VAYNBERG, Mikhail Solomonovich, kand.tekhn.nauk. Prinimali uchastiye: LOMOTIKOV, G.P., inzh.; VINOGRADOV, V.Ya., SHCHEGLOV, K.A., red.; PANCHENKO, M.F., red.izd-va; LELYUKHIN, A.A., tekhn.red.

[Planning of general schemes for city sanitation] Proektirovanie general'nykh skhem sanitarnoi ochistki gorodov. Moskva, Izd-vo M-va kommun.khoz.RSFSR, 1960. 142 p. (MIRA 13:7)
(Sanitary engineering)

SHCHEGLOV, K.A.

Developments in the water-supply system of the capital. Gor. khoz.Mosk. 34 no.1:21-23 Ja '60. (MIRA 13:5)

1. Glavnyy inzhener proyekta instituta "Mosvodokanalproekt". (Moscow--Water supply)

SOV-128-59-9-14/16

AUTHOR: Shcheglov, K.M.

TITLE: The Results of the Competition for the Best Proposition on the Modernization of Casting Equipment (Itogi konkursa na luchsheye predlozheniye po modernizatsii liteynogo oborudovaniya)

PERIODICAL: Liteynoye proizvodstvo, 1959, Nr 9, pp 29-31 (USSR)

ABSTRACT: In 1957 the Casting Section in the Moscow District Board of the Scientific-Technical Society of the Machinebuilding Industry organized a competition for the improvement of casting equipment. First prize was awarded to I.A. Onufriyev from the plant "Stankolit" for the development of a machine for the grinding of molded edges and the facing of large and medium-sized castings. Second prize was awarded to S.A. Kazennov and his coworkers for the modernization of a machine for casting under pressure. In the press-molds (Figure 1) a vacuum is produced in which the casting is made. Two third prizes were awarded to I.T. Andreychenko and his coworkers for a device to produce a vacuum in pressure casting machines, and to L.L. Koblents and his coworkers for the

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SOV-120-59-9-14/16

The Results of the Competition for the Best Proposition on the Modernization of Casting Equipment

modernization of the blast apparatuses model 39[illegible] and 49[illegible]. Fourth and fifth prizes were awarded for minor inventions. There are 4 diagrams.

1. Foundries--Equipment 2. Castings--Processing 3. Furnaces --Performance

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S/128/60/000/003/007/007
A105/A133

AUTHOR: Shcheglov, K. M., Candidate of Technical Sciences

TITLE: New developments in the mechanization and automation of production processes in the foundry industry

PERIODICAL: Liteynoye proizvodstvo, no. 3, 1960, 41-48

TEXT: In a competition of the Moskovskoye oblastno pravleniye nauchno-tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti (Moscow Oblast' Administration of the Scientific Technical Society of the Mechanical Engineering Industry) in 1958 quite a number of suggestions and improvements were made. The winners of First Prizes were: N. I. Larponov, Z. A. Dol'berg, N. V. Artsishevskaya, G. M. Kuznetsov, V. M. Popov, R. R. Lutts, M. A. Korotkina, V. D. Verbilskiy, Yu. V. Protasov, V. F. Mitrofanov, N. M. Davydova, R. G. Yashchunskiy, A. V. Butuzov, F. F. Kalashnikov, Yu. G. Vorobeychuk, E. L. Miller, Yu. V. Apraksin, I. V. Ageyev, P. N. Aksenov, A. S. Yevseyev, B. V. Rabinovich, V. L. Lesnichenko, G. D. Kolikov, M. I. Rodimkin and Yu. A. Preobrazhenskiy. NIITAvtoprom in cooperation with the Moskovskiy avtozavod im. Likhacheva (Moscow Automobile Plant im. Likhachev) and the Moskovskiy avto-

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New developments in the...

mekhanicheskiy institut (Moscow Automechanical Institute) designed an automated production line with a capacity of up to 900 molds per hour based on a sandblower developed by the NIITAvtoprom. Based on the paper of F. Kh. Averbukh a molding machine with power lift and conveyer has been designed. The authors N. N. Rubtsov, P. I. Polovinkin, N. P. Borodina, V. V. Zyskin and K. Torketoru received a Fifth Prize for the draft project of an automated molding-assembly-pouring line. M. I. Dubinskiy and S. S. Rudelev received a Third Prize for their project of a shake-out semi-automatic. The "Stankolit" Plant designed a new type of shake-out semi-automatic with conveyer. Based on the paper of S. S. Rudelev a trough-shaped sand conveyer was developed at the same plant. N. V. Shershakov, V. M. Popov, Yu. A. Klimov, Z. A. Dol'berg, Yu. G. Vorobeychik, A. A. Zykov, V. L. Lesnichenko, D. G. Shumyatskiy, A. M. Kozyarev and Kesarev were awarded a Third Prize for their design of a coreblower with a capacity of 360 cores per hour. Based on papers of N. I. Rastimenin, A. F. Ivanov, A. F. Yakovenko, A. N. Agafonov and V. K. Savel'yev another coreblower has been developed. D. M. Litvin, N. N. Morozov, A. V. Lozovskiy, A. M. Ivanov, I. D. Chudnovskiy, Ye. G. Grishin, A. V. Gordeyeva, V. P. Ladetskaya and V. M. Orlov of the NIILITMash were awarded a Third Prize for their design of a rotary chill casting machine. Technical data of which

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New developments in the...

are given. V. M. Matveyev was awarded a Fifth Prize for a continucus casting machine of shaped parts with a capacity of 10,000 castings per hour. The authors N. I. Larionov, G. M. Kuznetsov, Yu. M. Spirin, Z. A. Dal'berg, A. V. Butuzov, N. A. Arkhipov, L. F. Chechekin, N. I. Davydova, Yu. V. Apraksin, I. I. Finger, A. M. Polevaya, V. D. Romanchikov, N. G. Intyakov, M. Barvenko, V. A. Trandofilova, I. V. Titov, A. I. Korotkov, and Yu. I. Krupchik were awarded a Fifth Prize for the АКФ-2 (AKF-2) automatic for the fabrication of shell molds, described in the article of A. A. Dudnik and G. A. Ukhabin "Liteynoye proizvodstvo", no. 5, 1959. A Fourth Prize was awarded to the authors Z. D. Dol'berg, I. V. Yefimov, Yu. M. Spirin, R. O. Pshennova, L. F. Chechekin, N. I. Larionov, A. V. Butuzov, M. N. Yefimov, I. B. Sokol, B. A. Pepelin, I. V. Rutkovskiy, M. N. Ivanova, A. A. Cherkashenko, Yu. L. Preobrazhenskiy, A. P. Lakuzo, A. P. Romashin, V. M. Boldyrev, V. V. Bykov, and I. I. Kol'tsov for their design of an automatic for the manufacture of low-melting patterns, having a productivity of 1,440 - 2,880 pattern members per shift. K. K. Kondakov, G. Z. Kogan, A. I. Koval'skiy, and B. M. Demkov were awarded a Fifth Prize for their design of a high-temperature air preheater for cupolas.

Card 3/3

SHCHEGLOV, L.; ALEKSEYEV, N.

Recommended technical specifications should protect quality.
Sov. torg. 36 no.11:18-19 N '62. (MIRA 16:1)
(Pottery)

FARAFONOV, A.V., inzh.; SHCHEGLOV, L.A., inzh.

Modernized type LK-300GM linear contactor. Vest. TSNII MPS 21 no.1:19-22 '62. (MIRA 15:2)
(Electric contactors)

KUZNETSOV, N.; SHCHEGLOV, L.

The quality of chinaware and earthenware articles. Sov.torg. no.10:27-29 O '56. (MLRA 9:12)
(Pottery)

SHCHEGLOV, L. M.

5(0) PHASE I BOOK EXPLOITATION SOV/2054

Kiselev, Vasiliy Stepanovich, and Lev Mikhaylovich Shcheglov

Tovary silikatnyye, iz plasticheskikh mass i khimiko-moskatel'nyye (Silicate and Plastic Articles and Household Chemical Products) Moscow, Gostorgizdat, 1958. 320 p. Errata slip inserted. 10,000 copies printed.

Ed. (Title page): N. A. Arkhangel'skiy, Professor; Chief Reviewers: G. I. Kutyanin, Professor, and N. V. Bulgakov; Reviewers: G. P. Kalliga, Docent, N. I. Yegorkin, Professor, A. B. Davankov, Docent, and P. I. Novoderezhkin, Docent; Ed. (Inside book): G. A. Borisova; Tech. Ed.: D. M. Medrish.

PURPOSE: The book is intended as a textbook for students specializing in silicates. It can also serve as a reference book for chemists, engineers, and technicians concerned with the production of glass, ceramics, resins, and household chemicals such as cements, soaps, detergents, insecticides, and fungicides.

COVERAGE: Glass tableware is manufactured on a large scale in the following plants: Gus'-Khrustal'nyy zavod (Gus' Glassware Plant), Dyat'kovskiy khrustal'nyy zavod (Dyat'kovo Glassware Plant), and the "Krasnyy gigant" zavod, ("Krasnyy gigant" Plant). The Leningradskiy zavod (Leningrad Plant) has the largest experimental

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laboratory for developing new varieties of glass, cut glass articles, new designs, etc. Large-scale manufacture of porcelain products is centered in the zavod im. gazety "Pravda" (Plant imeni gazety "Pravda"), Dmitrovskiy zavod (Dmitrovskiy Plant), zavod im. Lomonosova (Plant imeni Lomonosov), zavod im. Lenina (Plant imeni Lenin), and plants in Riga and Tashkent. The textbook was edited by Docent G. P. Kalliga (section "Silicate Products"), and Professor N. I. Yegorkin, Docent A. B. Davankov, and Docent P. I. Novoderzhkin (section "Plastic Materials"). Editing for the Experts' Committee was done by Professor G. I. Kutyanin and Professor N. V. Bulyakov (Department of the Science of Industrial Commodities of VZIST). There are 52 Soviet references.

TABLE OF CONTENTS:

SHCHEGLOV, L., kand.tekhn.nauk

Isn't it time to review technical conditions? Sov. torg. 35 no.12:35-36 D '61. (MIRA 14:11)

(Glassware)
(Pottery)

SHCHEGLOV, L., kand.tekhn.nauk; ALEKSEYEV, N., kand.tekhn.nauk

Selection of china and faience goods. Sov.torg. 35 no.7:16-18 Jl '62. (MIRA 15:11)

(Pottery)

ABRAMOV, P.R.; ALEKSEYEV, N.S.; ARKHANGEL'SKIY, N.A., prof. [deceased]; GUREVICH, B.S.; ZAYTSEV, V.G.; KEDRIN, Ye.A.; MIRONOVA, L.V.; OSTANOVSKIY, T.S., dots.; PALLADOV, S.S., dots., SERGEYEV, M.Ye.; TER-OVAKIMYAN, I.A.; TSEREVITINOV, B.F.; SHCHEGLOV, L.M.; YAKOVLEV, A.I.; BORISOVA, G.A., red.; NEDRISH, D.M., tekhn. red.

[Study of manufactured goods; concise course] Tovarovedenie promyshlennykh tovarov; kratkii kurs. [By] P.R.Abramov i dr. Izd.2., perer. Moskva, Gostorgizdat, 1963. 768 p. (MIRA 16:11)

(Commercial products)

SHCHERBOV, Leonid Ivanovich; ABRAMOV, A.L., red.

[On the way to technological progress] Po puti tekhnicheskogo progressa. Yuzhno-Sakhalinsk, Sakhalinskoe knizhnoe izd-vo, 1963. 26 p. (MIRA 18:4)

SHCHEGLOV, M.

Life requires accounting. NTO 4 no.12:14-16 D '62. (MIRA 16:1)

1. Predsedatel' ekonomicheskogo soveta ryazanskogo zavoda "SAM".
(Ryazan--Calculating machines)

SHCHEGLOV, M.G. (Kuybyshev, Nekrasovskaya ul.,d.20,kv.47)

Some characteristics of the course of a chronic suppuration in a hypoplastic lung. Grud. khir. 1 no.5:70-75 S-O '61. (MIRA 15:3)

1. Iz kliniki fakul'tetskoy khirurgii (zav. - prof. S.L. Libov) Kuybyshevskogo meditsinskogo institut (dir. D.A. Voronov).
(LUNGS--DISEASES)

SHCHEGLOV, N.K., inzhener.

On Engineer A.S. Kazi[illegible]ov's article "Using ekotop' for [illegible]". Energetik 5 no.7 [illegible]. (Boilers)

SHCHEGLOV, M.K.

Methods for chemical descaling of boilers. Vod. i san. tekh. no.6: 16-19 Je '59. (MIRA 12:8)
(Boilers--Incrustations)

SHCHEGLOV, M.K.

Using the power "Ekotop". Energetik 8 no.2:38-39 F '60.
(MIRA 13:6)

(Boilers)

SHCHEGLOV, M.K.

Methods of cleaning external heating surfaces of boilers.
Energetik 8 no.7:36 Jl '60. (MIRA 13:8)
(Boilers--Cleaning)

NOVIK, F.S.; SHCHEGOV, M.I.

Experimental study of the marginal sharpness obtained with motion-picture camera lenses. Opt.-mekh.prom. 30:3,-41 '64.
(MIRA 17:10)

SHCHEGLOV, M.P.

Shtshegloff, M. On some problems of summation by Poisson's method. Bull. Acad. Sci. URSS. Sér. Math. [Izvestia Akad. Nauk SSSR] 9, 423–428 (1945). (Russian. English summary)

[In the original, the author's name was transliterated Chthegloff. The Russian spelling is Ščeglov.] If $\sum a_n x^n$ converges for $|x|<1$, the limits of indetermination of the function $\sum a_n x^n$, as $x \to 1$, are contained between the limits of indetermination of the sequence of the partial sums of the series $\sum a_n$. If $a_n = o(1/n)$, the two segments of indetermination coincide [Littlewood, Proc. London Math. Soc. (2) 9, 434–448 (1911)]. The author gives examples illustrating situations when $a_n = O(1/n)$.

A. Zygmund.

Source: Mathematical Reviews, Vol 8, No. 3

SHCHEGLOV, M.

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Shtsheglov, M. On convergence and boundedness ... Dirichlet's series. Bull. Acad. Sci. URSS. Sér. Mat. [Izvestia Akad. Nauk SSSR] 9, 527–530 (1945). (Russian. English summary)

Typical result. Suppose that a Dirichlet series $\sum a_n e^{-\lambda_n t}$, with $\lambda_{n+1}=O(\lambda_n)$ converges for $t>0$. Let $t_1>\cdots>t_m\to 0$, $t_m-t_{m+1}=O(t_{m+1})$, $a_n<o(\lambda_{n+1}-\lambda_n)\lambda_n^{-1}$. Then $f(t_m)\to 0$ implies $f(t)\to 0$ as $t\to+0$. *A. Zygmund* (Philadelphia, Pa.).

Source: Mathematical Reviews, Vol 8, No. 3

SHCHEGLOV, M. P.

O summirovanii Fuassona. Matem. st., 17 (60) (1945) 41-58.

SO: Mathematics in the USSR, 1917-1947
edited by Kurosh, A.G.,
Markushevich, A.I.,
Rashevskiy, P.K.
Moscow-Leningrad, 1948

SHCHEGLOV, M. P.

Source: Mathematical Reviews, Vol. 13 No. 1

Sčeglov, M. P. On the generalization of Tauber's theorem. Mat. Sbornik N.S. 28(70), 245–282 (1951). (Russian)

The author considers various generalizations of Tauberian theorems. Let $a_0+a_1+\cdots$ be a given series and let $f(t)=\sum a_n e^{-nt}$ be its Abel means. Let $t_n>t_{n+1}\to 0$. If $t_n/t_{n+1}=O(1)$, then the conditions $f(t_n)\to S$ as $n\to\infty$ and $a_n=o(1/n)$ (even $a_n<o(1/n)$ will do) imply the convergence of $\sum a_n$ to S. However, 1) for every sequence $t_n>t_{n+1}\to 0$ such that $t_n/t_{n+1}\neq O(1)$ there is a series $\sum a_n$ with terms $o(1/n)$ such that $f(t_n)$ tends to a finite limit and yet $\sum a_n e^{-nt}$ diverges. 2) Suppose that $a_n<O(1/n)$ and that $\sum a_n e^{-nt}$ converges for $t>0$. Suppose also that $f(t_n)\to S$ where S is a finite number and t_n is a decreasing-to-zero sequence satisfying the following conditions: a) $\liminf q_n=r$, $\limsup q_n=R$, with $q_n=t_n/t_{n+1}$, $1=r<R<\infty$; b) there is a subsequence $\{t_{n_k}\}\subset\{t_n\}$ for which

$$\liminf_{k=1,2,\ldots} t_{n_k}/t_{n_k+1}>1, \quad \limsup_{k=1,2,\ldots} t_{n_k}/t_{n_k+1}<\infty;$$

c) $\lim q_n=1$ for $n\to\infty$ and $n_s\leqq m<m_{s+1}$ $(s=2,4,\ldots)$. Then $\sum a_n$ converges to S. 4) Let t_n be any positive sequence satisfying $t_n/t_{n+1}>\gamma$, where $\gamma>\gamma_0=\frac{1}{2}(e^{-1}+e^{-2})^{-2}$. Then there is a series $\sum a_n$ with terms $O(1/n)$ such that $f(t_n)\to 1$, and yet $\sum a_n$ diverges. The problem of whether the result holds for $\gamma_0=1$ is formulated and left open. Let d_ρ and D_ρ be the limits of indetermination of the partial sums of $\sum a_n$, and d_ρ and D_ρ the limits of indetermination of the Abel means $f(t)$, for $t\to 0$. The author investigates in great detail various actual possibilities in the obvious relations $d_\rho\leqq d_\rho\leqq D_\rho\leqq D_\rho$ under one of the following assumptions $a_n=o(1/n)$, $O(1/n)$, $O(\omega_n/n)$, where $\omega_n<\omega_{n+1}\to\infty$, $\omega_n=o(n)$. The results are too long to be given here.

A. Zygmund (Chicago, Ill.).

Mathematical Reviews
Vol. 14 No. 11
Dec. 1953
Analysis

8-10-54
LL

Math
2

Šeoglov, M. P. On subsequences of the arithmetic mean sums of Cesàro. Doklady Akad Nauk SSSR (N.S.) 87, 517-520 (1952). (Russian)

Let d and D be the limits of indeterminacy of the arithmetic means σ_n of the partial sums of the series $\sum_0^\infty a_n$ and let d' and D' (not necessarily finite) denote the same for a subsequence σ_{n_m}, so that $d \leq d' \leq D' \leq D$. It is shown that $d = d'$ and $D = D'$ if $a_n < o(n-1)$ and $n_{m+1} = O(n_m)$ or if $a_n < o(n-1)$ and $n_{m+1} = n_m + o(n_m)$. The second in each pair of conditions cannot be weakened. It is remarked that, in view of the Hardy-Landau Tauberian theorem, if under either of the above sets of conditions σ_{n_m} converges to a finite limit s then $\sum_0^\infty a_n = s$.

G. Klein.

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Mathematical Reviews
Vol. 14 No. 11
Dec. 1953
Analysis

Šćeglov, M. P. Generalization of the Hardy-Landau-Vijayaraghavan theorem. Doklady Akad. Nauk SSSR (N.S.) 87, 697-700 (1952). (Russian)

Let d and D be the limits of indeterminacy of the partial sums of the numerical series $\sum_0^\infty a_n$ and let d' and D' be the same for their arithmetic means, so that

$$d \leqq d' \leqq D' \leqq D. \tag{1}$$

The classical result of the title states that $d = D$ whenever $d' = D' = S$ (finite) if $a_n = O(n^{-1})$. This last condition can be replaced by $a_n < O(n^{-1})$ when S is finite but, as shown by Vijayaraghavan [J. London Math. Soc. 2, 215-222 (1927)], if $S = +\infty$ the weakest effective one-sided Tauberian condition is $a_n < O(n \log\log n)^{-1}$. Here the author considers the more general situation wherein d' and D' need not be equal or finite. In addition to all the above Tauberian conditions, those obtained by use of o in place of O are studied to determine which of the possibilities (1) do and which cannot occur. For example if $a_n < O(n \log\log n)^{-1}$ then $d = d' \leqq D' = D$ unless $D' = D = +\infty$ and $-\infty < d < d' < +\infty$, but if $a_n < o(n \log\log n)^{-1}$ this alternative is excluded. Some of the results are the best of their kind.

G. Klein.

Mathematical Reviews
Vol. 15 No. 4
Apr. 1954
Analysis

8-24-54
LL

Ščeglov, M. P. On a generalization of a theorem of Hardy-Littlewood. Ukrain. Mat. Žurnal 5, 299–303 (1953). (Russian)

Let us consider the set P of all non-negative sequences $s_0, s_1, s_2, \cdots$ and let

$$\phi(u) = u^{-1}\sum_{\nu=0}^{\infty} s_\nu e^{-\nu/u}, \quad \sigma_n = (n+1)^{-1}\sum_{\nu=0}^{n} s_\nu$$

be their Abel and $(C, 1)$ means. Let

$$\limsup_{n\to\infty} \sigma_n = D, \quad \limsup_{u\to\infty} \phi(u) = D'.$$

It is a familiar fact that D and D' are either both finite or both infinite, and the classical proof of Hardy and Littlewood [Proc. London Math. Soc. (2) 13, 174–191 (1914)] shows that $D \leqq eD'$. Assuming that both D and D' are finite, the author proves that a) $\inf_P (D-D') = 0$; b) $\sup_P (D-D') = +\infty$; c) $\inf_P D/D' = 1$; d) $\sup_P D/D' = e$; e) $\sup_P (D+a)/(D'+a) = e$, for any finite positive a. Also, 1) if $\limsup s_n = D$, then $D' = D$; 2) there exist $\{s_n\} \in P$ such that $D = D' < \limsup s_n$. *A. Zygmund.*

SHCHEGLOV, M. P.

Ščeglov, M. P. On bounded sequences. Doklady Akad. Nauk SSSR (N.S.) 90, 145–147 (1953). (Russian)

Let $s_0, s_1, \cdots$ be a real bounded sequence. Let $\underline{D}_0 = \liminf s_n$ and $\bar{D}_0 = \limsup s_n$. Let $\underline{D}_1 = \liminf \sigma_n$ and $\bar{D}_1 = \limsup \sigma_n$ where $\sigma_n = (s_0+s_1+\cdots+s_n)/(n+1)$. Let $\underline{D}_2 = \liminf \phi(u)$ and $\bar{D}_2 = \limsup \phi(u)$ where $u \to \infty$ and $\phi(u) = u^{-1}\sum_{k=0}^{\infty} s_k e^{-k/u}$. It is well known that $\underline{D}_0 \leqq \underline{D}_1 \leqq \underline{D}_2 \leqq \bar{D}_2 \leqq \bar{D}_1 \leqq \bar{D}_0$. Some additional results, including the following, are given. If $\bar{D}_1 = \underline{D}_0$, then $\bar{D}_2 = \bar{D}_0$. The number e is the least constant such that

$$(\bar{D}_1 - \underline{D}_1) \leqq e(\bar{D}_2 - \underline{D}_2)$$

whenever s_n is bounded. *R. P. Agnew* (Ithaca, N. Y.).

SHCHEGLOV, M. P.

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Shcheglov, M. P. On two theorems of Hardy-Littlewood. Ukrain. Mat. Ž. 7 (1955), 180–187. (Russian)

Let $a_0+a_1+a_2+\cdots$ be a series with real terms and partial sums $s_n=a_0+a_1+\cdots+a_n$. Let $A(u)=\sum_{k=0}^{\infty} a_k e^{-k/u}$ denote the Abel transform of $\sum u_n$. Let

$$d=\liminf_{n\to\infty} s_n, \qquad d'=\liminf_{u\to\infty} A(u),$$

$$D'=\limsup_{u\to\infty} A(u), \qquad D=\limsup_{n\to\infty} s_n.$$

It is a well known fact that these four numbers satisfy the inequality $d\leq d'\leq D'\leq D$. While the reviewer does not recall seeing the fact stated in print, it is possible to construct a series for which d, d', D', D are any pre-assigned numbers, finite or infinite, that satisfy this inequality. If, however, T is a Tauberian condition such that each series satisfying T and evaluable A is convergent, then we can assert that if $\sum a_n$ is a series satisfying

(OVER)

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Szegler, M. P.

T then the relations $d<d'=D'$ and $d'=D'<D$ are impossible because if $d'=D'$, then $d=d'=D'=D$. In a previous paper the author [Mat. Sb. N.S. 28(70) (1951), 245–282; MR 13, 28] made an exhaustive study of the relations among d, d', D', and D that are possible when $\sum a_n$ satisfies an order Tauberian condition $na_n=o(1)$ or $na_n=O(1)$ or $na_n<o(1)$ or $na_n<O(1)$. The present paper treats the same problem with $\sum a_n$ satisfying a Tauberian gap condition, that is, $a_n=0$ except when $n=n_1$, n_2, n_3, $\cdots$, where n_k is a rapidly increasing sequence of integers. *R. P. Agnew* (Ithaca, N.Y.).

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SHCHEGLOV, M.P.

Vijayarackavan's generalization of Tauberian theorems. Ukr. mat.zhur. 7 no.3:333-338 '55. (MLRA 9:2)
(Series)

USSR/ Mathematics - Divergent series

Card 1/1 Pub. 22 - 12/53

Authors : Shcheglov, M. P.

Title : Solution of some extremal problems of the theory of divergent series

Periodical : Dok. AN SSSR 102/4, 703-704, Jun 1, 1955

Abstract : A method for the solution of some maximum-minimum problems of the theory of divergent series W and W_+ is described. The differences are considered (of functions) r, R, p, P of the W and r_+, R_+, p_+, and P_+ of the W_+, where the W and W_+ are divergent series satisfying certain conditions imposed upon them. Three USSR references (1939-1951).

Institution : Moscow Physico-Technical Institute

Presented by : Academician A. N. Kolmogorov, February 16, 1955

LIDSKIY, Viktor Borisovich; OVSYANNIKOV, Lev Vasil'yevich; TULAYKOV, Anatoliy Nikolayevich; SHABUNIN, Mikhail Ivanovich. Prinimali uchastiye: ABRAMOV, A.A.; BOCHKK, I.A.; YEVGRAFOV, M.A.; ZYKOV, A.A.; KARABEGOV, V.I.; KARIMOVA, Kh.Kh.; KUDRYAVTSEV, L.D.; KUTASOV, A.D.; SHURA-BURA, M.R.; SHCHEGLOV, M.P. SOLODKOV, V.A., red.; KRYUCHKOVA, V.N., tekhn.red.

[Problems in elementary mathematics] Zadachi po elementarnoi matematike. Moskva, Gos.izd-vo fiziko-matem.lit-ry, 1960. 463 p. (MIRA 14:1)

(Mathematics--Problems, exercises, etc.)

9,9822

AUTHORS: [illegible]

TITLE: An investigation, using the wavelength method, of radio wave depolarization by dielectric particles

PERIODICAL: Referativnyy zhurnal. Fizika, no. 6, 1961, 393, abstract 6Zh525 ("Uch. zap. Tomskiy un-t", 1960, no. 36, 82 - 86)

TEXT: The authors investigate depolarization of radio waves by dielectric particles, in particular by meteoritic metallic particles. The rotational spheroid was adopted as a model of a scatterer. The method of wave bridge with a double T-joint was employed for measuring depolarization coefficients. Measurements were carried out at the 3.2-cm wavelength. Rain droplets were imitated by spheroids of "tikond" ($\varepsilon_2 = 80$) and water droplets hail particles and icicles by an artificial dielectric with $\varepsilon_2 = 3.3$ (mixture of paraffin with aluminum powder). The dependence of depolarization coefficient on ε and scatterer shape for artificial dielectrics was also measured. The author arrived at the following conclusions: 1) If scatterer dimensions are sufficiently small in comparison with the wavelength, the depolarization can be performed in the same way as for an electrical field. 2) De-

S/058/62/000/005/112/119
A061/A101

24 3000

AUTHOR: Shcheglov, N. G.

TITLE: Polarization structure of a field reflected from a circular cylinder and a grid

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962, 24, abstract 5Zh179 ("Tr. Sibirsk. fiz.-tekhn. in-ta pri Tomskom un-te", 1960, no. 39, 58 - 65)

TEXT: The problem of re-emission of a plane elliptically polarized wave by a circular cylinder, when the ellipse of polarization is arbitrarily oriented with respect to the cylinder axis, has been studied. The coefficient of ellipticity, that of the wave re-emitted in the opposite direction, and the angle formed by the major axis of the ellipse and the cylinder axis have been measured. The additional phase shift between the mutually-orthogonal components of the re-emitted field is calculated. An experimental diagram is given to illustrate the coefficient of ellipticity as a function of the cylinder radius. The field reflected from the grid of metal cylinders is found for the cases in which the primary

Card 1/2

Card

SOKOL'SKIY, D.V.; SHCHEGLOV, N.I.

Hydrogenation of nitrobenzene on Raney nickel with platinum as promoter. Izv.AN Kazakh.SSR Ser.khim.no.2:76-89 '48. (MLRA 9:7)
(Hydrogenation) (Benzene) (Catalysts, Nickel)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Platinum promoted catalytic hydrogenation of liqued styrene on a nickel skeleton catalyst. Izv.AN Kazakh.SSR.Ser.khim. no.4:40-45 '51. (MLR 9:5)

(Styrene) (Hydrogenation)

Shchegolev, N.I.

3

Hydrogenation of 3-methyl-1-hexen-3-ol. N. I. Shchegolev and D. V. Sokol'skii. *Izvest. Akad. Nauk Kazakh. S.S.R.* No. 120, *Ser. Khim.* No. 5, 34-8(1953).—H was passed through a soln. of $CH_2:CHC(Me)(C_4H_7)OH$ in 20 ml. alc. contg. 0.56 g. Raney Ni catalyst plus H_2PtCl_6 as promoter, in an app. described previously, (*ibid.* 2, 76 (1948)), at 0° and 25°. The hydrogenation is a zero-order reaction at 0°, but is a first-order reaction at 25°. At 25° the reaction rate is directly proportional to the Pt added (0.001–0.005 g.); at 0° the rate is almost independent of the Pt concn. The activation energy of the reaction varies with amt. of Pt on the surface of the Ni; for pure Ni, it is 7000 ± 1000 cal./mole; for 0.0049 g. Pt on 0.56 g. Ni, 11,000 ± 1000 cal./mole. Malcolm Anderson

Chem

2

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Hydrogenation of 2-methyl-4methoxy-2,3-butene. Izv.AN Kazakh. SSR Ser.khim. no.5:39-44 '53. (MLRA 9:5)
(Hydrogenation) (Butene)

Chemical Abstracts
May 25, 1954
Dyes and Textile Chemistry

(3)

Hydrogenation of cottonseed oil in the presence of Raney nickel catalyst promoted by platinum and palladium. N. I. Shchegloy and D. V. Sokol'skiĭ. *Izvest. Akad. Nauk Kazakh. S.S.R.* No. 123, *Ser. Khim.* No. 7, 30–8(1953); cf. preceding abstr.—With unpromoted Raney-type Ni catalyst the cottonseed oil is hydrogenated best at 60–80°. Higher temp. lowers the apparent activation energy: at 25–40° it is 10,000–11,000 cal./mole; at 80–100° it is 2000–3000 cal./mole. On promotion with Pt the reaction rate rises with the amount of promoter up to 0.009 g. per 0.56 g. Ni; such promotion raises the temp. optimum to 80–100°. Ni promoted with Pd is somewhat more active than that with Pt, and promotion with Pd lowers the optimum temp. to 40–60°. Addn. of Pt increases the strength of bonding of H to the catalyst surface, while Pd has an opposite effect.
G. M. Kosolapoff

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Hydrogenation of cottonseed oil in the presence of a nickel-skeletal catalyst, with platinum and palladium as promoters. Izv.AN Kazakh.SSR no.123:30-38 '53. (MLRA 7:3)
(Cottonseed oil) (Hydrogenation) (Catalysts)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Hydrogenation of actylene to ethylene. Trudy Inst.khim. nauk AN Kazakh. SSR 2:150-157 '58. (MIRA 12:2)
(Hydrogenation) (Acetylene) (Ethylene)

PHASE I BOOK EXPLOITATION SOV/3537

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk

Trudy, t. 5 (Transactions of the Institute of Chemical Sciences, Kazakh SSR, Academy of Sciences, Vol 5) Alma-Ata, Izd-vo Akademii nauk Kazakhskoy SSR, 1959. 154 p. 1,000 copies printed.

Ed.: N.D. Zhukova; Tech. Ed.: Z.P. Ropokina; Editorial Board of Series: D.V. Sokol'skiy (Resp. Ed.), V.G. Gutsalyuk, and B.V. Suvorov (Resp. Secretary).

PURPOSE: This collection of articles is intended for personnel of scientific research laboratories, laboratories of industrial enterprises, and faculty members of schools of higher education.

COVERAGE: The collection reviews problems of liquid-phase catalytic hydrogenation to upgrade and reactivate various products. Hydrogenation of unsaturated bonds of various types, adsorption of hydrogen on different catalysts, chromatographic separation of mixtures, and the effect of halogen salts of alkali metals on the rate of hydrogenation reactions promoted by various skeleton catalysts are described. Conditions of catalytic hydrogenation of natural fat, sunflower oil, and such synthetic products as esters of high-molecular fatty acids are set out. Dehydration of the butane fraction carried out in combination with isomerization is analyzed. Principles of selecting catalysts and regenerating them are reviewed and the formation of adsorption potentials on metal catalysts is explained. Each article presents conclusions drawn on the basis of experimental findings. References accompany most of the articles.

Card 4/5

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Some methods used for "revivifying" nickel skeletal catalysts.
Trudy Inst.khim.nauk AN Kazakh.SSR 5:92-96 '59. (MIRA 13:6)
(Catalysts, Nickel)

S/081/61/000/005/008/024
B110/B205

AUTHORS: Shcheglov, N. I., Sokol'skiy, D. V.

TITLE: Hydrogenation of acetylene in the liquid phase

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 5, 1961, 417, abstract 5Л13 (5L13) ("Tr. In-ta khim. nauk AN Kaz. SSR", 1959, 5, 97-104)

TEXT: A study has been made of the hydrogenation of C_2H_2 in solutions of 0.1 n NaOH and 96 % alcohol by means of the (KT) (KT) Pd catalyst on $CaCO_3$ or silica gel carrier at 2-80°C, the ratios $C_2H_2:H_2 = 1:1$; 1:2; 1:3, and flow rates of 7-60 ml/min. In the presence of $Pd/CaCO_3$, an increase of temperature and the use of alcohol as a solvent increase the yield of polymerization products and lower that of C_2H_4. Addition of 5 % of Pb reduces the activity of KT and changes its degree of selectivity. Increase of the H_2 concentration raises the yield of C_2H_4 which is not affected by

Card 1/2

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.; ISHCHENKO, A.A.

Promoting a skeletal nickel catalyst. Report No. 1: Hydrogenation of m-nitrophenol. Izv. AN Kazakh. SSR. Ser. khim. no. 2:81-88 '60. (MIRA 14:5)

(Catalysts, Nickel) (Phenol) (Hydrogenation)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.; ISHCHENKO, A.A.

Promoting a skeletal nickel catalyst. Report No. 2: Hydrogenation of methyl ethyl ketone. Izv. AN Kazakh. SSR Ser. khim. no. 2:89-92 '60. (MIRA 14:5)

(Ketone) (Hydrogenation) (Catalysts, Nickel)

SOKOL'SKAYA, A.M.; MEYEROVICH, A.D.; SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Hydrogenation of nitriles. Izv. AN Kazakh. SSR Ser. khim. no. 2:93-100 '60. (MIRA 14:5)
(Nitriles) (Hydrogenation)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.; ISHCHENKO, A.A.

Addition of promoters to skeletal nickel catalysts. Hydrogenation of furfurole. Trudy Inst.khim.nauk AN Kazakh.SSR 7:33-37 '61. (MIRA 15:8)

(Furaldehyde) (Hydrogenation) (Catalysts)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.; ISHCHENKO, A.A.

Hydrogenation of terephthalic acid dinitrile. Izv.AN Kazakh. SSR. Ser.khim. no.1:91-94 '61. (MIRA 16:7)
(Terephthalic acid) (Nitriles) (Hydrogenation)

SHCHEGLOV, N.I.; SOKOL'SKIY, D.V.

Effect of certain factors on the rate and completeness of hydrogenation of aromatic nitriles. Trudy Inst. khim. nauk AN Kazakh. SSR 11:43-55 '64. (MIRA 17:11)

SHCHEGLOV, N.K.

Signal of card can filling connected with the self stopping of the doffer roll. Obm.tekh.opyt. [MLP] no.16:11-12 '56.
(Carding machines) (MIRA 11:11)

S/123/59/000/008/004/043
A004/A002

Translation from: Referativnyy zhurnal, Mashinostroyeniye, 1959, No. 8, p. 15, # 28697

AUTHOR: Shcheglov, N. N.

TITLE: The Endurance Limit and Plastic Deformations of Steels in Some Cases of Joint Bending and Torsion Effects

PERIODICAL: Tr. Tallinsk. politekhn. in-ta, 1957, A, No. 113, p. 34

TEXT: Smooth standard specimens of 7.62 mm diameter of the steel grades 10, 45, and 40X (40Kh) were subjected to fatigue tests under the joint effect of cyclic symmetric circular bending and static torsion (case A) and symmetric torsion and static bending (case B). Based on the test results, which were compared to the test results with the same kinds of cyclic loading without static stress, it was found: in case A for grade 10 steel an increase of the endurance limit σ_{-1}/τ at low static tangential stresses (τ_c), while the endurance limit decreases at high static tangential stresses. A small decrease of σ_{-1}/τ was observed for 45 grade steel, while the decrease of σ_{-1}/τ was

Card 1/2

SHCHEGLOV, N.N., kand.tekhn.nauk

Endurance limit and plastic deformations of steel subjected to combined bending and torsion. Rasch.na prochn. no.7:361-374 '61. (MIRA 14:11)

(Steel--Testing)

S/122/61/000/004/001/007
D211/D303

AUTHOR: Shcheglov, N.N., Candidate of Technical Sciences

TITLE: Strength and plasticity of steels under simultaneous bending and torsion at variable stresses

PERIODICAL: Vestnik mashinostroyeniya, no. 4, 1961, 27-30

TEXT: The author presents the results of a series of experiments carried out on discs made of steels 10-45 and 40X (40Kh) under the following conditions of loading: a) Constant torsion plus variable bending and b) constant bending plus variable torsion. Following conclusions are drawn: 1) Plastic deformation always took place only in the direction of the constant stress, i.e. in case a) Plastic deformation occurred in the form of twisting and in case b) owing to plastic deformations, the specimens were permanently bend. 2) Plastic deformation of the samples increased with the number of the cycles of loading. Between 1 and 3 million cycles the rate of plastic deformation fell rapidly or ceased altogether. Plastic defor-

Card 1/2

L 22980-66

ACC NR: AP6008554 SOURCE CODE: UR/0166/66/000/001/0088/0089

43
B

AUTHOR: Shul'gin, P.I.; Kallistov, A.P.; Tonkikh, V.K.; Shcheglov, N.V.

ORG: Physics Technical Institute, AN UzSSR (Fiziko-tekhnicheskiy institut AN UzSSR)

TITLE: A photoelectric semiconductor water turbidity analyzer

SOURCE: AN UzSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk, no. 1, 1966, 88-89

TOPIC TAGS: semiconductor device, turbidimeter, photoelectric effect, measuring instrument

ABSTRACT: This article describes a field photoelectric device by means of which it is possible to determine the turbidity of water in 1.5—2 min with an accuracy of at least 2—3%. The device was patented under Registration Certificate No. 36269, April 22, 1963. Silicon photocells manufactured in FTI AN UzSSR (Knigin, P.I., Dubrovskiy, L.A. "Izv. AN UzSSR," seriya fiz.-mat. nauk, 1962, no. 3) were used as sensors. The device also incorporates P-13 semiconductor triodes, a potentiometer, and resistors. The analyzer was tested in laboratory and field conditions. The laboratory tests showed that the calibrated curves fully represent the turbidity of the water. The field experiments were conducted at the hydrostations of Ak-Dzhar, Kyzyl-Kishlak (Syrdar'ya River), and

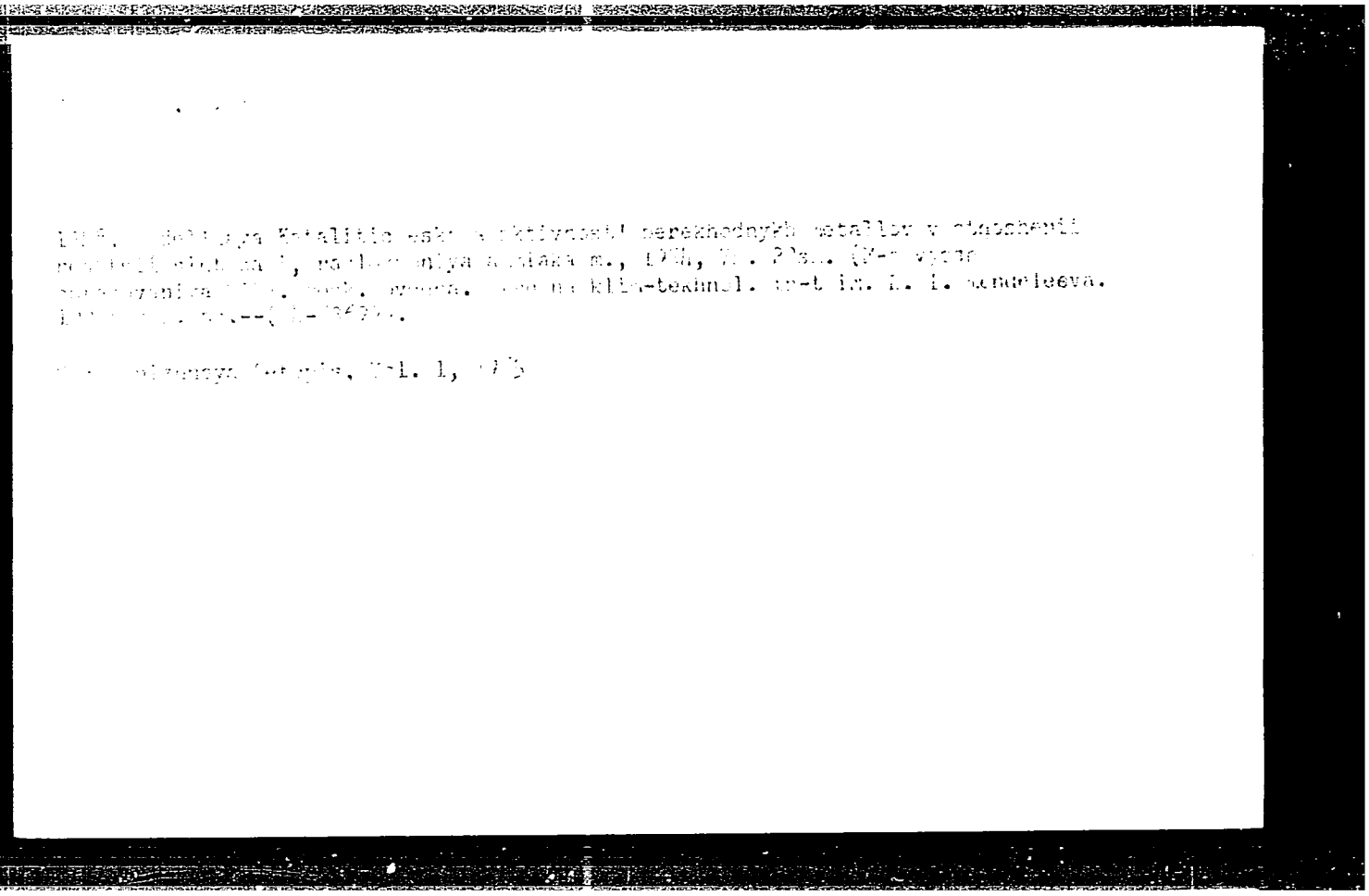
Card 1/2

2

[illegible], S. . .

"The Specific Catalytic Activity of Transition Metals in Relation to the Synthesis and Decomposition Reactions of Ammonia." Cand Chem Sci, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev, 29 Dec 54. (V., 21 Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 554, 24 Jun 55



ACC NR: AR7000949 SOURCE CODE: UR/0275/66/000/011/A022/A022

AUTHOR: Zvereva, F. G.; Shcheglov, O. S.

TITLE: Effect of anode shape on high-frequency plasma oscillation

SOURCE: Ref. zh. Elektronika i yeye primeneniye, Abs. 11A156

REF SOURCE: Uch. zap. Kuybyshevsk. gos. ped. in-t, vyp. 49, ch. 1, 1965, 220-227

TOPIC TAGS: plasma oscillation, anode, plasma oscillation intensity, anode design

ABSTRACT: Experimental data are presented on the study of high-frequency oscillations in a mercury-vapor plasma at pressures of the order of 10^{-4}—10^{-3} mm Hg. It is shown that during the passage of an unmodulated electron beam through the plasma, longitudinal electric waves with a frequency close to Langmuir's are excited in it. The relationship between plasma-oscillation intensity and voltage are obtained for various anode shapes (disc, cone, and rod). [Translation of abstract] [NT]

SUB CODE: 09, 20/

UDC: 537.525

Card 1/1

L 18964-65 EWT(d)/EWT(l)/EPA(s)-2/EEC(k)-2/EEC-4/EEC(t)/EEC(b)-2/EWA(h) Po-4/Pq-4/Pg-4/Pt-10/[illegible]/Pl-4/Peb IJP(c)/SSD/AFETR/RAEM(a)/AS(mp)-2/AFWL/ASD(a)-5/AEDC(b)/RAEM(c)/ESD(gs)/ESD(t)

ACCESSION NR: AR5000811 S/0058/64/000/010/H033/H033

SOURCE: Ref. zh. Fizika. Abs. 10Zh229

AUTHORS: Koshkin, L. I.; Kurushin, Ye. P.; Shcheglov, O. S.; Nedovesov, V. N.

TITLE: Contribution to the calculation and investigation of electromagnetic fields in waveguides with ferrodielectric inserts

CITED SOURCE: Uch. zap. Kuybyshevsk. gos. ped. in-t., vyp. 42, 1964, 75-80

TOPIC TAGS: ferrodielectric, ferrite insert, waveguide measurement, electromagnetic field, electric loss

TRANSLATION: An experimental method is proposed for finding the field configuration in waveguides with ferrite inserts of arbitrary form. It consists of introducing into the waveguide a probe with

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L 18964-65
ACCESSION NR: AR5000811

appreciable losses. Motion of the probe causes the transfer coefficient of the waveguide to vary in proportion to the square of the tangential component of the field at the location of the probe. Results of tests of this method in waveguide with known field distribution are presented, and it is noted that the accuracy of the method is high. A diagram is proposed of an installation for exact measurement of low losses. G. Postnov.

SUB CODE: EC, EM ENCL: 00

Card 2/2

SHCHEGLOV, P., inzh.

Drain piping for methane removal. Bezop.truda v prom. 3 no.8:35 Ag '59. (MIRA 12:11)

(Mine gases)

SHCHEGLOV, P., uchitel' khimii (g.Sverdlovsk)

Spontaneous combustion of oils. Khim.v shkole 14 no.3:93 My-Je '59. (MIRA 12:9)
(Combustion, Spontaneous)

[illegible], [illegible]

"[illegible] Complications in Spinal Fractures," Khirurgiya, No. 4, 194[illegible]. [illegible]., [illegible] Inst., Cent[illegible] Inst., Traumatology & Orthopedy, -c194[illegible]-.

SHCHEGLOV, P. I.

USSR/ Engineering - Machinery

Card 1/1 Pub 128 - 28/35

Authors : Shcheglov, P. I.

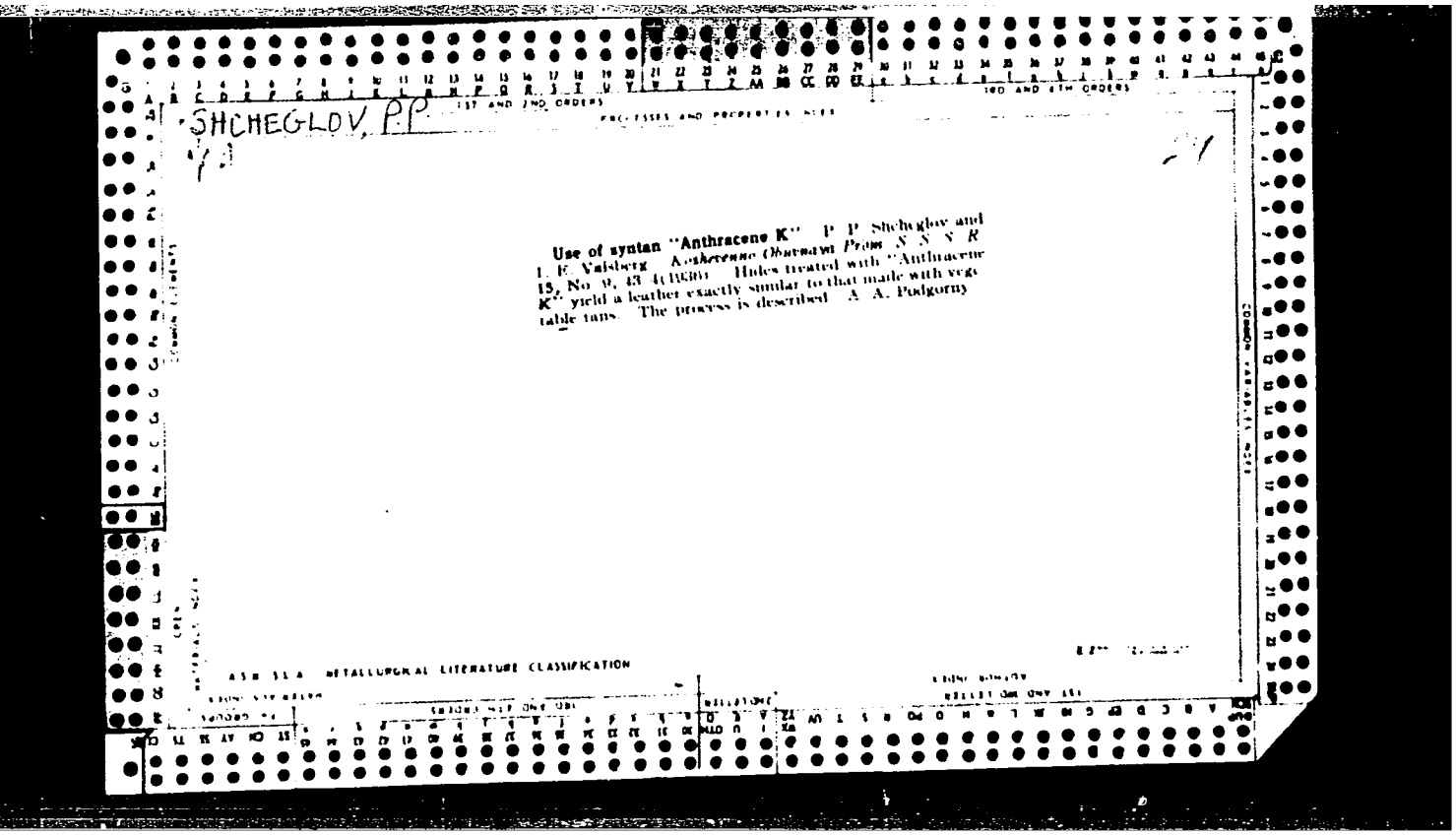
Title : Cutting conical thread

Periodical : Vest. mash. 35/3, page 84, Mar 1955

Abstract : An explanation is given of a method by which a device which was designed for cutting thread on objects in the form of a cylinder can be adapted for cutting on objects that are somewhat tapered, such as the end of a pipe to be inserted. Illustration; drawing.

Institution : .....

Submitted : .....



APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001548730013-9"

SHCHEGLOV, P.P., uchitel'

Explosibility of the vapors of combustible materials. Khim.v shkole 15 no.1:67-69 Ja-F '60. (MIRA 13:5)

1. Pozharnoye tekhnicheskoye uchilishche Sverdlovska.
(Explosions--Study and teaching)

SHCHEGLOV, P P., prepodavatel' spetsial'noy khimii

Bromium derivatives of carbohydrates as means for fire extinction. Khim. v shkole 17 no.1:89 Ja-F '62. (MIRA 15:1)

1. Sverdlovskoye pozharno-tekhnicheskoye uchilishche.
(Bromo-derivatives (Organic chemistry))
(Fire extension--Chemical systems)

DIBAY, E.A.; SHCHEGLOV, P.V.

Fifth conference on cosmogony devoted to radio astronomy.
Astron.tsir. no.158:26-27 Ap '55. (MIRA 8:9)
(Radio astronomy)

SHCHEGLOV, P. V. Cand Phys-Math Sci -- (diss) "Photometric study of certain astronomical objects in the area of 8000-12000-A° wave-lengths." Mos, 1957. 7 pp (Mos Order of Lenin and Order of Labor Red Banner State Univ im M. V. Lomonosov. State Astronomical Inst im P.K. Shternberg), 100 copies (KL, 3-58, 95)

33-3-24/32

AUTHOR: Shcheglov, P.V.

TITLE: The photography of stars with an image converter tube (Fotografirovaniye zvezd pri pomoshchi elektronno-opticheskogo preobrazovatelya)

PERIODICAL: "Astronomicheskiy Zhurnal" (Journal of Astronomy), 1957, Vol.34, No.3, p.487 (U.S.S.R.)

ABSTRACT: Observations of the galactic cluster M39 (NGC 7092, α (1950.0) = $21^{h}30^{m}4$, δ (1950.0) = + $48^{\circ}13'$) made with an image converter tube and presented at the Dublin meeting are described.

ASSOCIATION: State Astronomical Institute im. P.K. Shternberg. (Gos. Astronomicheskiy Institut im. P.K.Shternberg)

SUBMITTED: December 11, 1956.

AVAILABLE: Library of Congress

Card 1/1

33-4-18/19

AUTHOR: Shcheglov, P. V.

TITLE: Spectrum of the Cancer nebula. (Spektr krabovidnoy tumannosti.)

PERIODICAL: Astronomicheskiy Zhurnal, 1957, Vol.34, No.4, pp.675-677 (USSR)

ABSTRACT: The radiation emitted by the Cancer nebula in both radio and optical regions is due to radiation of relativistic electrons in weak magnetic fields (Shklovskii Ref.1).

The distribution of energy in the spectrum of the radiation emitted by relativistic electrons is connected with their differential energy spectrum. If the latter is described by

$$N(E) = k E^{-\gamma}$$

then the radiation spectrum is given by

$$I_\nu \sim \nu^{(1-\gamma)/2}$$

(Shklovskii Ref.2) Thus the spectrum of the Cancer nebula may be used to deduce the spectrum of the radiating relativistic electrons.

Card 1/3

Spectrum of the Cancer nebula. 33-4-18/19

AVAILABLE: Library of Congress

Card 3/3

SHCHEGLOV, P.V.

Distribution of the infrared brightness in the central region of nebula M31. Astron.tsir. no.180:18-20 My '57.
(MIRA 13:4)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Nebulae)

25-1-9/48

AUTHORS: Kurt, V.G., and Shcheglov, P.V., Scientific Workers of the State Astronomical Institute imeni P.K. Shternberg

TITLE: Electronics in Astronomy (Elektronika v astronomii)

PERIODICAL: Nauka i Zhizn', 1958, #1, pp 25-28 (USSR)

ABSTRACT: The application of electronics in astronomy makes it possible to carry out observations with strict accuracy. A new branch of science came into existence - radio-astronomy - which deals with the radio radiation of the sun, of clouds of inter-stellar gas, and of remote stellar systems, galaxies, etc. A number of new devices have been designed for this purpose. Photometric recording of light intensity, for instance, is possible with a measuring device linked to the series connection of a photoelement; this is at the same time the simplest stellar electrophotometer.

The first principles advanced for achieving an intensification of the photocurrent of the photoelectric cell, suggested by Soviet scientist L.A. Kubetskiy in 1930, are based on making use of secondary electronic amplification. The discovery of a photoamplifier made it possible to apply

Card 1/4

now carrying out experiments in this field, under the direction of V.B. Nikonov.

Recently, new devices have been designed, the so-called "automatic guides", where the application of electrons ensures direct guiding of the telescope, without any deflection, onto the star to be investigated. Such a photoelectric guide for a solar telescope was constructed by E.Ye. Dubov of the Crimean Astrophysical Observatory, and proved to be very effective, the sun deflection being much smaller than in the case of manually operated guidances.

The photocell is another electronic device applied in astronomy. It is sensitive to infra-red rays with a wave length of up to 3.5 microns.

The electronic optical converter (ЭОП) - another photoelectric device - is of very simple design. The photocathode may be either antimonial-cesium or oxygen-cesium. The sensitivity of the ЭОП is 10 times greater in the visible part of the spectrum than that of a photo-plate, and in the infra-red section this sensitivity is 100 times greater. Since infra-red rays easily pass through dense cosmic dust, Soviet scientists V.I. Krasovskiy, V.B. Nikonov and A.A. Kalinyak succeeded in examining the center of our

53-64-3-1/8

AUTHORS: Shklovskiy, I. S., Shcheglov, P. V.

TITLE: The Optical Observation of Artificial Earth-Satellites (Opticheskiye nablyudeniya iskusstvennykh sputnikov Zemli)

PERIODICAL: Uspekhi Fizicheskikh Nauk, 1958, Vol. 64, Nr 3, pp. 417-427 (USSR)

ABSTRACT: The spatial coordinates of such satellites for various times are determined by means of radiotechnical and optical methods. This work is dealing with the optical methods, which enable to determine the coordinates of satellites more exactly, on principle, than do radiotechnical methods. The authors explicitly point out the importance of the exact position-finding of satellites. Above all, the analysis of the motion of satellites is important for the investigation of the shape of the earth. When the satellite is observed with an accuracy of 5", the coordinates of the observation place can be determined with an accuracy of several meters. An exact determination of the coordinates of satellites is first of all important for geodetic-and geophysical problems of geo-

Card 1/3

physics. This, however, is just one field of application for the exact coordinate determination. There is an interesting possibility for considerably increasing the brightness of satellites at dawn. It is the emergence of an "additional satellite" from the "main satellite". The additional satellite consists of a balloon of a thin aluminum-coated cover. At present such a balloon is realized which weighs 300 g, the apparatus for the gas filling included. But also bigger balloons of relatively light weight can be produced. Such a balloon has, however, because of its great braking effect, no substantial scientific value. The coordinates of the satellite can be determined by simultaneously photographing the satellite and the surrounding stars. The authors investigate the demands made on a system used for photographing satellites. Such a camera must take a fixed star of the 6th order within 1/300 of a second. By means of the analysis of the photographic picture an accuracy of ± 1,5-2 seconds of arc can be obtained. The use of photoplates is to be preferred in the photographic investigation. Until November 1957, no data of the use of such cameras

for the observation of the Soviet satellites were at hand. In the Soviet Union 66 stations for the visual observation of satellites were built. An apparatus was constructed on the basis of the standard air-camera NAFA -3c/25 in the Astronomical Institute imeni Shternberga (Gosudarstvennyy astronomicheskiy institut im. Shternberga) for the observation of brighter satellites. After this another apparatus is described. The authors point out the possible use of electron-optical transformers, since they are much more sensitive than photoplates, have, however, also disadvantages. The production of satellites of polyhedral shape would be an advantage, as the plane surfaces of this polyhedron act as plane mirrors. Finally the authors report on the observation of the satellites which became red-hot when entering the earth's atmosphere. There are 4 figures, 1 table, and 10 references, 2 of which are Soviet.

Card 3/3 1. Satellite vehicles--Motion 2. Satellite vehicles--Reflective effects 3. Satellite vehicles--Performance

SOV/33-35-4-15/25

3(1)

AUTHOR: Shcheglov, P.V.

TITLE: Some Methodical Problems in Applying Image Converters (Nekotoryye metodicheskiye voprosy primeneniya elektronno-optiches-kikh preobrazovateley v astronomii)

PERIODICAL: Astronomicheskiy zhurnal,1958, Vol35, Nr 4, pp 651-655(USSR)

ABSTRACT: The present paper contains the experiences which have been gathered in 1954-1957 in the Section of Radio Astronomy of the State Astronomical Institute imeni P.K.Shternberg in applying image converters. Especially the use of these instruments in photometric and spectroscopic investigations in the infrared domain is explicitly discussed. The gathered experiences do not exceed those already well-known for several years in the western countries (see [Ref 1,2]).

Some Methodical Problems in Applying Image Converters SOV/33-35-4-15/25

There are 4 figures, and 6 references, 3 of which are Soviet, 2 German, and 1 American.

ASSOCIATION: Gos. astronomicheskiy in-t im. P.K.Shternberga (State Astronomical Institute imeni P.K. Shternberg)

SUBMITTED: May 15, 1957

Card 2/2

SHCHEGLOV P. V.

PHASE I BOOK EXPLOITATION SOV/3405

Soveshchaniye po voprosam kosmogonii. 6th, Moscow, 1957

Vnegalakticheskaya astronomiya i kosmologiya; trudy soveshchaniya (Extragalac'ic Astronomy and Cosmology; Transactions of the 6th Conference on Problems of Cosmogony, June 5-7, 1957) Moscow, AN SSSR, 1959. 273 p. Errata slip inserted. 1,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR.

Ed. of Publishing House: L.V. Samsonenko; Tech. Ed.: O.N. Shevchenko; Editorial Board: D.A. Frank-Kamenetskiy (Resp. Ed.) Professor; B.A. Vorontsov-Vel'yaminov, Corresponding-Member.

PURPOSE: The book is intended for astronomers and physicists studying problems of general cosmology.

COVERAGE: The book is a collection of papers on cosmogony read by scientists participating in a conference held in Moscow on June 5-7, 1957. The papers review recent observational and theoretical work in extragalactic astronomy, gravitational theory, theory of relativity, red shift, radio astronomy, formation of chemical elements, thermodynamics of the universe, entropy, etc. No personalities are mentioned. There are references following most of the reports.

PHASE I BOOK EXPLOITATION SOV/3051

Vsesoyuznoye astronomo-geodezicheskoye obshchestvo

Astronomicheskiy kalendar' 1960 (Astronomical Calendar, 1960) Moscow, Fizmatgiz, 1959. 351 p. (Series: Its: Yezhegodnik; peremennaya chast', vyp. 63) 7,200 copies printed.

Ed.: I.Ye. Rakhlin; Tech. Ed.: S.N. Akhlamov; Editorial Board: P.I. Bakulin (Resp. Ed.), M.M. Dagayev, S.G. Kulagin, A.G. Masevich, P.P. Parenago.

PURPOSE: The book is intended for astronomers and geophysicists and physicists interested in astronomical phenomena.

COVERAGE: This yearbook on astronomy was compiled by a number of Soviet scientists specializing in several different branches of astronomy. The following persons participated in the work: L.D. Kovbasyuk, who wrote the chapters on ephemerides of the Sun and Moon; M.M. Dagayev, the chapters on planets, eclipses, physical coordinates of the Sun, Moon, Mars, and Jupiter, and the satellites of Jupiter and Saturn; V.S. Lazarevskiy, the chapters on ephemerides and heliocentric longitudes of planets; Ye.G. Demidov, the chapters on occultation of stars and planets by the Moon, observations of Polaris and computation of coordinates of stars; V.A. Br[illegible]ntser, the chapters on comets; N.S. Yakhontova, sections on minor planets; and N.B. Perova, the chapters on variable stars. The appendixes contain articles on recent developments and events in astronomy such as the launching of the first Soviet space rocket, the 10th Congress of the International Astronomical Association held in Moscow in August 1958, developments in astronomy in 1958 during the IGY. There are 385 references, all Soviet.

AVAILABLE: Library of Congress

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Shcheglov, P.V.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R001548730013-9"

SHCHEGLOV, P.: SHLOVSKII, I.

"Optical observations of artificial earth sattelites"

Pokroky Matematiky, Fysiky a Astronomie. Praha, Czechoslovakia. Vol. 4, no. 1, 1959

Monthly list of East European Accessions (EEAI), LC, Vol. 8, No. 6, Jun 59, Unclas

66729

~~23(3)~~ 3.1230

SOV/20-129-2-14/66

AUTHORS: Volkov, I. V., Yesipov, V. F., Shcheglov, P. V.

TITLE: The Use of the Contact Photography Principle in Studying Weak Light Fluxes

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 129, Nr 2, pp 288-289 (USSR)

ABSTRACT: The solution of some astronomical and geophysical problems makes it necessary to investigate the spectra of objects with low light intensity. One of the methods for intensifying the images is the use of electron-optical transformers. When using the conventional electron-optical transformers the image is projected by means of an optical system from the screen of the device to the photoemulsion. In this case, however, also objects with highest light intensity collect at maximum only 10% of the light emitted by the screen. To fully utilize the light, the photoemulsion must be brought into optical contact with the fluorescing screen of the transformer. In order to maintain the high resolving power of the device, the distance between screen and emulsion must be very small. V. I. Krasovskiy (Ref 4) was the first to use electron-optical transformers for contact photography. In 1958 a perfect device for contact photography of weakly luminous objects,

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The Use of the Contact Photography Principle in Studying Weak Light Fluxes

the photo contact tube, was developed. It consists of a vacuum balloon into which a semi-transparent photocathode, an electron-optical device and a fluorescing screen are mounted. The latter was applied to a 20 to 30 μ thick mica plate (forming the back wall of the device). The photoemulsion is pressed to this plate. The vacuum in the device is maintained for a long period. To produce an optical contact between the photoemulsion and the mica plate (to which the screen is attached) an immersion medium with a refractive index close to that of mica is used. The photoemulsion applied to an elastic base (cinematographic film) was mechanically pressed to the screen. The photo contact tube with an oxygen-cesium photocathode was used for photographing the spectra of the night sky luminescence in the spectral range 0.8 - 1.2 μ. In this connection a spectrograph of the type SP-50 was used which was directed at an angle of 30^0 to the northern horizon. The photographs were taken on a DN film. Exposure was 4 hours and not even traces of a cold emission were found in this case. One illustration shows the spectra of the night sky luminescence in the range 0.9 and 1.0 μ. A comparison of the

The Use of the Contact Photography Principle in Studying Weak Light Fluxes

spectra of the night sky which were taken by means of a photo contact tube and a conventional electron-optical transformer with projecting optical systems showed that contact photography has a sensitivity by ten times higher. The resolving power of the photo contact tube is approximately 20 grades per millimeter. Photo contact tubes with a 10 mm long screen may be produced. Such a screen size is sufficient for a number of spectroscopical investigations. There are 1 figure and 5 references, 3 of which are Soviet.

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut im. P. K. Shternberga (State Astronomical Institute imeni P. K. Shternberg)

PRESENTED: July 13, 1959, by A. I. Berg, Academician

SUBMITTED: July 6, 1959

Card 3/3

23698

S/[illegible]/61/[illegible]/[illegible]/[illegible]/[illegible]
A001/A101

3,1510

AUTHORS: Gershberg, R.Ye., Pronik, V.I., Shcheglov, P.V.

TITLE: Photographing diffuse nebulae in infrared rays

PERIODICAL: Referativnyy zhurnal. Astronomiya i Geodeziya, no. 4, 1961, 30, abstract 4A301 ("Tr. Krymsk. astrofiz. observ.", 1960, v. 22, 190-191, Engl. summary)

TEXT: The authors report on the results of photographing bright gaseous nebulae NGC 6611, 6618 and 6613 in infrared region by means of an electronic-optical converter mounted on a high-speed camera with D=640 mm, D/F=1:1.4. It was supposed to detect emission in region $\lambda\lambda$ (8600-9500). The region was singled out by a filter absorbing light with $\lambda < 8300$ and by the long wavelength sensitivity border of the equipment. A 90 mm (23.7) additional filter permitted the solution of the problem about the nature of emission, i.e. emission [S III] or continuum, because narrowing the pass band by 2.5 times the filter did not practically change the emission if emission at λ 9540. No emission from the nebula NGC 6611 was

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23698

Photographing diffuse nebulae in infrared rays

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A001/A101

detected, and in the nebula NGC [illegible] only the brightest part of the nucleus was noticed. Apparently the [illegible] band used for taking the photographs was too wide. The nebula NGC 6618 is well visible in infrared rays. There are 8 references.

V. Yesipov

[Abstracter's note: Complete translation]

Card 2/2

81849
S/033/60/037/03/022/027
E032/E514

3.1230

AUTHOR: Shcheglov, P. V.

TITLE: Experiments in the Photography of Nebulae Using an Image Converting Telescope

PERIODICAL: Astronomicheskiy zhurnal, 1960, Vol 37, Nr 3, pp 586-589 + 1 plate

ABSTRACT: It is well known that it is difficult to photograph weak emission nebulae against the background of the night sky. The background can be reduced with the aid of interference filters but these can only be used in convergent light and this leads to a deterioration in their resolution. The most detailed review of weak nebulae carried out by Shayn (Ref 1) involved the use of a glass filter in conjunction with a photographic emulsion, the spectral width being 240 Å. However, the background is still the limiting factor and the exposures cannot exceed 2 hours with a focal ratio of 1:1.4. Another possible method is to use multi-layer dielectric filters and photographic recording in which case the background ceases to be the

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[illegible] shows that all the [illegible] on the image converter photograph. No

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E032/E514

Experiments in the Photography of Nebulae Using an Image Converting Telescope

traces of the background sky can be seen. It is concluded that good contrast photographs of weak emission objects inaccessible by direct photography can be obtained by using narrow band light filters in conjunction with image converting telescopes.
Acknowledgment is made to the Department of Physics of Nebulae of the Crimean Astrophysical Observatory and to V. F. Yesipov for help in the experiments.
There are 2 figures and 3 references, 2 of which are Soviet and 1 English.

ASSOCIATION: Gos. astronomicheskiy in-t imeni P. K. Shternberga (State Astronomical Institute imeni P. K. Shternberg)

SUBMITTED: January 7, 1960

Card 3/3

SHCHEGLOV, P.V.; YESIPOV, V.F.

Diameter of the pupil in the adapted eye. Priroda 49 no.9:108 S '60. (MIRA 13:10)

1. Gosudarstvennyy astronomicheskiy institut im. P.K.Shternberga.
(Pupil (Eye))

SHCHEGLOV, P. V.

Filament field corrector for optical and electronic-optical instruments. Soob. GAISH no.117:24-26 '61. (MIRA 15:10)

(Optical instruments)
(Electronic instruments)

YESIPOV, V.F.; SHCHEGLOV, P.V.

Spectrum of the Orion Nebula in the region 9,000 - 11,000 Å.
Astron.zhur. 38 no.3:554 My-Je '61. (MIRA 14:6)

1. Gosudarstvennyy astronomicheskiy institut imeni P.K.Shternberga.
(Nebulae--Spectra)

SHCHEGLOV, P.V.

"Vistas." Astron.zhur. 38 no.3:567-568 My-Je '61. (MIRA 14:6)
(Astronomy)

9.4170 (2801, 3005)
3.1510 (1062, 1166 only)

21491
S/020/61/137/004/015/031
B104/3206

AUTHORS: Volkov, I. V., Yesipov, V. F., and Shcheglov, P. V.

TITLE: Contact image-amplifier for the red spectral range

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 4, 1961, 840

TEXT: As known, the production of image amplifiers in the red spectral range is difficult owing to the low sensitivity of the classical photocathodes in this range. In 1959-1960 the authors made experiments with bismuth-cesium- and multi-alkali photocathodes. Characteristic for the multi-alkali photocathodes is their relatively far red boundary for very low dark currents. The red boundary of the bismuth-cesium cathode lies nearer, but its thermionic emission is stronger. The reproducibility of photocathodes gets more complicated through the necessary more accurate dosage of the alkaline metals than for photoelectric cells. For the determination of the sensitivity increase achieved by such a device, a gaseous nebula (H_α with 6563 A) was photographed by it. The objective had a speed of 1 : 1.5 and a dielectric light filter was used for the H_α-line ($\Delta\lambda$ = 40 A, T = 60 %). For comparison, the same photo was taken with the

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Contact image-amplifier for the...

identical photographic arrangement and a Kodak 103 a: panchromatic emulsion. Both photos of the NGC 7000 nebula are shown (not reproducible). An evaluation of the qualities shows that the sensitivity of the electronic telescope installation is 50 times higher than the normal photoinstallation. The gain in sensitivity is lower in the green spectral range. This is explained by the greater sensitivity of the nonsensitized photoemulsion as compared with the panchromatic emulsion. There are 2 figures and 4 Soviet-bloc references.

ASSOCIATION: Gosudarstvennyy astronomicheskiy institut im. P. K. Shternberga (State Astronomical Institute imeni P. K. Shternberg)

PRESENTED: November 19, 1960, by A. I. Berg, Academician

SUBMITTED: November 4, 1960

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