 11.79	246.5	-20.9	61	2.0–8.0	3–5	> 0.2	3.3–6.7	5
6	" 12.78	245.7	-21.9	61	7.0–7.5	3–4	0.4–0.8	6.0–6.7	4
7	" 13.74	245.5	-18.0	58	7.0–7.5	3	0.2	6.0–6.2	2
8	" 25.76	273.2	- 3.1	48	6.0–8.5	3–4	0.5–0.9	2.7–3.6	3
9	" 27.76	273.8	- 1.5	48	8.0–9.0	4–5	0.6–1.2	1.4–2.7	4

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87019

S/034/60/000/209/006/009
E032/E114

Southern Meteor Stream Observations in 1959

List of radiants (continued)

№	Date	α	δ	z	mag.	Definition	λ/ψ		n
10	июль	26.82	339.6	-14.1	63	6.5–7.5	4–5	> 0.6	3.2–5.0	3
11	"	28.82	340.3	-14.1	61	6.5–8.0	3–5	0.6–1.2	4.5–8.3	4
12	"	29.79	338.2	-15.6	70	2.0–4.0	4	0.4–0.7	1.0–1.6	3
13	"	29.82	341.1	-13.6	63	7.0–8.0	3–4	0.4–1.0	3.3–6.2	5
14	"	30.80	341.3	-11.6	62	6.5–8.0	3–4	0.4–0.8	4.7–6.5	5
15	"	30.82	339.8	-16.2	63	2.5–6.5	3–4	0.4–0.5	0.0–2.0	6
16	"	31.80	340.0	-15.8	63	3.0–4.0	3–4	> 0.7	1.2–1.3	2
17	"	31.82	341.9	-12.8	61	7.5–8.0	3–4	0.7–0.8	4.5–7.8	3
18	авг.	8.78	336.3	-12.2	60	2.0–7.0	4	?	5.0–8.0	3
19	нояб.	22.58	345.5	-25.2	65	7.5–3.0	3–4	0.3–0.6	6.2–9.1	3

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S/034/60/000/209/006/009
E032/E114

Southern Meteor Stream Observations in 1959

The months mentioned in the above table are May, June, July, August and November. The definition is given on a 5-unit scale in which 5 refers to the best defined objects. Nos. 1 and 2 in the above table are short period streams (20-30 min each). Radiant No. 2 was found to be close to that obtained by Sytinskaya in 1928 from observations by the naked eye. Nos. 3 to 7 are Scorpionids, and Nos. 8 and 9 are the same stream, known since the last century. Nos. 10, 11, 13, 14 and 17 are Delta Aquarids, Nos. 12, 15 and 16 are again Delta Aquarids. Here the meteors were very bright. Apparently the maximum of the Delta Aquarids occurred on the night of July 30-31. No. 18 are Southern Iota Aquarids and the radiant is in good agreement with the Harvard photographs. There is 1 table.

ASSOCIATION: Chardzhou, Pedinstitut
(Chardzhou Pedagogical Institute)

SUBMITTED: January, 1960

Card 4/4

SHTEPAN, V.Ye.

Observations of telescopic meteors in Armavir. Astron.tsir. no.225:18 S '61. (MIRA 16:1)

1. Armavirskiy pedagogicheskiy institut.
(Meteors)

S/269/63/000/001/030/032
A001/A101

AUTHOR: Shtepan, V. Ye.

TITLE: Radiants of telescopic meteors of the southern hemisphere

PERIODICAL: Referativnyy zhurnal, Astronomiya, no. 1, 1963, 75, abstract 1.51.513 ("Byul. Komis. po komitetam i meteoram Astron. soveta AN SSSR", 1961, no. 5, 45 - 51)

TEXT: Fourteen regions of the southern hemisphere were observed for 47 nights with the purpose of searching for radiants and preliminary surveillance of meteor streams. Binoculars were used for observations. Meteors were plotted on the maps of Mikhaylov's stellar atlas. 288 meteors were recorded during 147 hours of observations, of which 99 pertain to streams. Anomalously large number of sporadic meteors was noted on February 26 and September 15, 1958. Information on the activity of the streams and radiants derived are presented in tables. There are 6 references.

P. Babadzhanov

[Abstracter's note: Complete translation]

Card 1/1

SHTEPAN, V.Ye.

Telescopic meteors and atmospheric tides. Astron.tsir. no.226: 11-12 O '61. (MIRA 16:1)

1. Armavirskiy pedagogicheskiy institut.
(Meteors) (Atmosphere)

KOL'MAN, E., prof.; GORPINICH, K.Ye., uchitel'; SHTEPAN, V.Ye., prepodavatel' teoreticheskoy mekhaniki; VLASOV, O.Ye., prof. (Moskva); MERKULOV, I.T. (Ul'yanovsk); KUTSEV, M.M. (Kuybyshev); CHAPTYKOV, P.G. (Leningrad); DEMIN, V.N. (Tashkent); TUKMAN, R.E. (Tallin); GERTS, G., doktor fizicheskikh nauk, dotsent; DUDEL', S.P., doktor filosof. nauk, prof. (Moskva)

Finiteness and infinity in the universe; survey of letters and articles received by the editor. Priroda 54 no.8:97-102 Ag '65. (MIRA 18:8)

1. Shkola No.8 g. Kremenchuga (for Gorpinich). 2. Krasnoyarskiy politekhnicheskiy institut (for Shtepan). 3. Filosofskiy fakul'tet universiteta im. Gumbol'dta, Berlin, Germanskaya Demokraticheskaya Respublika (for Gerts).

SHTEPAN, Yakov Gerasimovich; IVANOV, A.P., red.; VOLKOVA, V.Ye., tekhn.red.

[Manual for engine mechanics] Uchebnik motorista. Moskva, Voen. izd-vo M-va oborony SSSR, 1958. 423 p. (MIRA 11:4)
(Gas and oil engines)

ZHERBIN, M.M., kand. tekhn. nauk; VDOVENKO, O.S.; VINOGRADOV, S.M. [Vynohradov, S.M.]; SLIVKO, V.M.[Slyvko, V.M.], inzh.; SHTEPAN, Ya.G.[Shtepan, IA.H.], otv. za vypusk; LOKTEVA, V.A. [Loktieva, V.A.], red.

[Device for drying corn on the cob with a gas and air stream] Ustanovka dlia sushinnia kukurudzy v kachanakh haropovitrianym strumenem. Kyiv, Derzh. vyd-vo tekhn. lit-ry URSR, 1961. 36 p. (MIRA 15:3)

1. Ukrains'kyi naukovo-doslidnyi i proektnyi instytut derzhplanu URSR. 1961.

(Corn (Maize))—Irying (Drying apparatus)

SHTEPAN, Ya.G., inzh.

Rotary internal combustion engines. Mashinostroenie no.3:117-120 My-Je '62. (MIRA 15:7)

1. Institut tekhnicheskoy informatsii
(Gas and oil engines)

SHTEPAN, Ya.G., inzh.

Air-cooled diesel engines. Mashinostroenie no.4:3-8 Jl-Ag '63.
(MIRA 17:2)

SHTEPAN, Ya.G.

Technical progress and the new international system of units.
Neft. i gaz. prom. no.2:60-65 Ap-Je '63.
(MIRA 17:11)

SOV/79-29-9-61/76

5(3)

AUTHORS: Yagupol'skiy, L. M., Shtepanek, A. S.

TITLE: Synthesis of the Nitro Derivatives of ω-Chlorostyrene

PERIODICAL: Zhurnal obshchey khimii, 1959, Vol 29, Nr 9, pp 3086-3092 (USSR)

ABSTRACT: The authors tried to use the easily accessible p- and m-nitrophenyl chloromethyl carbinols (Refs 1, 2) for the synthesis of the corresponding nitro derivatives of ω-chlorostyrene by substituting the chlorine for hydroxyl with a subsequent separation of HCl according to scheme (A). In the attempt of substituting chlorine in compound (I) for hydroxyl with the aid of thionyl chloride the already known compound (V) was obtained instead of the expected compound (II). In the action of PCl_5 on (I) compound (II) smoothly forms, which reacts with triethylamine in alcohol according to scheme (B), and which leads to compound (IV). The structure of compound (IV) was proved according to scheme 2. m-Nitrophenyl chloromethyl carbinol (VI) which together with thionyl chloride, as mentioned above, gives compound (VII) reacts in a similar way as the para-derivative. PCl_5 transforms compound (VI) into the dichloride (VIII). In the separation of HCl by an alcoholic

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Synthesis of the Nitro Derivatives of ω-Chlorostyrene

solution of triethylamine an uncrystallizable oil results. In contrast to it the earlier described (Ref 5) ω-nitro-m-chlorostyrene is a solid compound. Similar to the para-isomer the preparation obtained must have the structure of m-nitro-α-chlorostyrene (IX). Also the hitherto undescribed 3,5-dinitro- (X) and 2,4-dinitro phenyl chloromethyl carbinol (XI) was synthesized by nitration of nitric acid ester of m- and p-nitrophenyl chloromethyl carbinol with subsequent saponification into strongly acid medium in the presence of urea. From carbinol (X) the dichloride (XII) was then obtained with PCl_5, which in the separation of HCl yielded 3,5-dinitro-α-chlorostyrene (XIII). The attempt of obtaining p-nitro-ω-chlorostyrene (III) by separating water from p-nitrophenyl chloromethyl carbinol could be carried out best, in order to obtain better yields, by heating carbinol (I) with phosphoric acid anhydride at 100°. The styrene (III) yield was 47% (besides its racemate (XIV) (4%)). By the same method the styrenes (XV) and(XVI) resulted by separating water from the corresponding carbinols. Compound (XVII) was formed as side product of the latter. It was shown that, in contrast to the meta-isomer, p-nitro-ω-chlorostyrene has a mobile

Synthesis of the Nitro Derivatives of ω-Chlorostyrene

halogen which made it possible to synthesize compounds (XVIII) - (XX). There are 7 references, 4 of which are Soviet.

ASSOCIATION: Institut organicheskoy khimii Akademii nauk Ukrainskoy SSR (Institute of Organic Chemistry of the Academy of Sciences of the Ukrainskaya SSR)

SUBMITTED: July 18, 1958

SHEVCHENKO, V.I.; SHTEPANEK, A.S.; KIRSANOV, A.V.

Isocyanatephenylphosphinyl chloride. Zhur.ob.khim. 31 no.9:3062-3066 S '61. (MIRA 14:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Phosphinic chloride)

KIRSANOV, A.V. [Kirsanov, O.V.], akademik; SHTEPANEK, A.S.; SHEVCHENKO, V.I.

Reaction of diphenyl phosphorus trichloride and diphenyl phosphorus dichloride with urethan. Dop. AN URSR no.1:63-65 '62. (MIRA 15:2)

1. Institut organicheskoy khimii AN USSR. 2. AN USSR (for Kirsanov.

(Phosphorus organic compounds)
(Carbamic acid)

SHEVCHENKO, V.I.; SHTEPANEK, A.S.; KIRSANOV, A.V.

3-Arylcarbamidophenylphosphinic acids and their chlorides. Zhur. ob khim. 32 no.1:150-153 Ja '62. (MIRA 15:2)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Phosphinic chloride)

DERKACH, G.I.; SAMARAY, L.I.; SHTEPANEK, A.S.; KIRSANOV, A.V.

Alkyl esters of phosphazocarbonic acid. Zhur.ob.khim. 32 no.11:3759-3761 N '62. (MIRA 15:11)

1. Institut organicheskoy khimii AN UkrSSR.
(Phosphazo compounds)
(Carbonic acid)

SHEVCHENKO, V.I.; SHTEPANEK, A.S.; KIRSANOV, A.V.

Esters of diphenylchloro- and triphenylphosphazo carbonic acid. Zhur. ob. khim. 32 no.8:2595-2600 Ag '62. (MIRA 15:9)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.
(Phosphazo compounds) (Carbonic acid) (Esters)

L 27844-65 EWG(j)/EWT(m)/EPF(c)/EPR/EWP(j)/EWP(k)/EWA(h)/EWA(d)/T/EWP(b)/EWA(l)/
EWP(v)/EWP(t) Pc-4/Pf-4/Pi-4/Pr-4/Ps-4/Peb IJP(c)/RPL RWH/JD/WW/HM/JW/RM
ACCESSION NR: AP5006089 S/0073/65/031/002/0233/0234

AUTHOR: Shtepanek, A. S.

TITLE: Circuit session of the division of chemistry and chemical technology of the Ukrainian Academy of Sciences

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 31, no. 2, 1965, 233-234

TOPIC TAGS: chemical research facility, chemical industry, chemical conference, free radical, polymer, physical chemistry, hydrocarbon, glass, plastic, metal welding, steel

ABSTRACT: The Circuit Session of the Division of Chemistry and Chemical Technology of the Ukrainian Academy of Sciences convened in Severodonetsk on 14—16 Oct 1964. The following list gives the authors and the subjects of selected papers from the proceedings of the Session:

V. S. Gutyrya, Vice-President of the Academy. Purpose of the Session—establishment of a constant contact between the chemical institutes of the Ukrainian Academy of Sciences and the scientific research institutes in

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branch industries and the chemical industry.

K. B. Yatsimirskiy. Basic research trends in chemistry and chemical technology at the Ukrainian Academy of Sciences.

Ye. M. Arnol'dov. Present state and future development of the chemical industry of the Donets region.

A. N. Brodskiy. Free radicals in chemical reactions.

A. K. Babko. Physicochemical methods for determining small amounts of impurities.

A. A. Kachan. Radiation-induced and photochemical modification of polymeric materials.

A. P. Klimenko. Preparation of high-purity hydrocarbon raw materials.

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ACCESSION NR: AP5006089

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L. M. Yagupol'skiy. Fluorine-containing intermediate products.

N. I. Kakhovskiy. Welding of austenitic and heat-resistant steels.

A. M. Romanenko. New production technology of glass-reinforced plastics.

The Session discussed the scientific work of the chemical institutes of the Ukrainian Academy of Sciences, the future development of the chemical industry of the Donets region, and problems connected with the efficient development of raw material resources. It was decided to organize an Institute of Organic Synthesis in the Donets region and to direct the Institutes of the Academy to provide scientific assistance to the chemical enterprises of the Donets region. The Session contributed to bringing together science and industry and to establishing contacts between scientists and workers in the chemical industry.

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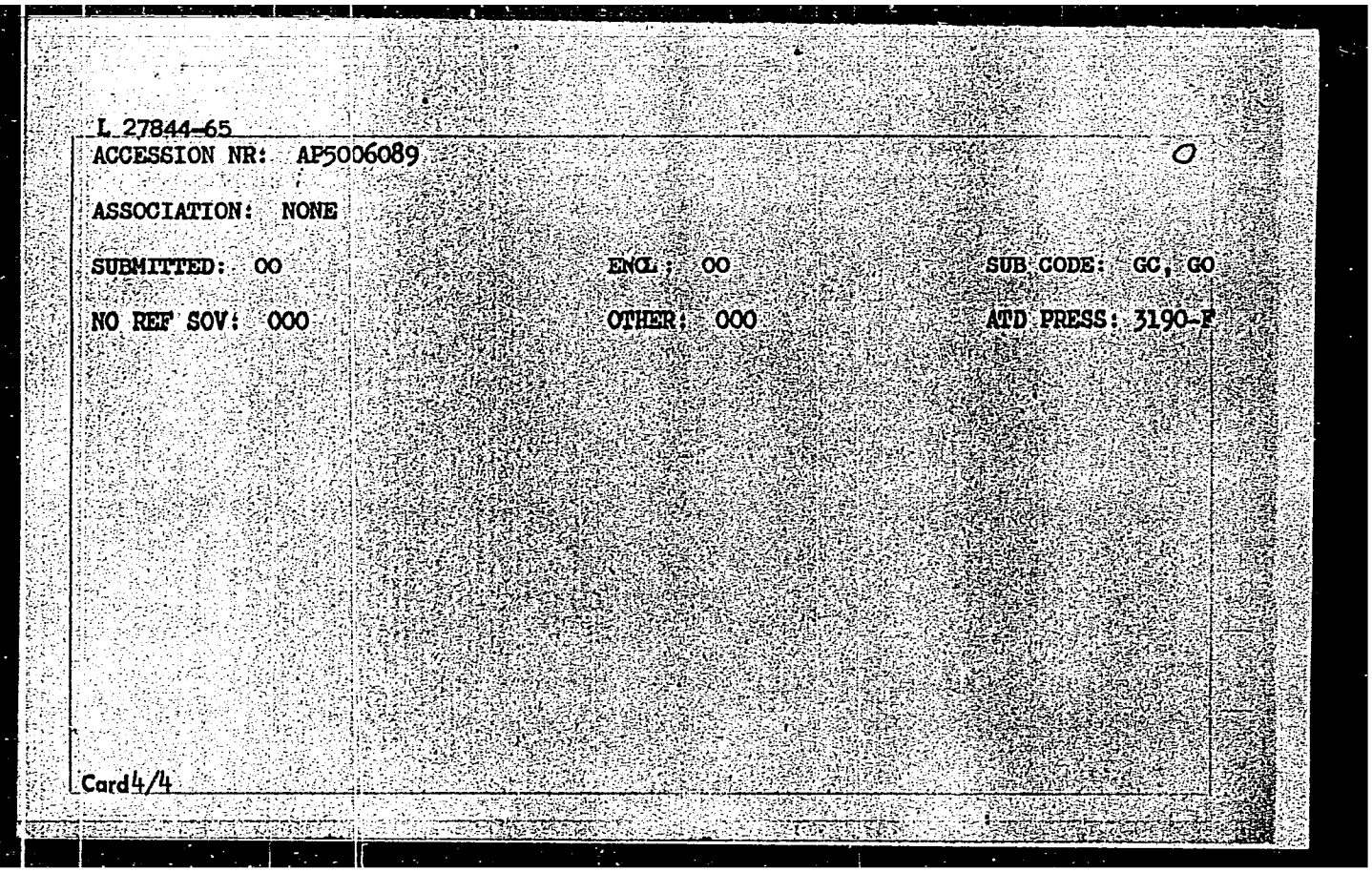

L 27844-65
ACCESSION NR: AP5006089 O

ASSOCIATION: NONE

SUBMITTED: 00 ENCL: 00 SUB CODE: GC, GO

NO REF SOV: 000 OTHER: 000 ATD PRESS: 3190-F

Card 4/4

SHTEPANʹK, A.S.; CHEVCHENKO, V.I.; KIRSANOV, A.V.

N-carbalkoxyamidophenylph[illegible] acids. Zhur. ob. khim. 35 no.6:1023-1025 Je '65. (MIRA 18:6)

1. Institut organicheskoy khimii AN Ukrainskoy SSR.

ACC NR: AM5027772 Monograph UR/

Derkach, Grigoriy Illarionovich; Zhmurova, Irina Nikolayevna; Kirsanov, Aleksandr Vasil'yevich; Shevchenko, Veniamin Isaakovich; Shtepanek, Alla Stanislavovna

Phosphazo compounds (Fosfazosoyedineniya) Kiev, Izd-vo "Naukova dumka," 1965. 283 p. illus., biblio. (At head of title: Akademiya nauk Ukrainskoy SSR. Institut organicheskoy khimii) 2000 copies printed.

TOPIC TAGS: organic phosphorus compound, nitrogen compound, organic azo compound

PURPOSE AND COVERAGE: The introduction contains a review of recent research in the field and a discussion of the problems connected with inconsistencies in terminology. The nomenclature employed is that first proposed by A. Mikhaelis. The book deals with data on the chemistry of phosphazo compounds, published in the scientific press up to 1 January 1964, and presents lists of the phosphazo compounds that are known at the present time. It is intended for scientists, industrial workers, teachers, and students interested in modern progress in organic chemistry, especially those working in the field of phosphor-organic compounds. Each chapter deals with a different class of compounds, for which the authors give the method of preparation, the chemical properties, a list of compounds, and an appropriate bibliography.

TABLE OF CONTENTS [abridged]:

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ACC NR: AM5027772

SUB CODE: 07/ SUBM DATE: 10Apr65/ ORIG REF: 222/ OTH REF: 319

Card 2/2

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1.5000

AUTHOR: Shtepanek, K. (CSR)

TITLE: Measuring and Increasing the Accuracy of Gear Cutting Machine Tools

PERIODICAL: Stanki i Instrument, 1960, No. 9, pp. 18-23

TEXT: The author points out that the accuracy of geared transmissions is characterized by the maximum magnitudes of the following components: maximum kinetic error Δk max, maximum accumulated error Δs max and maximum cyclic error Δc max. In the case of $\Delta c = \Delta c$ max = const, and Δk max = Δs max + Δc max, the curve of kinematic transmission errors characterizes its quality and is used as a basis for kinematic and dynamic calculations. The author emphasizes that, since the accuracy of toothed wheels is determined by the accuracy of the transmission, the chief aim of measurement is the determination of its kinematic errors. He then describes the measurement of accuracy of geared transmission by the single-profile rolling method and gives a description of the new IMO-S measuring device, which was developed by the Nauchno-issledovatel'skiy institut metallorezhushchikh stankov i obrabotki rezaniyem (Scientific Research Institute for Metal Cutting Machine Tools and Tooling by Cutting) in Prague. The device possesses a new

Card 1/2

SHTEPANEK, S. I.

36794. Gidravlicheskiye sposoby aeratsii vody v rybovodnylk prudakh. Izvestiya In-ta gidrologii i gidrotekhniki (akad. nauk Ukr. SSR), t. V, 1949, c. 82 - 89. --Na ukr. yaz.-- Rezyme na rus. yaz.

SO: Letopis Zhurnal'nylk Statey, Vol. 50, Moskva, 1949

SHTEPANEK, S.I., kand. tekhn. nauk.

Utilizing hydraulic air-lift pumps and air compressors for aerating water from fish-inhabited sources. Izv. Inst. gidrol. i gidr. AN URSR 8:92-97 '51. (MIRA 11:4)
(Pumping machinery) (Water--Aeration)

SUKHOMEL, G.I.; SHTEPANEK, S.I.

Determining the range of disadvantageous speeds for the passage of ships through canals. Izv. Inst. gidrol. i gidr. AN URSR 9: 57-61 '53. (MIRA 11:4)

1. Deystvitel'nyy chlen AN USSR (for Sukhmel).
(Canals) (Shore protection) (Hydrodynamics)

SHTEPANE[redacted], S. I.

Immediate tasks for the Institute of Hydrology and Hydraulic Engineering of the Academy os Sciences of the Ukrainian S.S.R. Visnyk AN URSR 27 no.9:28-31 S '56. (MLRA 9:11)

(Ukraine--Hydrology)

SHTEPANSK, S.I.

Study of hydraulic engineering in the Ukraine during Soviet rule. (MIRA 11:1)
Visnyk AN URSR 28 no.7:35-38 Jl '57.
(Ukraine--Hydraulic engineering)

SHTEPANEK, S.I., kand. tekhn. nauk

First pipe spillways in Ukrainian ponds. Izv. Inst. gidrol. i gidr. AN URSR 15:101-103 '59. (MIRA 12:9)
(Ukraine--Spillways)

SHTEPANEK, S.I., kand. tekhn. nauk

Annotated index of publications of the Institute of Hydrology and Hydraulic Engineering of the Academy of Sciences of the Ukrainian S.S.R. for the period 1926-1956. Izv. Inst. gidrol. i gidr. AN URSR 15:110-119 '59. (MIRA 12:9)
(Bibliography--Hydraulic engineering)

SHTEPANEK, S.I., kand.tekhn.nauk

Annotated list of works published by the Institute of Hydrology and Hydraulic Engineering of the Academy of Sciences of the Ukrainian S.S.R. during 1957-1959. Visti Inst.gidrol.i gidr. AN URSR 18:113-115 '61. (MIRA 15:3)
(Bibliography--Hydrology) (Bibliography--Hydraulics)

DIDKOVSKIY, M.M., kand. tekhn. nauk, otv. red.; DYATLOVITSKIY, L.I., doktor tekhn. nauk, red.; ROZOVSKIY, I.L., doktor tekhn. nauk, zam. otv. red.; NIKITIN, I.K., kand. tekhn. nauk, red.; PYSHKIN, B.A., red.; SILIN, N.A., kand. tekhn nauk, red.; SUKHOMEL, G.I., akademik, red.; SHTEPANEK, S.I., kand. tekhn. nauk, red.; GILELAKH, V.I., red.

[Hydraulic engineering and fluid mechanics] Gidrotekhnika i gidromekhanika. Kiev, Naukova dumka, 1964. 217 p. (MIRA 17:12)

1. Akademiya nauk URSR, Kiev. Instytut hidromekhaniky. 2. Chlen-korrespondent AN Ukr.SSR (for Pyshkin). 3. AN Ukr.SSR (for Sukhomel).

SHTEPANSKIY, V. (Ostrava)

Representation of equations with 8 to 24 variables by nomograms with crossed indices and a family of lines. Nom. sbor. no.3:110-143 '65. (MIRA 18:10)

SHTEPENKO, A.

Pervyi kommercheskii reis Moskva-Chukotka. /The first Moscoe-Chukotka commercial run/. (Sovetskaia Arktika, 1940, no. 7, p. 39-46, illus.).

DLC: G600.S6

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

SHTEYENKO, A.

"Notes of a Navigator," 1950. Great Northern Sea Route Administration- Publications.

SHTEPENKO, Aleksandr Pavlovich

[Notes of navigator] Zapiski shturmana. Moskva, Gos. izd-vo geogr. lit-ry, 1953. 198 p. (MLRA 7:6)
(Voyages and travels)

ALIKIN, R.I.; GORBIYENKO, P.I.; BESPROZVANNYY, I.G.; ZHIBTSOV, P.P.; ZOLOTAREV, P.A.; ZUSMANOVSKAYA, L.L.; IBRAGIMOV, K.G.; KOZOREZOV, M.A.; KOKOREV, A.I.; KUPRIANOV, Yu.V.; KUROCHKA, A.L., kand. tekhn. nauk; LITVINOVA, L.M.; LOZANOVSKIY, A.L., kand. tekhn. nauk; MAVDRIKOV, F.I.; MAKHAN'KOV, L.V.; PUKALOV, V.I.; RAYLYAN, A.F.; SVERDLOV, V.Ya.; SKLYAROV, B.S.; SOLOV'YEV, K.M., kand. tekhn. nauk; STUKALKIN, A.N.; SUROVIKOV, A.A.; TIKHONOV, N.G.; SHCHEPENKO, P.K.; YANOV, V.P.

[VL8O electric locomotive.] Electrovoz VA8O. Novocherkassk. Nauchno-issledovatel'skii institut elektrovozostroeniia. Sbornik nauchnykh trudov, vol. 5) (MIRA 18:5)

SHCHIRENKO,N.S., professor, doktor tekhnicheskikh nauk; ISAYENKO,N.F., dotsent; SHTEPENKO,V.Z., dotsent; GREBENIK,V.M., kandidat tekhnicheskikh nauk; SOCHAN,I.F., inzhener; IVANCHENKO,F.K., kandidat tekhnicheskikh nauk

Rotating loader-hurlers and their use in Martin furnace plants. Vest.mash.35 no.8:13-14 Ag'55. (MLRA 8:10)
(Conveying machinery)

VISHNYAKOV, Dmitriy Yakovlevich, prof., doktor tekhn. nauk; ROSTOVTSEV Gennadiy Nikolayevich; NEUSTRUYEV, Aleksandr Aleksandrovich; STARODUBOV, K.F., doktor tekhn. nauk, prof., akademik, retsenzent; SOKOLOV, K.N., doktor tekhn. nauk, prof., retsenzent; DOLZHENKOV, I.Ye., kand. tekhn. nauk, dots., retsenzent; SHTEPENKO, V.Z., kand. tekhn.nauk, dots. retsenzent; KRAVTSOV, A.F., kand. tekhn. nauk, dots., retsenzent; FIL'TSER, G.A., dots., retsenzent; SILICH, A.N., st. prepodav., retsenzent; SIUKHIN, A.F., assistent, retsenzent; SAVEL'YEV, L.P., assistent, retsenzent

[Equipment, mechanization and automation of heat-treating plants] Oborudovanie, mekhanizatsiia i avtomatizatsiia v termicheskikh tsekhakh. Moskva, Metallurgiia, 1964. 467 p. (MIRA 17:10)

1. Akademiya nauk Ukr. SSR (for Starodubov).

SHTEPINA, Ya., kand.tekhn.nauk; BENDL, I., kand.tekhn.nauk;
YAKOVENKO, V.A., kand.tekhn.nauk, dotsent

Concerning V.A. IAkovenko's article "Calculation of commutating flux rise for suddenly applied loads." Elektrichestvo no.2:89-92 F '62. (MIRA 15:2)

1. Chekhoslovatskaya Akademiya nauk (for Shtepina, Bendl).
(Electric machinery)
(IAkovenko, V.A.)

KONDRAT'IEV, N.P.; SHTER, B.O.; CHERNYSHOVA, T.Ye.; LANGE, V.I., redaktor; POLOSINA, A.S., tekhnicheskiy redaktor.

[Operation and maintenance of a fleet of automobiles and tractors in the petroleum industry; a collection of articles] Ekspluatatsiia i remont avtotraktornogo parka neftianoi promyshlennosti; sbornik materialov. [Sost. N.P.Kondrat'ev, B.O. Shter, T.E. Chernyshova] Izd.2-oe, ispr. i dop. Moskva, Gos. nauchno-tekhn.izd-vo neftianoi i gorno-toplivnoi lit-ry, 1952. 502 p. (MLRA 8:10)

1. Russia (1923- U.S.S.R.) Ministerstvo neftyanoy promyshlennosti.
(Automobiles) (Tractors) (Petroleum industry)

KALININ, Vladimir Ivanovich; SHTER, B.O., redaktor; BEKMAN, Yu.K., vedushchiy redaktor; SHIKIN, S.T., tekhnicheskiy redaktor

[Operation of tractor-mounted hoisting machinery] Ekspluatatsiia traktorov-pod"emnikov. Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1956. 174 p. (MLRA 9:12)
(Hoisting machinery) (Tractors)

KONDRAT'YEV, N.P.; SHTER, B.O.; CHERNYSHOVA, T.Ye.; LOZBYAKOVA, Ye.S., vedushchiy redaktor; KHLEBNIKOVA, L.A., tekhnicheskiy redaktor

[Operation and repair of an automobile and tractor fleet of the petroleum industry; a collection of papers] Ekspluatatsiia i remont avtotraktornogo parka neftianoi promyshlennosti; sbornik materialov. Izd. 3-e, ispr. i dop. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi lit-ry, 1957. 563 p. (MLRA 10:7)

1. Russia (1923- U.S.S.R.) Ministerstvo neftyanoy promyshlennosti.
(Automobiles--Maintenance and repair)
(Tractors--Maintenance and repair)

VATSFEL'D, V.; FUKSHANSKIY, M.; SHTER, B.

Organizing crews for transportation of earth on dump trucks. Avt. transp. 36 no.8:33-35 Ag '58. (MIRA 11:9)

1.Glavmosavtotrans.

(Dump trucks) (Earthwork)

VAYSFEL'D, V.; SHTER, B.

Hauling building materials according to time tables. Avt. transp. 36 no.10:3-5 O '58. (MIRA 13:1)

1. Glavmosavtotrans.
(Building materials--Transportation)

VAYSFEL'D, V.; SHTER, B.

Transportation of fertilizers according to a schedule. Avt. transp. 37 no.8:15-17 Ag '59. (MIRA 12:12)
(Fertilizers and manures) (Transportation, Automotive)

SHTER, Boris Ovseyevich; VAYSFEL'D, Vladimir Yur'yevich; SEMINA, N.V., red.; GALAKTIONOVA, Ye.N., tekhn.red.; NIKOLAYEVA, L.N., tekhn.red.

[Brigades of communist labor in automotive transportation; collectives of the 1st and the 36th auto depots of the Moscow City Building Transportation Trust] Brigady kommunisticheskogo truda na avtomobil'nom transporte; o kollektivakh 1-i 35-i avtobaz Mosstroitransa. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1960. 33 p. (MIRA 14:1)
(Moscow--Transportation, Automotive)
(Socialist competition)

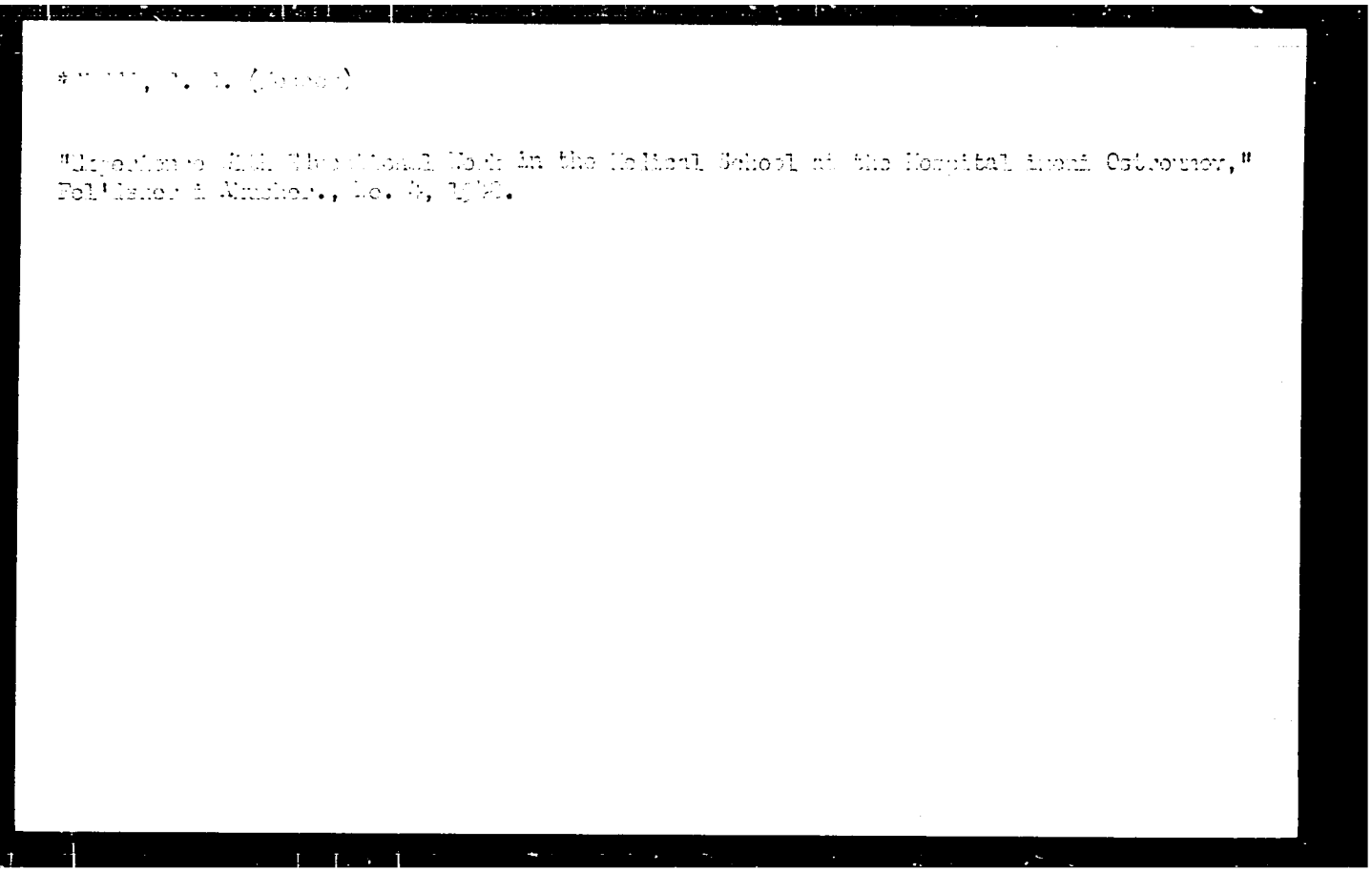
MURAV'YEV, I.M., prof.; ARZUMANOV, Sh.K., inzh.; ARKHANGEL'SKIY, N.K., inzh.; BAZLOV, M.N., inzh.; GROBSHTEYN, S.R., kand.tekhn.nauk; ZHUKOV, A.I., dotsent, MAKHMUDBEKOV, E.A., inzh.; MOVSESOV, N.S., inzh.; MURAV'YEV, V.M., inzh.; NEGREYEV, V.F., kand.tekhn. nauk; PLOTKL', S.G., kand.tekhn.nauk; PODGORNOV, M.I., inzh.; RUBACHEV, G.N., kand.ekon.nauk; SULTANOV, D.K., inzh.; SHTER, B.O., inzh.; SAVINA, Z.A., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Reference book on petroleum production] Spravochnik po dobyche nefti. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry. Vol.3. 1960. 712 p. (MIRA 13:5)
(Oil fields--Production methods)

SHTER, B.O.; KONDRAT'YEV, N.P.; LESNIKOVA, Ye.S.; MAKAROV, I.V.; CHERNYSHOVA, T.Ye.; SOLGANIK, G.Ya., ved. red.; FEDOTOVA, I.G., tekhn. red.

[Operation and repair of transportation and hoisting machinery of the petroleum and gas industry] Ekspluatatsiia i remont transportnykh sredstv i pod"emnykh mashin neftianoi i gazovoi promyshlennosti; spravochnik. Moskva, Gostoptekhizdat, 1962. 396 p. (MIRA 15:7)

(Gas, Natural--Transportation) (Petroleum--Transportation)



SHTEREA, F.

We watch your successes. p. 31.

Vol. 10, no. 9, Sept. 1955
KOOPERATIVNO ZEMEDELIE
Sofiya, Bulgaria

So: Eastern European Accession Vol. 5 No. 1 Jan. 1956

S/089/60/009/003/006/014
B006/B063

AUTHORS: Burgov, N. A., Danilyan, G. V., Korol'kov, I. Ya., Shterba, F.

TITLE: The Gamma Spectrum of the TBP(TVR) Reactor

PERIODICAL: Atomnaya energiya, 1960, Vol. 9, No. 3, pp. 214-215

TEXT: The authors of the present paper used a gamma spectrometer of the "Elotron"-type to measure the spectrum of gamma rays emerging from a radial hole of the TVR reactor. The geometry of the experiment, which is briefly described in the introduction, is schematically represented in Fig. 1. Fig. 2 shows the entire measured spectrum (resolution of 1.25 per cent for $E_\gamma \geq 2$ Mev). The peaks are numbered according to the numbering of the lines in the table. The second column of this table gives the energies of the various lines in Mev, and the values enclosed in brackets indicate the errors of the last places. The third column gives the relative intensities of the lines (accurate to about 10 per cent), and the fourth column gives the various possibilities of their identification. Individual lines were identified from data of Ref. 3. The fourth column further gives the

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BEDNARZHIK, T.; SHTERBA, O.; GEYGAL, L.; FIRT, P.

Fibrin muff for joining blood vessels without sutures. Probl. gemat. i perel. krovi 5 no.2:39-42 F '60. (MIRA 14:5)

1. Iz Instituta gematologii i perelivaniya krovi i Instituta klinicheskoy i eksperimental'noy khirurgii v Prage.
(BLOOD VESSESL--SURGERY)

SHTERENBERG, A.

What is bromoil? Sov.foto. 19 no.8:47-48 Ag '59.
(MIRA 13:1)

(Photography--Printing process)

RAKOV, Petr Petrovich; SMIRNOV, Arseniy Sergeyevich; SHTERENBERG, Aleksandr Iosifovich; SEROVA, Ye.I., vedushchiy red.; POLOSINA, A.S., tekhn.red.

[Work organization and new techniques in petroleum production; practice of innovators] Novaia tekhnika i organizatsiia truda v dobyche nefti; opyt novatorov. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-toplivnoi lit-ry, 1959. 58 p. (MIRA 13:1)
(Oil fields--Production methods)

RAKOV, P.P.; SHTERENBERG, A.I.; GRAYFER, V.I., red.; LIPKOVICH, R.I., red.; ZAYNULLIN, I.Kh., tekhn. red.

[Preparation of crude for refining] Podgotovka nefti k pererabotke. Pod red. V.I.Graifera. Kazan', TSentr. biuro tekhn. informatsii, 1960. 73 p. (MIRA 15:3)
(Oil fields--Production methods) (Automatic control)

KADOMSKAYA, K.P. (Leningrad); SHTERENBERG, G.P. (Leningrad)

Study of internal overvoltages in electrical systems using electronic digital computers. Izv. AN SSSR. Energ. i transp. no.6:731-741 N-D '63. (MIRA 17:1)

KADOMSKAYA, K.P.(Leningrad); LEVINSHTEYN, M.L. (Leningrad); SHTERENBERG, G.P. (Leningrad)

Solution of the equations of a long electric power transmission line using numerical and digital computers. Izv. AN SSSR. Energ. i transp. no.4:508-513 Jl-Ag '63. (MIRA 16:11)

L 16385-65 RAEM(1)/ESD(dp)/SSD/BSD/AFWL/ASD(a)-5/AFM(dp)/AFETR/AFTC(b)
ACCESSION NR: AP4049218 S/0281/64/000/005/0587/0592

AUTHOR: Kadomskaya, K. P.(Leningrad); Kantorovich, A: Kh. (Leningrad); Shterenberg, G. P. (Leningrad)

TITLE: Calculation of the internal overloads on long range power transmission lines using an electronic digital computer

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 5, 1964, 587-592

TOPIC TAGS: digital computer, D'Alambert method, Runge Cutt method, power transmission, discharge device, power overload, magnetic circuit, Euler method, memorizing device, computer programming

ABSTRACT: The use of electronic digital computers to calculate the internal overloads on long-range power transmission lines calls for the solution of the ordinary differential equations describing the transient conditions at the terminal installations, and the equations of the line recorded in the D'Alambert form. Control calculations of the overloads on a 255-kV transmission line were made with a view to checking the accuracy of the various integration methods. The Runge-Cutt integration method, with a step interval of 0.17 milliseconds, was adopted and showed a margin of error of over 3%, while the error in the Euler method of integration was about 5%. The solution of these equations by a digital computer requires that it memorize not the variables involved but their derivatives, which should be

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