

25990

S/560/61/000/006/008/010

EO32/E314

Discovery of ....

is assumed. It is estimated that the energy flux associated with these currents, which may reach the lower layers of the atmosphere, is at least  $1 \text{ erg cm}^{-2} \text{ sec}^{-1}$ . The discovery of large currents of 10 keV electrons is of particular importance to the understanding of many geophysical phenomena. For example, it is interesting to note that appreciable intensities of such electrons first appear at the geomagnetic latitude at which increased ionization was previously recorded in the F-layer and which could not be explained by hard electromagnetic radiation of solar origin. The existence of these electron currents may lead to the explanation of ionization irregularities in the upper atmosphere. Acknowledgments are made to S.Sh. Dolginov, V.V. Beletskiy and Yu.V. Zonov for determining the orientation of the apparatus relative to the magnetic field. There are 11 figures and 15 references: 12 Soviet and 3 non-Soviet.

SUBMITTED: December 9, 1959

Card 5/7

GALPERIN, Yu. I.

"Proton Bombardment in Aurora."

report to be submitted for the Symposium of Theoretical Interpretation of  
Upper Atmospheric Emissions, Paris France, 25 - 29 June 1962.

Inst. of Physics of the Atmosphere, Acad. Sci. USSR

GAL'PERIN, Yuriy Il'ich; YERSHKOVICH, Aleksandr Isaakovich; YAGLOM ,  
A.M., prof., red.; FAYNBOYM, I.B., red.; RAKITIN, I.T., tekhn.  
red.

[Auroras] Poliarnye slianiia. Pod red. A.M. Iagloma. Moskva, Izd-  
vo "Znanie," 1962. 24 p. (Novoe v zhizni, nauke, tekhnike.  
IX Seria. Fizika i khimiia, no.2) (MIRA 16:1)  
(Auroras)

34715  
S/049/62/000/002/004/005  
D218/D301

9.9/60

AUTHOR: Gal'perin, Yu.I.

TITLE: On the problem of the sources of energy of the upper atmosphere

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya geofizicheskaya, no. 2, 1962, 252-261

TEXT: A review of published information leads the author to conclude that both direct measurements and theoretical estimates indicate that the flux of solar radiation which ionizes the F layer is of the order of 1-3 erg/cm<sup>2</sup>-sec. This result is based on data including Sputnik III measurements. If the source of heat in the atmosphere is only the incident solar radiation, then above the absorption layer the atmosphere should be isothermal and the temperature of the isothermal layer and the height of its base should decrease at night. If, on the other hand, the atmosphere contains an appreciable additional source of heat in the form of corpuscular

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On the problem of the sources...

S/049/62/000/002/004/005  
D213/D301

radiation which is absorbed above the F layer maximum, then the temperature should increase with altitude right up to the upper boundary of the heat source, and the temperature of the lower boundary of the exosphere should be higher than that of the F layer. The different temperature variation predicted by the two mechanisms should have an effect on the density variation with altitude and the latter can be deduced from the drag on satellites. In fact, analysis of models of the atmosphere based on data of the latter type shows that in the range 250-350 km, the heat flux absorbed in daytime is about 0.2-0.6 erg/cm<sup>2</sup>sec, which can hardly be explained by the absorption of solar ultraviolet radiation. On the other hand, the heat flux absorbed at night above 200 km is less than 0.05 erg/cm<sup>2</sup>sec. An independent criterion for estimating the energy flux due to the entry of corpuscular radiation may be the absence of 1 NGN<sub>2</sub><sup>+</sup> emission in the spectrum of the nightglow with intensity greater than the detection threshold of modern highly sensitive apparatus. It is estimated that for electrons the upper limit of corpuscular radiation energy flux at night is  $3 \times 10^{-2}$  erg/cm<sup>2</sup>sec

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while for protons the upper limit is  $6 \times 10^{-4}$  erg/cm<sup>2</sup>-sec. These figures refer to low latitudes. The general conclusion is, therefore, that nightglow data indicate that corpuscular radiation in the form of electrons and protons cannot be an important source of heat at night in the middle and low latitudes. At high latitudes the situation may be different. In the auroral zone the upper atmosphere continuously receives corpuscular radiation and the energy flux estimated for electrons turns out to be of the order of 1 erg/cm<sup>2</sup>-sec. A.I. Yershovich is mentioned in the article. There are 1 figure, 1 table and 50 references: 10 Soviet-bloc and 20 non-Soviet-bloc. The 4 most recent references to English-language publications read as follows: M.Nicolet. Planet Space Sci., 5, no. 1 (1961); P. Rothwell and C.E. McIlwain. Magnetic Storms and the Van Allen radiation belts; Observations from satellite 1953 epsilon (Explorer IV). Proc. First Int. Space Sci. Simp., Nice (1960); L.G. Jacchia. A variable atmospheric-density model from satellite accelerations. Smitson. Contr. to astrophys. no. 59 (1960); H. Hinteregger, preprint. Preliminary data on solar extreme ultraviolet rad-

Card 3/4

On the problem of the sources...

S/049/62/000/002/004/005  
D213/D501

iation in the upper atmosphere. Florence (1961)

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery  
(Academy of Sciences USSR, Institute of Physics  
of the Atmosphere).

SUBMITTED: May 25, 1961

Card 4/4

GALPERIN, YU.I.

KRASOVSKY, V.I., GALPERIN, YU.I., DZHODRZHIO, N.V., MULYANCHIK, T.M.,  
BOLUNOVA, A.D.

Soft Corpuscular Radiation

Report to be submitted for the 4th International Space Science Symposium  
(COSPAR) Warsaw, 2-12 June 63



L 18945-63 EWT(1)/EWT(m)/FCC(w)/FS(v)-2/BDS/ES(v) AEDC/AFFTC/ASD/  
AFMDC/ESD-3 P0-4/Pg-4/Pl-4/Pl-4/Po-4/Pq-4 TT/GW

ACCESSION NR: AP3007340 S/0293/63/001/001/0126/0131

AUTHOR: Gal'perin, Yu. I.; Krasovskiy, V. I. 92

TITLE: Study of the upper atmosphere by means of the Cosmos 3 and Cosmos 5 satellites. 1. Apparatus 14

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 1, 1963, 126-131

TOPIC TAGS: counter, particle counter, ion counter, ion trap, electron counter, ionospheric particle, ionospheric current, satellite, Cosmos satellite, Cosmos series, Cosmos 3, Cosmos 5, geophysical study, geophysical satellite

ABSTRACT: In the first of four articles on the investigation of ionospheric charged particles by the Cosmos 3 and Cosmos 5 satellites, a detailed description is given of the particle-sensing apparatus carried on board. Three types of counters were used, covering the energy spectrum from just above thermal up to hard particles in the high-Mev range. The counters were as follows:  
1) An indicator type, which consisted of a fluorescent screen laid

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ACCESSION NR: AP3007340

on a glass base and faced with a thin aluminum foil to eliminate low-energy particles, the entire assembly being housed in a cylinder. Near the cylinder aperture were two grids, one grounded to the case and the other biased at (-)40 v to block passage of thermal electrons. The fluorescent screen was isolated from the case and could have stepped voltages applied to it of 0, 0.15, 3, 6 and 11 kv in order to segregate the penetrating electrons according to energy level. Screen illumination from particle impact was detected by a photomultiplier whose output was stored and telemetered. On each satellite five such counters were mounted in various attitudes and with differing values of phosphor composition and foil thickness. 2) An ion trap, which passed both positive and negative particles above a fixed threshold level and registered their algebraic sum. This was also a tubular cylinder with a grid arrangement similar to the indicator type, i.e., two grounded grids, a third at fixed bias, and a fourth at stepped voltages of 0 to 11 kv as in the indicator-type counter. The collecting element was a silvered metal ring 0.43 cm<sup>2</sup> in area, whose output fed into an electrometer tube. The ring was located in the annular air gap of a permanent magnet whose field diverted any

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ACCESSION NR: AP3007340

electrons arriving at less than 5 Kev, as well as ions with similar Larmor radius. The ion trap thus could sense selected ranges of positive ions as well as electrons above 5 Kev. Two traps were used on each satellite, one with a fixed grid bias of (-)40 v, the other with a bias of +24 v. It was determined that the spurious effect of photoemission caused by solar rays striking the collector ring was small (on the order of  $10^{-11}$  amp), which verified the suppressing action of the trap's magnetic field. 3) A standard halogen-filled geiger counter, type STS-5, which had an effective area of  $4.3 \text{ cm}^2$  and was shielded by  $3.4 \text{ g/cm}^2$  of lead. With the added shielding of the satellite skin this counter had a negligible response to electrons below 400 Kev or protons below 50 Mev. Sample recordings of the indicator counter are given which show modulation in electron count caused both by the stepped accelerating voltages and by the rotation of the satellite. Degradation in the Al foil was detected, apparently caused by micrometeorite erosion. A large increase in foil porosity occurred during the launch phase, due either to frequent meteorite contact while rising through the denser atmospheric layers or to sudden outgassing of

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ACCESSION NR: AP3007340

the foil on entering the vacuum environment. The variations and relative orientations of the indicator and trap counters are shown in Fig. 1 of the Enclosure. Orig. art. has: 6 figures.

ASSOCIATION: none

SUBMITTED: 09May63

DATE ACQ: 21Oct63

ENCL: 01

SUB CODE: AS, GE

NO REF SOV: 003

OTHER: 001

Card 4/5

L 18946-63 EWT(1)/EWT(m)/FCC(w)/FS(v)-2/BDS/ES(v)/EEC-2 AFFTC/ASD/  
AFMDC/ESD-3/AFGC Pe-4/Pi-4/Po-4/Pq-4 TT/GW 89  
88

ACCESSION NR: AP3007341 S/0293/63/001/001/0132/0139

AUTHOR: Krasovskiy, V. I.; Gal'perin, Yu. I.; Dzhordzhio, N. V.;  
Mulyarchik, T. M.; Bolyunova, A. D.

TITLE: Study of the upper atmosphere by means of the Cosmos 3  
and Cosmos 5 satellites. 2. Soft particles

SOURCE: Kosmicheskiye issledovaniya, v. 1, no. 1, 1963, 132-139

TOPIC TAGS: Cosmos satellite, Cosmos 5, geoactive particle,  
ionospheric particle, ionospheric current, ionospheric field,  
ion, ion counter, particle counter, Cosmos 3

ABSTRACT: This is the second in a series of four articles on geo-  
active particle research conducted during the Cosmos 3 and Cosmos 5  
orbital flights. This article discusses the existence of currents  
of electrons and positive ions in the upper ionosphere having  
energies that are relatively low but greater than thermal. This  
was concluded from fluxes detected by the two types of particle  
counters used: 1) a sensor formed of a fluorescent screen and

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ACCESSION NR: AP3007341

photomultiplier, which was biased negatively and also shielded with Al foil so as to register only electrons above 40 ev and positive ions whose free path exceeded the foil thickness (e.g., protons of the order of 200 Kev); 2) an ion trap which registered electrons of 5 Kev or more and positive ions. The trap counters showed repeated instances of anisotropic positive ion flow in a direction normal to the geomagnetic force lines; the fact that no simultaneous indications appeared in the indicator screen type counters thus suggests that these must have been "soft" positive ions; if protons, their energy would be less than 200 Kev. This conclusion is supported by the fact that when the satellite had turned 180° the indicator counters in turn registered particles not sensed by the ion traps, which were evidently electrons below 5 Kev. There thus are areas which exhibit local current flow, in which positive ion energies are estimated to be several dozen electronvolts and average density is  $10^8$  ion/cm<sup>2</sup>/sec/ster. These areas are in the 200- to 600-km region and tend to remain at the same earth latitudes for prolonged periods, sometimes as much as 9 hours. The authors emphasize that complete determination of the orientations of the

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ACCESSION NR: AP3007341

Cosmos 3 and Cosmos 5 satellites during flight is not yet complete, but sufficient data are available to verify the above results. Additional observations are made of some high-energy particles, particularly those registered in the South Atlantic geomagnetic anomaly. If these had been positive ions, the ion trap count, being the algebraic sum of incoming particles, would have been phase opposed to the indicator count, which records the absolute sum; since, however, both counters registered such particles in phase, they must have been electrons, estimated at between 50 Kev and 1 Mev and at an omnidirectional density of  $5 \times 10^7/\text{cm}^2/\text{sec}$ . Regarding electron counting technique, the possibility of spurious effects caused by the fields of on-board transmitting antennas, principally that of the telemetry transmitter, is rejected since no difference in electron count was noted whether the transmitters were on or off. The intensity and anisotropy of recorded electron currents agree with earlier data from the 1958 Sputnik and from the U.S. "Injun" rocket of 1961. Fig. 1 of the Enclosure shows examples of electron intensity isolines over the South Atlantic taken by Cosmos 3. Orig. art. has: 7 figures.

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L 11112-63

EWT(1)/FCC(w)/FS(v)/BDS/ES(v)--AEDC/AFFTC/AFMDC/ESD-3--  
Pe-4/Pg-4/Pi-4/P1-4/Po-4/Pq-4--TT/GW

ACCESSION NR: AP3000792

S/0203/63/003/003/0401/0407

95  
94

AUTHOR: Krasovskiy, V. I.; Gal'perin, Yu. I.; Temnyy, V. V.; Mulyarchik, T. M.; Dzhordzhio, N. V.; Marov, M. Ya.; Bolyumova, A. D.; Vaisberg, O. L.; Potanov, B. P.; Bragin, M. L.

TITLE: Some characteristics of geoactive particles

SOURCE: Geomagnetizm i aeronomiya, v. 3, no. 3, 1963, 401-407

TOPIC TAGS: geoactivity, Cosmos-3, Cosmos-5, satellite, particle counter, ionospheric particles, Kosmos-3, Kosmos-5

ABSTRACT: Three types of charged-particle sensors<sup>1/2</sup> used on the Cosmos-3<sup>1/2</sup> and Cosmos-5 flights are described and some recorded results are discussed. One type was an aluminum tube which housed a fluorescent screen whose photoemission from particle impact was recorded by a photomultiplier. The screen was faced with aluminum foil of 0.4 to 1.1 mg/cm<sup>2</sup> thickness to prevent passage of low-energy particles. Grids placed at the tube entrance included an accelerating grid for applied stepped voltages of up to 11 kv and a bias grid at -40 v to prevent impact of thermal electrons on the foil. The fluorescent screen was made thin (1.4 mg/cm<sup>2</sup>) so as not to respond to x-ray radiation. Each such

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ACCESSION NR: AP3000792

indicator subtended about  $1/12$  steradian and had its axis normal to the satellite rotational axis; each satellite had several indicators. A second tubular device, acting as a trap for high-speed protons and electrons, was similar in construction but had an annular collecting electrode placed in a permanent-magnet field rather than a screen. The bias grid in this case eliminated electrons of less than 5 kev. Angular coverage of the trap counter was about 1 steradian. The third collector used was a standard Geiger counter, type STS-5, which was inside the satellite skin and had a 5-mm lead shield to minimize x-ray effects. This counter responded only to electrons above 0.4 Mev and protons above 50 Mev, but is described as too primitive to distinguish their relative contributions. Results from the three types of recorders are discussed as functions of satellite altitude, latitude, and day/night exposure. Three general energy groupings appear to exist: 1) electrons of  $10^2-10^4$  ev at maximum flux density of  $10^9$  el/cm<sup>2</sup>/sec/ster, observed at levels above 300 km over the USSR ( $30-35^\circ$  N); 2) electrons of about 100 kev, with a maximum density of  $2 \times 10^7$  el/cm<sup>2</sup>/sec/ster, noted mainly in southern latitudes at altitudes of 600-700 km over the South Atlantic; and 3) the very high energy protons and electrons registered by the Geiger counter at peaks of 100 pulses/cm<sup>2</sup>/sec/ster [not associated with any particular geographical region].  
Orig. art. has: 7 figures.

Card 2/3 *Inst. of Physics of the Atmosphere*

ACCESSION NR: AT4034383

8/2662/63/000/010/0070/0079

AUTHOR: Gal'perin, Yu. I.

TITLE: Proton precipitation in auroras

SOURCE: AN SSSR. Mezhdunarodnyy geofizicheskiy komitet. IV razdel programmy\* MGG: Polyarnyye sluyaniya i ovecheniye nochnogo neba. Sbornik statey, no. 10, 1963, 70-79

TOPIC TAGS: aurora, proton, proton precipitation, hydrogen line glow, meteorology, geophysics, proton energy spectrum

ABSTRACT: The article is in two main sections: a discussion of experimental results and the theory of auroral hydrogen line glow. In the first of these sections the author considers such factors as the morphology of proton precipitation, intensity distribution as a function of height, hydrogen line profiles, the Balmer attenuation decrement, hydrogen line intensity levels and correlations with emissions of other specific character and direct measurements of proton precipitation into the auroral atmosphere. In the second part of the article, which deals with theoretical considerations on the glow of hydrogen lines under auroral conditions, the author has discussed the dependence of glow on the velo-

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ACCESSION NR: AT4034383

city of the particle and the role of protons in the excitation of auroral glow. Theoretical considerations on proton flux anisotropy and corresponding cross sections are briefly reviewed. The author claims that the problem of deducing the initial proton energy spectrum from profile observations is still unresolved. This brief survey of certain aspects of the problem of proton precipitation into the atmosphere indicates that, despite the considerable successes that have been registered in this area, the study of proton auroras still resolves itself basically to a compilation of experimental facts. The material discussed in this paper leads to the following conclusions: 1. The fact of a broad dispersion of velocities on the part of simultaneously precipitating protons is established. The energy spectrum stretches even to hundreds of kev and is variable. The maximum differential energy spectrum lies in an area of 1 - 30 kev, with the lower limit the more probable. The directional intensity of protons  $\mu(\theta)$  above the atmosphere is practically isotropic. The refinement of this data requires information on the function  $F_{nn}'(v)$  for upper atmospheric components and direct measurements of soft protons (with energies of less than 30 kev), as well as a height-dependent distribution of the glow intensity of the  $L_{\alpha}$  lines in the auroral regions. 2. The typical form of proton intrusion into the upper atmosphere is a band 1 - 15° in width, extended along the geomagnetic parallel and arranged to the South of the basic region of the brilliant auroral forms, excited

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ACCESSION NR: AT4034383

by electrons. As the magnetic perturbation increases, the area of proton precipitation shifts from the auroral zone toward the equator, but later returns. Such precipitations are characteristic during a substantial portion of the observational time in the auroral zone. The maximum observed intensity of  $H_{\alpha}$  is on the order of several thousand rayleighs. For the auroral theory, an explanation of the character of proton precipitation is of undoubted interest. In this connection, the author calls attention to the following points: in the first place, in order of magnitude, the energies which correspond to the maxima of the differential energy spectrum are close to one another. This coincidence is hardly an accident. In the second place, the proton energy distribution normally has a considerably longer tail in the high energy region than the electron distribution (although during rare, particularly low, type B auroras a large number of electrons with energies of several hundred kev do occur; however, at such times protons are generally absent). This fact must be considered when analyzing the possible mechanisms of corpuscle acceleration in the upper atmosphere. In particular, this situation would scarcely take place in the event of acceleration by an electrical field and, possibly, points to some statistical mechanism of acceleration. . Orig. art. has: 2 figures.

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ACCESSION NR: AT4034383

ASSOCIATION: Mezhdudedomstvennyy\* geofizicheskiy komitat AN SSSR (Interdepart-  
mental Geophysical Committee, AN SSSR)

SUBMITTED: 00

DATE ACQ: 13May64

ENCL: 00

SUB CODE: ES

NO REF SOV: 012

OTHER: 033

Card 4/4

L 10799-63 EWT(1)/FCC(w)/FS(v)/BDS/ES(v)--AEDC/AFTTC/ASD/AFMDC/ESD-3/  
APOC--Pe-4/Pg-4/P1-4/P1-4/Po-4/Pq-4--TT/GW

95  
94

ACCESSION NR: AP3000793

S/0203/63/003/003/0408/0416

AUTHOR: Krasovskiy, V. I.; Gal'perin, Yu. I.; Temnyky, V. V.; Mulyarchik, T.M.;  
Dzhordzhio, N. V.; Marov, M. Ya.; Boiyumova, A. D.

TITLE: Some new results of geophysical studies made by Kosmos-3 and Kosmos-5 satellites

SOURCE: Geomagnetizm i aeronomiya, v. 3, no. 3, 1963, 408-416

TOPIC TAGS: Kosmos-3, Kosmos-5, radiation belt, particle counter, upper atmosphere radiation, radiation, upper atmosphere Cosmos-3, Cosmos-5

ABSTRACT: Concentrations and intensities of charged particles as measured by the Kosmos-3 and Kosmos-5 satellites are analyzed. The satellites used combinations of three types of recorders: 1) a collector tube with fluorescent screen sensor and photomultiplier, 2) an ion trap with a ring electrode collector located in a permanent magnetic field, and 3) a Geiger counter with a 3-mm lead shield, which registered only electrons above 0.4 Mev and protons above 50 Mev. Particles recorded by these sensors fall into three energy

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L 10799-63

ACCESSION NR: AP3000793

groups: 1) high-energy protons and electrons recorded by the Geiger counter, 2) electrons of about 100 Kev, and 3) electrons of the order of 1--10 Kev. No observable correlation appears to exist among these groups. Isoline contours in earth coordinates are given for groups 1 and 2 showing their energy distribution over the South Atlantic region, where intensity was maximum. These data are in the 650-km altitude region and show that the coordinates of maximum intensity areas shifted with succeeding passes of the satellite. Some possible explanations for this shift are suggested, which are postulated on the lifespan of the particles relative to satellite orbit time. In equatorial latitudes at a 200--400-km altitude the Geiger count did not average over 1.8 pulses/sec. In contrast, the Geiger count recorded by Kosmos-5 in the vicinity of apogee (1600 km) exceeded 1500 pulses/sec and showed a strong periodicity with satellite rotation, indicating that these high-energy particles are trapped in the geomagnetic field and moving normal to its lines of force. Group 3 electrons, which were sporadic in appearance and located mainly in the polar latitudes, varied in intensity proportionally with altitude. The retarding of the satellites due to particle friction at the perigees (200 km for Kosmos-5) was noted to be less than for the 1958 sputniks, which indicates less

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L 10799-63

ACCESSION NR: AP3000793

geomagnetic activity during the present observations (April-May 1962):  
Orig. art. has: 10 figures and 1 table.

ASSOCIATION: Institut fiziki atmosfery AN SSSR (Institute of the Physics of  
the Atmosphere, AN SSSR)

SUBMITTED: 31Jan63

DATE ACQ: 21Jun63

ENCL: 00

SUB CODE: SP, AS

NO REF SOV: 010

OTHER: 010

cs/uu

Card 3/3



L.17836-65 FSP(h)/FSS-2/EWT(1)/EWT(m)/FS(v)-3/EWO(s)-2/EWO(v)/FO1/EWA(d)/EEC-l/  
EEC(t)/EWA(h) Po-l/Pe-5/Pq-l/Pae-2/Peb/P1-l ASD(a)-5 TT/GW/WS  
ACCESSION NR: AP4046779 S/0293/64/002/005/0763/0772

AUTHOR: Gal'parin, Yu. I.; Bolyunova, A. D.

TITLE: Registration of the effects of the high-altitude nuclear explosion of July 9, 1962 by satellite "Kosmos-5"

SOURCE: <sup>19</sup> Kosmicheskiye issledovaniya, v. 2, no. 5, 1964, 763-772

TOPIC TAGS: Kosmos 5, Johnston Island nuclear explosion, gamma radiation, nuclear test, nuclear radiation, radiation belt

ABSTRACT: Kosmos-5, launched 28 May 1962, with an orbital plane inclined 49° to the equator, on an apogee of 1600 km and a perigee of 240 km, registered the high-altitude American nuclear explosion which took place above Johnston Island on 9 July. At the moment of the explosion, a hard-radiation burst was detected far beyond the limits of the satellite's line of sight. This burst was apparently the registration of  $\varphi$ -radiation caused by the explosion, and was named  $\varphi$ -glow. In the first minutes following the explosion, positively charged particles (protons),  $\alpha$ -particles, and fission fragments (positrons) drifted to the west to be detected by the

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ACCESSION NR: AP4046779

approaching Kosmos-5. Ten minutes later electrons with an energy of several Mev began to predominate. In the magnetic region in the vicinity of Johnston Island at altitudes of about 500 km, and in the vicinity of the Brazilian magnetic anomaly at altitudes of 200-300 km, relatively soft electrons were detected, whose absorption in the atmosphere was evidently the cause of an aurora-borealis display above the Pacific. The maximal intensity registered above the South Atlantic one hour after the explosion was on the order of  $2 \times 10^9$  electron/cm<sup>2</sup>/sec. The maximum intensity of the radiation belt formed after the explosion occurred above the magnetic equator at an altitude of approx. 1,350 km above Johnston Island; intensity varied with longitude. During the first few days, a rapid drop in intensity was noted which gradually tapered off so that after the first four months the intensity in the center of the belt had declined by approximately one order. An increase in the background radiation was detected at an altitude considerably below that of the existing steady-state radiation belts. The decay rate of this excess radiation was close to the maximum of that of the background radiation caused by cosmic rays. The authors include graphic data on the decay rate and a dis-

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L 17836-65

ACCESSION NR: AP4046779

Discussion of the radiation sensing apparatus. Orig. art. has: 3 figures.

ASSOCIATION: none

SUBMITTED: 11Mar64

ENCL: 00

SUB CODE: CB, SV

NO REF SOV: 004

OTHER: 010

Card 3/3

GALPERIN, Yu. I.; TENNY, V. V.;

"Atmospheric scale height in the 200-400 km range according to radiation belt data."(USSR)

Report submitted for the COSPAR Fifth International Space Science Symposium, Florence, Italy, 8-20 May 1964.

GALPERIN, Yu. I.; BELYUNOVA, A. D.;

"Study of drastic changes of the radiation in the upper atmosphere in July 1962"(USSR)

Report submitted for the COSPAR Fifth International Space Science Symposium, Florence, Italy, 8-20 May 1964.

GALPERIN, Yu. I. and TEMNY, V. V. (Acad. Sci. USSR)

"Atmospheric Scale Height in the 200-400 KM Range."

report presented at the COSPAR , 5th Intl. Space Science Symposium,  
Florence, Italy, May 1964.

L 2796-66 FSS-2/EWT(1)/EWT(m)/FS(γ)-:/FCC/EWA(d)/EWA(h) TP/GS/CW

ACCESSION NR: AT5023608

UR/0000/65/000/000/0388/0393

AUTHOR: Gal'perin, Yu. I.

TITLE: Physical description of the artificial radiation belt created by the American high-altitude thermonuclear explosion on 9 July 1962

SOURCE: <sup>19</sup> Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva. Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 388-393

TOPIC TAGS: nuclear fission, radiation belt, nuclear explosion

ABSTRACT: Direct observations by "Kosmos-5" and other sources indicate that the final radius of the plasma cloud accompanying the American high-altitude blast of 9 July 1962 did not exceed 600 km and may have been even less. This is less than the final radius for a plasma cloud expanding in a vacuum, which indicates a considerable dissipation of energy in a plasma expanding in a vacuum close to the F-region maximum. Theoretical calculations show that an hour after the explosion there were  $\sim 1.5 \cdot 10^{25}$  electrons with energies  $> 20$  kev in the artificial radiation belt formed by the blast. It is estimated that decay of fragments from  $\sim 10^{25}$  fissions was

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ACCESSION NR: AT5023608

responsible for this number of electrons in the belt. This decay took place above Johnston Island at altitudes of more than 1200 km, i. e. within limits of direct visibility from the "Kosmos-5." About  $2 \cdot 10^{26}$  fissions took place during the explosion. Experimental data show that the "gamma-glow" and radiation belt are caused by the same mechanism--decay of a small number of radioactive fission fragments in the geomagnetic field beyond the limits of the blast cloud. Three mechanisms are proposed for this particle ejection beyond the boundaries of the cloud: 1) diamagnetic ejection of plasma clots due to instability at the interface between plasma and field; 2) free separation in the magnetosphere of fission fragments neutralized in the beginning stages of cloud expansion, i. e. before the stage of "inertial separation;" 3) free separation in the magnetosphere of fragments neutralized by charge exchange between ions in the plasma cloud and neutral particles in the atmosphere. "In conclusion I take this opportunity to thank V. I. Krasovskiy, S. B. Pikel'ner, A. S. Strelkov and Yu. V. Kukushkin for useful discussion of the results." Orig. art. has: 4 figures, 3 formulas. [14]

ASSOCIATION: none

SUBMITTED: 02Sep65

ENCL: 00

SUB CODE: ES, NP

NO REF SOV: 007

OTHER: 005

ATD PRESS: 4103

Card 2/2 BVK



L 3107-66 FSS-2/EWT(1)/FS(v)-3/ECC/EWA(d)/EWA(h) TT/GS/GW  
ACCESSION NR: AT5023611 UR/0000/65/000/000/0406/0417

AUTHOR: Bolyunova, A. D.; Vaysberg, O. L.; Gall'perin, Yu. I.; Potapov, B. P.;  
Temnyy, V. V.; Shuyskaya, F. K. 77  
67  
BT1

TITLE: Preliminary results of particle studies using the "Elektron-1" satellite

SOURCE: Vsesoyuznaya konferentsiya po fizike kosmicheskogo prostranstva, Moscow, 1965. Issledovaniya kosmicheskogo prostranstva (Space research); trudy konferentsii. Moscow, Izd-vo Nauka, 1965, 406-417

TOPIC TAGS: particle physics, artificial earth satellite, satellite data analysis, electron, proton

ABSTRACT: The authors analyze data from the "Elektron-1" to determine the distribution of radiation in the geomagnetic trap along the orbit of the satellite in January-March 1964. At lower latitudes ( $L < 2$ ) close to the equator, the dominating particle flux is from electrons of natural origin with energies of 20-200 keV and an intensity of up to  $2 \cdot 10^9$  particles  $\cdot$  cm<sup>-2</sup>  $\cdot$  sec<sup>-1</sup>, and from electrons artificially injected by the high-altitude explosion of 9 July 1962 with energies of several MeV and a flux of up to  $2 \cdot 10^8$  particles  $\cdot$  cm<sup>-2</sup>  $\cdot$  sec<sup>-1</sup>. There are also trapped protons in

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L 3107-66

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ACCESSION NR: AT5023611

this same region with energies of tens and hundreds of Mev and an intensity of up to  $\sim 5 \cdot 10^4$  particles  $\cdot$  cm $^{-2}$   $\cdot$  sec $^{-1}$  ( $E > 50$  Mev). At middle latitudes ( $2 < L < 4$ ) there is a sharp increase in the flux of soft protons with energies of a few hundred kev to intensities of no less than  $\sim 10^8$  particles  $\cdot$  cm $^{-2}$   $\cdot$  sec $^{-1}$  at latitudes of 30-50° and apparently to no less than  $\sim 3 \cdot 10^8$  close to the plane of the equator at  $L \sim 3$ . Their spectrum is softer at higher latitudes. Both protons and electrons are observed at higher latitudes, the low energy electron component ( $E > 20$  kev) being extremely variable, especially during increased geomagnetic activity. The boundary of the capture zone in the geomagnetic field during magnetic calm matches the outlines of the "momentary" polar aurora zone which reflects the diurnal asymmetry of the magnetosphere. "In conclusion, we are sincerely grateful to V. I. Krasovskiy, T. M. Mulyarchik, N. V. Dzhordzhio, M. L. Bragin, G. N. Zlotin, I. N. Kiknadze, I. D. Dmitriyeva, T. N. Zaglyadimova, A. K. Nazarova and G. A. Bordoyskiy for great assistance in the work and for useful discussions." Orig. art. has: 8 figures and 1 table. [14]

ASSOCIATION: none

SUBMITTED: 02Sep65

ENCL: 00

SUB CODE: ES, NP

NO REF SOV: 009  
Card 2/2 *OC*

OTHER: 008

ATD PRESS: 4105

L 62104-65 FSS-2/ENT(1)/FS(v)-3/ENG(s)-2/ENG(v)/FCC/EAM(d)/HEC-4/EEC(t)/EWA(h)  
Po-4/Pe-5/Pq-4/Pae-2/Peb/Pi-4 IT/GH

ACCESSION NR: AP5015670

UR/0293/68/003/003/0426/0432  
551.510.536

66  
6-1  
63

AUTHOR: Gal'perin, Yu. I.

TITLE: ~~Effects of the American high-altitude explosion of July 9, 1962 in the upper atmosphere~~

SOURCE: Kosmicheskiye issledovaniya, v. 3, no. 3, 1965, 426-432

TOPIC TAGS: nuclear explosion, upper atmosphere, radiation belt, hard electron, artificial satellite / Cosmos V, Elektron I, Elektron III

ABSTRACT: By using data of Cosmos V, the author analyzed measurements on the early stages of developing an artificial radiation belt. This belt was produced on July 9 and 10, 1962. Later measurements on intensity and decay of the belt were used to reconstruct the intensity distribution of hard electrons injected into the geomagnetic field. These measurements came chiefly from Cosmos V in the summer and fall of 1962 and from Elektron I and Elektron III in 1964. The intensity distribution indicates that the total number of electrons injected in the belt during the first hour after explosion, maintaining a height of at least 300 km, was about  $4 \cdot 10^{24}$ . If the average efficiency of capture during isotropic

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ACCESSION NR: AP5015670

injection holds at about one half, approximately  $10^{25}$  fissions must occur at sufficient height, where the artificial radiation belt is formed, in order for the indicated number of electrons to be injected by means of beta decay. Computation of the intensity and time dependence of gamma radiation of the fission products that rise to great height indicates a correspondence with the intensity and time dependence of gamma flashes recorded on Cosmos V at the time of explosion. This means that the products of  $10^{25}$  fissions appeared above the horizon of Cosmos V within three seconds after the explosion, i.e., the products rose to a height of 1200 km or more in that time, and their gamma and beta radiation caused gamma flashes and an artificial radiation belt of hard electrons. The upper limit of total fissions during the Johnston Island explosion was  $2 \cdot 10^{26}$  or more, as determined by Geiger counter measurements on Cosmos V about 20 minutes after the explosion. "In conclusion, I am happy to express my thanks to the group at the Otdel fiziki verkhney atmosfery IFA AN SSSR (Department of Physics of the Upper Atmosphere, IFA AN SSSR), in particular to its director V. I. Krasovskiy for his great aid and numerous useful discussions on interpretation of measurements from artificial satellites." Orig. art. has: 4 figures.

ASSOCIATION: none

SUBMITTED: 25Feb65

NO REF SOV: 005

ENCL: 00

OTHER: 007

SUB CODE: NP, ES

Card 2/2 *llc*

ACC NR: AP7007042

SOURCE CODE: UR/0203/66/006/004/0633/0649

AUTHOR: Gal'perin, Yu. I.; Poleuktov, I. A.; Sobel'man, I. I.

ORG: none

TITLE: Flux and energy spectrum of protons responsible for hydrogen luminescence in auroras

SOURCE: Geomagnetizm i aeronomiya, v. 6, no. 4, 1966, 633-649

TOPIC TAGS: aurora, solar wind, magnetic anisotropy, geomagnetism

SUB CODE: 08,04

ABSTRACT: The author draws on 65 Soviet and foreign sources in review of the proton spectrum responsible for H luminescence in auroras. It is concluded that soft protons, penetrating in a broad zone into the polar latitudes, play a very important role in the energy processes of excitation and ionization in "proton" auroras and in the energy balance of the upper atmosphere in the polar latitudes. However, at present there is no well-developed hypothesis on the origin of powerful low-energy fluxes of protons. Due to the regularity of appearance of the proton flux and its slight dependence on geomagnetic activity it can be postulated that these protons penetrate into the atmosphere from the "solar wind". The mean energy of these protons is close to the mean translational energy of the solar wind... In the case of conservation of magnetic moment of a proton the increase of magnetic field strength with motion from the boundary of the magnetosphere to the region of luminescence should lead to an appreciable increase of the isotropy of the flux of penetrating protons. Computations of the proton flux reveal that with a  $H^{\alpha}$ -line intensity greater than 300 rayleighs the energy density of protons, even

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1/2

UDC: 550.388.8

ACC NR: AP7007042

with anisotropy of the flux taken into account, probably is commensurable with or even exceeds the energy density of a magnetic field with a strength of  $\sim 30 \gamma$ . Therefore, the injection of protons responsible for the luminescence of hydrogen emission with an intensity adequate for precise measurements of the contours should considerably distort geomagnetic field near the boundary of the magnetosphere, so that constancy of the magnetic moment of a proton can be expected only in a limited segment of its path in the magnetosphere. On the other hand, the diurnal asymmetry of the region of the zone of trapped particles (outer zone) suggests that the injection of protons can occur from the plasma tail of the magnetosphere (where the field is not greater than  $10-30 \gamma$ )... It is entirely probable that the region of injection of protons lies directly on the boundary of the zone of trapped particles (to be more precise, the zones of closed geomagnetic lines) and is associated with "friction" between this zone, participating in diurnal rotation with the earth, and the region of unclosed geomagnetic lines (emanating from the polar caps into the tail of the magnetosphere), twisted during this rotation. This hypothesis harmonizes with the morphological characteristics of the zone of injection of protons and with the pattern of its movements accompanying change of magnetic activity. Orig. art. has: 7 figures and 25 formulas. [JPRS: 38,937]

Card 2/2

ACC NR: AP7000551

SOURCE CODE: UR/0293/66/004/006/0932/0935

AUTHORS: Gal'perin, Yu. I.; Mulyarchik, T. M.

ORG: none

TITLE: On the altitude distribution of photoelectrons

SOURCE: Kosmicheskiye issledovaniya, v. 4, no. 6, 1966, 932-935

TOPIC TAGS: photoelectron, electron distribution, ionosphere, scientific satellite, upper atmosphere, solar radiation, electromagnetic wave, geomagnetic field / Kosmos 5 scientific satellite, IMP-1 scientific satellite, IMP-2 scientific satellite

ABSTRACT: The results of measuring photoelectrons with energies of  $\geq 40$  eV (at the maximum of the F region and above) made with the Kosmos-5 satellite in 1962 are discussed. The distribution of photoelectrons with altitude for the domain of the open magnetic field must be close to curve a or b (see Fig. 1). Time variations of the magnetic and electric fields in the corresponding tubes of force, electromagnetic waves in them, and also macroscopic distortions of the shape of the magnetosphere, intrusion into its hot plasma, etc, can affect the properties of photoelectrons propagated through the corresponding tubes of force. Study of the characteristics of photoelectrons is seen to play an important role in the investigation of the topology of the geomagnetic field.

Card 1/3

UDC: 525.7:551.590.21

ACC NR: AP7000551

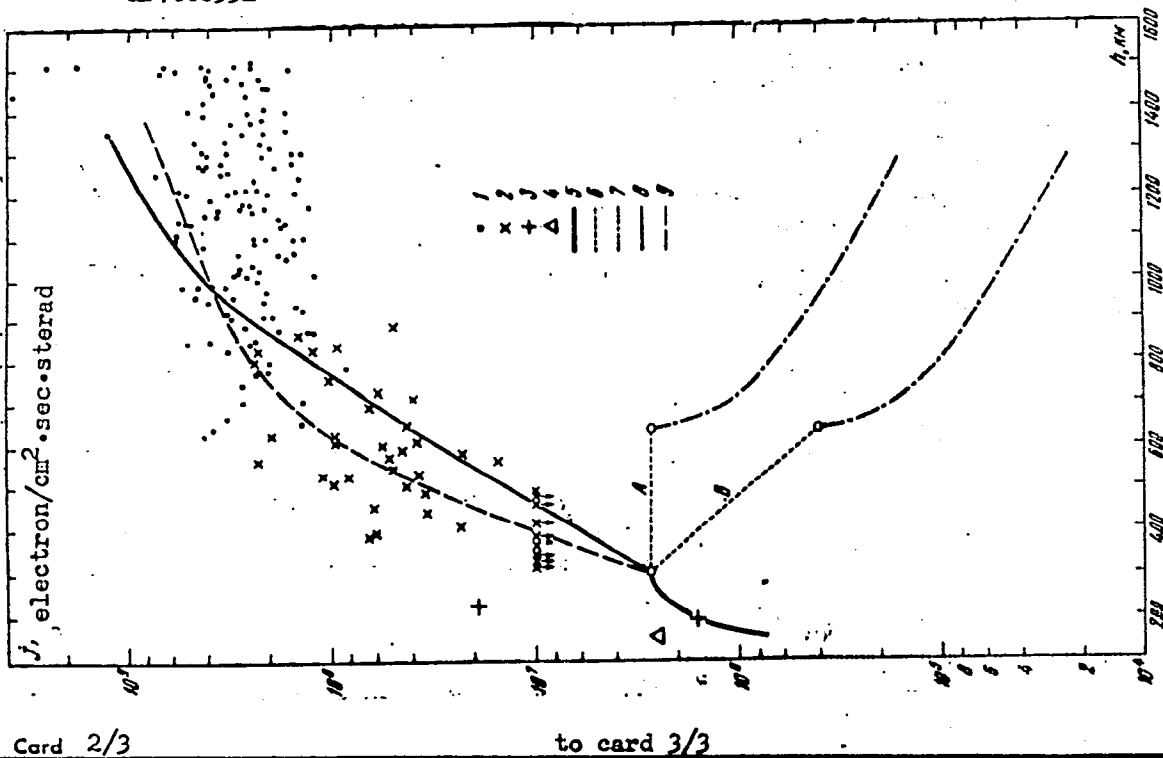


Fig. 1.



ACC NR: AP7000551

from card 2/3

Fig. 1. Altitude distribution of photoelectrons with  $\geq 40$  eV obtained from Kosmos-5 satellite: 1 - measurements for  $L \geq 1.20$ ,  $9^h \leq T_{loc} \leq 15^h$ ; 2 -  $L \geq 1.20$ ,  $8^h \leq T_{loc} < 9^h$ ; 3 - data of Hinteregger for electrons with  $\geq 30$  eV; 4 - data of Shea, et al for  $\geq 40$  eV; 5 - calculated equilibrium flux of photoelectrons with  $\geq 40$  eV; 6 - qualitative estimates A and B of high-altitude course of photoelectron flux; 7 - results of calculation of flux by Cole; 8 -  $b \cdot d_{scat}^{-1}$ ; 9 -  $c^{-1}(h)$

Orig. art. has: 1 graph and 2 formulas.

SUB CODE: 04, 20/ SUBM DATE: 29Aug66/ ORIG REF: 004/ OTH REF: 018

Card 3/3

GAL'PERIN, Yu.M.; MICHNERICH, Ya'.

Level of the clearing of the arc of the antero-lateral inhibitory reflex. *Bull. eksp. biol. i med.* 60 no.9:30-34 S '65.  
(MIRA 18:10)

I. Patofiziologicheskaya laboratoriya (zav. -- kand. med. nauk Yu.M. Gal'perin) Mskarskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirskego (dir. E.M. Leonenko).

GAL'PERIN, Yu. M.

"The Role of the Central Nervous System in the Restoration of the Blood Circulation During Resuscitation." Cand Med. Sci, Kazakh State Medical Inst imeni V. M. Molotov, Alma-Ata, 1955. (KL, No 10, Mar 55)

SO: Sum. No. 670, 29 Sep 55--Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (15)

GALPERIN, Yu. M.

6881. Bryukhanov, I. I. Isolated dog's head. Zh. 1935. No. 68917. 2 p. Head separated from trunk at the seventh vertebra. Head was perfused due to the nasal and muscular movements reflexes were observed.

... and the brain's muscles for the maintenance of posture. V. I. Galperin and E. S. Gerasimov. U.S.S.R. 1977. No. 1154. 1 p. Also described for the prop. of isolated dogs in the trunk at the seventh vertebra. When the blood (using an auto-circulatory apparatus) to the muscles appeared. In some experiments is connected with sneezing and swallowing. (Russian) E. S. Gerasimov.

*Gal'perin, Yu. M.*

USSR/Human and Animal Physiology - Blood.

V-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, 3863

Author : Yu.M. Gal'perin, A.P. Kandel'

Inst : -

Title : An Analysis of the Mechanism of the Effect of Intra-Arterial Transfusions.

Orig Pub : Fiziol. zh. SSSR, 1956, 42, No 7, 559-564

Abstract : The authors studied the role of peripheral mechanisms in the cardio-vascular system stimulation in cases of intra-arterial blood transfusions after a complete and prolonged anemia of the central nervous system (CNS). They applied a modification of I.P. Pavlov's cardiopulmonary "preparat" [preparation?]. Blood was circulating only in the small system and in the artificial system. In the latter, blood pressure was recorded. At various times after the beginning of the CNS anemia (from 20 up to 105 minutes), the animals were receiving

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USSR/Human and Animal Physiology - Blood.

V-4

Abs Jour : Ref Zhur - Biol., No 1, 1958, 3863

through the femoral artery 20-25 ml/kg of physiological solution, or 1-1.5 ml/kg of hypertonic solution (20 % NaCl) to stimulate the receptors of the vascular bed. The experiments were carried on under morphine-hexanal narcosis. Under the influence of the mechanical stretching and the chemical excitation of the walls of arteries separated from the heart by clamps on the aorta and the inferior vena cava, the cardiac activity was increasing - which was reflected by an increased blood pressure in the artificial system and by changes in the pulse rate and amplitude. Additional experiments with decapitation and total removal of all the spinal cord, which were performed after a complete anaemia of the CNS was reached, prove that - in the described reflex reactions from the vessels to the heart - peripheral nervous mechanisms play a role, whose character is far

Card 2/3

LEPERIN, M. H.

The significance of artificial circulation by the autojector for examining the activity of the central nervous system .... 166

Novye khirurgicheskie apparaty i instrumenty i opyt ikh primeneniya (New SURGICAL Equipment and Instruments and Experience in Their Use) NO. 1, Moscow, 1957. A collection of Papers of the Scientific Research Inst. for Experimental Surgical Equipment and Instruments.

MONIKI - Moscow Oblast' Sci Res Inst. Clinical  
Research in M. F. Vladimirovsky.

GAL'PERIN, Yu.M.; BRISKIN, A.I.

Role of a local reflex component in the mechanism of cardiac reactions to increased intrapulmonary pressure and hypertension in the venae cavae. Biul. eksp. biol. med. 50 no.12:11-15 D '60. (MIRA 14:1)

1. Iz laboratorii krovoobrashcheniya i dykhaniya (zav. - prof. G.P.Konradi) Instituta fiziologii AN SSSR (dir. - akademik K.M. Sykov [deceased]) i laboratorii farmakologii (zav. - kand.biologicheskikh nauk A.I. Briskin) Instituta eksperimental'noy biologii i meditsiny (dir. - prof. Ye.N. Meshalkin) Sibirskogo otdeleniya AN SSSR. Predstavlena akademikom V.N. Chernigovskim.

(RESPIRATION)

(VENA CAVA)

(BLOOD PRESSURE)

(HEART)



VILYANSKIY, M.P., kand.med.nauk (Zhukovskiy, Moskovskoy oblasti, ul.  
Moskovskaya, d.4, kv.28); GAL'PERIN, Yu.M., kand.med.nauk

Method of combined treatment of late stages of endarteritis obliterans.  
Nov. khir. arkh. no.4:112 J1-Ag '60. (MIRA 15:2)  
(ARTERIES DISEASES)

ANTIPOV, B.V.; GAL'PERIN, Y.M.; YERMAKOVA, N.M.; PERESTORONIN, S.A.;  
SMIRNOV, Ye.Ye.

Restoration of cardiac activity after prolonged arrest and anemia  
of the heart in a surgically prepared experiment. Vest. khir. 85  
no. 7:9-17 Je '60. (MIRA 14:1)

(HEART FAILURE)

ANTIPOV, B.V.; GAL'PERIN, Yu.M.; YERMAKOVA, N.M.; PERESTORONIN, S.A.;  
SMIRNOV, Ye.Ye.

Effect of cardioplegic substances and artificial blood  
circulation regimes on the restoration of heart activity  
after prolonged anemia. Grud. khir. 2 no.4:108-113 J1-Ag  
'60. (MIRA 15:6)

1. Adres avtorov: Moskva, 3-ya Meshchanskaya, d.61/2,  
Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskiy  
institut imeni M.F. Vladimirovskogo.

(BLOOD--CIRCULATION, ARTIFICIAL)  
(HEART FAILURE) (CARDIAC RESUSCITATION) (CARDIOVASCULAR AGENTS)

BRISKIN, A.I.; GAL'PERIN, Yu.M.

Effect of arphonate on peripheral cardiovascular and cardio-  
pulmonary reflexes. Farm. i toks. 23 no. 5:406-412 S-0 '60.  
(MIRA 13;12)

1. Laboratoriya eksperimental'noy farmakologii Instituta  
eksperimental'noy biologii i meditsiny (dir. - prof. Ye.N.  
Meshalkin) Sibirskogo otdeleniya AN SSSR i nauchno-eksperimental'-  
nyy otdel Moskovskogo oblastnogo nauchno-issledovatel'skogo  
klinicheskogo instituta (dir. - kandidat meditsinskikh nauk  
P.M. Leonenko).

(TRIMETAPHAN) (CARDIOVASCULAR SYSTEM) (LUNGS)

KONRADI, G.P.; GAL'PERIN, Yu.M.

Mechanism of the action of intra-arterial transfusions. Fiziol.  
zhur. 47 no.1:46-50 Ja '61. (MIRA 14:3)

1. From the Laboratory of Blood Circulation and Respiration, Pavlov  
Institute of Physiology, Leningrad, and the Pathophysiological  
Laboratory of the Vladimirskiy District Clinical Research Institute.  
(BLOOD—TRANSFUSION)

GAL'PERIN, Yu.M.

Method for the studying tone in peripheral areas of the vascular bed in intact animals. Biul. eksp. biol. i med. 51 no.1:110-112  
Ja '61. (MIRA 14:5)

1. Iz laboratorii krovoobrashcheniya i dykhaniya (zav. - prof. G.P.Konradi) Instituta fiziologii (dir. - akademik K.M.Bykov [deceased]) AN SSSR i patofiziologicheskoy laboratorii nauchno-eksperimental'nogo otdela Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta (dir. - dotsent P.M. Leonenko). Predstavlena akademikom V.M.Chernigovskim.  
(BLOOD VESSELS)

ANTIPOV, B. V.; GAL'PERIN, Yu. M. (Moskva, ul. Vorovskogo, d. 26, kv. 14)

Use of direct cardiac massage for artificial blood circulation  
(experimental-morphological data). Grud. khir. no.5:52-58 '61.  
(MIRA 15:2)

1. Iz nauchno-eksperimental'nogo i patomorfologicheskogo otdela  
(zav. - prof. S. B. Vaynberg) Moskovskogo oblastnogo nauchno-  
issledovatel'skogo klinicheskogo instituta imeni M. F.  
Vladimirskogo (dir. - zasluzhennyy vrach RSFSR P. M. Leonenko)

(HEART FAILURE) (RESUSCITATION)

GAL'PERIN, Yu.M.

Changes in the activity of the longitudinal and annular musculature of the intestinal wall in response to various agents affecting the motor function of the small intestine. Dokl.AN SSSR 145 no.6:1417-1420 Ag '62. (MIRA 15:8)

1. Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskiy institut im. M.F.Vladimirovskogo. Predstavleno akademikom V.N.Chernigovskim.  
(GASTROINTESTINAL MOTILITY) (DRUGS—PHYSIOLOGICAL EFFECT)



GAL'PERIN, Ye.M.

Methods for restoring cardiac activity following prolonged anemia and cardiac arrest. Trudy NIIKHAI no.5:160-165 '61. (MIRA 15:8)

1. Iz Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta.

(HEART FAILURE) (PERFUSION PUMP (HEART))

GAL'PERIN, Yu.M.

Role of pharmacological preparations in restoring cardiac function following prolonged anemia and cardiac arrest. Farm. i toks. 24 no.6:744-748 N-D '61. (MIRA 15:11)

1. Patofiziologicheskaya laboratoriya Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F. Vladimirovskogo.

(ANEMIA)

(HEART FAILURE)

(RESUSCITATION)

(BLOOD--CIRCULATION, ARTIFICIAL)

TATARINOV, Vasilii Georgiyevich; GAL'PERIN, Yu.M., red.; MATVEYEVA, M.M.,  
tekhn. red.

[Textbook of human anatomy and physiology] Uchebnik anatomii i  
fiziologii cheloveka. 2. izd. perer., Moskva, Medgiz, 1963.

347 p. (MIRA 16:6)

(ANATOMY, HUMAN) (PHYSIOLOGY)

GAL'PERIN, Yu.M.

Ambivalent action of pharmacodynamic block in hemorrhagic collapse. Eksper. khir. i anest. no.2:74-75'63. (MIRA 16:7)

1. Iz patofiziologicheskoy laboratorii nauchno-eksperimental'nogo otdela Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta (dir. P.M.Leonenko)  
(SHOCI) (HUMAN HAGE) (DRUGS--PHYSIOLOGICAL EFFECT)

GAL'PERIN, Yu.M.; VOLKOVA, A.D.

Changes in the motor activity of the small intestine and efferent impulses in the intestinal nerves following stimulation of the mechanoreceptors of a segment of the small intestine. *Biul. eksp. biol. i med.* 55 no.2:22-28 F'63.  
(MIRA 16:6)

1. Iz patofiziologicheskoy laboratorii Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni M.F.Vladimirovskogo (dir. P.M. Leonenko).  
(INTESTINES—INNERVATION) (GASTROINTESTINAL MOTILITY)

GAL'PERIN, Yu.M.; GRIGOR'YEV, M.Yu.

Differentiation of nervous and humoral effects by simultaneous registration of motor activity of an innervated and denervated loop of small intestine. Biul. eksp. biol. i med. 57 no.3:23-25 Mr '64. (MIRA 17:11)

1. Patofiziologicheskaya laboratoriya (zav. - kand. med. nauk Yu.M. Gal'perin) Moskovskogo oblastnogo nauchno-issledovatel'skogo instituta imeni Vladimirovskogo (dir. P.M. Leonenko) i laboratoriya neyro-gumoral'noy regulyatsii (zav. - chlen-korrespondent AN SSSR prof. N.I. Grashchenkov) AN SSSR, Moskva. Predstavlena deystvitel'nyim chlenom AMN SSSR N.I. Grashchenkovym.

OLEVSKIY, M.I. [deceased]; GAL'PERIN, Yu.M.; ODINOKOVA, V.A.

Charges in the liver in experimentally induced pathological processes in the spleen. Biul. eksp. biol. i med. 57 no.4:123-127 Ap '64.

(MIRA 18:3)

1. Detskaya klinika (zav. - prof. M.T. Olevskiy [deceased]), patofiziologicheskii otdel (zav. - kand. med. nauk Yu.M. Gal'perin) i patologoanatomicheskii otdel (zav. - chlen-korrespondent AMN SSSR prof. A.P. Avtsyn) Moskovskogo oblastnogo nauchno-issledovatel'skogo klinicheskogo instituta imeni Vladimirskego (dir. - kand. med. nauk P.M. Leonenko), Institut morfologii cheloveka (dir. - chlen-korrespondent AMN SSSR prof. A.P. Avtsyn) AMN SSSR, Moskva. Submitted March 18, 1963.

ANTIPOV, B.V.; GAL'PEFIN, Yu.M. (Moskva)

Interrelations of local and general factors in the pathogenesis of a dynamic obstruction of the intestines in peritonitis. Arkh. pat. 27 no.3:54-60 '65. (MIRA 18:5)

1. Nauchno-issledovatel'skiy institut morfologii cheloveka (dir. - chlen-korrespondent AMN SSSR prof. A.P. Avtsyn) AMN SSSR i Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskiy institut imeni Vladimirskogo (dir. P.M. Leonenko).



OLEVSKIY, N.I.; MARCHENKO, V.I.; OPINCOVA, V.A.; GAL'PERIN, Yu.M.

Immunological method for the reproduction of an experimental  
hepatolienal syndrome in rabbits. Pat. fiziol. i eksp. terap.  
8 no.5:86-87 S-O '64. (MIPA 18:12)

1. Moskovskiy oblastnoy nauchno-issledovatel'skiy klinicheskoy  
institut. Submitted May 29, 1963.

L 31983-66

ACC NR: AP6005338

SOURCE CODE: UR/0413/66/000/001/0080/0080

INVENTOR: Gal'perin, Yu. Sh.; Soms, M. K.; Bardiyer, N. M.; Gorlin, I. K. 8  
8

ORG: none

TITLE: Artificial respiration <sup>22</sup>equipment. Class 30, No. 177597 [announced by the All-Union Scientific Research Institute for Medical Instrument and Equipment (Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh instrumentov i oborudovaniya)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 80

TOPIC TAGS: artificial respiration, respiration equipment, respiration device

ABSTRACT: An Author Certificate has been issued for an artificial respiration device containing a power-operated blower, a membrane box, inspiration and expiration bellows, a humidifier-heater, a dosimeter kit with an elastic bag, and a system of tubing complete with cocks and valves. To perform supplementary respiration as well as artificial respiration with active inspiration and passive expiration, the membrane box is equipped with a contact device for control, when the patient attempts to breathe, an electromagnetic valve in the suction line of the blower, and a cock which will take the patient off the expiration bellows and simultaneously connect it with the atmosphere. To simplify the set-up procedure for specific operating

Card 1/2

UDC: 615.816-78

L 31983-66  
ACC NR:AP6005338

conditions, the valve for setting the exhalation time is mechanically linked with a valve for setting the ventilation minute volume. A dual valve is installed in the inspiration and expiration lines for rapid switching from artificial respiration to spontaneous and vice-versa. To broaden the potential of the device, there is also a valve for switching in the dosimeter kit as well as one for increasing the resistance to expiration. In order to save an oxygen during artificial respiration with a semiopen system, there is a three-way cock which is placed in line with the evacuation control valve and is designed with a connection to the air (see Fig. 1)

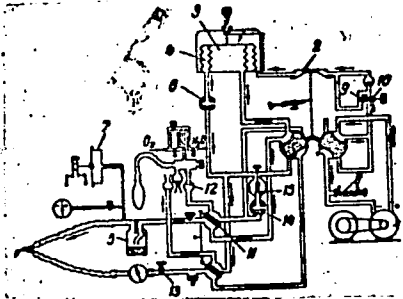


Fig. 1. Artificial respiration device. 1—blower; 2—membrane box; 3—inspiration bellows; 4—expiration bellows; 5—humidifier-heater; 6—valve for making artificial respiration with active inspiration and passive expiration; 7—membrane box with contact device; 8—electromagnetic valve; 9—expiration time valve; 10—ventilation minute volume valve; 11—dual cock; 12—dosimeter kit valve; 13—resistance-to-expiration valve; 14—three-way cock; 15—evacuation control valve.

[LD]

Orig. art. has: 1 figure.

SUB CODE: 06/ SUBM DATE: 15Jun64

Card 2/2 LC

GAL'PERIN, Yu.S.; SOMS, M.K.; YUREVICH, V.M.

New Soviet apparatus RN-59 for artificial respiration during  
anesthesia. Khirurgiia 36 no.7:139-142 Je '60. (MIRA 13:12)  
(RESPIRATORS)

GAL'PERIN, Yu.S.

Apparatus for artificial respiration during anesthesia. Med. prom.  
15 no. 5: 34-36 My '61. (MIRA 14:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut meditsinskikh  
instrumentov i oborudovaniya.

(ANESTHESIOLOGY—EQUIPMENT AND SUPPLIES)  
(RESPIRATORS)

SHPORN, A.B., PERETS IANU, Zh.N., GAL'PERIN, Zh.S.

Investigation on toxicity of chemical food additives. Vop.pit.  
17 no.4:48-53 Je-Ag '58 (MIRA 11:7)

1. Iz otdela gigiyeny pitaniya (zav. - kand.med.nauk A.B. Shporn)  
Instituta gigiyeny i zdravookhraneniya Rumynskoy Narodnoy Respubliki.  
Bukharest.

(FOOD,  
additives, tox. (Rus))

BELILOVSKIY, M.A.; GAL'PERIN, V.I.Sh.; SOMS, M.K.

Analysis of activating devices used in biologically controlled  
artificial respiration. Nov. med. tekhn. no.3:125-133 '65.  
(MTRA 19:1)

LEKSAU, Igor' Nikolayevich; ARODZERO, Aleksandr Mikhaylovich;  
GAL'FERIN, Zinoviy Samoylovich; GORBACHEVSKIY, Viktor  
Andreyevich; DARAGAN, Leonid Dmitriyevich; KLYCHKOV,  
Pavel Dmitriyevich; LAKH, Yevgeniy Ivanovich; FRASOLOV,  
Boris Aleksandrovich; RYZHKOV, Aleksey Nikolayevich;  
SUKHARNIKOV, Iosif Osipovich; TURASS, Aleksey Leont'yevich;  
DOLGOPOLOV, N.P., red.; KONARDOVA, T.F., red. izd-va;  
VDOVINA, V.M., tekhn. red.

[Manual for the lumber truck driver] Spravochnik shofera  
lesovoznogo avtomobilia. Moskva, Goslesbumizdat, 1962. 169 p.

(MIRA 15:7)

(Lumber--Transportation)



GORBACHEVSKIY, Viktor Andreyevich; GAL'PERIN, Zinoviy Samoylovich  
Gal'perin; KLYCHKOV, Pavel Dmitriyevich; LAKH, Yevgeniy  
Ivanovich; LEKSAU, Igor' Nikolayevich; PRASOLOV, Boris  
Aleksandrovich; RYZHKOV, Aleksey Nikolayevich; SUKHARNIKOV,  
Iosip Osipovich; SHESTAKOV, Boris Aleksandrovich; ALPATSKIY,  
I.V., red.; PLESKO, Ya.P., red.izd-va; GRECHISHCHEVA, V.I.,  
tekhn. red.

[Utilization of logging truck transportation] Eksploats-  
tsia lesovoznogo avtomobil'nogo transporta. [By] V.A.  
Gorbachevskii i dr. Moskva, Goslesbumizdat, 1962. 296 p.  
(MIRA 16:5)

(Lumber--Transportation) (Tractor trains)

GAL'FERIN, Z.S.; KLYCHKOV, P.D.; LAKH, Ye.I.; GORBACHEVSKIY, V.A.;  
DARAGAN, L.D.; RYZHKOV, A.N.; SUKHARNIKOV, I.O.; TURASS,  
A.L.; GATSKEVICH, V.A., red.

[Manual on automotive transportation of lumber] Spravochnik po lesovoznomu avtomobil'nomu transportu. Moskva, Lesnaia promyshlennost', 1965. 446 p. (MIRA 19:1)

1. Khimki. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti.

GAL'PERINA, A.A.

Using construction equipment at the sites of compressor stations.  
Stroi. truboprov. 9 no.1:21 Ja '64. (MIRA 17:3)

GAL'PERINA, A. I.

Gal'perina, A. I. - "On the problem of the functional value of a foot stump," Uchen. zapiski (Ukr. nauch.-issled. in-t protezirovaniya), Issue 1, 1948, p. 69-78, - Bibliog: 22 items.

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949.)

CA

1174

Effect of pervitin and ascorbic acid on young rabbit under oxygen deficiency. A. I. Gal'perina. *Akusherstvo i Ginekol.* 1951, No. 5, 27-32. Introduction of either pervitin or ascorbic acid into the fetus or the mother leads to prolongation of life of the former after tying its umbilical cord. Administration of ascorbic acid along with glucose and cardiazole gives an effect similar to that in which ascorbic acid is omitted. G. M. Kosolapoff

GAL'PERINA, A.I.

AZBEL', Ya.A., starshiy nauchnyy sotrudnik GAL'PERINA, A.I., kandidat  
meditsinskikh nauk

Method of measuring equinism of foot stumps. Ortop., travm. i protez.  
17 no.2:62 Mr-Ap '56. (MLRA 9:12)  
(ORTHOPEDIC APPARATUS)

GAL'PERINA, A.I., kandidat meditsinskikh nauk

Clinical peculiarities of foot stumps following amputations at various levels. Ortop., travm. protez. 17 no.5:68-69 S-0 '56.

(MLRA 10:1)

1. Iz Ukrainского nauchno-issledovatel'skogo instituta protezirovaniya (dir. - prof. A.P.Kotov)

(AMPUTATION STUMP) (FOOT—SURGERY)

Gal'perina, A. M.

✓ The application of some aldehydes in the identification of  $\beta$ -aminosalicylic acid (PAS). A. M. Gal'perina, (N.I. Pirogov Med. Inst., Odessa). *Azhivaniye Dats*, No. 6, 8-10 (1956).—Of the 3 compds. investigated: urotropine, HCHO, and BzH, urotropine was the most suitable for detection of PAS. Addn. of 0.1 g. of urotropine in 2 cc. of concd. H<sub>2</sub>SO<sub>4</sub> to 0.1 g. of PAS gives a green color changing to orange (not orange-red at 15-20°. At 60-70° the color is red. Of 19 aromatic amino compds. only *m*-aminophenol gives a similar reaction. The reaction for PAS is specific at room temp. only. Limit of sensitivity: 0.35 mg. of PAS/cc. The reaction with BzH is more sensitive: 0.04 mg./cc. The reaction takes place when a mixt. of 1 cc. of BzH and 0.3 g. of PAS is warmed. The red-orange color changes gradually to cherry-red. *m*-Aminophenol gives a similar reaction.

A. S. Mirkin

MD



GAL'PERINA, Ada Naumovna; DOBROVOL'SKAYA, Valentina Ivanovna;  
KELIER, Oleg Konstantinovich; LUBYANITSKIY, Grigoriy  
Davidovich; RADCHENKO, L.A., red.

[Small transistorized ultrasonic unit with a 100 watt power  
capacity for universal technological use] Malogabaritnaya  
ul'trazvukovaya ustanovka mozhnost'iu 100 vt universal'nogo  
tekhnologicheskogo primeneniia na poluprovodnikovyykh triodakh.  
Leningrad, 1965. 24 p. (MIRA 18:7)

CA

(H. ... ..)

**Fluidity of a rubber mixture as an index of its technological characteristics.** P. I. Gal'perina. *Lezhava Prom* 11, No. 5, 44 (1951). Fluidity was determined in an apparatus consisting of a matrix with a hollow piston connected to a gage and to a lever for applying loads; matrix and piston are housed in a vessel with oil heated to the desired temp. The sample, previously heated to 70°, is vulcanized under the desired load and the expansion of rubber into the hollow piston is recorded by the gage. Results indicate that fluidity is more characteristic than plasticity in controlling quality of rubber during the initial period of vulcanization.  
B. Z. Kamich

GAL'PERINA, F. I., and SHTRAMBRAND, V. D.

Technical improvement in the production of footwear by the method of hot vulcanization. Leg. prom., No 1, 1952.

2181000000, P. 7, 1954

"Ways of Improving the Method of Hot Filtration, Author: S. I. Shchegolev."  
Dmitriyev S. I., Moscow Technological Inst of Light Industry, 1954, p. 1.  
Kagan V. I., Technological Faculty, 26 Oct 54. (A, 24 Oct 54)

Survey of Scientific and Technical Dissertations, Department 1954.  
Moscow Technological Institute (16)

SO: Sov. No. 101, 5 May 55

ZLOTNIKOV, S.A.; GAL'PERINA, G.B.

Surgical treatment of false aneurysm in children. Vest. khir. 84  
no. 2:126-128 F '60. (MIRA 14:1)

(ANEURYSMS)

*Hydraulic resistance of fouled packing*  
EM-TKHE-DEN [On Tae-chon]; GAL'PERINA, I.I.; PECHURO, N.S.

Hydraulic resistance of fouled packing. Gaz.prom. no.9:35-37 S '57.  
(MIRA 10:10)

(Packed towers)

GAL'PERINA, I.M.

Work of the intestinal infections section at Children's Hospital  
No.15 in Oktyabr' District in Tashkent. Med.zhur.Uzb. no.8-9:  
35-39 Ag-S '58. (MIRA 13:6)

1. Iz detskoy klinicheskoy bol'nitsy No.15 (glavnyy vrach -  
M.Ya. Alyautdinova) i kafedry detskikh bolezney sanitarnogo  
fakul'teta (zav. - prof. L.S. Aleksandrova) Tashkentskogo  
gosudarstvennogo meditsinskogo instituta.

(TASHKENT--CHILDREN--HOSPITALS)

(INTESTINES--DISEASES)

GAL'PERINA, L.I., GEGUZIN, Ya.Ye., PINES, B.Ya.,

"Thermal Effects During the Sintering of Metallic Powders," Uch. zap. KhGU  
V. 48, Tr. Fiz. Otd., No. 4, Kh. St. Univ. publication. 1953



GAL'PERINA, L. I.

62  
[No. 2] ✓ Distortion of the crystal lattice and sintering of metal powders. L. I. Gal'perina, Ya. E. Geguzin, B. Ya. Pines, and I. V. Samshkov (A. M. Gor'ki State Univ., Kharkov). *Doklady Akad. Nauk S.S.S.R.* 88, 285-8 (1953) [Butcher Translation No. 3088].—Changes in the stresses and distortion in metal powders as a result of annealing were studied by x-rays and sp. heat measurements. The sp. heat was detd. during heating at 2.0 to 2.8 degrees/min. with a high-temp. adiabatic calorimeter. A Cu compact made of 100- $\mu$  powder with a porosity of 20% evolved 8.35 cal./g. with the max. rate at 350°. 40-50- $\mu$  powder with 35% porosity evolved 11.25 cal./g. with the max. at 275°. 10-20- $\mu$  Ni powder with 15% porosity evolved 14.00 cal./g. with a 550° max. Thirty- $\mu$  Fe powder with 10% porosity evolved 12.00 cal./g. with a 330° max. This release of energy corresponded to decreases in stresses of the 2nd and 3rd kinds and was not caused by decrease in the surface area of the pores. X-ray measurements were made on specimens 0.2 mm. in diam. and 2 mm. long pressed from 40-50- $\mu$  electrolytic Cu powder or from 10-20- $\mu$  Ni powder. For Cu the elastic energy, estd. from line breadth, decreased from  $4.2 \times 10^{-3}$  cal./g. to nearly zero in >400 min. at 100°, 100 min. at 150°, 40 min. at 200°, and 10 min. at 250°. If a diffusion process caused the decrease in microstresses, the activation energy was 20,000 cal./mol., close to the 12,000 cal./mol. characteristic of the initial stage of diffusive sintering. Since the microstresses were eliminated at a low temp. they could have little effect on the sintering process compared to the effect of the initial energy of distortion. Distorted regions in the lattice could increase the concn. of vacancies and decrease the activation energy for self-diffusion. A. G. Guy

3

L 52729-65 //EWT(m)/EPF(c)/T Pr-4 DJ

ACCESSION NR: AP5016030

UR/0055/64/000/011/0042/0046

AUTHOR: Kalantar, N. G.; Masagutov, R. M.; Gal'perina, M. A.; Glazunov, V. I.; Akhmetshina, M. N.

19  
18  
B

TITLE: Gas-stable insulating oils from extracts of selective purification

SOURCE: Khimiya i tekhnologiya topliv i masel, no. 11, 1964, 42-46

TOPIC TAGS: insulating material, petroleum refinery product

Abstract: The basic components which cause a breakdown of the electrical characteristics of phenol extracts of Tuymazy transformer distillate are resins, sulfur compounds of the sulfide type, and aromatic hydrocarbons with a nonsymmetrical molecular structure. The possibility of reprocessing these extracts to gas-stable oils of the condenser type with good electrical, and hydrogenation refining can be used to achieve this purpose. Reprocessing of the extracts to gas-stable insulating oils permits a substantial increase in the coefficients of utilisation of the initial raw material and provides the electrotechnical industry with gas-stable dielectrics. Orig. art. has 1 table and 4 graphs.

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I. 52729-65

ACCESSION NR: AF5016030

ASSOCIATION: BashFAN SSSR

SUBMITTED: 00

ENCL: 00

SUB CODE: FP

NO REF SOV: 003

OTHER: 003

JPRS

18  
Card 2/2

*С. И. КОРДОНСКИЙ*  
KORDONSKIY, I.S. (Artemovsk); GAL'PERINA, M.I. (Yama, Stalinskoy oblasti)

Prostigmine therapy. Vrach. delo no.3:297 Mr '57 (MLBA 10:5)  
(NEOSTIGMINE)

GAL'PERINA, M. K.

Dissertation: "The Role of Combined Water in Clay Suspensions on Dilution With Electrolytes."  
Cand Tech Sci, Sci Res Inst of Construction Ceramics, Moscow, 1953. Referativnyy Zhurnal--  
Kimiya, Moscow, No 13, Jul 54.

SO: SUM No. 356, 25 Jan 1955

GAL'PERINA, M.K.; NOSOVA, Z.A.; CHERNOV, V.A.

Effect of electrolytes on the quantity of combined water in clayey  
suspensions during dilution. Trudy NIISTroikeramika no.10:22-55 '55.  
(Clay) (Ceramics) (MLRA 9:6)

NOSOVA, Z.A.; GAL'PERINA, M.K.

Use of new types of raw materials in the production of facing tiles.  
Trudy NIISTroikeramika no.10:131-142 '55. (MIRA 9:6)  
(Tiles)

*Gal'perina, M.K.*

USSR/Chemical Technology. Chemical Products and their Application.  
Glass. Ceramics. Building Materials.

J-12

Abs Jour Referat Zh.-Kh., No 8, 1957, 27648

Author : M.K. Gal'perina, M. Ye. Yakovleva.

Inst : \_\_\_\_\_

Title : Black Glaze for Tiles

Orig Pub: Steklo i keramika, 1956, No 10, 26-29

Abstract: It is established on the basis of performed experiments that the use of black pigments containing  $\text{Cr}_2\text{O}_3$  for the production of black glaze is not suitable, because this oxide furthers the crystallization of cobalt ferrite. Black pigments consisting of a mixture of  $\text{MnO}_2$ ,  $\text{Fe}_2\text{O}_3$ , and  $\text{CoO}$  give positive results. The following composition of a black glaze for tiles of a burning temperature of 1160 to 1180° is recommended (in %): frit No 1 - 73;  $\text{CoO}$  - 3.6;  $\text{MnO}$  - 1.6;  $\text{Fe}_2\text{O}_3$  - 1.6; feldspar - 10.5; quartz sand - 2. The chemical composition of

Card : 1/2

-48-



USSR/Chemical Technology. Chemical Products and their Application. J-12  
Glass. Ceramics. Building Materials.

Abs Jour: Referat Zh.-Kh., No 8, 1957, 27648

frit No 1 is mentioned (in %):  $\text{SiO}_2$  - 22.6;  $\text{Al}_2\text{O}_3$  - 2.3;  $\text{CaO}$  -  
7.5;  $\text{K}_2\text{O}$  - 3.9;  $\text{PbO}$  - 3.9;  $\text{B}_2\text{O}_3$  - 8.4.

Card : 2/2

-49-

GAL'PERINA, M.K., kand.tekhn.nauk; FEDOROVA, T.Kh., kand.tekhn.nauk

Study of causes of the formation of cracks on sanitary engineering and structural elements. Trudy NIISTroikeramiki no.16: 70-83 '60. (MIRA 15:2)

(Ceramics--Testing)

GAL<sup>3</sup>PERINA, R. Ye.

Case history of a paranoid form of pathological inebriation.  
Prak. sudebnopsikh. ekspert. no.1:66-72 '60.

(MIRA 15:7)

(PARANOIA) (ALCOHOLISM)

ROZHNOV, V.Ye.; TUROVA, Z.G.; GAL'PERINA, R.Ye.

Dynamic study of the alcohol content in the blood and the bio-  
electrical activity of the brain in chronic alcoholics after  
administering small doses of alcohol. Sud.-med.ekspert. 4 no.3:  
48-51 J1-S '61. (MIRA 14:10)

1. Tsentral'nyy nauchno-issledovatel'skiy institut sudebnoy  
psikhiatrii imeni prof. Serbskogo (dir. - dotsent G.V.Morozov).  
(ALCOHOL—PHYSIOLOGICAL EFFECT)