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This publication contains titles and abstracts of Japanese periodicals. Each periodical is abstracted as a whole and its issues summarized with a listing of volume and issue or report numbers and the dates of publication. Each periodical and each title and abstract has also been assigned an Index Number at the right in accordance with the Basic Intelligence Directive. Due to limitations of personnel and volume of material, it has been found necessary to require local agencies interested in any item covered by these abstracts to first send a representative to Sixth Floor, 1340 L Street, N. W., in order to preview the article prior to formal request for further translation. Formal requests should be made through the Office of Collection and Dissemination, CIG, 2430 E Street, N. W., Washington, D. C.

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OCO	1
OCT	2
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AGF	10
ICAF	1
NWC	1
NavWarCol	1
AFSC	1
ID	5
CINCPACFLT	5
COMNAVJAP	5
US NAVAL ATTACHE Nanking	2
COMNAVWESPAC	5
ONR	2
NOL	2
BUSHIPS	5
BUORD	5
BUAER	5
BU Yards & Docks	5
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Op-20-2 (via Op-32 Y-1)	2
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Op-34 H-10	1
Op-413 B	1
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NIPPON SUGAKU BUTSURI GAKKAISHI 5505.0100
"Organ of the Physico-Mathematical Society of 5706.
Japan" 7500.
7501.

Published monthly by the Physico-Mathematical Society of Japan. Articles on pure and applied mathematics and on theoretical and practical physics and occasionally astronomy and geophysics, written by prominent Japanese scientists who are Society members.

The following are abstracts of articles from the Japanese-language issues of Jul 1941, Apr to Dec 1942 and Jan to Dec 1943.

Jul 1941 - Vol XV, No 1

"Fourier Series, Part 4" by KAWADA Tatsuo 8430.
A discussion of the convergence factor of Fourier series. 11 pp.

"Ferromagnetism and Magnetostriction" by TAKAKI Hideo 8430.
Magnetic phenomena accompanying physical deformation, Weiss domain, Joule's effect in simple iron crystals, Joule's effect at high temperatures, and the influence of tension on Joule's effect. 19 pp.

"Various Ergodic Theorems" by YOSHIDA Kosaku 8430.
Development from Banach's space, the mean ergodic theorem, the uniform ergodic theorem, and Markoff's chain possessing invariant measure. 34 pp.

"Physico-acoustical Studies on Japanese Phonetics" by OBATA Juichi, MURAI Ken and OUCHI Akira 8430.
Oscillographic studies of the sounds H, R, G and nasal G and of the nature of vowels between surds. 11 pp.

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Apr 1942 - Vol XVI, No 1

- "Thermoelectricity and Clausius' Inequality" by SUGIDA
Motoyoshi 8430.
The thermodynamics of irreversible changes, reduced
heat and Kelvin's relations. 4 pp.
- "Several Problems of Physical Volcanology" by MIZUKAMI
Takeshi 6201.01
Volcanic explosions, distribution of rocks showered,
pumice and volcanic ash, volcanic activity and changes
in ground slope, earthquakes and tremors caused by vol-
canoes, changes in terrestrial magnetism varying with
volcanic zones and during volcanic activity, gravity
and gravitational declination near volcanoes and ter-
restrial movements during volcanic activity. 25 pp.
- "Modular Representation of Finite Groups" by OSHIMA Katsu 8430.
Regular representation analysis, indicial relations,
Block's theory, proof of basic theorems, and special
cases and examples. 20 pp.
- "The Existence of Average and Stable Planetary Motion"
by HAGIHARA Yusuke 8430.
Proofs by the theory of integral numbers and by asymp-
totic series; almost-periodic motion, the stable equi-
librium theory, and the null value of almost-periodic
functions. 9 pp.
- "Several Problems of the Geiger-Muller Tube" by AOKI 8600.0430
Hiroo 8370.0250
Types: growth and disappearance of the electric dis-
charge in the tube; Montgomery's explanation and Ramsey's
experiments concerning voltage changes in the needle;
minimum times between two electric discharges; self-
excitation; characteristic curves of the tube; series
resistance and characteristic curve; time curve for
the electric discharge; the time relation between radio-
active rays and electric discharge; and the causes of
self-excitation. 11 pp.
- "Viscosity and Dielectric Adsorption of Organic Resinous
Substances" by KAWAI Hirejiro 8520.0108
The influence of atomic and molecular constitution on
physical properties, as in Debye's theory. 1 p.
- "Counter Tube Possessing a Grid" by AOKI Hiroo, ARAKAWA 8370.0250
Taiji and MORIYA Tadao 8600.0430
A graph showing several characteristic curves for
different voltages. 1 p.
- "Determination of the Maximum Force of Neutrons Released in
the Reaction Cu plus D" by SACANE Ryokichi, HORIE Hiroshi
and TOHIDA Giichi 8600.0811
Three graphs of the results of experiments. 1 p.

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"Determination of the Maximum Force of Neutrons Released 8600.0811
in the Reaction Al plus D" by SAGANE Ryokichi and UKAI
Shigeshi

Three graphs showing the results of experiments.
1 p.

"Variation of the Barometric Effect on Cosmic Rays With 8430.
Latitude" by SEKIDO Yataro

A graph showing the results of tests with a Neher-
type counter carried aboard a ship traveling from
Australia to Seattle. 1 p.

"Cosmic Rays and Aerology of the Tropics" by SEKIDO 8380.0209
Yataro

Practical application of the inverse relation between
changes in atmospheric pressures and temperatures in
the stratosphere over the lower latitudes. 1 p.

"Cosmic Rays and Seasonal Rainfall" by SEKIDO Yataro . 8430.

Graph showing correlation between precipitation and
the air pressure effect coefficient. 1 p.

"The Stoppage of Protons" by ARAKI Gentaro 8600.0811

General discussion of Schain's and Oppenheimer's
work, especially the cross-sectional area through
the proton of static forces and the emission of
mesons. 1 p.

"Interaction of Mesons and Nuclear Particles" by ASANAGA 8600.0811
Shinichiro

General discussion of the discrepancies between theo-
retical and experimental results and the difficulties
of relative quantum mechanics. 2 pp.

May 1942 - Vol XVI, No 2

"Corona Lines" by HAGIHARA Yusuke 8430.

The coronal spectrum of the sun and certain forbidden
lines difficult to explain; Maxwell's distribution
formula applied to the electron velocities in the so-
lar corona. 5 pp.

"The Elasticity of Steel" by MURAKA A Kiyoshi 8430.

The elasticity of ferromagnetic bodies; experimental
methods and graphs of the results; cohesive and mag-
netic stretch; initial reversible stretch; and re-
peating a load. 5 pp.

"Acoustical Studies of Japanese Fire Bells" by KOBASHI 8430.
Yutaka

Peculiar vibrational modes and patterns. 10 pp.

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- "The Phenomenon of Adsorption in Electrolytes Possessing Surface Tension" by MUTO Yoshio 8430.
 Corrections made in Cassie's and Palmer's formulas by consideration of image force repulsions in inorganic salts. 4 pp.
- "Recent Researches into the Mechanical Characteristics of Amorphous Substances" by OKA Shoten and OGAWA Noriya 8430.
 Correlations between molecular structure and physical properties of viscosity and plasticity. A general discussion. 14 pp.
- "Progress in Cosmic Ray Research" by ASANO Yoshihiro 8430.
 General view, direction and method of research; the origin of cosmic rays; their nature; their hard and soft components; showers and explosions; the heavy particles among cosmic rays; variations in the intensity of cosmic rays; and the influence of cosmic rays on life. 15 pp.
- Jun 1942 - Vol XVI, No 3
- "Regular Functions of Complex Variables and Necessary Conditions" by SHE IZU Shinjiro 8430.
 General discussion of the analytic functions. 2 pp.
- "Corrections Made by Quantum Mechanics in the Potential Between Atoms in Gases" by KIHARA Taro 8430.
 Atomic potential as calculated from the equations of state in thermodynamics; the calculation of the virial constant or coefficient in the gas law for atoms of the classical model; quantum mechanics correction; atomic potential determined by the coefficient of viscosity; the viscosity of gas according to the kinetic theory; quantum mechanics effect in heat diffusion between isotopes. 6 pp.
- "Solving the Problem of Thermal Conduction when Given Terminal Conditions" by OSHIDA Isao 8430.
 The temperature distribution in a body that existed prior to a known distribution. 2 pp.
- "Neutron Scattering in Iron-Nickel Alloys" by HONDA Yoshihiro 4205.1000 8430.
 Practical application of the discovery by Nix, Dunning and others that the transmission coefficient of thermal neutrons varies with annealing, quenching and cold working. A study of atomic order and superlattices. 4 pp.
- "The Hygroscopic Coefficient of Paper" by SHIMA Shiro 8430.
 The hygroscopic tendencies of paper and their vitiation of its insulating properties for electrical work. 1 p.

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- "Banach Space Possessing Semi-Order" by KAWADA Keigi 8430.
A general discussion of the vector lattice theory as recently developed. 15 pp.
- "Pseudo-Scalar Mesons" by ARAKI Gentaro 8600.0811
General discussion of the short-range force and interaction of the various particles. 4 pp.
- "Recent Researches into the Physical Characteristics of Amorphous Substances; Part 2" by OKA Shoten and OKAWA Noriya 8430.
The Bannowitz-Rotger theory; the influence of temperature and vibration on great elastic changes; characteristics in the solid-liquid phase; elastic bodies showing temporal effects; and Volterra's theory. 19 pp.
- Jul 1942 - Vol XVI, No 4
- "The Structure of a Riemannian Space Whose Holonomic Groups Fix a Direction or Point" by SASAKI Shigeo 8430.
A general discussion of Cartan's theory. 8 pp.
- "The Life Period of Vector Neutral Mesons" by NAKAMURA Seitaro 8430.
General discussion; quantization; calculations of perturbations; approximations. 8 pp.
- "The Meson Theory of the Nucleus" by OZAKI Seiji 8600.0811
A general view; the interaction of nucleus and meson; nuclear forces; and the dispersion of mesons by the nucleus. 2 pp.
- "Spectroscopic Studies on Mercury Hg₂" by HAYASHI Shoichi 8430.
Outline of researches; the experiments; and the spectrographs. The potential curves. 10 pp.
- "The Amount of Water Absorbed by and the Thermal Conductivity of Regenerated Cellulose Membranes" by MATANO Chujiro 8430.
Experimental methods and test materials; and experimental results. Four graphs and a table. 2 pp.
- "The Interaction of Thermal Neutrons and Solid Bodies" by KIMURA Kazuharu 8600.0811
The general characteristics possessed by thermal neutrons; the problem of refraction in crystals; scattering by alloys; the interaction depending on the magnetic moment of the neutrons; problems of today and tomorrow. Charts and tables. 8 pp.

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- "The Relation Between Mesons and YUKAWA's Particles" by 8600.0811
SAKADA Shoichi and INOUE Ken
The present-day difficulties of the meson theories
cleared away by new studies in the fundamental nature
of simple particles. 3 pp.
- "The Interaction of Nuclear Particles" by ARAKI Gentaro 8600.0811
The solution of the problem of nuclear forces by
assuming the inverse cube law. 1 p.
- "Direct Interaction" by MIYASHIMA Tatsuoki 8600.0811
The approximate value of the coefficients of inter-
action in the perturbational Hamilton function; gen-
eral discussion of nuclear forces. 1 p.
- "Nuclear Forces" by MIYASHIMA Tatsuoki 8600.0811
Separation of the problems of scattering and of nuclear
forces and magnetic moment. 1 p.
- "Natural Ionization Intensities at Various Places" by 8430.
ASANO Yoshihiro
A table showing cosmic ray intensities at various
places in Japan, by the Neher-type counter. 1 p.
- "Aerial Radiation During Rain, Report No 1" by SEKIDO 8430.
Yataro, IIO Tsutsumu and IKEDA Teruyoshi
Two graphs showing the variation of ionization with
precipitation and an explanation. 1 p.
- "Aerial Radiation During Rain, Report No 2" by SEKIDO 8430.
Yataro, ISHII Chihiro and TSUTANO Tsuneyoshi
Two graphs showing maximum ionization versus maximum
precipitation at various localities. 1 p.

Aug 1942 - Vol XVI, No 5

- "Abstracts of Lectures to be Delivered at the Annual 8430.
Meeting for 1943" 5706.
Program listing several hundred lectures variously 8600.010
on physics, mathematics, geophysics and astronomy, 8600.0200
which were to be given 16-18 Oct 1942 by about 8600.0811
several hundred Society members. 45 pp. 4422.

Sep 1942 - Vol XVI, No 6

- "The Phenomenon of Relaxation" by KUBO Ryogo 8430.
Application of the Boltzmann equation to polydisperse
systems and to paramagnetic dispersion and electrical
conduction in alloys. 7 pp.
- "The Ideal Theory of Semi-Abelian Groups and Its Explan- 8430.
ation by the Theory of Partially-Ordered Groups" by
MATSUSHITA Kameo 11 pp.

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- "The Interaction of Thermal Neutrons and Solid Bodies, Part 2" by KIMURA Kazuharu 8430.
8600.0811
General discussion following Pomerantschuk, on work with crystals; scattering in alloys; and six graphs and tables, showing the coefficient of neutron penetration for various alloys. 6 pp.
- "The Hard Components of Cosmic Rays" by KOBAYASHI Minoru 8600.0811
The hard and soft components; nuclear forces and the meson; difficult points in the neutron theory of the hard components; the generation and disappearance of the hard components. 13 pp.
- "Recent Researches into the Mechanical Characteristics of Amorphous Substances, Part 3" by OKA Shoten and OKA A Noriya 8430.
The statistical theory of rubber elasticity; six graphs of results. 10 pp.
- Oct 1942 - Vol XVI, No 7
- "Acoustical Studies on the Japanese Fire Bell, Part 2" by OHASHI Yutaka 8430.
Nine diagrams showing the sound intensity distribution around the bell. 8 pp.
- "Riemannian Integrals and Lebesgue Integrals (Integral Theory), Part 1" by KAWADA Keigi 8430.
Family of sets, measure, Riemannian integrals, metric functions, Lebesgue integrals and additive set functions. 24 pp.
- "Haar's Measure (Integral Theory), Part 2" by KONISHI Isao 8430.
General discussion. 14 pp.
- "The Life Period of Pseudo-Scalar Mesons" by ARAKI Gentaro 8430.
8600.0811
Experimental and theoretical values. 1 p.
- "Some Notes on Pseudo-Scalar Mesons" by MIYASHIMA Tatsuoki 8430.
8600.0811
A new study of the delta function that overcomes a former difficulty in explaining nuclear forces. 3 pp.
- "Stability of Ionic Crystals" by OBAYASHI Shigehiro and OKURI Hiroshi 8430.
Chart showing volumetric changes versus temperature and a table of some extremal temperature values. 1 p.

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Nov 1942 - Vol XVI, No 8

- "Curves Possessing Bounded Curvatures" by KAKEYA Seichi 8430.
Study of curves defined by the parameters tangent angle and radius of curvature, with bounded values for the parameters. 3 pp.
- "The Derivative Functions of a Function That Varies Irregularly" by FUJIOKA Yoshio, MORI Yu and SATO Hideo 8430.
Derivatives calculable under certain assumptions of average and mean square values for fairly large values of the argument. 2 pp.
- "The Construction of a High Pressure Wilson Cloud Chamber" 8430.
by FUJIOKA Yoshio, MORI Yu and SATO Hideo 8600.0811
Diagram and explanation. 1 p.
- "Several Problems on the Spectrum of Planetary Nebulae" 8430.
by HATANAKA Takeo
Photographs, charts and graphs; recombination spectrum, forbidden lines, optical interaction and atomic numbers and electric dissociation. 20 pp.

Dec 1942 - Vol XVI, No 9

- "The Influence of Atomic Vibration on Orderliness and Randomness in Binary Alloys" by NAGAMIYA Kiyoo and UEMON-NO-SA Shigeo 8430.
A study and explanation of variations in physical characteristics (volume, conductivity, thermoelectricity, etc.) with changes in proportions of components, as in the work of Bethe, Bragg and Williams, etc. 8 pp.
- "Quantitative Analysis Using Artificial Radioactivity and Its Application to the Determination of Microscopic Amounts of Na in Al" by SAGANE Ryokichi, ENOBUCHI Masahiko and SHIGDA Jitaro 8430.
Graphs and charts showing results of experiments, compared with actual chemical determinations. 5 pp.
- "Counter Tubes Possessing Grids" by AOKI Hiroo, HONSHO Goro and KUROZAKI Zenichi 8430.
8600.0811
The electrical discharge in counter tubes; experimental results, with graphs and diagrams. 3 pp.
- "Vector Lattice Theory" by OGASAWARA Tojiro 8430.
Discussion of its representation by Boolean algebra and continuous functions; metrics. 35 pp.
- "Young's Modulus in Fe-Al Alloys of Regular Lattices" by KUBO Tetsujiro 8430.
Graphs and table showing modulus versus ratio of components and temperature. 2 pp.

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- "Oxide Cathodes and Oxygen Atmospheres" by KAWAMURA Hajimuru, TAMURA Sachio and SHINOHARA Akira 8430.
8370.02
A study of saturated thermal electrical current and its variation with the pressure of a pure oxygen atmosphere in a tube. 1 p.
- "The Bar Number of the Recurring Period in a Recurring Decimal Fraction Which Corresponds to An Integral Power of a Prime Number Under 1500" by YAMANOUCHI Jiro 8430.
1 p.
- Jan-Feb 1943 - Vol XVII, No 1 and 2
- "Lift and Momentum of a Plane Wing with Open-Flap" by TASHIRO Yoshio, TOKOCHIKA Susumu and SHUZO Kenichi 2302.0300
Aerodynamical study by functions of complex variables and by isogonal representation of Bickley, with numerical results for C_L and C_M . 3 pp.
- "The Cross-sectional Area of Elastic Collision of Oxygen Atoms by Thermal Electrons" by YAMANOUCHI Yasuhiko 8430.
A mathematical and graphical study by quantum mechanics of the effective area of scattering. 4 pp.
- "Surface Construction of Ionic Crystals" by OBAYASHI Shigehiro 8430.
Internal lattice constants, intervals between planes near the surface, positions of surfaces, graphs and tables. 2 pp.
- "Equations of State and Critical States of Gases" by KIHARA Taro 8430.
Thermodynamical studies of the virial coefficients of simple and mixed gases. 5 pp.
- "Emission of Thermal Electrons by Semi-Conductors" by HIBI Tadatoshi 8430.
8370.0100
Eleven characteristic curves, theoretical equations of Richardson and Fermi. 7 pp.
- "Field Emission" by TABUCHI Seiichi 8430.
8370.0100
Modification of the theoretical formula of "Field-emission" assuming an approximately parabolic surface for the cathode. 3 pp.
- "The Region of Electric Discharges and their Forms" by MOCHIZUKI Shigeo and MIKOSHI Hoken 8370.0100
8430.
Relation of breakdown potential and the various conditions of circuit, gap, voltage; study of the electric discharge energy in the transition from corona to arc, as in the work of Townsend and Loeb. 9 pp.
- "Researches into Sound-Absorbing Materials Under Water" by OHASHI Yutaka 8430.
4412-
Determination of sound absorption coefficients. 6 pp.

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"Oppenheimer-Phillips Type Nuclear Reaction" by SUGIMOTO 8600.0811
Asao

The lack of experimental proof, the distribution of proton energies and the transmutation function and cross-sectional area of reaction.. 9 pp.

"High-speed Photography" by HIRADA Shinzo 0410.

High-speed shutters, flash illumination, the problem of spark voltages, production of electric spark, spark relay by a window vacuum-tube, the method of IASHIMA and HANADA and the method of numerous photographs. 14 pp.

"Stability and Fusion of Crystals" by KUBO Ryogo 8430.

The correlation of the elastic constants for various deformations with certain physical characteristics. 2 pp.

"Crystalline Structure of Chromium Plate Layers" by YOSHIDA Susumu 4205.0239
4205.1000

The variation of surface hardness of chrome plating with conditions of electroplating. 1 p.

Mar 1943 - Vol XVII, No 3

"Matrix Representation of Operators in Approximations" 8600.0811
by UMEMIYA Ayao

Matrical studies on electron distribution in atomic spectrum researches; Heisenberg wave mechanics. 11 pp.

"Tables of the Products of Three Spherical Functions" by UMEMIYA Ayao 8600.0811

Aids to problems of atomic physics in the integration of three spherical functions. 8 pp.

"The Statistical Mechanics of Regular Solutions" by MUTO Yoshio 8430.

The grand partition function and free energy of regular solutions, nature of the beta function of j , the critical temperature of complete fusion. 6 pp.

"Ferromagnetism of Semi-Conductors" by HIRONE Tokutaro and MIYAHARA Shohei 8430.

Several new results from the Fermi distribution of electrons by considering electron interaction, hitherto unclarified. 5 pp.

"D-D Neutron Capture" by Osaka U Nuclear Laboratory 8600.0811

Determination of induced radioactivity in Al, Cu, Ag and Rhodium by capture of 2.5 Mev neutrons, tables of results. 5 pp. 8600.0110
8600.0200

"The Theory of Denjoy Integrals, Part 1" by IZUMI Nambuichi 8430.

SHIMANOUCI Genichiro, ORIHARA Masae and KASAHARA Masatomo

Integral calculus of discrete functions, continuous functions and Denjoy integrals. 19 pp.

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- "Theory of Forbidden Lines" by MASUKO Masanori 8430.
Theory of radiation, the correspondence principle, the selection rule, intermediate coupling, strength of forbidden lines, Zeeman effect, general combination rules and the theory of scattering, observability of forbidden lines. 14 pp.
- "The Barkhausen Effect in Ferromagnetic Bodies" by MURAKAWA Kiyoshi 8430.
A survey of all work up to the present. 11 pp.
- Apr 1943 - Vol XVII, No 4
- "Various Factors Influencing Oxide Cathodes" by KAWAMURA Hajimuru 8370.0100
8430.
Discussion of the results of experiments on the activation of oxide cathodes with characteristic curves and tables. 16 pp.
- "Oxide Thermal Cathode" by KAWAMURA Hajimuru 8370.0100
8340.
Electron emission versus various heating elements, filament current versus O₂ gas pressure in the tube, Richardson's equation, the work function, evaporation of BaO and Ba. 10 pp.
- "Researches into Oxide Cathodes through the Electron Microscope" by ARIZUMI Tetsuya 8370.0100
8430.
General view of the results of electron optical studies on cathode surfaces, electron emission from crystals, optical and electronic images, reversal of electronic images, center of radiation, cathode activation. 10 pp.
- "Secondary Electron Emission" by KAWAMURA Hajimuru 8370.0100
8430.
Energy distribution, primary voltage and its influence, work function and its effect, other factors influencing secondary emission, the theory of secondary emission, secondary electron emission in semi-conductors, practical applications. 8 pp.
- "External Photoelectric Effect" by SAYAMA Yoshihiro 8370.0100
8430.
The theoretical and practical development, history, the effect in pure metals, development of the composite photocathode, tables and graphs of experimental values. 11 pp.
- "Regularity in Nuclear Isomers" by MORIDA Yu 8430.
8600.0811
The work of Bethe, Hebb and Uhlenbeck in energy and spin differences. 2 pp.

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May 1943 - Vol XVII, No 5

- "Abstracts of Lectures to be Delivered at the Annual Meeting" 8430.
5706.
Program listing of 350 lectures variously on physics, mathematics, geophysics and astronomy which were to be given 17-19 Jul 1943 by about 400 society members; abstracts from 3 to 10 lines long; authors and institutions or private laboratories; the 350 lectures break down as follows: physics 138, mathematics 144, geophysics 45, astronomy 23. 46 pp. 8600.0100
8600.0200
8600.0811
4422.

Jun 1943 - Vol XVII, No 6

- "One-Parameter Set of Stochastic Laws" by IWAZAWA Kenkichi 8430.
General discussion. 4 pp.
- "Numerical Solution of Integrals" by HIDAKA Takatsuga and ISHIMOTO Sumire 8430.
Fredholm's solution, calculation of the recurrence formulas, numerical calculations, two examples, Fredholm integrals of the first type. 5 pp.
- "Theory of Rubber Elasticity" by SAKAI Koichi 8430.
Ideal rubber, application of statistical mechanics, the physical explanation of stress, relation between stress and strain, relation between stress and temperature, relation between temperature and length, graphs and formulas. 8 pp. 4416.0200
- "Movement of Anions in Counter Tubes" by SHIMODA Koichi and OGAWA Iwao 8430.
8370.0250
The Geiger-Muller tube, the circuit, variation in the grid voltage of tubes with two grids, estimation of anion mobility, the dead time. 5 pp.
- "The After-Discharge in Geiger-Muller Tubes" by SHIMODA Koichi and OGAWA Iwao 8430.
8370.0250
Explanation of the Nachentladung phenomenon, grid effect, temporal distribution of the after-discharge, tubes with two wires, tubes with double grids and wires, relation between photons and after-discharge, conjecture concerning the mechanism by which photons cause the after-discharge; characteristic curves, wiring diagrams, cross-section of the Geiger-Muller tube. 7 pp.
- "The Progress of Electrolytic Polarization in the Active Material of Storage Batteries" by TOMOHISA Takeo 0504.0604
8430.
Discussion of polarization and practical application of the results of experiments. 16 pp.

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Abstracts of material on various scientific subjects will be found as listed in the Table of Contents.

TABLE OF CONTENTS

Astronomy

Pages

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Jul 1943 - Vol XVII, No 7

- "Electrical Conductivity of Semi-Conductors" by HIBI Tadatoshi 8430.
Experimental and theoretical studies on number of conduction electrons n versus temperature T for various substances, activation energies E and initial values n_0 . 5 pp.
- "Deliquescence and Efflorescence in Rochelle Salt Crystals" by KAWAI Hiratsugu 8430.
Experimental results in tabular and graphic forms. 3 pp. 8330.0700
- "Statistical Mechanics of Chain Compounds (Part I): A Study of Rubber Elasticity" by KUBO Ryogo 8430.
Theoretical studies. 7 pp.
- "Transition in KH_2PO_4 , Part 1" by TAKAGI Yutaka 8430.
Calculation of total number of different positions of Hydrogen in the molecule following Slater in the study of Hydrogen bonds. 11 pp.
- "Mechanism Explaining Transport of Electric Charge in Belt Generators (Report by the Tokyo University Physical Laboratory on the Ion Accelerator)" by KUMAGAI Hiroo 8430.
Comparison of results for different arrangements of corona combs. 6 pp. 8600.0432
- "Researches into the Various Natures of Ion Sources Using Low Voltage Arcs" by ASANO Yoshihiro 8430.
Diagrams and operating curves. 8 pp. 8600.0432
- "Experimental Research into Nuclear Electrons" by OJIMA Shoji 8430.
Equipment, preliminary experiments, determination of excitation curves for nuclear electrons, their energy distribution and total energy, comparison of theoretical and experimental energy distribution of nuclear electrons, reaction ratio. 9 pp. 8600.0800
- "Several Researches into Ultra Short Waves" by WATANABE Michio 8430.
General survey of the whole field. 14 pp. 8340.0100
- "Denjoy Integral Theory, Part 2" by IZUMI Shinichi, SHIMANOUCHI Genichiro, ORIHARA Masae and KASAHARA Masatomo 8430.
Differentiation, Perron-type integrals, abstract Denjoy integrals. 24 pp.
- "Magnetic Scattering of Protons by Neutrons" by YAMASHITA Jiro 8430.
Nuclear forces and diagram of maximum energies. 2 pp. 8600.0800

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- "Intermediate Method of Handling Electrons Within Solid Bodies" by SAWADA Masami 8430.
General discussion of electron interaction. 2 pp.
- "Natural Decay of Pseudo-Scalar Mesons" by SAKATA 8430.
Shoichi and HIRANO Minoru 8600.0800.
General discussion. 1 p.

Aug 1943 - Vol XVII, No

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4406.0200
4402.
4406.0200
0502.

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4402.
4406.0100
4805.0100

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2 pp.	
May 1941	
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November 1941	
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"History of Ordnance, Part 3, Tanks" 3 pp.	0405.
January 1942	
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February 1942	
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- 40 -

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