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Experimental allergic encephalomyelitis was regularly produced by injection of normal mouse brain tissue emulsified with an adjuvant containing heat-killed BCG and liquid paraffin into guinea pigs, monkeys, and albino rats; however, it was much less frequently induced in rabbits and white mice.

In guinea pigs, the typical findings of the disease was a paralysis of the hind legs and death from ascending paralysis. In a few animals, however, following paralysis of one of the limbs, a gradual recovery was observed. Similar reactions occurred in the other types of animals used. It was noted that the clinical findings of the disease in monkeys were much more complex than those found in guinea pigs.

The authors used 23 references, all of which were in English except 2 German and 2 Russian, dated 1933-1959 with one exception, 1887. This article was received for publication on 27 September 1962. The authors expressed their thanks to the laboratory pathology team and the Department of the Chinese Academy of Medical Sciences for their assistance in the pathological investigations.
TECHNICAL SCIENCES

STUDY ON GRADUATING MACHINES -- Peiping, Ts'ee-hui Haueh-pao (Acta Geodetica et Cartographica Sinica), Vol 6, No 1, Feb 63, pp 44-49

[The following is a translation of the Russian-language abstract which appears at the end of an article, entitled "Some Problems on Graduating Machines for Graduating Precise Graduated Circles," by Tsou Tsu-ch'iang (6760/5261/1730.)]

This article sets forth certain problems concerning the precision of graduating machines, [problems] encountered in the investigation of the technology of graduating high-precision graduated circles.

After a detailed study of the problems relating to oscillations of the main axe, the author considers it possible to subdivide such oscillations into three parts: single-period oscillation, two-period oscillation, and random oscillation. The article examines the characteristics of these three oscillations, methods for their use, their effect on the performance accuracy of the graduating machine, and methods of reducing these effects. In analyzing the error distribution for the oscillation of the axe in the graduating machine, the author proposes methods for the correct sinking of the cutting tool to reduce the effect of the two-period oscillation. He introduces certain results in the investigation of the precision V of the (formed) system of the axe, connected with the performance precision of the graduating machine.

In considering the problem on abrasion and elastic deformation in the graduating machine, the author notes the effect of the primary displacement of elasticity in the worm gear at the very beginning of the work of the graduating machine (i.e., the phenomenon of "initial attack" of elasticity) and the phenomenon of return attack of elasticity of the worm gear at the beginning of the operation of the graduating machine. The article examines the effect of the duration of rest of the graduating machine begins rotating, and the effect of temperature change on the abrasion. The article also discusses certain exploratory results which the author obtained in applying the methods of analyzing the frequency spectrum for studying the problems on the abrasion of pins in the graduating machine.

The article also examines the problem concerning vibration of the graduating machine. In considering the vibration created within the graduating machine itself, the author also analyzes certain sources of this vibration, its characteristic features, and methods for eliminating it.
The article closes by examining the effect of temperature change on the precision of graduating the graduated circles and proposes certain measures relative to this.

PEIPING MUNICIPAL SILICATES SOCIETY HOLDS FIRST ANNUAL CONFERENCE -- Kuei-suan-yan Hsueh-pao, Vol 1, No 2, 15 May 62, p 117

The Peiping Municipal Silicates Society held its first annual conference on 9-15 May 1962. The conference summarized about 1-2 years of production experience and research results. The conference received a total of 95 papers on cement and cement products, glass and glass fiber, ceramics, and bricks. Comprehensive theoretical papers on subjects such as the application of petrology to silicates research and a discussion of the potassium fluorosilicate method for rapid determination of silica were also read. In addition, more than 30 papers on special subjects were read to interested groups. These included such subjects as research on sulfate cement and expanded cement, design norms for a large-scale cement plant, revision of cement standards, new cement products, etc. In the field of glass and glass fibers, there were papers on the chemical stability of glass fibers, techniques of glass determination, new electrical fusion techniques, etc. In the field of ceramics, there were articles on conservation of coal in inverted flame kilns, large-scale sanitary ceramics production techniques, infrared radiation apparatus, etc. Finally, there were technical summaries of theories in several special fields and a discussion of work and plans for future academic activities. The conference elected 39 directors of the Peiping Municipal Silicates Society, including such men as Liu Yuan-shih (0491/0337/1102) Wang T'ao (3769/347), Ling Ch'i-chun (0407/0366/4546), and Wang Chine (3769/0255).
STUDY ON AZIMUTHAL PROJECTIONS -- Peiping, Ta'e-hui Haueh-pao (Actr Geodetica et Cartographica Sinica), Vol 6, No 2, May 63, pp 104-119

[The following is a translation of the Russian-language abstract which appears at the end of an article entitled "Pseudoazimuthal Projections and Their Application for the Entire Map of China," by Liu Chia-hao (0491/1367/627a) and Li Kuo-tsao (2621/0948/5879).]

On the basis of the principle that a projection should be selected according to the form of the cartographic territory and on the basis of investigating the type of territory in China, the authors proposed an isoconic equation with the form $\phi = \alpha + \frac{\pi}{2} \cos 3\theta$. A projection which has such an equation may be considered best for the territory of China.

The authors then investigated pseudoazimuthal projections. They considered the determination of the radius of the pseudoazimuthal projections. They analyzed the values of the parameters in the cited projections, and they proposed strict methods for determining the parameters. After this, the authors developed a plan for the entire map of China. The projection of this plan is an approximate equidistant projection. Its isoconic projection of the scale of the areas and of the greatest angular distortions are almost identical to and uniform with the type of territory in China. In this respect, the different distortions of the projections adopted for China could be reduced. A brief comparison of the developed projection with the azimuthal equidistant projection and with the conic equidistant projection in this article confirmed improvement in the distorted areas and angles in the developed projection. In considering the limited applicability of pseudoazimuthal projections, the authors investigated combinative pseudoazimuthal projections. They proposed four principles of combination and thus established a theoretical foundation for the application of combinative pseudoazimuthal projections. A plan for combinative pseudoazimuthal projections for the entire map of China was developed according to the special territorial features in China. This is a plan for approximate pseudoazimuthal equidistant projections, whose distortions have not only those advantages as the aforementioned plan, but also certain improvements in many places. Finally, the article demonstrates that pseudoazimuthal projections have considerable flexibility; and after having been developed in this article, they will surely receive even wider application.
WORK ON THE THEORY OF EQUIVALENT OBSERVATIONS -- Peiping, T'se-hui Hsueh-pao [Acta Geodetica et Cartographica Sinica], Vol 6, No 2, May 63, pp 59-90

[The following is an English abstract of an article, entitled "Equivalent Observation in a Broad Sense," by Kuan Hsueh-hai (7070/1331/3189).]

The theory of equivalent observations in a broad sense is an extension of the theory of equivalent observations to correlated observations.

In the first part (chapter I) of this paper, definitions of three types of equivalent observations are given, and four theorems concerning these observations are proved.

In other parts of this paper, the applications of this theory to several typical problems are discussed and a series of applied formulas are derived.

Meanwhile, some methods of adjustments suggested by other authors are discussed.

CHINESE GREAT SCALE TRIANGULATION CALCULATED WITH MATRIX -- Peiping, T'se-hui Hsueh-pao (Acta Geodetica et Cartographica Sinica), Vol 6, No 1, Feb 63, pp 1-13

[The following is an English abstract which appears at the end of an article, entitled "The Matrix Adjustment by Groups of Great Scale Triangulations," by Chuang K'un-yuan (5445/2492/0337).]

This paper treats of the adjustment by groups of great scale triangulations calculated with matrix. The author aims at simplifying the adjusted calculus. At first, by arranging the normal equations suitably, an adjusted method by groups has been established. According to the normal figures, this method divides the triangulations into sections and regularizes the construction of diagonal submatrix in the normal equations. By the general iteration, the author also obtains the iteration by groups $K = b_0 + b_1 + b_2 + b_3 + ... + b_N$ and further gets it in the form of Seidel. The formula $F = [f^T f] + [q^T q]$ may calculate the weight on functions of adjusted values. Secondly, when iterated matrix $B$ has one minimum eigenvalue $\lambda_1$ but $|\lambda_1| < 1$, or two maximum eigenvalues $\lambda_1 = \lambda_2$ but $|\lambda_1| < 1$, the author finds the convergence formula to expedite the convergence of the iteration. Thirdly, the author suggests using the method of P. A. Hansen or enlarged matrix to calculate the inversion $A$ and gives several tables to invert the diagonal submatrix. At last, there is an example with 21 normal equations. Such an example has been calculated by the author himself and completed within 16 hours.
only. If calculated by three persons, it will be completed within 8 hours surely. This method completes it so rapidly, and the accuracy may be carried out to any degree. Therefore, this method is more fit for the adjustment of great scale triangulations calculated with hand calculator or high speed calculator.

(Included in this article are seven pages of tables and charts which are co-ordinated with this article; there are also many diagrams and equations contained throughout the article.)

STUDY ON ISOLINE GRAPHS -- Peiping, Ts'e-hui Hsueh-pao (Acta Geodetica et Cartographica Sinica), Vol 6, No 1, Feb 53, pp 31-38

[The following is a translation of the Russian-language abstract which appears at the end of an article entitled "Analysis of Computation and Equalization of Triangles in the Orientation of Mine Shafts With the Aid of Isoline Graphs for Error," by Chiang Yu-hen (3068/7183/4024)]

In applying isolne graphs for error, the author of this article makes a detailed study of formulas for computing connecting triangles, their accuracy, the problem of their equalization, etc. These graphs clearly express the law of error distribution and the relationship between error and the triangle form.

The following conclusions were obtained as a result of the analysis:

1. The elongated form of connecting triangle is the most effective. It must be applied in every possible way in practice and computed according to the formula of sines.

2. When there is no opportunity to construct an elongated form, it is possible to apply an approximately isosceles or equilateral form, which is less precise and must be computed according to the formula of the sides. Other forms are considered ineffective.

3. The equalization of connecting triangles does not have any practical value. However, the equalization of measured angles at the station may be of some benefit.
The following is a translation of the Russian-Language abstract which appears at the end of an article, entitled "State and Trend in the Development of Mathematical Cartography," by Wu Chung-hsing (0702/1813/1840).

The article briefly sets forth the state of the development of mathematical cartography over more than 20 years and the further trend in its development.

In this article, the author examines the general direction with the following questions: on the induction of available cartographic projections and their development; on the search for new projections based on the disposition of deformations of known projections and on their selection with respect to cartographic requirements; on changes in cartographic projections; on the development of map measurements; on the composition and use of nomograms; on improvements in developing projections, and on investigation of the history of mathematical cartography. These observations may be aids to cartographers in our country.

The following is a translation of the Russian-language abstract which appears at the end of an article, entitled "On the Progress of Mathematical Elements and the Description of the Contents in Chinese Maps," by Kao Chun (7559/0303).

China is the focus of cartography in the Orient. Many outstanding cartographic productions had already appeared in China in ancient times. For example, in the 3rd Century, P'ai Hsui (224-271) had already created a map, "China and Its Tributary Nations," and had postulated six basic principles of cartography. In later times, Chia Tan (730-805) designed a map, "China and Other Countries," which covered Asia.

"Ruled Squares in Li" is a measure of length in China; one li equals one-half kilometer was a traditional cartographic method in ancient China. In the long process of cartographic development in China, this method played an important role in transferring and authenticating the contents of maps. Indeed, it objectively produced the effect of "square projection." The cartographic network and the half-kilometer square were used as the mathematical basis for Chinese maps for a long time during this period.

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In the comparatively distant past, our country was already using conventional cartographic signs which produced notable effects for improving the interpretation of maps and, indeed, enriched their contents. It was approximately in the middle of the 19th Century when China began the extensive use of cartometry. Thus, the representation of map subjects in a horizontal projection gradually replaced landscape symbols.

The following is a translation of the Russian-language abstract which appears at the end of an article, entitled "Results of the Experiment of the NASM-2a Geodimeter in the Plateau Region," by Teng Ju-kang (6772/5423/0474) and Chin Kuo-hsiung (6855/0948/7160).

With the aim of explaining the expediency of applying the NASM-2a geodimeter in the plateau region and explaining its attainable accuracy, a characteristic site was selected in 1960, a high-precision triangulation network was created, and an experiment was conducted.

The Swedish geodimeter NASM-2a No 123 was used for this purpose. The observation on all sides of the network was conducted in two evenings, using about 9-14 readings. Observation on the basis was made in three evenings, using about 24 readings.

Results of the test indicate that the geodimetric measurement maintains good accuracy along the internal convergence. The mean square error per reading was less than 14 mm. The mean square error of the final results was usually within 1-14 mm. The discrepancy in the results of the various evenings was usually less than 14 mm. Hence, it follows that the geodimeter performs evenly and with a high degree of accuracy on the plateau.

In comparing and analyzing the results of the sides measured with a geodimeter and by the triangulation method, it is evident that the accuracy of measurement during observations on the two evenings with six readings in each was usually under 1:700,000, while the maximum relative error was about 1:400,000.

The experiment also demonstrates that the effect of the external factors is often the major source of errors in the measurement. To heighten the accuracy of measuring distance with a geodimeter, attention should be given to local conditions in selecting the sides, so that the meteorological data determined on the two ends of the lines of light distribution would prove to be characteristic of all the lines. In addition, it is necessary to check the accuracy in determining centering and reduction.
STUDY ON TELLUROMETRY -- Peiping, Ts'e-hui Hsueh-pao (Acta Geodetica et Cartographica Sinica), Vol 6, No 1, Feb 63, pp 13-25

The following is a translation of the Russian-language abstract which appears at the end of an article, entitled "Results of the Investigation of a Tellurometer and Its Experimental Application," by Chang Chih-hsin (1728/1807/2450), Chin Kuo-hsiung (6855/0946/7160), Wei Keng-pin (7279/5105/6333), Hsia Chih-chung (1115/3112/0022), and Lai Hsi-an (6351/6932/1344).

This article was written as the result of numerous field experiments with a tellurometer made in the Union of South Africa and a certain experiment of its application in actual productions. These experiments were conducted in 1959-1960 by corresponding institutions in our country.

The article is divided into three parts. The first part is devoted to an account of the results of the experiments, particularly, results of experiments in the plateau region. From the results of numerous experiments, it is evident that the actual precision of the measurement of distances with a tellurometer may reach 1:200,000 under conditions of reducing the error of reverberation from the Earth's surface. However, much factual data indicate that the performance of the instrument is uneven, and, individual cases, it does not even produce results. The second part of the article considers errors of reverberation from the Earth's surface and methods for reducing such. Actual performance has already proved that these methods permit effective elimination of the reverberation error. However, they are not always effective. Consequently, the error in the reverberation from the Earth's surface when measured by a tellurometer is now also the main obstacle in improving the accuracy of measurements of distances. Thus, more extensive tests must be conducted for the final elimination of this error. The third part of the article is devoted to examining the laws of the effect of meteorological factors on tellurometric measurement of distances.

Because of insufficient date, the laws cited in the article cannot be considered general. They merely represent particular cases relating to the plateau region. More experiments and necessary theoretical investigations must be conducted in the future in order to expose fully the laws of the changes caused by the effects of meteorological factors.

PROBLEMS OF SEA GRAVIMETRY--Peiping, Ts'e-hui Hsueh-pao (Acta Geodetica et Cartographica Sinica), Vol 6, No 2, May 63, pp 100-103

The following is a translation of the Russian-language resume which appears at the end of an article, entitled "Gravimetric Measurements at Sea," by Chang Shan-yen (1728/0810/6056) and Li Hsi-ch'ia (2621/632/0366).
Principal difficulties in measuring gravity at sea lie in the fact that
the gravimeters are constantly being affected by disturbances caused by rough
seas and by the ship's motion. Such disturbances include the ship's slope,
periodic horizontal and vertical accelerations, centrifugal velocity, etc.
The use of long- and short-period gimbals involves two cases which are also
considered when investigating the effects of horizontal accelerations on
gravimetry readings. As a result of this, it was observed that the effect
of horizontal accelerations could be eliminated if the gimbal period were
sufficiently long. Use of a gimbal with a short period requires second
order corrections for the horizontal accelerations. Corrections for the
ship's slope caused by the final period and by damping must be considered.
The effect of vertical accelerations on the gravimetry readings and the
crosscoupling effect may be eliminated in the designing of the instruments
and in the measuring process. This article also examines corrections for
velocity during the ship's movements relative to the Earth and correc-
tions for the submersion depth of the submarine and for the sea depth, [factors]
necessary for computing the gravity anomaly.

CHINESE RESEARCH IN PHYSICAL METEOROLOGY -- Peiping, Science Abstracts of
China: Earth Sciences, No 1, 1963, p 20

The following is an English abstract of an article, entitled
"Radar Equation Considering the Coherent Scattering of Radar Waves
From Cloud and Raindrops," by Li Chi-chen (2621/0366/3819), which
was originally published in Chi-hsiang Hsueh-hao (Acta Meteorologic

Attention has been paid to the fact that grouping association between
particles exist in clouds, as well as in rain. Coherent scattering of
radar waves from cloud and raindrops dependent to each other has been
evaluated and a new radar equation derived. The new equation involves the
old one as its special form indicates incoherent scattering. It is found
that the effect of coherent scattering in some cases is not quite small
and should not be neglected.

CHINESE RESEARCH ON GLACIERS -- Peiping, Science Abstracts of China: Earth
Sciences, No 1, 1963, pp 12-13

The following is an English abstract of an article, entitled
"The Great Ice Age Glaciation in China," co-authored by Sun Tien-
ching (1327/3013/0615) and Yang Huai-jen (2799/2037/0088), which
was originally published in Ti-chih Hsueh-pao (Acta Geologica
Sinica), Volume 41, No 3-4, 1961, pages 234-244.

During the past decade, extensive geological and geographical explora-
tions into numerous mountainous areas and in some of the subjoining piedmont
plains have brought home large quantities of materials positively proving
the wide distribution of vanished glaciers of the Great Ice Age. The materials include: (1) erratic blocks, (2) moraines, (3) faceted, polished pebbles and boulders with typical glacial striae, (4) planed, polished, gouged and striated rock surface, (5) epitectonic phenomena, namely, tectonic disturbances caused by surface drag on loose and stratified deposits on the superficial layer of bed rock underneath boulder-clay, and (6) ice sculptural land forms damaged to various degrees through inter-and post-glacial erosion.

The mountanious area of northwest Hupeh, the Lushan and its surrounding plains, the scenically superb mountains of the Huangshan and parts of the Tapeishan, in central Yangtze Valley, and the mountains of the western border of the Red Basin of Szechuan yield reliable evidences for glacial action in the initial stage of our research on the subject. Subsequent investigation on a wider scope enabled us to recognize that glacial phenomena also prevails in the Great Khingan, Chilien (Nanshan), and Tienshan areas. Nor does the Yangtze belt mark the sudden limit of glaciation as was once supposed. Indisputable evidences for glaciation have been gathered from Kweichow, Yunnan, and even northern Kraangsi in recent years. In the region of North China now characterized by a dry climate, we have found unmistakable traces of glacierization in a number of places, notably in certain spots in the Western Hills of Peking.

The materials in hand converge to show the occurrence of poly-glaciation essentially of the corrie type in northern and southern China, separated by interglacial periods of glacial or even subtropical climate.

Many important problems, however, still remain unsolved. The more significant ones concern: (1) the origin of boulder-and-clay deposits and their associated gravels in places where they are only partly preserved on a terrace tread of leveled down to a plain in the lowland often covered by loess or other superficial deposits, (2) the question of demarcation between glacial and interglacial periods and of the age of these periods, (3) the question as to whether some or all such arctic faunal and floral elements as Coelodonta antiquitatis, Elephas (Mammonteus) primigenius, and Saxifraga and the warm climates ones such as Rhinoceros mercki, Bubalus, and Ulmus lived side by side or in separate period, (4) the question as to how the proved or suspected glacial fluvo-glacial deposits are related to the different formations of Huang-t'u (loess), and (5) the division of physiographic stages from the point of alternating glacial and interglacial climates and the influences of postglacial erosion upon the superimposed erosional effects on past land surfaces throughout the glacial and interglacial periods.
The first part of this paper deals chiefly with the Triassic stratigraphic provinces and eight subprovinces are divided on the basis of stratigraphical development and facies changes as shown on table. For each subprovince, one or two typical sections are chosen and briefly described, together with some discussion about their succession and subdivision. The upper Triassic in southwest Kweichow, the lower Triassic in the east subprovince of northwest Kweichow, and the Sanchiaotzu of the upper Triassic in the central subprovince are subdivided anew; the occurrence of post-Anisic deposit in the Ching-yen section, central Kweichow, is discussed; and a biostratigraphic study of the Triassic succession in the southeast province is made.

The author reviews the boundaries and nature of contact with Permian and Jurassic, as well as the co-relation among the different stratigraphic units within the Triassic in Kweichow and offers a list of stratigraphical terms that could be more appropriately used in this province. A special discussion on the geological range of the Leikoupotzu (Szechwan Province) and the Patuntzu (Hupeh Province) has made it clear that the lower and middle part of these two formations, formerly considered to be Ladinic, are in fact equivalent to the Kuanling tzu (Kweichow Province); therefore, they should be of Anisic age.

The world-wide usage of the stages of the lower Triassic is mainly based on ammonitic faunas. Taking advantage of the coexistence of both ammonites and lamellibranchiates in Ussuri Gulf, Himalaya, Transcaucasia, Alps, and Kweichow Province, this paper confirms that the Eumorphotis multiforntis-Clarraiia aurita fauna is characteristic of the Indian stage and the Tirolites spinocus-Pteria murchisoni fauna of the Olenekian. Thus, the Feihsiangkian-Yehlangtzu of Kweichow and Seiser and the lower Campiler of the Alps, containing the former fauna, are of Indian, Yangningchengtzu, containing the latter, and its Alpian equivalent, the middle and upper Campiler, are of Olenekian stage.

Referring to "The Draft Copy on the Triassic Faunal Zones of South China," issued by the First National Stratigraphical Congress (1959), this paper proposes to abandon the zone of Augustella Augusta, as well as that of Rhynchonella Decurtata and Maxillirichynchia Sinensis, on the ground of the very limited distribution, and also the zone of Eumorphotis.
Illyrica and that of Eumorphotis inaequicostata for their erroneous geographical range. The zone of Eumorphotis multiformis has been found to be extending downward, while that of Halobia superba is relimited as a local zone. A preliminary list of the Triassic fauna zones of Kweichow is proposed.

The second part of this report is a systematic analysis of the lithofacies and the faunal ecology of the Triassic of Kweichow as per stage and per subprovince. Special attention has been paid to the facies changes of the lower Triassic, as well as the over-saline-water facies of the Anisic Kuanlingtzu and the biothermal facies of middle Triassic in the Chingyen-Machangping district. The lower Triassic faunas of the epicontinental sea of southwest China are a mixture of both the Tethic and the Circum-pacific faunas, with the China Sea serving as a sort of channel way for both faunal provinces. The upper Triassic fauna, on the other hand, becomes much more restricted in extent. The analysis leads to a general picture of the harmonious interrelations between lithofacies and ecological types and from this it is stressed that stratigraphical value of the various faunas should be appraised according to their ecological types.


[The following is an English abstract of an article, entitled, "New Materials of Abrograptidae," co-authored by Mu En-chih (4476/1869/0037) and Chiao Hsin-tung (0829/2450/2639), which was originally published in Ku-sheng-wu Hsueh-pao (Acta Palaeontologica Sinica), Volume 10, No 1, 1962, pages 1-11.]

Recently while investigating the Ordovician graptolites of Chekiang, the writers found a number of specimens of the family Abrograptidae among the collections of graptolites deposited in the Institute of Geology and Palaeontology, Academia Sinica. Four species belonging to the four genera are recognized as follows:

1. Dinemagraptus sinicus sp. nov.
2. Abrograptus forratus mu.
3. Parabrograptus tribraciatus gen. et sp. nov.
4. Chiangshanites ramosus gen. et sp. nov.

These graptolite specimens were mainly collected by Prof Y. H. Lu, Miss Y. T. Hou, Mr J. T. Chang, Mr T. Y. Lu, and one of the writers (Mu) from the Middle Ordovician Hulo shale of the Chiangshan district, western Chekiang, in 1954, and partly by Mr K. T. Yeh and others from the Hulo shale of Lungyu, Chekiang, in 1956.
The family Abrograptidae was established by the senior writer in 1958. It consists of two genera known as Dinemagraytus Koslowski and Abrograptus Mu. Both of them are monotypic. The new genus Parabrograptus resembles Abrograptus in many characters, but has a central branch and an oblique filament in addition to the three radiated filaments in the proximal portion of the first main stipe. It is most probably a derivative of Abrograptus. The new genus Chiangabanites is a multi-ramous graptolite with thecal periderm reduced. Its systematic position is still uncertain due to its fragmentary preservation. On account of the particular character of the reduced periderm, this genus is here provisionally described under the family Abrograptidae.

The occurrence of these new materials of the family Abrograptidae reveals that the reduction of the periderm is almost as notable in the axonolipous graptoloids as in the axonophorous graptoloids. He further confirms the opinion that "the family Abrograptidae and the family Reticolitidae represent two different lines of the reduction of the thecal periderm in Graptoloidea."

[The following is an English-language abstract of an article titled "The Time-depending Scattering Theory of Multichannel Process," by Yang Tse-sen (2799/3419/2773), Department of Physics, Peking University. References listed at the end of the article include four English-language articles, dated 1950 to 1956, and one Chinese-language article by the present author, dated 1958. This article was received for publication on 23 August 1962. The author extends thanks to his teacher, Prof Yang Li-ming (2799/4539/6900), for valuable assistance during discussions of the subject material.]

The time-depending formal theory of scattering, initiated by Lippmann and Schwinger, is generalized to the case of multichannel process.

Ekstein attempted to construct such a theory in 1956 and pointed out the orthogonality properties of the set of multichannel outgoing (incoming) scattering states, which is very important for the establishment of scattering matrix, but it seems to him that the quite general starting point of the L-S formalism is not appreciated. In his work, the simplicity of the L-S formalism is lost. He came to the conclusion that the scattering matrix cannot be regarded as the matrix of a single linear operator because he insisted on working in one single interaction representation for all the initial and final states. Thereby, the concept of scattering matrix is confused.

The present paper deals with the same generalization, but the simplicity of the L-S formalism is preserved. The explicit form of the scattering operator is given. The calculation of the various transition probability in the present case can be made in a similar way as the original L-S theory.
Vol 19, No 4, Apr 63, pp 205-214

[The following is an English-language abstract of an article, entitled "Nuclear Interactions of Cosmic Ray High Energy Particles With Liquid Scintillator," by Wang Shih-wei (3769/0013/0251), K'uang Hao-huai (3119/3185/2037), and Yuan Yu-k'uei (5913/0151/1145) (no affiliations given). The article was submitted for publication on 22 October 1962. Of 18 references listed at the end of the article, 11 are in English, 5 in Italian, one in Japanese, and one in Chinese. The most recent references are dated 1962.]

Nuclear interactions induced by cosmic ray high energy particles have been studied by means of a multiplate cloud chamber at 3,185 meters above sea level with a liquid scintillator as target material. From the analysis of 18 interactions induced by charged primaries, it is found:

1. Average primary energy \( E_p = 4.1 \pm 8 \) Bev (by the Castenoli formula).
2. Average multiplicity of charged secondary \( n_1 = 4.9 \pm 0.3 \).
3. With \( x = 1g \gamma t g \theta \), the differential angular distribution \( dN/dx \) indicates some possibility of the existence of double-humped shape. This angular distribution has been discussed tentatively along the lines of two-centered model.

ELECTRONIC MEASUREMENT APPLICATIONS EXAMINED -- Peiping, Wu-hsien-tien,
No 5, 10 May 63, pp 1-2

[The following is a descriptive abstract of an article by An P'ei (1344/1014), entitled "The Applications of Electronics in Measurement Techniques."]

This article considers the wide application of measurement technology and the advantages offered by electronic methods. It specifically considers techniques of measuring size, time and speed, and stress. One section of the article is devoted to a consideration of the problems of radio telemetry as applied to high-speed aircraft, ballistic missiles, artificial satellites, and atomic electric power stations. The entire article is general in nature, and no reference is made to any Chinese work in the field. The article is accompanied by three block diagrams of systems for measuring stress, speed, and thickness.

[The following is a translation of the Russian abstract of an article, entitled "The Cherenkov Spectrometer for Complete Absorption," by T'ang Hsiao-wei (0781/1321/1218) (no affiliation given). Of 27 references listed at the end of the article, 17 are in English, 5 in Russian, 4 in Chinese, and 1 in German. The most recent references are dated 1961. The article was received for publication on 16 July 1962.]

This paper discusses the application of the Cherenkov complete absorption spectrometer to measurement of the energy spectrum of high energy electrons or photons in the field of nuclear physics. It explains the structure and principles of the Cherenkov complete absorption spectrometer and compares the characteristics of several Cherenkov complete absorption spectrometers.

NEW METHOD FOR CALCULATING PROPERTIES OF GLASS -- Peiping, Kuei-suan-yen Hsueh-pao, Vol 1, No 2, 15 May 62, pp 55-76

[The following is a translation of the Russian abstract of an article, entitled "A New System of Calculating Physical Properties of Silicate Glass," by Kan Fu-hsi (1626/4895/3588) of the Institute of Optical and Precision Instruments, Chinese Academy of Sciences. The author extends thanks to Professor Appen of the Soviet Union for his enthusiastic concern for the research involved. Of 23 references at the end of the article, 12 are in English, 6 in Russian, 3 in German, and 2 in Chinese, both of them by the present author. The most recent reference is dated 1961.]

This paper generalizes a great many of the present methods of calculating physical properties of silicate glass and compares them with the results obtained by means of four representative methods, to bring out the deficiencies of the methods of calculation. Methods of representing the composition of glass and methods of determining the calculation coefficient of each constituent are discussed. On the basis of systematic research into the chemical composition and structure of glass and its relationship with the characteristics of the glass, a new system for calculating the physical properties of silicate glass is suggested. The article provides calculation coefficients for almost 40 types of oxides, which can be used to calculate 6 kinds of physical properties, such as the index of refraction, average dispersion, density, index of thermal expansion, and indexes of torsion and elasticity. The new method of calculation is much more applicable than present methods.

There is a theoretical discussion of the rules of changes in some properties of oxides, which explains the close relationship between some characteristics of oxides in glass and its structural properties.
MANY COLLEGES ANNOUNCE VACATION PERIODS -- Jen-min Jih-pao, Jen-min Jih-pao,
3 Jul 63

[Between 3 July and 28 July 1963, Jen-min Jih-pao announced
the summer vacation period for many of the colleges and universities.
Dates of publication are in parenthesis.]

1. Nan-k'Al University, from 8 July to 26 August. (3 Jul 63)
2. Tsinghua University, from 15 July to 1 August. (3 Jul 63)
3. China University of Science and Technology, from 15 July to
   2 September. (15 Jul 63)
4. Tientsin University, from 15 July to 7 September. (15 Jul 63)
5. Nanking Engineering College, from 15 July to 2 September. (19 Jul 63)
6. Peking University, from 20 July to 31 August. (19 Jul 63)
7. South Central Geological College, from 22 July to 2 September.
   (19 Jul 63)
8. Harbin Polytechnic University, from 29 July to 1 September.
   (19 Jul 63)
9. Peking Aeronautical Engineering College, from 20 July to 1 September.
   (21 Jul 63)
10. Kirin University, from 28 July to 1 September. (25 Jul 63)
11. Sian Chiao-t'ung University, from 29 July to 31 August. (28 Jul 63)
12. Dairen Engineering College, from 5 August to 7 September. (28 Jul 63)
[The following biographic information on selected Chinese Communist scientific and technical personnel was taken from the sources cited in parentheses].

CHAN Kuang-liang (2069/1684/5328), Department of Construction, Inner Mongolia Autonomous Region; author of article, "Discussion on 'On Theory of Calculation for Flat Shell With Rectangular Base Without Reinforcement (I)." (Peiping, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 2, 1962 pp 54-63)

CHANG Chieh (1728/3381)
WANG Tsung-I (3769/1350/4400)
Both of the Institute of Zoology, Chinese Academy of Sciences; Coauthors of article, "Faunistic Studies of Mammals of Tainghai Province." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 125-139)

CHANG Chun (1728/0971), deputy secretary of the party committee, Institute of Geology, Ministry of Geology; died of an undisclosed illness on 26 Jun 1963. (Peiping, Pei-ching Jih-pao, 28 Jun 63, p 3)


CHAO Cheng-yi (6392/2973/0001)
LI Chien-chih (2621/0313/0037)
HUANG Nan-yueh (7806/0589/2887)
CH'EN Chia-jui (3088/0857/3843)

TAI Ai-yun (2071/1947/0061)


CH'EN Chia-jui (3088/0857/3843)

TAI Ai-yun (2071/1947/0061)

Both of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article "The Copepoda of the Wu-Li Lake, Wu-Sih, Kiangsu Province. II. Cyclopodia." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 225-249)

CH'EN Chia-jui (3088/0857/3843)

SUNG Ta-hsiang (1345/1129/4382)

Both of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article, "Notes on Copepoda Collected From Shigatze and Gyangtse Regions in Tibet, China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 79-98)

CH'EN Hsiao-chou (3088/1321/1352), Institute of Zoology; author of article, "The History of the Formation and Special Characteristics of Mammals in Tibet." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 139-151)

CH'EN Hsin-t'ao (7115/1800/7118), Department of Parasitology, Chungshan Medical College; author of article "The Etiological Agent of Human Paragonimiasis in China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 279-286)

CH'EN Hsin-t'ao (7115/1800/7118)

HSU Ping-k'un (1776/4426/6924)

Both of the Chungshan Medical College; coauthors of article, "Some Experiments on the Rate of Movement of Certain Trombiculid Mites." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 307-314)
Both of the Department of Parasitology, Chungshan Medical College; coauthors of article, "The Behavior of the Trombiculid Larvae in Climbing onto the Rodent Hosts." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinical Vol 15, No 1, Mar 63, pp 29-33)

Both of the Department of Parasitology, Chungshan Medical College; coauthors of article, "The Age of the Adult Trombicula Akamushi var. Deliensis in Relation to the Number of Larvae Produced." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinical, Vol 14, No 3, Sep 62, pp 355-361)


Both of the Institute of Geography, Chinese Academy of Sciences; author of article, "Some Modern Special Characteristics of Cartography." (Peiping, Ti-li Haueh-pao, [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 36-62)

Cosauthors of article, "A New Record of Grasshopper to China -- Eremippus Kozlovi Misthenko." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, p 54)

Cosauthor with Y. W. Kucharoff of article, "Equilibrium Between Solid Phases in System Mg O-Cr 2 O 3 - Fe 2 O 3." (Peiping, Kuei-suan-yen Haueh-pao, Vol 1, No 2, 15 May 62, pp 91-98)
CHENG Hsiao-ta (6774/1321/6671), Chungking Communications College; author of article, "The Space Calculation of the Reinforced Concrete Beam Bridge With the Ratio Between the Width and Span Less Than 0.5." (Peiping, Tung-ch'eng Haueh-pan, [Chinese Journal of Civil Engineering], Vol 8, No 2, 1962 pp 50-55)

CHENG Kuang-mei (6774/0342/5019), Department of Biology, Peking Normal University; author of article, "Ecological Distribution of Birds During the Winter in Peking and Vicinity." (Peiping, Tung-wu Haueh-pan, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 321-337)


CHENG Tso-hsin (6774/0155/2450), Institute of Zoology, Chinese Academy of Sciences T'AN Yao-k'uang (6223/5069/0562), Institute of Zoology, Chinese Academy of Sciences MIN Chih-lan (7036/5347/5695), Biology Department, Northwest University Coauthors of article, "Taxonomic Studies on Birds from Southwestern Szechwan and Northwestern Yunnan, Part I., Passeriformes: Muscicapidae." (Peiping, Tung-wu Haueh-pan, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 109-125)

CHENG Tso-hsin (6774/0155/2450), Institute of Zoology, Chinese Academy of Sciences

CH'IEN Yen-wen (6929/3601/2429), Institute of Zoology, Chinese Academy of Sciences

KWAN Kuan-hsun (7070/6306/0534), Institute of Zoology, Chinese Academy of Sciences

LI Kuei-yuan (2621/2710/0997), Szechwan Provincial Agricultural College.

CH'EN Fu-kuan (7115/2591/1351), Biology Department, Northwest University. Coauthors of article, "An Avifaunal Survey of the Ts'ai-ling and Ta-P'ai-Shan Region." (Peiping, Tung-wu Haueh-pan, [Acta Zoologica Sinica], Vol 14, No 3, Sept 62, pp 361-381)

CHIANG Ch'un-ch'iu (5592/5573/4428), Peking Research Academy of Fine Designing; author of article, "Discussion on 'The Graphical Analysis of the Second Plane of Rupture in Designing Retaining Wall (III)."' (Peipings, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 47-52)

CH'IAO Sheng-hsi (0829/4143/6007), Research Institute of Meteorology, Hubei Province; author of article, "The Relationship of the Many Years of Change From the Sun's Actions to the Problem of Flood and Drought on the History of Hubei Province." (Peipings, Ti-li Hsueh-pao, [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 14-25)


CH'IEN Chia-huan (6929/1367/2970), East China Hydraulic Engineering College; author of article, "Settlements of Some Sluices Foundations in the Northern Part of Kiangsu Province and Their Relations With Time," (Peipings, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 9, No 3, 15 May 63, pp 11-16)

CH'IEN Chung-I (6929/6988/3015); author of article, "Buckling of Composited Compressive Member of Timber." (Peipings, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 9, No 3, 15 May 63, pp 53-57)

CH'IEN P'ei-feng (6929/1014/7364), Southwest Institute of Technical Physics, Chinese Academy of Sciences, author of article, "The Combination Factor of Modal Response of Chimney Under Seismic Action." (Peipings, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 9, No 3, 15 May 63, pp 22-29)

CH'IEN Yen-wen (6929/3601/2429)

CHENG Pao-lai (6774/1405/6336)

KUAN Kuan-shun (7070/6306/0534)
Coauthors of an article, "New Records of Birds From Sinkiang." (Peiping, Tung-wu Hsueh-pao, [Acts Zoologica Sinica], Vol 15, No 1, Mar 63, p 168)

CH'IN Kuang-jung, Department of Analytic Chemistry, Moscow State University; coauthor with I. M. Gibalo of article, "On Oxalate Complexes of Niobium and Tantalum," in Russian; received for publication 23 January 1963. (Moscow, Vestnik Moskovskogo Universiteta, Seriya, 2, Khimiya, No 4, Jul/Aug 63, pp 73-74)

CHIN Wen-lu (6855/0795/7627), Hangchow Municipal Institute of Construction; author of article, "Discussion on "The Graphical Analysis of the Second Plane of Rupture in Designing Retaining Wall (I)."" (Peiping, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 44-45)

CHIN Yun-yao (6855/0061/5069); author of article, "Some Reinforced Concrete Tanks Built Abroad." (Peiping, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 54-59)

CHING Ch'i-Ch'eng (5427/0366/6134)

P'ENG Jui-hsiang (1756/3843/4382)

FANG Yun-ch'iu (2455/5366/4428)
CH'IU Shu-yuan (8002/2579/7108), Department of Biology, University of Amoy, author of article, "On the Metamorphosis of the Ctenophore Ocyropsis Crystallina (Rang) From Amoy." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 10-17)

CHOU Ching (0719/6975), Research Academy of Railroad Sciences; author of article, "Discussion on 'The Graphical Analysis of the Second Plane of Rupture in Designing Retaining Wall (II).'" (Peiping, Tu-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 45-47)


CHU Li-chung (2612/7787/0022), Institute of Zoology, Chinese Academy of Sciences; coauthor with A. V. Zhirmunsky of article, "The Cell Thermostability of Sympatric Species of Donax in Relation to the Temperature Condition of Their Habitat." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 21-29)


CHU Yuan-ting (2612/0337/7844)

WU Han-lin (0024/3352/7207)
Both of the Shanghai Fisheries College; Shanghai Fisheries Institute, Chinese Academy of Sciences; coauthors of article "Description of a New Genus and a New Species of a Trichiuroid Fish of China." (Peiping, Tung-wu Haush-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 219-225)

FAN Chung-min (4636/1813/3046); author of article, "Using Nest-Boxes for Attracting the Great Tits to the Cultivated Larch Woods." (Peiping, Tung-wu Haush-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, p 288)

Fu Hsiang-chi (0265/3276/3823)

CH'EN Ta-yuan (7115/1129/0337)

CHENG Kuo-Chang (6774/0948/4545)
All of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article, "Studies on the Glomera Aortica of the Great Reed Warbler and the Von Schrenck's Little Bittern." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 292-300)

HO I-hsun (0149/3015/0534), Institute of Parasitic Diseases, Chinese Academy of Medical Sciences; author of article, "Some Remarks on the Morphology of Schistosoma Japonicum." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 300-307)

HSIA Wu-p'ing (1115/2976/1627)

SUN Ch'ung-lu (1327/1504/3406)
Both of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article, "On the Relative Fatness of the Redbacked vole, Clethrionomys Rutilus Pallas." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 33-34)

HSIA Wu-p'ing (1115/2976/1627); author of article "Some Materials on the Growth and the Relative Fatness of Carps From Yilung and Kumbling Lakes, Yunnan." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, p 28)

HSIA Wu-p'ing (1115/2976/1627)

LO Tse-hsun (5012/3419/3800)
HSIAO T'ing-k'uei (5618/1694/1145), Department of Geography, K'ai-feng Normal College; author of article, "A Review of P. A. Krattser's Book City Climate." (Peiping, Ti-1i Haueh-pao, [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 78-84)

HSIEH Lin-ko (6200/7792/7041), Department of Biology, Anhwei University; author of article, "On the Crystalline Style of Oncomelania Hupensis." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica] Vol 15, No 1, Mar 63, pp 17-21)

HSIEH Ying (0673/5391), Department of Parasitology, Shanghai First Medical College; coauthor with Wu Shih-hsien (0702/4311/7359) of article, "Studies on Trichomoniasis, VI. A Comparative Study on the Growth Rates of T. Foetus in Different Culture Media." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63)

HSIUNG Yao (3574/1031)
BSIEH Peau-I (0673/1415/6664)
XANG P'an-nung (2799/3961/6593)
All of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article, "Chemical Structure and Biological Activity: Synthesis of Substituted Phenyl N-Methyl Carbonates and Their Biological Activities." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 49-55)

HSU Hsing-yu (1776/1428/3768)
WANG Chih-chiing (3769/0037/3068)
TUNG Yu-yuan (5516/1635/0954)
LIU Tso-lin (0491/0155/7207)
All of the East China Municipal Construction Designing Academy; coauthors of article, "The Three-Dimensional Analysis of Pile Group With Rigid Cap." (Peiping, Tu-mu Kung-ch'eng Haueh-pao, [Chinese Journal of Civil Engineering], Vol 9, No 3, 15 May 63, pp 29-38)

HSUEH Ta-wei (5641/1129/3634), Peking Engineering College; author of article, "Discussion on 'Thermal Stress of Spherical Shell With Rectangular Base'." (Peiping, T'u-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 1, 1962 pp 64-65)

HSUEH Ts'eng-t'ung (5641/2582/6639), Student of Tientsin University; author of article, "Discussion on 'On Theory of Calculation for Flat Shell With Rectangular Base Without Reinforcement (III)'." (Peiping, T'u-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 2, 1962 pp 55-63)

HU Yu-t'e (5170/2589/3676), The First Designing Academy, First Ministry of Machine Industry; author of article, "On the Crack Resistance Calculation in the Prefabricated Members of Prestressed Concrete." (Peiping, T'u-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 31-36)


KAO Pao-hsin
Author of article, "Calculation of Parasitic Parameters of Crystal Diodes in Calculating a Parametric Transformer With a Differential Discharge Frequency," in Russian, (Moscow, Vestnik Moskovskogo Universiteta, Seriya Fizika i Astronomiya, No 3, May/Jun 62, pp 41-44)

KAO Yao-t'ing (7559/5069/0080)
LJ Ch'ang-k'un (7120/7022/0981)
CHANG Chieh (1728/3381)
WANG Sung (3076/2646).
All of the Institute of Zoology, Chinese Academy of Sciences; coauthors of article "Mammals of the Hsi-Shuan-Pan-Na Area in Southern Yunnan." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 180-197)

KUAN Kuan-hsun (7070/6306/0534)

CHENG Tso-chain (6774/0155/2450)
Coauthors of article, "A New Generic Record to the Chinese Avifauna--Oxyura leucocephala (Scopoli)." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 431)


K'UNG Fan-yao (1313/4907/3852).

YANG Nien-ho (2799/1628/0678)
Both of the Peking Agricultural College; coauthors of article, "Strongylid Parasites of Donkeys in Peking. II." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 61-71)


KUO Tsu-yuan (6665/4371/3293); author of article, "Productive Oxidation Pond." (Peiping, T'u-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 1, 1962 pp 57-62)

LI Chih-hsun (2621/5268/0534), author of article, "A New Record of Snake to China -- Natrix himalayanus (Guenther)." (Peiping, Tung-wu Haueh-pao, [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, p 432)
LI Ch'uan-lung (2621/0278/7127), Institute of Zoology, Chinese Academy of Sciences; author of article, "Some New Species of Rhopalocera in China. III." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 101-109)


LI Ming- hsing

TSAI Hai-ying Coauthors of untitled report on the complex interaction of internal and external factors in the development of cancer of the uterus, given at the Eighth International Anticancer Congress in Moscow. (Moscow, Akademiya Nauk SSSR, Uspekh Sovremennoy Biologii, Vol 55, No 1, Jan/Feb 63, p 149)


LIN Chen-t'ao (2651/2182/3447), Institute of Zoology, Chinese Academy of Sciences; author of article "Unionidae (Mollusca) of Poyang Lake, Kiangsi Province, China." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 249-261)

LIN Hsuan-chung (2651/1357/0022), Designing Academy, Department of Construction, Fukien Province; author of article, "A Direct Method for Calculation of Reinforced Concrete Members Subject to Oblique Eccentric Loading." (Peiping, T'u-mu Kung-ch'eng Hsueh-pao, [Chinese Journal of Civil Engineering], Vol 8, No 2, 1962, pp 39-44)

LIU Ch'eng-chao (0491/2110/6856)

HU Shu-ch'in (5170/3219/3830)

LIU Shih-I (0491/0013/3534)

WU Ch'in-o (6762/0530/1230)

LIU Shih-I (0491/0013/3534)

WU Ch'in-o (6762/0530/1230)

LIU Tse-tung (0491/4371/3159)

LIANG Chih-ch'eng (2733/1807/2052)
Both of the Institute of Genetics, Fu-tan University; coauthors of article, "The Complementary Effect of Stilbestrol and Methylthiouracil on the Fattening of Cockerels." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 155-165)

LIU Yueh-ying (0491/2588/5391), Institute of Zoology, Chinese Academy of Sciences; author of article, "On the Fresh Water Pulmonata From Shigatze and Gyantse Regions in Tibet, China." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 71-79)

LO Chia-hsiang (2867/0657/4382)

WANG Te-ch'un (3769/1795/2504)
Both of the Institute of Hydrography, Research Academy of Water Conservation; coauthors of article, "Special Characteristics of the Chemistry of Chinese River Currents." (Peiping, Ti-li Hsueh-pao, [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 1-14)

LO Tse-hsun (5012/3419/3800)

HSIEN Tsung-yao (0673/1350/5069)

32
LO Tse-hsun (5012/3419/3800); author of article, "The Lethal Effect of Zinc Phospide on the Yellow Rice Rat (Rattus Rattoides Exiguus A. B. Howell)." (Peiping, Tung-wu Hsueh-pao, [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, p 266)

MA Chia-chi, Department of Foundry Production, Krasnoyarskiy Institute of Nonferrous Metals; coauthor with A. G. Spasskiy of article, "Investigation of the Effects of Composition and Temperature Regime on Heat Cracking of Aluminum Magnesium Alloys in Chill-Mold Casting," in Russian; received for publication 10 May 1961. (Ordzhonikidze, Izvestiya Vysshih Uchebnykh Zavedeniya, Tsvetnaya Metallurgiya, No 3, 21 Jun 63, pp 125-127)


P'ANG So-fu (3282/6956/4395); author of article, "A Discussion on the Causes of Falling Temperatures During the Winter Half of the Year in South China." (Peiping, Ti-li Haueh-pao [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 84-87)

PAO Shih-sun (7637/6347/1327); author of article, "Analysis of Hinged Bents With Irregular Column Arrangement." (Peiping, T'u-mu Kung-ch'eng Haueh-pao [Chinese Journal of Civil Engineering], Vol 9, No 3, 15 May 63, pp 16-22)

P'ENG Jui-hsiang (1756/3813/4382) PANG Yun-ch'iu (2455/5366/4428) CHING Ch'i-ch'eng (5427/0366/6134) Coauthors of article, "Target Size as a Cue to Distance Judgment Along a Ground Strip." (Peiping, Hsin-li Haueh-pao [Acta Psychologica Sinica], No 1, 1963, pp 31-42)

P'ENG Kuo-fan (6772/0948/5672), Institute of Zoology, Chinese Academy of Sciences; author of article "A New Species of Trombiculid Mite From Szechwuan, China." (Peiping, Tung-wu Haueh-pao [Acta Zoologica Sinica], Vol 14, No 3, Sep 62, pp 417-421)


P'ENG Chih (4426/1807), Institute of Zoology, Chinese Academy of Sciences; author of article "On the Myoseptal Spines of the Carp (Cyprinus Carpio L.)." (Peiping, Tung-wu Haueh-pao [Acta Zoologica Sinica], Vol 14, No 2, Jun 62, pp 175-180)

SEN Shih-i (3088/0013/6965), Nankai University; author of article, "The Necessary and Sufficient Condition for the Validity of Information Fidelity Criterion in the Shannon Theorem." (Peiping, Shu-hsueh Kung-hsueh-pao [Acta Mathematica Sinica], Vol 12, No 4, Dec 62, pp 383-407)

SUN Ju-yung (1327/0320/3744), Biology Department, Peking Normal University; author of article, "On the Application of Various Methods Expressing the Intensity of Chemical Thermoregulation." (Peiping, T'ung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 44-49)

T'AO I-chung (7118/6654/6945); author of article, "On the Cracks and Strengthening of Tee Beams of the Typical Design, Ser. No: G-109." (Peiping, Tu-mu Kung-ch'eng Hsueh-pao [Chinese Journal of Civil Engineering], Vol 8, No 1, 1962, pp 26-33)

T'AO Tsu-t'sung, Institute of Metallurgy imeni A. A. Baykov; coauthor with A. A. Babareko of article, "Substructure of Niobium, Deformed With a File," in Russian. (Moscow, Akademiya Nauk SSSR, Fizika Metallov i Metallovedeniye, Vol 15, No 3, Mar 63, pp 405-409)


T'SAI Tao-chang, Moscow Institute of Railroad Engineers; author of dissertation for scientific degree of Candidate of Technical Sciences, "Investigation of Problems in Designing Plant Sorting Stations Generally Connected With Application of Various Types of Transport on Sites of Metallurgical Enterprises," in Russian. (Moscow, Vestnik Vsesoyuznogo Nauchno-Issledovatelskago Instituta Zheleznozdorozhnogo Transporta, Vol 3, 10 May 63, p 65)

T'SAI Eng Ch'eng-jiu (2582/0701/3843); author of article, "A Case Study Of the Characteristics of Working of an Advanced Textile Worker." (Peiping, Hsin-li Hsueh-pao [Acta Psychologica Sinica], No 1, 1963, pp 75-81)
C-O-N-F-I-D-E-N-T-I-A-L

TS'UI Meng-yuan, Institute of Chemical Physics, Academy of Sciences USSR; author of dissertation for scientific degree of Candidate of Chemical Sciences, "Determination of the Rate Constant of Elementary Reactions of Nascent Oxygen and Hydrogen With Certain Hydrocarbons," in Russian. (Moscow, Vechernyaya Moskva, 8 May 63, p 4)


T'UNG Ti'chou (4547/4574/0719)
HSIEH Yu-fen (0673/3022/5358)

WANG Chang-pao, Moscow Institute of Steel and Alloys; author of dissertation for the scientific degree of Candidate of Technical Sciences, "Investigation of Various Methods of Automatic Regulation of Reverberatory Flames and Their Effect on the Process of Heat Exchange in Open Hearth Furnaces," in Russian. (Moscow, Vechernyaya Moskva, 15 Feb 63, p 4)


WANG Keng-nan (3769/5087/0589), Department of Biology, Nanking University; author of article, "Studies on a New Genus and Two New Species of Allocreadiliidae (Trematoda) From China." (Peiping, Tung-wu Hsueh-pao [Acta Zoologica Sinica], Vol 15, No 1, Mar 63, pp 55-61)

WANG Nai-liang (3769/0035/2856), Department of Geology and Geography, Peking University; author of article, "The Present Status of Geomorphology in France." (Peiping, Ti-li Hsueh-pao [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 52-63)


WU Chao-cheng (0702/0340/2913)
MOU Chi-sheng (4924/4764/3932)

YANG Kuo-hsien (2799/0948/0341), Ch'eng-tu Railroad School; author of article: "Discussion on 'The Space Calculation of the Reinforced Concrete Beam Bridge With the Ratio Between the Width and Span Less than 0.5 (II)." (Peiping, T' u-mu Hsueh-pao [Chinese Journal on Civil Engineering], Vol 9, No 3, 15 May 63, pp 61-65)

YANG Wu-yang (2799/0710/2254), Department of Geology and Geography, Peking University; author of article, "An Introduction and Comprehension of Several Principles and Procedures Relating to the Regional Division of Production and Distribution." (Peiping, Ti-li Hsueh-pao [Acta Geographica Sinica], Vol 29, No 1, Mar 63, pp 63-78).


YU Fu-ken (0205/1381/5087); author of article, "The Effects of Prestressed Steel in the Compressive Zone on the Ultimate Strength of a Reinforced Concrete Member." (Peiping, T' u-mu Hsueh-pao [Chinese Journal of Civil Engineering], Vol 8, No 1, 1062, pp 62-64)

YU I-hein (5713/0110/2450)
CHENG Tso-hein (6774/0155/2450)

YU Pang-jui (0205/6721/3843); author of article, "Discussion on "On the Determination of the Calculated Strength of Clay Foundation." " (Peiping, T' u-mu Kung-ch' eng Hsueh-pao [Chinese Journal of Civil Engineering], Vol 8, No 3, 1962, pp 41-44)


YUEH Ching-chung (1471/2529/0022), Institute of Optics and Precision Instruments, Chinese Academy of Sciences; author of article, "Embedding Theory and Cohomology of Permutation Groups (II)." (Peiping, Shu-hsueh Hsueh-pao, [Acta Mathematica Sinica], Vol 12, No 4, Dec 62, pp 341-351)

* * *
7 September 2004

Ms. Roberta Schoen
Deputy Director for Operations
Defense Technical Information Center
7725 John J. Kingman Road
Suite 0944
Ft. Belvoir, VA 22060

Dear Ms. Schoen:

In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

We have completed a declassification review of the “Non-NIS” referral list and include the results of that review as Enclosure 1. Of the 220 documents identified in our declassification database, only three are classified. These three are in the Release in Part category and may be released to the public once specified portions of the documents are removed. Sanitization instructions for these documents are included with Enclosure 1.

In addition to the documents addressed in Enclosure 1, 14 other documents were unable to be identified. DTIC then provided the CDC with hard copies of these documents in April 2004 for declassification review. The results of this review are provided as Enclosure 2.

We at CIA greatly appreciate your cooperation in this matter. Should you have any questions concerning this letter and for coordination of any further developments, please contact Donald Black of this office at (703) 613-1415.

Sincerely,

Sergio N. Alcivar
Chief, CIA Declassification Center,
Declassification Review and Referral Branch

Enclosures:

1. Declassification Review of CIA Documents at DTIC (with sanitization instructions for 3 documents)
2. Declassification Status of CIA Documents (hard copy) Referred by DTIC (with review processing sheets for each document)
Processing of OGA-Held CIA Documents

The following CIA documents located at DTIC were reviewed by CIA and declassification guidance has been provided.

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