

PEKSHEV, Yu. A.; LENSKIY, B. V.; AVSENOV, Yu. M.; MILONOV, V. S.; KISVIANTSEV, L. A.; TELGIN, Ya. I.; POTAPOV, V. I.; NETRUSOV, A. A.; ZYKOV, A. A.; KUDEN, B. M.; MAKSI-MOVA, A. P.; NIKOLAYENKO, Zh. I.; VOLKOV, N. V.; SHVETSOV, N. I.; FLAKSIN, S. V.; POPOV, N. N.; KARSHINOV, L. N.; YAKIMOVA, T. A.; SHALASHOV, V. P.; VISYANIN, Yu. L.; KRASNOV, L. V.; PUSENIKOV, N. N.; IVANOV, N. I., red.; ZOLOTAREV, V. I., red.; SLADKOVSKIY, M. I., red.; LEPNIKOVA, Ye., red.; KUROLEVA, A., mladshiy red.; NCGINA, N., tekhn. red.

[Economic development of the people's democracies; survey for 1959]  
Razvitie ekonomiki stran narodnoi demokratii; obzor za 1959 god. Pod red. N. I. Ivanova i dr. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1960.  
305 p.  
(MIRA 14:6)

1. Moscow. Nauchno-issledovatel'skiy kon'yuktorny institut.  
(Europe, Eastern--Economic conditions)

ZLOTAREV, Vladimir Ivanovich; SHIRYAYEV, Yu., red.; GRIGOR'YEVA, I.,  
mladshiy red.; NOGINA, N., tekhn. red.

[World socialist market] Mirovoy sotsialisticheskii rynok. Mo-  
skva, Izd-vo sotsial'no-ekon. lit-ry, 1961. 205 p. (MIRA 14:6)  
(Communist countries--Commerce)

ZOLOTAROV, V.I.

At the head of the brigade stands the specialist. Nauka 1 pered.  
op. v sel'khoz. 7 no.8:58 '57. (MLRA 10:9)

1. Glavnyy zootekhnik Pervomayskoy mashinno-traktoynoy stantsii,  
Krasnoyarskogo kraya.

(Farm management)

ZOLOTAREV, V.I., inzhener

Device for the removal of burrs from resistance welded chains.  
Svar. proizv. no. 3<sup>2</sup>27 Mr '55. (MIRA 8:9)  
(Chains--Welding)

ZOLOTAREV, Vladimir Ivanovich; PISKOPFEL', F.G., red.

[Foreign trade of socialist countries] Vneshniaia  
torgovlia sotsialisticheskikh stran. Moskva, Vneshtorg-  
izdat, 1964. 389 p. (MIRA 17:9)

ZOLOTAREV, Valentin Ivanovich; RIMASHEVSKIY, Bronislav Adamovich;  
MARTIROSOV, A.Ye., red.

[Il'ichevsk sea port] Il'ichevskii morskoi port. Moskva,  
Transport, 1964. 54 p. (MIRA 18:5)

ZOLOTAREV, V.M.

MEN'SHOV, D.Ye.; SHAFAREVICH, I.R.; MOROZOVA, Ye.A.; ZOLOTAREV, V.M.

Sixteenth mathematical olympiad for Moscow schools. Usp. mat. nauk 9  
no.3:253-256 '54. (MLIRA 7:10)  
(Mathematics--Competitions)

Zolotarev, V. M.

USSR Mathematics - Distribution Functions

Card 1/1 Sub. 12 - 1954

Authors : Zolotarev, V. M.

Title : Expression of the density of a stable distribution with the index greater than one through the density with  $\frac{1}{\alpha}$  index

Periodical : Dok. AN SSSR 98/5, 735-738, Oct 11, 1954

Abstract : A thesis on the expression of density of a stable distribution with an alpha index through the density with a different index is presented. The formula for the logarithm of the characteristic function of a stable distribution is represented as a series in powers of the logarithm of the absolute value of the variable in the case of a stable distribution with an index greater than one. Graphs.

Institution : The M. V. Lomonosov State University, Moscow

Presented by: Academician A. N. Kolmogorov, July 5, 1954



ZOLOTAREV, V. V.

ZOLOTAREV, V.M. (Moskva).

More precise statement of a series of theorems in the theory of  
branching processes [with summary in English]. Teor. veroiat. i  
ee prim. 2 no.2:256-266 '57. (MLRA 10:11)  
(Probabilities)

AUTHOR: Zolotarev, V. M. (Moscow)

SOV/52-2-4-3/7

TITLE: Mellin-Stieltjes Transformations in Probability Theory.  
(Preobrazovaniya Mellina-Stil't'yesa v teorii veroyatnostey.)

PERIODICAL: Teoriya Veroyatnostey i yeye Primeneniya, 1957, Vol.II, Nr.4, pp. 444-469. (USSR)

ABSTRACT: Mellin-Stieltjes transformations are very useful in solving problems in which products and ratios of random variables are encountered. In the first part of this paper some general considerations and results concerning the application of these transformations are given. In particular the relation between the Mellin-Stieltjes transformation, the one-sided Laplace-Stieltjes transformation and the characteristic function of a given distribution is established. In the second part some limit and point relations in the class of stable distributions are studied. For the special choice of the mixing parameter  $\gamma$  an explicit expression for the Mellin transformation of the density of stable distributions is found. The necessity for a special choice of the parameter  $\gamma$  is explained by the fact

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## Mellin-Stieltjes Transformations in Probability Theory.

that there is a natural separation of the stable distribution into two analytically independent branches. The explicit Mellin transformation for these branches makes it possible to establish a whole series of relations between the branches of the stable distributions as special cases of previously known relations of the same type. For the sake of simplicity, all distributions in section 1 are considered as being continuous at the origin. The concepts "cut" and equivalency of random variables are also determined there. Any random variable having a distribution function

$$\tilde{F}(x) = \frac{F(x)-F(0)}{1-F(0)}, \quad x \geq 0; \quad \tilde{F}(x) \equiv 0, \quad x \leq 0$$

is called cut  $\tilde{\xi}$  of random variable  $\xi$  having a distribution function  $F(x)$ . Cuts may also be considered as functions of an initial random variable  $\xi$  (two different representations of  $\xi$  are given as functions of  $\xi$ ). Random variables  $\xi_1$  and  $\xi_2$  are considered as being

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Mellin-Stieltjes Transformations in Probability Theory.

equivalent and are designated as  $\xi_1 \approx \xi_2$  if the distribution functions corresponding to them are equal. The concepts of cuts and equivalency of random variables are systematically employed in the second section in establishing precise and limiting relationships in the class of stable distributions. Stable distributions naturally decompose into two analytically independent branches if the shift parameter  $\gamma$  is specially selected. For  $a \neq 1$  it is possible to determine an explicit expression of the Mellin transformation for these branches employing Euler's  $\Gamma$ -function. These two circumstances justify the use of the above mentioned concepts. This explicit representation of Mellin's transformations in turn is used to determine a whole series of relationships between branches of stable distributions, in which all previously known relationships of the same type are special cases. It should be noted that in paragraph 2.6 all random variables, which are written separately, are considered independent. The behavior of stable distributions near critical points  $a = 0$  and  $a = 1$  is

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Mellin Stieltjes Transformations in Probability Theory.

investigated in the second section.

There are 6 Soviet references.

1. Mathematics
2. Transformations (Mathematics)---Theory
3. Random distribution

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ZOLOZAREN, V.M., Cand Phys-Math Sci --(diss) "Analytical properties of infinitely-divisible laws of dispersion." Mos., Publishing House of the Acad Sci USSR, 1958. Cover, 4 pp (Acad Sci USSR. Mathematical Inst in V.A.Steklov), 130 copies (IL,43-58, 114)

- 3 -

SOV/52-3-2-7/10

AUTHOR: Zolotarev, V. M.

TITLE: Distribution of the Superposition of Infinitely Subdivisible Processes (Raspredeleniye superpozitsii bezgranichno delimyykh protsessov)

PERIODICAL: Teoriya veroyatnostey i yeye primeneniya, 1958, Vol III, Nr 2, pp 197-200 (USSR)

ABSTRACT: It can be stated generally that when the parameters of a certain fixed condition exist, the distribution of the process with an ordinary and evenly distributed parameter becomes also fixed. This can be applied to two cases, one of which is an arbitrary infinitely subdivisible process and the other is the sum of the independent random variables. From the Eq.(1) and its characteristic function  $\Phi(\lambda)$  it can be derived that the distribution of the superposition  $\zeta(t) = \xi[\eta(t)]$  will be infinitely subdivisible if an arbitrary process  $\xi(t)$  and any non-negative process  $\eta(t)$  are proved to be infinitely subdivisible. The corresponding spectral function  $H(x)$  can be obtained from the derivation(Eq.2).

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Distribution of the Superposition of Infinitely Subdivisible Processes

This can be expressed in more general form (Eq.U). Similarly, it can be proved that for the sum  $\zeta(t) = \xi_1 + \dots + \xi_n(t)$ , when all the random variables are independent, the process  $\eta(t)$  has an infinitely subdivisible distribution. When a random variable  $\xi_1$  satisfies the condition (Eq.V) then the distribution  $\zeta(t)$  must be infinitely subdivisible. It should be noted, however, that it is possible to obtain a characteristic function and to satisfy the condition Eq.(V). But this case can be easily recognized as being always continuous and thus not suitable for the condition of subdivisible processes. There are 3 Soviet references.

SUBMITTED: March 25, 1958.

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ZOLOTAREV, V.M.  
p. 3

SOV/52-3-2-10/10

AUTHOR: None Given

TITLE: A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probability, Moscow, September-March 1957-1958 (Rezyume dokladov, sdelaynykh na zasedaniyakh nauchno-issledovatel'skogo seminaru po teorii veroyatnostey, Moskva, sentyabr'-mart 1957-58 g.)

PERIODICAL: Teoriya veroyatnostey i yeye primeneniya, 1958, Vol III, Nr 2, pp 212-216 (USSR)

ABSTRACT: A. N. Kolmogorov - Ergodic stationary random processes with a discrete spectrum. If  $S$  is a set of numbers and  $\xi(t)$  is a stationary ergodic function defined for all random values of  $t$  as

$$\xi(t) = \sum_{\lambda \in S} \varphi(\lambda) e^{i\lambda t}$$

then  $\rho(\lambda) = |\varphi(\lambda)|$  is not random. Therefore, the unit probability can be expressed as  $\rho(\lambda) = +\sqrt{f(\lambda)} > 0$  and  $\varphi(\lambda) = \rho(\lambda) e^{i\theta(\lambda)}$  where  $\theta(\lambda)$  is defined as mod  $2\pi$

Card 1/6 and represents a random element of the space  $A_S$  of all the

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A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probability, Moscow, September-March 1957-1958

functions  $\alpha(\lambda)$ . The space  $A_S$  represents a compact group with a sub-group  $B_S$ . The factorial group

$\Gamma_S = A_S - B_S$  will determine the distribution of

the function  $\xi(t)$  becoming isomorphic of the other two.  
Ye. B. Dynkin - Infinitesimal operators of "jump" Markov processes. Published in Vol III, Nr 1 of this journal.

V. A. Volkonskiy - A random change of time in strictly Markov processes. If  $x_t = x(t, \omega)$  is a homogeneous Markov process on the space  $\mathcal{E}$  and  $\tau_t(\omega)$  is a function non-decreasing at all  $\omega$ , and that  $\tau_t(\omega)$  at all  $t$  is a random value not dependent on future, then the function  $y(t, \omega) = x(\tau_t(\omega), \omega)$  is a process obtained from  $x_t$  with random change of time  $\tau_t$ . At some conditions of  $\tau_t$  the

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the process  $y_t$  becomes a homogeneous strictly Markov process. In the case of a homogeneous process with a random change of time and a uniform deformation of space it is possible to obtain any continuous Markov process which will be regular in the interior and absorbed near the boundary.

R. L. Dobrushin - A statistical problem of detecting a signal in the noise of a multi-channel system reduced to stable distribution laws. Published in this issue.

V. M. Zolotarev - Some new properties of stable distribution laws. Published in Vol II, Nr 4 of this journal.

R. A. Minlos - On the extension of the generalized random process to additive measure. Any exact process, such as Gelfand's, based on the cylindrical set of numbers on linear topologic space  $E'$  and extended into a space  $E$  will retain its additive property defined as the set  $B$  on the space  $E'$ . (There are 2 references, 1 Soviet and 1 French).

D. M. Chibisov - Limit distribution for the number of runs in a Bernoulli Trials. If  $k$  represents a number of independent runs in two trials, the probability of a positive

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A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probability, Moscow, September-March 1957-1958

trial being  $p$  and a negative trial being  $q = 1 - p$ , then at  $i$ -run ( $i \geq r$ ) a series  $r$  can be found:  $i-r+1$ ,  $i-r+2$  ... The trial ( $i$ ) will be positive and the trial ( $i-r$ ) negative ( $i \geq r + 1$ ). The number of series  $r$  is  $N$ . The conditions for  $p, q, r, k \rightarrow \infty$  are given by (1) (2) and (3).

A. N. Kolmogorov - Spectra for dynamical systems generated by the stationary stochastic process. Displacements of a trajectory on the space of a random stationary process generate the dynamic systems for which the probability distribution is invariant. If the process is normal then the spectra of dynamical systems are homogeneous. In the case of discrete time its multiple for a separable process can be calculated. For the continuous time only some examples of calculated multiple are known. The above can be illustrated by the entropy per unit of time considered as a metric invariant of a dynamical system. As in the case of discrete

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A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probability, Moscow, September-March 1957-1958

time a normal process with a short multiple spectrum can be defined also for a continuous duration of entropy. Therefore a solution can be obtained for a problem in metric theory of dynamical system existing as a transitory set of the non-spectral invariant.

I. V. Girsanov - Some examples of dynamical systems with a continuous spectrum. If  $x(t, \omega)$  is a substantial Gaussian process and  $F(dx)$  is its continuous spectrum, then the displacement  $S_t x(t, \omega)$  retains its value on the space of trajectory, thus defining a certain dynamical system. The system is related to a group of the unitary operators  $U^t$  on the Hilbert space  $H$  which describes the substantial functionals of trajectory. The spectrum of the group  $U^t$  is described by the maximum  $\rho$  and the multiple function  $\nu(x)$ .

It has been proved that  $\rho = \sum F^i$  where  $F^i$  represents  $i$ -composition of  $F$ . If  $X$  is a complete numerical set,  $F_0$  a continuous value having  $X$  as its carrier, then the spectral process  $F(dx) = F_0(dx)$  has a single spectrum with

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A Summary of Papers Presented at the Sessions of the Scientific Research Seminar on the Theory of Probability, Moscow, September-March 1957-1958

the maximum  $\rho$ . The cyclic vector on  $H$  can be described as a series of stochastic integrals. In the case of

$F(dx) = F_0(dx) + F_0^2(dx)$  the process has the same maximum  $\rho$

but the spectrum will not be simple. Generally, it can be stated that: if a spectrum  $F$  of a process  $x(t, \omega)$  has a definite value then the spectrum of a dynamical system defined by this process contains only single components.

M. G. Shur "Ergodic properties of invariant Markov chains on homogeneous spaces". Published in this issue.

B. A. Sevast'yanov "Branching stochastic processes for particles diffusing in a restricted domain with absorbing boundaries". Published in this issue.

B. A. Rogozin "Some problems in the field of limit theorems". Published in this issue.

V. Sazonov "On characteristic functionals". Published in this issue.

Card 6/6 There are 2 references, 1 Soviet, 1 English.

USCOM-DG-60370

ZOLOTAREV, V.M. (Moskva); KOROLYUK, V.S. (Kiyev)

New method in the problems on wandering on a semi-axis. Teor.  
veroiat. i ee prim. 5 no.2:263-264 '60. (MIRA 13:9)  
(Probabilities)

16.6100

32770  
S/658/61/000/007/010/010  
D251/D302

AUTHOR: Zolotarev, V.M., Candidate of Technical Sciences

TITLE: On the choice of normalizing constants in increasing sums of independent random quantities

SOURCE: Moscow. Fiziko-tehnicheskiy institut. Trudy, no. 7, 1961. Issledovaniya po mekhanike i prikladnoy matematike, 158 - 161

TEXT: The author considers a sequence of independent random quantities  $\xi_1, \xi_2, \dots, \xi_n, \dots$  (1), whose distribution and characteristic functions are, respectively,  $V_k(x)$  and  $v_k(t)$ . It is assumed that there exists a sequence of such constants  $A_n, B_n > 0$  that the distribution function of the normalized sum

$$\zeta_n = \frac{1}{B_n} (\xi_1 + \dots + \xi_n) - A_n \quad (2)$$

as  $n \rightarrow \infty$  has a bounded stable distribution  $G_\alpha(x, \lambda)$  with charac-

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On the choice of normalizing ...

teristic function.

$$\varphi_n(t, \lambda) = \begin{cases} \exp \left\{ -\lambda |t|^\alpha \exp \left[ -t \frac{\pi}{2} \beta \frac{t}{|t|} (1 - |z-1|) \right] \right\} & \text{for } \alpha < 1; \\ \exp \left\{ -\lambda |t| \left[ \frac{\pi}{2} + \beta \frac{t}{|t|} \log |t| \right] \right\} & \text{for } \alpha = 1. \end{cases} \quad (3)$$

where  $0 < \alpha \leq 2$ ,  $|\beta| \leq 1$ ,  $\lambda > 0$ . The following result is established: Theorem: Let there be a sequence of independent random quantities (1) such that: 1) (2) has a limited stable distribution with parameters  $\alpha, \beta, \lambda$ ; 2) There exists a sequence of positive numbers

$\lambda_k = \lambda c_k$ , for which  $\lim_{n \rightarrow \infty} \sum_{k=1}^n c_k = \infty$  and absolute moments  $\nu_k(\alpha)$  finite for all  $k$ . 3) For increasing  $n$

$$\max_{1 \leq k < n} [\nu_k(\alpha)]^{1/c_k} = o \left( \sum_{k=1}^n c_k \right), \quad \left( \sum_{k=1}^n \nu_k(\alpha) \right)^{1/n} = o \left( \sum_{k=1}^n c_k \right).$$

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25768

S/052/61/006/003/004/006  
C111/C22216.6111AUTHOR: Zolotarev, V.M.

TITLE: On the asymptotic behavior of a class of infinitely divisible laws

PERIODICAL: Teoriya veroyatnostey i yeye primeneniye, v. 6, no. 3, 1961,  
330 - 334

TEXT: For the infinitely divisible laws there holds the formula of P. Levy :

$$\log f(t) = it\gamma - \frac{\sigma^2}{2} t^2 + \int_{-\infty}^{\infty} \left( e^{itu} - 1 - \frac{itu}{2} \right) dH(u), \quad (1)$$

where  $f(t)$  is the characteristic function,  $\gamma$  and  $\sigma^2$  are real parameter,  $H(u)$  is a function non-decreasing on  $(-\infty, 0)$  and  $(0, \infty)$  tending to zero for  $|u| \rightarrow \infty$  and for which

$$\int_{|u| \leq 1} u^2 dH(u) < \infty.$$

The prime at the integrals denotes that the point 0 is excluded from the Card 1/4

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S/052/61/006/003/004/006  
C111/C222

X

On the asymptotic behavior ...

region of integration. An infinitely divisible law is determined uniquely by  $\gamma$ ,  $\sigma$  and the spectral function  $H(u)$ .

Let  $G(x) = G(x, \gamma, \sigma^2, H)$  be the distribution function of the infinitely divisible law determined by  $\gamma, \sigma^2, H$ .

Definition :  $H(u)$  belongs to the class  $\mathcal{L}_\gamma^B$  (or  $\mathcal{L}_B$ ) if it is representable on  $(1, \infty)$  (or on  $(-\infty, -1)$ ) in the form  $H(u) = u^{-B}h(u)$  (or  $H(u) = -|u|^{-B}h(|u|)$ ), where  $h(u) < 0$  has the property that  $h(ku) \sim h(u)$  for every constant  $k > 0$  and  $u \rightarrow \infty$ .

Theorem 1 asserts that from  $H(x) \in \mathcal{L}_\gamma^B$  it follows :

$$1 - G(x, \gamma, \sigma^2, H) \sim -H(x) \tag{2}$$

for  $x \rightarrow \infty$ .

Let  $H(u) \in \mathcal{L}_\alpha$  if on  $(0, 1)$  it holds  $H(u) = u^{-\alpha}h(u)$ , where  $h(u)$  is so that for every positive  $k$  it holds  $h(ku) \sim h(u)$  for  $u \downarrow 0$ . Let

$\mathcal{K}_\alpha^B = \mathcal{L}_\alpha \cap \mathcal{L}_\gamma^B$ . In the class of all infinitely divisible laws let one-Card 2/4

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C111/C222

On the asymptotic behavior ...

parametric families of distribution functions  $\{G_\alpha(x)\} = \mathcal{U}(c_1, c_2)$  be characterized by the following conditions:

1) The characteristic function  $f_\alpha(t)$  for  $G_\alpha(x) \in \mathcal{U}(c_1, c_2)$  has the form :

$$f_\alpha(t) = \exp \left\{ \int_0^\infty (e^{itu} - 1) dN_\alpha(u) \right\}, \text{ where } N_\alpha \in \mathcal{U}_{\mathcal{F}_\alpha}.$$

2)  $\lim_{\alpha \downarrow 0} \lim_{u \downarrow 0} u^\alpha N_\alpha(u) = c_1 \leq \lim_{\alpha \downarrow 0} \lim_{u \rightarrow \infty} u^\alpha N_\alpha(u) = c_2 \neq 0.$

Theorem 2 : If  $G_\alpha(x)$  belongs to  $\mathcal{U}(c_1, c_2)$  then for  $\alpha \downarrow 0$  the distribution function  $G_\alpha(x^{1/\alpha})$  converges to the distribution function

$$V(x) = \begin{cases} 0 & x \leq 0 \\ \exp\left(\frac{c_1}{x}\right) & 0 < x \leq 1 \\ \exp\left(\frac{c_2}{x}\right) & 1 < x \end{cases}$$

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ZOLOTAREV, V.M. (Moscow)

One probability problem. Teor. veroiat. i ee prim. 6 no.2:219-222  
'61. (MIRA 14:6)

(Distribution (Probability theory))

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S/O20/62/142/004/006/022  
B112/B102

/1.6100

AUTHOR: Zolotarev, V. M.

TITLE: General theory of multiplication of independent random quantities

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 4, 1962, 788-791

TEXT: Multiplication schemes (M-schemes) are constructed analogously to addition schemes (A-schemes). The matrix

$$W_{\xi}(t) = \begin{pmatrix} w_0(t) & 0 \\ 0 & w_1(t) \end{pmatrix},$$

where  $w_k(t) = M|\xi|^{it \operatorname{sgn} k}$  ( $k = 0, 1$ ), is said to be the characteristic transformation of the random quantity  $\xi$ . The M-composition of distribution functions  $F_{\xi}, F_{\eta}$  is defined by  $F_{\xi \eta}(x) = F_{\xi}(x) \circ F_{\eta}(x)$ .  $\mathcal{M}$  is the class of all distribution functions  $F$  which can be represented in the

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General theory of multiplication... S/020/62/142/004/006/022  
B112/B102

form

$$F = F_{n_1} F_{n_1} \dots F_{n_1} \quad (n_1 \text{ factors})$$

$$= F_{n_2} F_{n_2} \dots F_{n_2} \quad (n_2 \text{ factors})$$

$$= \dots$$

( $0 < n_1 < n_2 < \dots$ ). The author defines the class  $\mathcal{M}$  by a necessary and sufficient condition. It is shown that  $\mathcal{M}$  can also be defined as a class of certain limiting distribution functions. Finally, the arithmetic properties of distribution functions with respect to the  $\mathcal{M}$ -composition are investigated. There are 3 references: 1 Soviet and 2 non-Soviet.

ASSOCIATION: Matematicheskiy institut im. V. A. Steklova Akademii nauk SSSR (Institute of Mathematics imeni V. A. Steklov of the Academy of Sciences USSR)

PRESENTED: November 18, 1961, by A. N. Kolmogorov, Academician

SUBMITTED: November 16, 1961  
Card 2/2

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35969  
S/517/61/064/000/001/006  
D299/D301

AUTHOR: Zolotarev, V. M.

TITLE: Duality principle in a class of infinitely divisible distribution laws

SOURCE: Akademiya nauk SSSR. Matematicheskiy institut. Trudy. v. 64, 1961, 52-60

TEXT: A theorem is proved on the duality of infinitely divisible distribution laws. The distributions of a class of infinitely divisible processes  $\xi(\lambda)$  is described in terms of the corresponding characteristic functions  $f(t, \lambda)$ . The formula

$$\frac{1}{\lambda} \log f(t, \lambda) = it\gamma - \frac{1}{2} \sigma^2 t^2 + \int_{-\infty}^{\infty} \left( e^{itu} - 1 - \frac{itu}{1+u^2} \right) dH(u) \quad (1)$$

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D299/D301

Duality principle in ...

is used, where  $\gamma$  and  $\sigma$  are real constants,  $\lambda > 0$  is a parameter denoting the duration of the infinitely divisible process,  $H(u)$  is a nondecreasing function (on the semiaxes  $(-\infty, 0)$   $(0, \infty)$ ), for which

$$\int_{|u| \leq 1} u^2 dH(u) < \infty \quad (2)$$

$H(u)$  is called the spectral function of the corresponding infinitely divisible distribution law (i.d.l.). The distribution function of the i.d.l. is denoted by  $G(x) = G(x, \sigma^2, H)$ ; the distribution density by  $g(x) = g(x, \gamma, \sigma^2, H)$ . The set  $\mathcal{B} = \{G(x)\}$  of all i.d.l. is divided into 3 disjoint groups A, B and C. In the following, the i.d.l. and the characteristics which belong to one of these groups, have the corresponding letter (A, B or C) as a subscript. Definitions are given of extreme (and their symmetrical)

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Duality principle in ...

S/517/61/054/000/001/005  
D299/D301

i.d.l., (as i.d.l. for which  $H(u) = 0$  with  $u < 0$ , and  $H(u) = 0$  with  $u > 0$ , respectively). The spectral functions of extreme i.d.l. are denoted by  $N(u)$ ; those of their symmetrical i.d.l. by  $M(u)$ . A further definition applies to a class  $\mathcal{S}_\alpha$  of spectral functions. In the theorem that follows, it is assumed that the spectral functions of  $G_B(x)$  belong to the class  $\mathcal{S}_\alpha$ . Theorem: For each extreme i.d.l.  $G_B(x, \lambda)$ , it is possible to find such an extreme i.d.l.  $G_A(x, \lambda)$ , so that for any  $x > 0$  and  $\lambda > 0$ , the relationship

$$xG_B(m\lambda - x, \lambda) = \lambda G_A(\lambda, x), \quad m = \max(0, -\tau_B)$$

holds. These infinitely divisible laws are directly related by means of their corresponding characteristic functions. The proof of the theorem is based on 2 lemmas. There are 1 figure and 2 Soviet-bloc references.

Card 3/3

ZOLOTAREV, V.M.

General theory of the multiplication of random variables.  
Dokl. AN SSSR 142 no.4:788-791 P '62. (MIRA 1512)

1. Matematicheskly institut im. V.A.Steklova AN SSSR.  
Predstavleno akademikom A.N.Kolmogorovym.  
(Sequences(Mathematics))  
(Transformations(Mathematics))

ZOLOTAREV, V.M.

Principle of duality in a class of infinitely divisible processes.  
Trudy Mat.inst. 64:52-60 '61. (MIRA 15:3)  
(Distribution (Probability theory)) (Processes, Infinite)

ZOLOTAREV, V. M. (Moscow); KOROLYUK, V. S. (Kiyev)

Comments on B. V. Gnedenko's hypothesis. *Teor. veroiat. i ee prim.*  
6 no.4:469-474 '61. (MIRA 14:11)  
(Distribution(Probability theory))

ZOLOTAREV, V.M., kand.fiziko-matematicheskikh nauk

Selection of normalizing constants in increasing sums of  
independence random variables. Trudy MFTI no. 7:158-161 '61.  
(MIRA 15:4)

(Limit theorems (Probability theory))

ZOLOTAREV, V.M., kand.fiziko-matematicheskikh nauk

Generalization of Kolmogorov's inequality. Trudy MFTI no.7:162.  
165 '61. (MIRA 15:4)  
(Limit theorems (Probability theory))

202071125 V-111  
Transactions of the Sixth Conference (Cont.)

REV/6371



ZOLOTAREV, V.M. (Moscow)

~~word has been removed~~  
Asymptotically correct constants in the definitions of the  
mean central limit theorem. Teor. veroiat. i ee prim. 9 no.2:  
293-302 '64 (MIRA 17:7)

ACC NR: AP6016382

SOURCE CODE: UR/0052/61/010/003/0519/0526

AUTHOR: Zolotarev, V. M. (Moscow)

ORC: none

TITLE: Closeness of the distributions of two sums of independent random variables

REF: Izvestiya vuzov matematiki i fizika, no. 10, no. 3, 1969, 522-526

SUBJ: Limit distribution function, approximation

ABSTRACT: Let  $\xi_1, \dots, \xi_n$  and  $\eta_1, \dots, \eta_n$  be two series of independent random variables with distribution functions  $F_1, \dots, F_n$  and  $G_1, \dots, G_n$ . There are formed the sums

$$\xi = \xi_1 + \dots + \xi_n, \quad \eta = \eta_1 + \dots + \eta_n.$$

Let  $F$  and  $G$  be the distribution functions of these sums. The approximation of the distribution  $F$  by the distribution  $G$  under certain subsidiary conditions is, in essence, a typical scheme in the theory of the summation of independent random variables. A distinguishing feature of all the classical limit theorems of this type is the requirement, as a result, of uniform smallness of the terms  $\xi_j$  as compared with the sum  $\xi$ . The author proposes a treatment of limit theorems in which the closeness of the distributions  $F$  and  $G$  can also occur in a much more general situation in which, instead of uniform smallness of  $\xi_j$ , the closeness (again

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L-25791-66

ACC NR: AP6016382

in a sense) of the respective summands  $\xi_j$  and  $\eta_j$  is assumed. It is found that a natural measure of the closeness of the random variables  $\xi_j$  and  $\eta_j$  can be the "pseudomoments"

$$\mu_k = \int_{-\infty}^{\infty} x^k F(x) dx, \quad \nu_k = \int_{-\infty}^{\infty} x^k G(x) dx,$$

where  $k$  is a nonnegative integer and  $x$  is nonnegative and real. The author evaluates the deviation of the distribution  $F$  from the distribution  $G$  in terms of the quantities

$$\mu_k(x) = \sum_{j=1}^n |\mu_j(x)|^{k+1}, \quad \nu_k(x) = \sum_{j=1}^n \nu_j(x)$$

He presents and proves two theorems which make it possible to formulate, in rather simple form, sufficient conditions for the convergence of  $F$  to the infinitely divisible distribution  $G$ . Several lemmas are given, including a refinement of A. BERKEY's well-known

RODIONOV, D.A.; PRKHOROV, Yu.V.; ZOLOTAREV, V.M.

Method of averaged samples in geochemical prospecting. *Geokhimiya*  
no.6:747-756 Je '65. (MIRA 18:7)

1. Institute of Mineralogy, Geochemistry and Crystal Chemistry of  
Rare Elements, Academy of Sciences, U.S.S.R., Moscow.

ZOLOTAREV, V.M. (Moscow)

Asymptotic behavior of the distribution of processes with independent increments. Teor. veroiat. i ee prim. 10 no.1:33-50 '65.

(MIRA 18:3)

ZOLOTAREV, V.M.

Representation of stable distribution laws by integrals. Trudy  
Mat. inst. 71:46-50 '64.

Distribution of the queue length and the number of active lines  
in an Erlang system with random damage and restoration of lines.  
Ibid.:51-61 (MIRA 18:2)

ZOLOTAREV, V.M. (Moscow)

Moment of the first intersection of a level and the behavior  
at infinity of a class of processes with independent increments.  
Teor. veroiat. i ee prim. 9 no.4:724-733 '64. (MIRA 17:12)

ZOLOTAREV, V.M.; KISLOVSKIY, L.D.

Attachment to an IKS-14 spectrophotometer for obtaining spectra  
of liquid and solid objects by the method of disturbed total  
internal reflection. Prib. i tekhn. eksp. 9 no.5:175-177 S-0  
'64. (MERA 17:12)

1. Gosudarstvennyy opticheskiy institut.



COLYANDIN, N.S.; ZOLOTAREV, V.M.

Use of the IKS-14 spectrophotometer in the short-wave region.  
Prib. i tekh. eksp. 9 no.5:198-199 S.O '64. (MIRA 17:12)

1. Gosudarstvennyy opticheskiy institut.

ZLOTAREV, V.M.

For high yields of all crops. Zashch. rast. ot vred. i bol. 6  
no.7:14-15 JI '61. (MIRA 16:5)

1. Agronom po zashchite rasteniy kolkhoza "Kuban'", Ust'-Labinskiy  
rayon, Krasnodarskogo kraya.  
(Bendery District--Plant, Protection of')

ABRAMOV, M.I.; BELIZIN, V.I.; DEVITSKIY, S.M.; ZATULA, V.I.; ZOLOTAREV,  
-V.M.; ZOLOTAREV, I.S.; IL'INA, M.I.; KOLYSEKINA, M.S.; KUDASOV,  
L.P.; MAKHLIN, V.N.; MEDVEDEV, G.S.; NEKHAYEV, I.S.; OLEYNIKOV, M.S.;  
PARKHOMENKO, P.N.; TOMASHEVSKIY, V.I.; FEDUNETS, I.Kh.; KHRAMTSOV,  
V.K.; ZOLOTAREV, N.V., red.; SEVRYUKOV, P.A., tekhn.red.

[Planning on collective farms; manual] Planirovaniye v kolkhozakh;  
spravochnik. Kursk, Kurskoe knizhnoe izd-vo, 1960. 437 p.

(MIRA 14:2)

(Collective farms)

KALININ, V.K., kand. tekhn. nauk; MIRONOV, K.A., inzh.; LEVIN, B.M., inzh.; LIEMAN, G.M., inzh.; YERSHOV, Ye.F., inzh.; PANCHENKO, P.M., inzh.; BOLYCHEV, N.G., mashinist elektrovoza; ZOLOTAREV, V.N., mashinist instruktor; YAMIN, I.A., inzh.; BOVE, Ye.G., kand. tekhn. nauk, red.; USENKO, L.A., tekhn. red.

[Electric networks and maintenance of the equipment of electric locomotives] Elektricheskie skhemy i ukhod za oborudovaniem elektrovozov. [By] V.K.Kalinin i dr. Moskva, Transzheldorizdat, 1963. 279 p. (MIRA 16:7)  
(Electric locomotives)

ZOLOTAREV, V.P., agronom.

Development of hothouse and hotbed vegetable growing in Moscow  
and the Moscow region. Gor.khoz.Mosk. 24 no.4:32-38 Ap '50

(MLIA 7:10)

(Moscow--Greenhouses) (Greenhouses--Moscow) (Moscow--  
Vegetable gardening) (Vegetable gardening--Moscow)

ZOLOTAREV, V. P.

ZOLOTAREV, V. P. "Watermelons and muskmelons in the Moscow region", *Spr. Khoz-vo Moskvy*, 1949, No. 4, p. 10-15.

SO: U-4393, 19 August 53, (*Letopis 'Zhurnal 'nykh Statey'*, No. 22, 1949).

S/064/60/000/01/20/024  
B022/B008

AUTHORS: Atroshchenko, V. I., Tseytlin, A. N., Zasorin, A. P.,  
Zolotarev, V. S.

TITLE: The Utilization of Nitrogen Oxides - the Waste From Some Processes

PERIODICAL: Khimicheskaya promyshlennost', 1960, No. 1, pp. 79 - 80

TEXT: The problem of the utilization of nitrogen oxide waste developing during the manufacture of some products of the organic synthesis is dealt with in the paper under review. The development of a simple method for the utilization of nitrogen oxide waste in industry is desirable. The principal reactions which determine the forming of nitric acid from nitrogen oxide are mentioned and equations for the reaction rate are given. The utilization of highly concentrated nitrogen oxides permits the production of 55% nitric acid in accordance with the equation of equilibrium of the second reaction ( $K_p = P_{NO}/P_{NO_2}$ ). The absorption takes place in a bubbling column which represents an absorber of improved type in the

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The Utilization of Nitrogen Oxides - the  
Waste From Some Processes

S/064/60/000/01/20/024  
B022/B008

given case. The high nitrogen oxide content in the gas permits also a simplified gas flow through the system, the gas flow being obtained with the aid of a vacuum pump of the type RMK (from acid-resisting alloys). The arrangement is given schematically (Fig.) and its characteristic values are given. The oxygen consumption for a daily production of 55% of  $\text{HNO}_3$  amounts to  $14 \text{ m}^3/\text{h}$  in all; the dimensions of the second cooler are reduced to two sevenths, the weight of the column to one fourth, the number of bottoms to 8, and the consumption of electric power to one fifth. There is 1 figure.

Card 2/2





ZOLOTAROV, V.P., agronom.

Culture of citrus plants in room conditions. Gor.khoz.Mouk 27 no. 3:28.  
29 Mr '53.

(MLRA 6:5)  
(Citrus fruits) (House plants)

ZOLOTAREV, V.S.

GRITZ, Yu.A., KHULELIDZE, D.E., SELINOV, I.P., ZOLOTAREV, V.S.

(Acad. Sci. USSR)

"Search of New Reactions Induced by Fast Neutrons."

paper submitted at the A-U Conf. on Nuclear Reactions in Medium and Low Energy Physics, Moscow, 19-27 Nov 57.

ZOLOTAREV, Vasilii SELIVERSTOVICH

"Electromagnetic Separation of Isotopes of the Rare-Earth Elements",  
(paper to be presented at 1958 UN "Atoms for Peace" Conference, Geneva.)

ZALIVAREV, V., KOMAR, Ye. G. and others.

"Separation of Isotopes by Electromagnetic Method in the USSR."

paper to be presented at 2nd UN Intl. Conf. on the peaceful uses of Atomic Energy, Geneva, 1 - 13 Sept 58.

ZOLOTAREV, V.S.

1) PHASE A BOOK EXPLOITATION NOV/27/13  
International Conference on the Peaceful Uses of Atomic Energy. 2nd.  
Geneva, 1958

Bookly sovetskikh uchebnykh: polucheniye i primeneniye izotopov (Reports  
of Soviet Scientists); Production and Application of Isotopes) Moscow,  
Atomizdat, 1959. 588 p. (Series: Uch. knigi, vol. 5) 3,000 copies  
printed.

Mts. (title page): G.V. Kuryanov, Akademicheskii and I.I. Kovtsov, Correspondent-  
of the USSR Academy of Sciences; M. (Inside book): Z.D. Andreyenko;  
Tech. Ed.: Z.D. Andreyenko.

PURPOSE: This book is intended for scientists, engineers, physicists, and  
biologists engaged in the production and application of atomic energy to  
peaceful uses; for professors and graduate and undergraduate students of  
higher technical schools whose major sciences is taught; and for the  
general public interested in atomic science and technology.

CONTENT: This is volume 6 of a 6-volume set of reports delivered by Soviet  
scientists at the Second International Conference on the Peaceful Uses of  
Atomic Energy held in Geneva from September 1 to 13, 1958. Volume 6 con-  
tains 32 reports on: 1) modern methods for the production of stable radio-  
active isotopes and their labeled compounds 2) modern methods obtained  
with the aid of isotopes in the field of chemistry, metallurgy, medicine,  
6) and agriculture, and 3) diagnosis of ionizing radiations. The  
reports are edited by: S.V. Levinskii, Candidate of Physical Sciences; V.S.  
Zolotarev, Candidate of Chemical Sciences; and V.V. Seleznev, Candidate of  
Medical Sciences. See SOV/2001 for titles of volumes of the set. Refer  
to SOV/2001 for titles of the articles.

3. Yankovskiy, G.M., and V.S. Bekker. Means of Deriving Radioactive Chemical Methods  
in the Mainstream Laboratories of the USSR (Report No. 2026)  
4. Koltov, M.P., A.G. Selivich, A.S. Fridkov, and T.A. Kuznetsov. Chemi-  
cal Production of Uranium by the Low-Temperature Distillation Method  
(Report No. 2023)

5. Gwarditskiy, I.O., E.Ya. Ruberov, and V.K. Tikhonov. Separation of  
Isotopes by Diffusion in a Steam Flow (Report No. 2006)  
6. Zolotarev, V.S., A.I. D'In, and Ye.G. Kozlov. Separation of Isotopes  
on Electromagnetic Units in the Soviet Union (Report No. 2007)

7. Alkhasov, B.A., G.P. Malygin, V.D. Zolotarev, B.V. Pevko, Ya.S.  
Chernomir, and G.Ia. Shchepkin. Separation of Isotopes of Rare-  
earth Elements by the Electromagnetic Method (Report No. 2017)

8. Kovalev, P.M., B.H. Kozlov, M.S. Jertz, B.G. Bruchov, and G.M. Prudkin.  
Ion Source for the Separation of Stable Isotopes (Report No. 2003)  
9. Bealls, R.V., and P.M. Kovalev. Electric Field Effect in Ion Beams on  
Stable Isotope Separation by the Electromagnetic Method (Report No.  
2004)

10. Popovskiy, B.G., P.I. Grubin, G.I. Yermolov, and I.Ye. Mikhlinitskiy.  
Use of Radioactive Isotopes in Metallurgical Research (Report No. 2013) 148

11. Gromilovskiy, E.H., V.A. Yemshikovskiy, and I.M. Sukser. The Theory and  
Practice of Isotopy-Type Instruments Based on Radioactive Isotopes  
(Report No. 2020) 135

12. Matayevskiy, P.D., G.Z. Shor, and B.H. Shcherbina. Studied the  
Mechanism of Protection of Working Circuits Against Near Dos to Corro-  
sion (Report No. 2120) 146

13. Baryatsev, S.V., and L.E. Matyuk. The Pu-170 No.175, and Ce-144 as  
Source of Radiation for Checking Thin-walled Products (Report No. 2295) 160

14. Krut, B.I., A.G. Zevaylov, and G.I. Kopyrin. Studying the Radiative-  
tion of Elements of Alloys and Their Compounds by Autoradiography  
and Radiometric Methods (Report No. 2036) 172

15. Gerasim, P.M., A.I. Terentevskiy, V.S. Yemel'yanov, G.G. Ryabov,  
G.N. Fedorov. Studying the Strontium and Distribution of Elements in  
Alloys of Zirconium and Titanium Base by the Radioactive Isotope Method  
(Report No. 2126) 169

20676

S/120/61/000/001/007/062  
E032/E114

26.2012

AUTHORS: Rayko, V.I., Ioffe, M.S., and Zolotarev, V.S.  
TITLE: A Surface-Ionization Ion Source for the Separation of Isotopes of Alkali Elements  
PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No.1, pp.29-32

TEXT: The source was designed to produce high intensity beams and K and Rb ions in electromagnetic isotope separators. In comparison with the gas discharge sources, the present source has the advantage that oscillatory processes occurring in the discharge and affecting the ion beam are absent and the spectrum does not contain multiply-charged ions. The principle of the source is indicated in Fig.1, in which the working substance is loaded into the cylindrical furnace 1 in the form of a metal or salt. The furnace is heated by the two coaxial stainless steel cylinders 2 which are 0.15 mm thick and are heated by passing a current through them. The temperature is measured by the thermocouple 3. The vapour passes through the mixer 4 which is also made of stainless steel, and finally reaches the ionizer 5 through a gap (0.2-0.5 mm) between the ionizer 5 and the front Card 1/4

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S/120/61/000/001/007/062  
E032/E114

X

A Surface-Ionization Ion Source for the Separation of Isotopes of Alkali Elements

lid 6 of the ionization chamber. The ionizer is in the form of a nickel box (18 x 10 x 200 mm<sup>3</sup>) which contains a heater consisting of a few turns of molybdenum wire (1 mm in diameter). The power consumption of the latter is 400 W. The working surface of the ionizer facing the ion-optical system 7 is concave in order to focus the ion beam. The surface ionization coefficient calculated from the Saha-Langmuir equation for nickel is 99.9 at 1000 °K, while at 1728 °K it is 98.2 (the corresponding figures for tungsten are 87 and 68 respectively). Ions formed on the working surface of the ionizer are accelerated by the field between 6 and 7 and are focussed into an ion beam. The cross-section of the ion beam at the surface of the ionizer is 8 x 180 mm<sup>2</sup>. The cross-section is defined by the slit in the front lid 6 of the ionization chamber. This lid serves both as the first electrode of the accelerating system and as the limiting slit for the ion beam. The lid is air-cooled. Fig.3 shows the empirical relation between the ion current of K<sup>+</sup> ions (mA) and

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A Surface-Ionization Ion ..... S/120/61/000/001/007/062  
E032/E114

the temperature of the ionizer. Curves 1-4 correspond to different vapour pressures of potassium in the furnace (from p to 3.5 p). It is clear from these figures that at  $T = 1200\text{ }^{\circ}\text{C}$  and above, the ion current becomes saturated and its magnitude is proportional to the number of K atoms at the surface of the ionizer. The maximum ion current of  $\text{K}^+$  ions obtained with the ionizer was 120 mA and the maximum working substance utilization coefficient was 43.2%. The efficiency of the ion sources of the above type was found to be comparable with that of gas discharge sources.

There are 3 figures and 5 tables.

SUBMITTED: February 8, 1960

Card 3/4

20676

S/120/61/000/001/007/062  
E032/E114

A Surface-Ionization Ion Source for the Separation of Isotopes of Alkali Elements

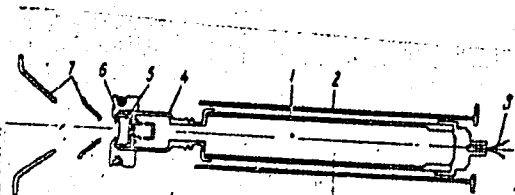


Fig. 1

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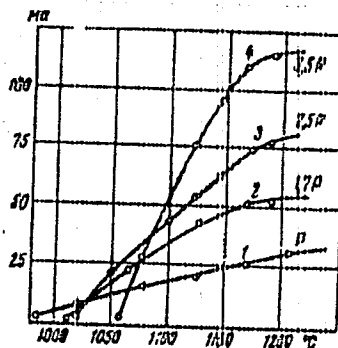


Fig. 3

BOCHIN, V.P.; ZHEREBTSOVA, K.I.; ZOLOTAREV, V.S.; KOMAROV, V.A.;  
KRASNOV, L.V.; LITVIN, V.F.; NEMILOV, Yu.A.; PISKOPZH, Sh.

Study of (d, p) stripping reactions and (d, d) elastic  
scattering on nuclei of mean atomic weight. Part 1. Vest.  
LGU 18 no.22:68-77 '63. (MIRA 17:1)

BOCHIN, V.P.; ZHEREBTSOVA, K.I.; ZOLOTAREV, V.S.; KOMAROV, V.A.;  
KRASNOV, L.V.; LITVIN, V.F.; NEMILOV, Yu.A.;  
NOVATSKIY, B.G.

Study of  $(d, p)$  stripping reactions and  $(d, d)$  elastic  
scattering on nuclei of mean atomic weight. Part 2. Vest.  
LGU 18 no.22:78-84 '63. (MIRA 17:1)



ZOLOTAREV, V.S.

Third International Conference on Separation, Analysis, and  
Use of Stable Isotopes. Atom. energ. 16 no.6:541-543 Je '64.  
(MIRA 17:7)

ZOLOTAREV, V.S.; GUSEV, V.M.

Electromagnetic separation of osmium isotopes. Prib. 1 tekhn.  
eksp. 9 no.1:141-142 Ja-F '64. (MIRA 17:4)

ATROSHCHENKO, V.I.; TSEYTLIN, A.N.; ZASORIE, A.P.; ZOLOTARIV, V.S.

Utilizing nitrogen oxides from the waste products of some  
manufactures. Khim.prom. no.1:79-80 Ja-F '60. (MIRA 13:7)

(Nitrogen oxide)  
(Salvage (Waste, etc.)



ca

10

Тетраэтиллитурат (Бондига, В. В. Золотарев, Русс. 50,766, Aug. 31, 1938). Salts of diethylidithiocarbamic acid are oxidized electrochemically in an alkaline soln.

ASS-SLA METALLURGICAL LITERATURE CLASSIFICATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00
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ZOIOTAREV, V.V., inzh.

Mechanization of loading and unloading operations at the Moscow  
City Mechanical Loading Department. Mekh. i avtom. proizv. 18  
no.9:15-19 3 '64. (MIRA 17:11)

ZOLOTAREV, V.V., insh.

Electrically driven pile driver for driving ground electrodes.  
Energetik 6 no.6:23-24 Je '58. (MIRA 11:8)  
(Electrodes) (Pile driving)

AUTHOR: Zolotarev, V.V., Engineer

91-58-6-23/39

TITLE: **Electrically Driven Drop Hammer** for Ramming-in Ground Electrodes  
(Koper s elektroprivodom dlya zabivki elektrodov zazemleniya)

PERIODICAL: Energetik, 1958, Nr 6, pp 23-24 (USSR)

ABSTRACT: Details are given on an electric piledriver designed by Ye.F. Gaydukov, master of the Trust "Tsentrøelektroset' stroy". The driver comprizes a frame with angle-girder guides for the ram, electric motor-driven flywheel and gear, the ram itself, sprocket chain, and spring damper. Manual labor is replaced and the time required is cut 3-4 times. There is one figure.

AVAILABLE: Library of Congress

Card 1/1 1. Piledriver-Design



ZOLOTAREV, V.Ya., inzh.; TURDAKOV, A.S., inzh.

Investigating the economic construction of welded bedplates for  
mechanical presses. [Nauch. trudy] ENIKMASHa 1:227-234 '59.

(MIRA 14:1)

(Power presses—Welding)

2010 Takev / V. Yd.

PHASE I BOOK EXPLANATION 807/3713

Experimental'nyy maubee-izsledovatel'skiy institut kuznetsovo-pressovogo mashinostroyeniya

Izlozheniya i resheniya voblasti kuznetsovo-pressovogo stroitel'stva (Studies and Calculations of Forging and Stamping Machinery) Moscow, Makhiz, 1959. 233 p. (Series: The Short, high 1) Kuzna sily izdatel'stva. 8,000 copies printed.

Sponsoring Agency: USSR. Gosstatizvestiy komitet po avtomatizatsii i mashinostroyeniya.

- M. I. A. Y. Kot'yev, Candidate of Technical Sciences; Ed. of Publishing House;
- S. S. Stepanchuk; Tech. Ed.: V. P. Sokolov; Managing Ed. for Literature
- of Heavy Machine Building (Mashgiz); S. Ya. Golovin, Engineer; Editorial Board:
- G. P. Bol'shakov, Engineer; V. P. Yvarkin, Candidate of Technical Sciences; Ed.
- E. B. Vasil'yev, Engineer; A. P. Kravtsov, Engineer; I. S. Melnikov, Candidate
- of Technical Sciences; E. A. Muz'yuchik, Engineer; P. L. V. Zubanov; V. E.
- S. S. Parvovodnikov, Engineer; S. A. Fedura, Candidate of Technical Sciences; and A. I. Zol'yev.

NOTE: The book is intended for technical personnel and scientific workers in the metal-forming industry.

COMMENT: This collection of 12 articles deals with current research on metal-forming operations, the design and operation of press-forming machinery, and stress and force analysis in punch and blanking operations. No personalities are mentioned. References follow each article.

TITLE OF DOCUMENT

Свойства, свойства и свойства. Use of Brittle Inorganic Coat-

ings as Brittle Indicators for Building Elements 202  
The article deals with a number of methods of testing brittle and resin coat-  
ings used in the construction of machinery for metal-forming machinery.  
The results of the tests on dielectricity are particularly recommended.  
Some of the reasons of coating of test pieces with 5 different  
strain-indicating agents, including the recommended one, are given in  
a table.

Свойства, свойства и свойства. Investigation Into  
the Speediness of Manufacturing Metal Forms and Tools for Mechanical  
Presses 207

The authors compare and analyze some economic indices for a number  
of cast and welded forms of 12 types of mechanical presses,  
manufactured by the two largest plants and the second plant.  
Specifications of the presses are given. The authors draw welding  
over casting because of cost considerations.

ANALYSIS: Library of Congress

Card No. 10

AC/PA/AL  
7-50-61

ZOLOTAREV, V.Ya., inzhener.

Two interpretations of determining savings effected by the utilization of inventions. Izobr. v SSSR 2 no.6:22-23 Ju '57.  
(Inventions) (Cost accounting) (MLRA 10:8)



L 57874-65 EWT(d)/FSS-2/EEC-4/EEC(t) ... Pr-4/Pp-4/Pac-4  
ACCESSION NR: AP5016723

UR/0286/65/000/010/0041(0)41  
621.315.092.7

AUTHOR: Berkman, N. A.; Gontar', V. M.; Gurov, V. S.; Darova, P. I.; Yatruchina, N. N.; Zolotarev, Ya. M.; Zrazhevskiy, S. P.; Kopp, V. M.; Pasechnik, N. D.; Ponomarenko, V. A.; Fugach, A. B.; Raykin, P. B.; Bergeyev, I. V.

TITLE: System for measuring the duration and number of interruptions in a communication channel. Class 21, No. 171023

SOURCE: Byulleten' izobryeteniy i tovarnykh znakov, no. 10, 1965, 41

TOPIC TAGS: noise measurement, frequency meter, communication channel, pulse meter

ABSTRACT: The proposed measuring device converts the spectrum of the investigated pilot (measuring) frequency to a region of higher frequencies and uses a filter to separate the side band containing information on the signal envelope. Provision is made for simultaneous analysis of pulse noise and declines in the level of the pilot frequency with respect to voltage and duration. Information on interruption time is transmitted in the form of quantized pulse packets to a measuring circuit consisting of flip-flops, AND gates, and registers. Orig. art. has: 1 figure. [DW]

Card 1/2

L 57874-65  
ACCESSION NR: AP5016723

ASSOCIATION: Kiyevskoye otdeleniye Tsentral'nogo nauchno-issledovatel'skogo  
instituta svyazi Ministerstva svyazi SSSR (Kiev Department of the Central Scientific  
Research Institute of Communications of the Ministry of Communications, SSSR)

SUBMITTED: 10Nov63

ENCL: 00

SUB CODE: EC

NO REF SOV: 000

OTHER: 000

AND PRESS: 4038

Card 2/2

1E 651111

L 10786-66	EWI(d)/EWP(L)	IUP(c)	BR/CS/DXT(1.2)
ACC NR: AP6001515	SOURCE CODE: U1/0302/05/000/001/003/0032		

AUTHOR: Bobreshov, Ya. N.; Zolotarev, Ya. M.; Ponomarenko, V. A.; Raykin, E. S.

CPC: none

TITLE: Counter for conversion of numbers from the binary to the decimal system

NUMBER: Avtomatika i telemekhanika, No. 1, 1965, pp. 10-11

TOPIC TAGS: pulse counter, binary code

ABSTRACT: A ~~binary-to-decimal converter~~, particularly useful for t. conversion of large numbers, was developed at the Kiev branch of the Central Scientific Research Institute of Communication. A block diagram is shown in Figure 1. Input circuit 1 when the entry of the binary number is converted, generates a sequence of pulses whose duration is proportional to the value of the number. The duration of the pulses is determined by the value of the number. The duration of the pulses is determined by the value of the number. The duration of the pulses is determined by the value of the number.

Card 1/2

UDC: 681.142.621

L 10786-66

ACC NR: AP6001515

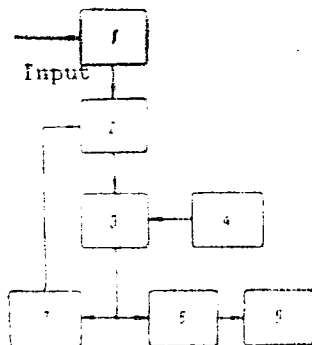


Fig. 1. Binary-to-decimal converter

complementary flip-flops with PNP transistors. Display unit 5 consists of a decade  
 gas-discharge tube with associated transistor drive circuits. The temperature limits  
 for the converter are 0 to 50°C for storage and 0 to 40°C for operation. [25]

SUB CODE: 09/ SUBM DATE: none/ ATD PRESS 4/68

HW  
 Card 2/2

5(4)

SOV/76-33-2-14/45

AUTHORS: Vasil'yev, V. P., Zolotarev, Ye. K., Yatsinirskiy, K. B.

TITLE: The Entropy of Gaseous Monatomic Ions (Entropii gazo-obraznykh odnoatomnykh ionov)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, pp 328 - 330 (USSR)

ABSTRACT: Values of the entropy of gaseous ions are often needed for calculating the entropy of hydration of ions for the quantitative calculation of a series of cycles in which gaseous ions appear in intermediate stages. The calculation of the entropy of gaseous monatomic particles is carried out using a well-known equation of statistical thermodynamics (1) (Ref 2) in which the entropy of the rotation of the monatomic gases is neglected. In chemical equilibrium at medium and high temperatures the entropy of the nuclear spin can also be neglected (Ref 2). Thus in the calculation of the entropy of a monatomic ion at standard conditions only the atomic weight of the particle and the statistical weight of the electronic ground level must be known. A table is given (Table 1) showing entropy values for 66

Card 1/2

The Entropy of Gaseous Monatomic Ions

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gaseous monatomic ions at standard conditions. The majority of the data on the electronic configuration and the terms of the ground state were taken from the publications (Refs 3,5). In the cases where no data were given in the publications the most probable electronic structure was assigned and the terms were derived according to Gregory (Gregori) (Ref 4). There are 1 table and 5 references, 2 of which are Soviet.

ASSOCIATION: Ivanovskiy khimiko-tehnologicheskij institut (Ivanovo Chemical Technological Institute)

SUBMITTED: July 5, 1957

Card 2/2

YEMELIN, V.P.; ZOLOTAREV, Ye.K.; YUDIN, A.M.

Absorption kinetics of sulfuric anhydride in the sulfonation of nitrobenzene by gaseous sulfur trioxide gas. Khim. prom. 41 no.1: 30-31 Ja '65. (MIRA 18:3)

VASIL'YEV, V.P.; ZOLOTAREV, Ya.K.; YATSIMIRSKIY, K.B.

Entropy of gaseous monoatomic ions [with summary in English].  
Zhur.fiz.khim. 33 no.2:328-330 F '59. (MIRA 12:4)

1. Ivanovskiy khimiko-tekhnologicheskii institut.  
(Ions) (Entropy)



ZOLOTOVA I. A.; YUDIN, A.M.

relation between the entropy of ions in aqueous electrolyte  
solutions and their viscosity. Zhur. fiz. khim. 39 no.8:  
2016-2017 Ag '65. (MIRA 18:9)

1. Chernorechenskiy khimicheskiy zavod imeni Kalinina.

ZOLOTAREV, Ye.K.; YUDIN, A.M.

Dependence of the viscosity of aqueous electrolyte solutions  
on the energy characteristics of ions. Zhur. fiz. khim. 39  
no.6:1497-1498 Je '65. (MIRA 1965:11)

I. Chernorechenskiy khimicheskiy zavod imeni Kulinina.  
Submitted March 3, 1964.

DUKEL'SKAYA, N.M.; ZOLOTAREV, Ye.Kh.; MOTORNYI, S.P.

Use of ethylene fluorohydrin in simultaneous control of rodents  
and their ectoparasites. Vest.Mosk.un.Ser.biol., pochv., geol.,  
geog. 14 no.1:65-71 '59. (MIRA 12:9)

1. Moskovskiy gosudarstvennyy universitet, Kompleksnaya zoologo-  
etnomologicheskaya laboratoriya.  
(Rodenticides) (Insecticides) (Fluorine organic compounds)

ZOLOTAREV, YE. KH.

Silkworms

Several peculiarities in the development of the tussah silkworm (*Antheraea pernyi* G.-K.) in connection with the presence of the diapause in its ontogeny. Vest. Mosk. un. 5 no. 6, 1950.

Monthly List of Russian Accessions, Library of Congress, November 1952, UNCLASSIFIED.



ZOLOTAREV, Ye.

USSR/Geophysics - Soil science faculty

FD-686

Card 1/1 : Pub. 129 - 21/25

Author : Zolotarev, Ye.

Title : Lomonosov lectures, 19-21 April 1954 in the Biologico-pedological Faculty

Periodical : Vest. Mosk. un., Ser. fizikomat. i yest. nauk, Vol. 9, No. 3, 146-151, May 1954

Abstract : Prof. N. P. Remezov, "Biological cycle and the soil-forming process." Docent Ye. V. Arinushkina, "Accelerated large-scale analysis of soils." Prof. S. S. Stankov, head of Chair of Geobotany, "Laws governing the distribution of the plant cover of the Crimea and the main ways to its improvement." N. S. Turkova, "Control of growth processes as a measure in the struggle against stem-break in wheat." Academician L. A. Zenkevich, head of the Chair of Zoology, and Ya. A. Birshteyn, docent of the Chair, "Studies of benthonic fauna of the Kwile-Kamchatka Depression." Prof. A. N. Studitskiy, "Problem of the nervo-trophic regulation of morphogenetic processes in the animal organism."

Institution : --

Submitted : --

ZOLOTAREV, Ye. Kh.

"New Highly Toxic Substances for the Control of Insects," by Ye. Kh. Zolotarev, docent at Moscow State University, Zashchita Rasteniy ot Vreditel'ey i Bolezney, Moscow, Vol 1, No 5, Nov/Dec 56, p 59

The author reports the results of investigations conducted by A. P. Terentyev, Ye. Kh. Zolotarev, A. N. Kost, and V. V. Yershov at the Moscow State University imeni M. V. Lomonosov to determine the insecticidal properties of a number of organic compounds. The experiments were conducted on the barn beetle, housefly, fleas, and several species of aphids. It was found that certain intracomplex metallocyclical compounds were highly effective against the insects. Three preparations which were given the names of MGU-22, MGU-32, and MGU-132 have been found to be particularly effective against these insects. Further experiments conducted by N. M. Dukel'skiy on white rats established that these insecticides were not toxic or were only slightly toxic to warm-blooded animals and plants. It is claimed that this lack of toxicity of the preparations to plants and animals opens perspectives for the creation of new and highly effective poisonous chemicals.

Sum 1219

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"New Toxic Substances for House Flies", by Ye.Kh. Zolotarev, Vestnik Moskovskogo Universiteta, Seriya Biologii, Pochivovedeniya, Geologii, Geografii, No 1, 1957, pp 141-146.

The toxic effect on Musca domestica L. of 14 new chemical substances developed by Moscow University is as follows:

The mortality of flies in 24 hours, %

Substance quantity on surfaces of glass mg./m<sup>2</sup>.

Substance	500	250	100	75	50	25	10
MGU * -22	100	100	100	100	83	70	23
MGU-32	100	-	100	"	84	84	2
MGU-52	98	-	98	-	92	"	40
MGU-57	90	70	12	-	12	"	0
MGU-61	40	-	22	-	8	"	0

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CARRIERS

MGU-70	100	70	18				
MGU-71	93	98	30				
MGU-75	100	98	20				
MGU-85	70	52	16				
MGU-86	48	-	5	-	2	-	0
MGU-104	90	66	8				
MGU-105	100	86	3	4	0		
MGU-114	52	12	0				
MGU-132	-	-	100	-			82

The author says that the four most effective substances, MGU-22, -32, -132 and -52 belong to the same group of intracomplex metal-cycle compounds. Beryllium, which is poisonous to mammals, is a constituent of MGU-52; therefore, further experiments with it were discontinued. The three remaining substances are analogous to one and the same compound, and differ from each other only in certain details of their molecular structure. These three substance may be dissolved in acetone, alcohol, ether and in other organic solvents; but none is water-soluble.

Card 2/3

CARRIERS

"A Substance for Poisoning Flies Resistant to DDT", by Ye.Kh. Zolotarev and V.A. Lineva, Vestnik Moskovskogo Universiteta, Seriya Biologii, Pochvovedeniya, Geologii, Geografii, No 1, 1957; pp 147-152

The substance MGU-22 the last is described as being extremely toxic to *Musca domestica* L. that has acquired an immunity from DDT. Experiments on the toxicity of MGU-22 were performed in Moscow University and the Institute of Malaria and Medical Parasitology, and are described in detail.

It is concluded that these experiments have again confirmed the highly toxic effect of MGU-22, especially, when oil is added to it. But, even though this chemical destroys flies immune to DDT, it does not affect their capacity for reproduction. The authors report that female flies subjected to the poison do not perish at once but in 48-72 hours; in the meantime, their production of ova is not terminated. The authors believe that MGU-22 deserves further and more detailed study.

Card 1/1

- 5 -

ZOLOTAREV, Ye.Kh.

Degree of the development of contact chemoreception in the larvae  
of *Ixodes persulcatus* P. Sch. in various conditions of habitat.  
Nauch.dokl.vys.shkoly; biol.nauki no.3415-18 '65.

(MIRA 18:8)

1. Rekomendovana kafedroy entomologii Moskovskogo gosudarstvennogo  
universiteta im. M.V.Lomonosova.

ZOLOTAREV, Ye.K.

Relation of ion entropy in an aqueous solution with their  
mobilities. Zhur. fiz. khim. 39 no.5:1075-1076 My '65.  
(MIRA 18:8)

1. Gor'kovskiy politekhnicheskii institut.