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AD NUMBER	
AD333069	
CLASSIFICATION CHANGES	
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FROM:	confidential
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FROM:	Controlling Organization. Central Intelligence Agency, Office of Central Reference, 2430 E. Street, NW, Washington, DC 20505.
AUTHORITY	
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SCIENTIFIC INFORMATION REPORT
CHINESE SCIENCE
(14)

Summary No. 4028

16 November 1962

Prepared by

Foreign Documents Division
CENTRAL INTELLIGENCE AGENCY
2430 E St., N. W., Washington 25, D. C.

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SCIENTIFIC INFORMATION REPORTChinese Science (14)

This is a serialized report consisting of unevaluated information prepared as abstracts, summaries, and translations from recent publications of the Sino-Soviet Bloc countries. It is issued in six series. Of these, four, Biology and Medicine, Electronics and Engineering, Chemistry and Metallurgy, and Physics and Mathematics, are issued monthly. The fifth series, Chinese Science, is issued twice monthly, and the sixth series, Organization and Administration of Soviet Science, is issued every 6 weeks. Individual items are unclassified unless otherwise indicated.

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BIOLOGICAL AND MEDICAL SCIENCES

Medicine and Pharmacology

NEUROSURGERY AT SHANGHAI FIRST MEDICAL COLLEGE -- Peiping, Kuang-ming Jih-pao, 29 Sep 62, p 3

Assistant Professor SHIH Yu-ch'uan (0670/3768/3132) is a neurosurgeon now practicing at Shanghai First Medical College. He studied under CH'EN Kung-pai (7115/0361/410/), assistant professor of the neurosurgery department. Prof CH'EN Kung-pai has trained quite a few attending physicians, and these physicians are, in turn, training young intern physicians. In fact, since Neurosurgeon CH'EN K'o-fei (3088/0344/7236), Vice-president of the medical college, performed the first postliberation brain operation, there have been four classes of surgeons.

In 1950, when CH'EN K'o-fei, Neurosurgeon CHANG Yuan-ch'ang (1728/3104/2490), and Radiologist JUNG Tu-shan (2837/3747/1472) prepared to carry out the first postliberation brain operation, SHIH Yu-ch'uan obtained permission to observe the operation.

Through self-study of native and foreign reference materials, SHIH Yu-ch'uan subsequently performed his first brain operation under emergency conditions at a time when all experienced neurosurgeons were absent from the medical college.

At the present time, SHIH Yu-ch'uan and his colleagues are beginning to use China's own materials to write textbooks. He has never left the country. He says that if he had lived in Old China, he could never have become a neurosurgeon and adds that this is possible only under the leadership of the party, he himself having become a party member in September 1957.

PEDIATRICS JOURNAL RESUMES PUBLICATION -- Peiping, Kuang-ming Jih-pao, 12 Oct 62, p 2

The periodical Chung-hua Erh-k'o (Chinese Pediatrics) has resumed publication, and the first issue was published on 6 October. This is a bimonthly national periodical which contains articles, bibliography, criticism, case histories, and investigation statistics.

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The first issue is devoted mainly to infants' digestive disorders and fluid therapy and infectious diseases of the intestinal tract (bacillary dysentery and acute infantile gangrenous enteritis). Among the articles in this issue are "Fluid Therapy for Malnutrition Complicated by Toxic Indigestion," by Hu Ya-mei (5170/0068/5019); a Bibliography of Recent Literature on Toxic Indigestion," by Li Chia-i (2621/1367/1355); and "Fluid Therapy for Toxic Indigestion," by Sung Chieh (1345/2638), as well as an article titled "How To Plan Liquid Supplements for Children Rationally." With regard to acute infantile gangrenous enteritis and infantile hemorrhagic enteritis, there are analyses and discussions of several case histories.

GROWTH OF TIENHSIN HOSPITAL OF STOMATOLOGY -- Peiping, Kuang-ming Jih-pao, 10 Oct 62, p 2

When the Tientsin Hospital of Stomatology was established in 1949, it had offices in two houses, 27 medical personnel, and some simple and crude equipment. The scope of its treatment was limited to dentistry. Hospital employees, under the correct leadership of party and government, managed the hospital frugally and gradually expanded it until, in 1956, it formally became the Tientsin Hospital of Stomatology, capable of rendering complete therapy for the mouth, head and neck, and face and jaw. Subsequently, it became capable of handling mouth tumor cases. Plans to establish an in-patient department, which began in September 1956, were formally realized in December 1959.

MEDICAL, PHARMACOLOGY, AND HEALTH SOCIETIES ESTABLISHED IN KIANGSU-- Shanghai, Wen-hui Pao, 9 Aug 62, p 1

The Kiangsu Province branches of the Chinese Medical Association, Society of Traditional Chinese Medicine (Chung-i Hsueh-hui; 0022/6829/1331/2585), Pharmaceutical Society, Nursing Society, Society of Microbiology, Society of Physiological Sciences, and Society of Anatomy were formally established in Nanking recently. Kiangsu Province Vice-Chairman Kuan Wen-wei (4619/2429/5588) spoke at the founding conferences of all these societies, and Sheng Li (4141/4539), of the Provincial Public Health Department, delivered reports on the nature and mission of the various societies. At their founding conferences, all of the societies elected boards of directors and leading organs for their organizations.

Biology

CHROMOSOME STRUCTURE OF THE CHINESE MAN -- Peiping, K'o-hsueh T'ung-pao,
No 6, Jun 62, pp 40-41

[The following are extracts of a research report by
CHU Ting-liang (2612/1353/5328), LIU Man-li (0712/2581/
0767), and LIU Tzu-tung (0491/4371/3159) of the Genetics
Research Institute, Fudan University.]

The study of human cell genetics has developed rapidly in the last few years because there has been a great advancement in the technique of observing chromosomes, which, above all, has clarified the relationship between some hereditary diseases and chromosome aberrations. In medicine, diagnosis and therapeutics have been greatly assisted.

Before investigating chromosome aberration, it is first necessary to understand normal chromosome structure. Heretofore, a structural analysis of chromosomes of the Chinese man has never been made.

We employed the tissue culture method to do the preliminary analysis. From the kidney, lung, muscle, skin, amnion, and bone marrow of miscarried fetuses, we made tissue cultures in 3-5 days. The cultures were placed in colchicine (6×10^{-7} M/milliliters) 12-17 hours and then in a hypotonic solution (0.95 percent sodium citrate) for half an hour, causing the cell to become enlarged which enabled the getting of pictures of clear and dispersed chromosomes. Methods used to make squash slide specimens for visual analysis were the use of acetic acid and alcohol for 20 minutes or the direct application of acetic acid and ao-hsin (1159/6580) or of acetic acid and "ta-li" (1129/7787) [possibly Chinese approximations of foreign names for staining materials].

We first made drawings on paper of the pictures of the complete cells with clear and distinct chromosomes and then did a statistical analysis. We analysed 25 cells. The preliminary results agreed with recent reports: the chromosome count for human cells was 46, the female sex chromosomes being designated XX and the male sex chromosomes XY. Because of the range of variation, considerably more material must be examined.

We classified and arranged our material in accordance with the classification standards of the International Human Chromosome Conference of 1960, i.e., in accordance with the so-called Denver system.

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[An English language footnote reference to the international conference standards reads: "A Human Chromosomes Study Group: A Proposed Standard Nomenclature of Human Mitotic Chromosomes. Supplement to Cerebral Palsy Bull. Volume 2, No 3, 1960.

Accompanying the research report are two pictures and a table: a picture of 46 chromosomes of a kidney cell (Ca. 2,000 X); a picture of the chromosome structure of a Chinese man arranged according to the Denver system; and a table of the measured characteristics of the human chromosomes.]

CONFERENCE ON DEFENSE AGAINST THE CHESTNUT CURCULIO -- Peiping, Kuang-ming Jih-pao, 9 Oct 62, p 1

The chestnut curculio, one of the most injurious insects that attacks the chestnut tree, is prevalent in many areas of Honan Province. In September, the Honan Provincial Forestry and Horticultural Society called a meeting at the Po-shan Forestry Station to discuss defensive measures against the insect. According to a 2-year study made by a research team, the life cycle of the insect is 2 years. The adult curculio develops wings in June, and in August it burrows into the earth for nourishment. After this, it burrows through the nut burr and shell and lays its eggs in the cotyledon. The eggs hatch in September, and the larvae leave the nut and enter the ground in October, where they pupate and remain for 2 years.

The amount of damage the insects do to the mountain chestnut is great, but to the river chestnut it is relatively small. The mature insect has little capability of migration. Stony soil is not a suitable environment for the larvae, while sandy loam is. Comparatively effective defense measures against the insect are clean cultivation and 666 dust or spray, according to the research team.

INVESTIGATION OF CHINESE MARINE ANIMALS AND PLANTS -- Canton, Chung-hua Hsin-wen, 23 Sep 62, p 3

The Marine Biology Expedition organized 8 years ago by the Institute of Oceanography, Chinese Academy of Sciences, and other units has collected several thousand specimens of fish, seaweed, invertebrates, etc., obtained abundant reference material, and basically investigated the distribution of marine animal and plant resources throughout the country to present scientific data for further development and utilization of these resources.

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The team has discovered many species of marine animals and plants that have not been recorded in China heretofore and have, in fact, seldom or never been seen in the world; for example, some 160 species of fish, 30 of which are new to the world; and some 40 polychaetous worms, all new to the world. The team has also discovered that there are large quantities of marine biological resources not fully utilized and that many animals and plants in the economic aquatic products category can be made to utilize China's existing vast expanses to expand the cultivation of these resources.

Scientific workers have been summarizing the data collected by the expedition and writing articles, some of which have already been published.

WEN-CH'ANG FISH PRODUCED FOR RESEARCH AND SPECIMEN IN FUKIEN -- Peiping, Kuang-ming Jih-pao, 23 Oct 62, p 2

Liu-wu Station, T'ung-an Hsien, Fukien Province, raises "wen-ch'ang (2429/2490) fish, of the class cyclostomata, which not only have a high nutritional value, but also are valuable material in the study of the evolution of vertebrates. A specimen plant in Amoy makes real-life specimens of the wen-ch'ang and embryonic materials to supply research departments at home and abroad.

The wen-ch'ang fish is a primitive notochord, an animal between the invertebrates and the vertebrates, which evolved from the invertebrates. It contains within it characteristics of the higher and lower animals. It is shaped like a weaver's shuttle and is about 35 millimeters long and transparent pink in color. Normally, it drills its lower part in the sand and sucks in plankton.

[Accompanying the article are three photographs: one of an Amoy wen-ch'ang specimen technician and two of the wen-ch'ang fish.]

ARTICLE DISCUSSES EVOLUTION OF THE PEONY -- Peiping, Kuang-ming Jih-pao, 12 Oct 62, p 1

Yu Heng (0827/5899) and Wang Nien-tz'u (2799/1819/1964) wrote an article recently, in Yuan-i Hsueh Pao, in which they discuss the origin, development, and formation of Chinese varieties of peony. The opinion of the authors was that the peony originated in China and was naturally distributed over an area that included Kansu, Shensi, Szechwan, and Shantung. The cultivated types were derived from the wild types through evolution. In the course of this evolution, the single flower became a double flower, and the original simple colors became more complex. At present, there are 600-700 varieties of cultivated peony in China.

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The peony has been used as a medicinal herb from very early times and was not employed as a decorative plant until the Fourth or Fifth Century. The opinion of the authors is that there are two future directions for the development of the peony: the first is the development of the underground roots for use in medicines; the second is its development as a decorative plant.

UNUSUAL DUCK SIGHTED IN HUPEH -- Peiping, Kuang-ming Jih-pao, 15 Oct 62,
p 2

Cheng Tso-hsin (6774/0155/2450) and Kuan Kuan-hsun (7070/6306/8113) of the Institute of Zoology, Chinese Academy of Sciences, have sighted a species of white-headed, stiff-tailed duck in Hung-hu Hsien, Hupeh Province. It is the first time that a duck of this genus has been discovered anywhere in China. The genus has only six species, of which five species are found in America, Africa, and Australia, and only this white-headed, stiff-tailed duck is found in areas near China. This discovery represents the easternmost extension recorded of this duck's winter season distribution area.

Agriculture

SCIENTIFIC-RESEARCH DEPARTMENTS MAKE CONTRIBUTIONS TO AGRICULTURE --
Peiping, Kuang-ming Jih-pao, 11 Oct 62, p 1

In the past few years, Chinese scientific-research organizations have made great contributions to increasing agricultural production. Some of these contributions have already been widely employed and have been instrumental in increasing production. Others have been proven effective and need only be put into practice.

One of the major means of increasing production is the prevention of damage by insect pests and plant diseases. Chinese scientists have made many advances in this area, among them the invention of "metallic tin" which is particularly effective against gibberella zeae; 401 insecticide, which is effective against cotton sprout diseases and sweet potato rot; and the systemic insecticide 1059, which kills aphids and red spiders. In addition, biologists have concentrated on finding parasites which are the natural enemies of some insect pests.

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Another important field in which scientific workers have devoted a great deal of their efforts is research in pedology and fertilizers. On the basis of an initial investigation, they have compiled soil maps, soil improvement maps, soil utilization maps, and soil fertility maps on the whole nation. It was discovered that there are 460 million mou of low production fields in China which require improvement. Most of this is salinated land, the loess soil of the northwest plateau, or the red soil of south China. Studies have also been directed at increasing production through the determination of rational close planting procedures for various crops under various conditions.

Other fields of research work which have contributed to agricultural production include seed selection, veterinary medicine, fisheries, water conservancy, meteorology, agricultural machinery, and utilization of wild resources.

PHYTOCIDE EFFECTS STUDIED BY HEILUNGKIANG AGRICULTURAL SCIENCE RESEARCH
UNITS -- Peiping, Kuang-ming Jih-pao, 12 Oct 62, p 2

During 1962, the Heilungkiang Provincial Academy of Agricultural Sciences, the Mu-tan-chiang Special District Institute of Agricultural Sciences, and plant protection and plant quarantine stations have applied 2-4 D phytocide to 60 percent of the paddy rice acreage in 20 communes in Mi-shan Hsien. This phytocide was used to kill *Scirpus maritimus* with good results. The 2-4 D has also proved effective against *Dicotyledonae* weeds. After spraying, the roots, stems, and leaves are all dead by the next season.

Use of 2-4 D enabled the communes to reduce the number of men needed to weed one hsiang [a hectare, in North China] from 200-300 to 15-20.

SINKIANG RESEARCH INSTITUTE SUPPORTS AGRICULTURE -- Peiping, Kuang-ming
Jih-pao, 20 Oct 62, p 1

Since its establishment, the Combined Institute of Water, Soil and Biological Resources (Shui-t'u Sheng-wu Tzu-yuan Tsung-ho Yen-chiu So; 3055/0960/3932/3670/6327/3293/4844/0678/4282/4496/2076) of the Sinkiang branch, Chinese Academy of Sciences, has actively developed research to support agriculture. In the past 2 years, it has conducted many investigations on water resources, artificial rain fall, utilization of wild plant resources, and the possibilities of combining animal husbandry and agriculture.

At the Ma-na-ssu farm of the Production-Construction Army Group, the K'ung-ch'iao farm in K'u-erh-lo, and Sha-ching-tzu in A-k'o-su, this institute has investigated the causes of secondary salinated soil and, at the same time, carried on experiments to find means of improving this type of soil.. In addition to this, a great deal of work has been done in desert areas to find some means of establishing windbreaks and holding the soil in place.

TSINGHAL RESEARCH INSTITUTE FINDS CURE FOR SHEEP DISEASE -- Peiping, Kuang-ming Jih-pao, 11 Oct 62, p 2

After several years of experiments, the Tsinghai Provincial Institute of Animal Husbandry and Veterinary Medicine has found a method to prevent streptococcal disease of sheep and is promoting its use in various herding areas. This is an acute contagious disease which is transmitted easily to both sheep and goats. In the past, it was widespread in Tsinghai Province, and there was no way to prevent it. After the liberation, researchers began to collect sick sheep and organize material concerning this disease; and by growing bacterial cultures, they determined that it was caused by the sheep streptococcus.

In the course of experiments, researchers found that penicillin and sulfa drugs were relatively effective in curing the disease. In the initial stages of the disease, injection of these drugs, together with careful tending of the animal, gives rapid results. In epidemic areas, injection of healthy animals can have a preventive effect for a short time. In addition, the researchers have isolated two types of bacteria and two types of highly immune blood plasma, and 3 years of continuous injection experiments have proved that it is possible to strengthen the immunity and resistance of the sheep to this disease.

TECHNICAL SCIENCES

WATER TRANSPORTATION COLLEGE ASSISTS IN IMPROVEMENT OF OPERATIONS --
Peiping, Kuang-ming-Jih-pao, 11 Oct 62, p 2

Some instructors at the Wuhan Water Transportation Engineering College (Wu-han Shui-yun Kung-ch'eng Hsueh-yuan; 2976/3352/3055/6663/1562/4453/1331/6108) have visited harbors and factories recently to carry on research work and assist in the improvement of operations. For instance in the past, it was the practice in most places to restore worn bearing parts by electroplating or electric welding. However, some of these parts were too badly worn, and the high temperatures of electroplating caused them to become deformed and unusable. With regard to this problem, Chang I-ts'ai (1728/6654/2088) has written five articles on subjects including electrical metal spraying, and air metal spraying.

Two instructors in the boat machinery department have considered the problem of relatively serious cylinder wear on boats operating between Wuhan and Chungking. In August 1962, they wrote a paper entitled "On Cylinder Scoring in Diesel Engines and the Technical Reconstruction of the 6KVD Engine."

In their efforts to help factories improve product designs, instructors of the Wuhan Water Transportation Engineering College have also contributed to improvements in product quality. A lecturer in the Port Machinery for the Peiping crane plant. The first crane of this design was produced in July 1962. An instructor in the Crane Teaching and Research Section and his students designed a new type of multipurpose loading and unloading machine for the Dairen Crane and Transport Machinery Plant. This machinery is light and simply constructed and has already been put into production.

SILICATES SOCIETY COMMITTEE DISCUSSES RECONSTRUCTION OF KILNS --
Peiping, Kuang-ming Jih-Pao, 15 Oct 62, P 1

The Special Committee on Ceramics of the Chinese Silicates Society held its first conference at Ching-te-chen, China's ceramics capital, in September. The reconstruction of the Ching-te-chen kilns was one of the main topics of discussion. These kilns are the oldest wood-burning kilns in China. Structurally, they have some unique advantages which represent thousands of years of the accumulated wisdom of the workers.

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However, wood is a very important construction material at present, and it is no longer possible to use it as a fuel. Moreover, the Ching-te-chen kilns cannot burn coal directly. Therefore, how to reconstruct these kilns is a very pressing problem at the present. In discussing this problem, delegates first affirmed the historical value and the advantages of the kilns, but they also pointed out their disadvantages caused by changes in circumstances. Finally, delegates suggested that experiments be carried out to determine the feasibility of using coal gas. However, it was also decided that a long-range plan should concentrate on the development of tunnel kilns. More than 60 ceramics specialists, professors, engineers, and technicians took part in this conference, which lasted 7 days. During the conference, 12 papers were read, of which 4 were concerned with heat treatment in kilns and designing.

WATER-SHEDDING GLASS DEVELOPED -- Peiping, Kung-jen Jih-pao, 18 Oct 62,

The central laboratory of the Shanghai Optical Instrument Plant (0006/3189/0342/1331/0308/0892/1681) carried out successful experiments recently on a type of water-shedding glass. This glass is formed by the addition of a chemical membrane to ordinary glass. Water does not adhere to this membrane, but forms beads or droplets, which run off as soon as the glass is tilted, leaving it completely dry.

This type of glass will make it possible to make lenses which do not fog, but it can have many other applications as well. With a windshield made of this type of glass, there would be no need for windshield wipers on cars and trucks. In submarines, it could prevent water from clinging to the lense of the periscope and obstructing vision. It could also be used to make nonfogging spectacles and frost-proof glass for airplanes.

INSTRUCTION AT NORTHEAST ENGINEERING COLLEGE IMPROVED -- Peiping, Kuang-ming Jih-pao, 19 Oct 62, p 1

During 1962, closer cooperation has been achieved among the instructors in the Architectural Engineering Teaching and Research Section, Mining Department, Northeast Engineering College. The responsibilities of this teaching and research section include the teaching of specialized courses for the Mining Department: architectural materials, structural mechanics, mining architecture, and mine structure. In addition, this teaching and research section handles

the instruction in three extra-departmental courses: architectural theory, structural mechanics, and steel structures. Since the fall of 1961, the instructors in this teaching and research section have been organized into two groups, depending on each instructor's capabilities. One group of instructors lecture, the other is teaching assistants. The lecturing instructors also engage in guidance work. This has caused some conflict when the lecturing instructors and the teaching assistant instructors have held different views; these temporary difficulties are overcome by discussion between the instructors.

Close cooperation exists between instructors teaching similar courses. Many more experienced instructors allow new instructors to use their lecture notes. Instructors in one course also monitor other courses; during the first semester, courses given by the Architectural Engineering Teaching and Research Section were monitored over 80 times.

Assistant Prof Liu Hai-yen (0491/3189/1365), Geology Teaching and Research Section, teaches a course in coal field geology that is monitored by instructors. Instructor P'an Hung-hsin (3382/3163/2450) has been assigned as a teaching assistant to lecturers that graduated at the same time he did because, although P'an has 6 or 7 years' experience in his present field since his graduation in 1951, he has insufficient teaching experience.

EAST CHINA HYDRAULIC ENGINEERING COLLEGE DEVELOPS RESEARCH AND ACTIVITIES -- Peiping, Kuang-ming Jih-pao, 11 Oct 62, p 2

The Soil Mechanics Teaching and Research Section of East China Hydraulic Engineering College is carrying on the planned development of research and academic activity among its instructors. In the past year, they have completed 10 research reports and held 14 report conferences.

The research work of this teaching and research section is closely coordinated with national education and construction. In assigning research tasks, the greater responsibilities are given to those with few instruction duties. Although all of their research involves examination of theory, much attention is given to planning and their tasks are generally completed on time. Among the new problems in soil mechanics which have been completed according to plan are "Calculation of the Fundamental Beam in a Viscous, Elastic Soil Foundation," "Experiments in Mastication Through Tri-axial Vibration," and "Principles and Calculations of the Stabilization of Soil When the Water Level Falls." The results of all of this research work is valuable for reference work.

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CHINESE STUDENTS AT KIEV UNIVERSITY -- Kiev, Pravda Ukrainy, 30 Sep
62, p 3

Among the young people from Communist China who are studying at Kiev State University imeni T. G. Shevchenko are Liu Chi-min, third-year student in the Physics Department, and Chang Chen-hsiang, who is engaged in practical studies in radio engineering.

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EARTH SCIENCES

HYDROCHEMISTRY OF THE LITTLE T'ENG-KO-LI DESERT STUDIED - Peiping, Ti-li (Geography), No 6, Jun 61, pp 263-267, 250

[The following are extracts from an article, "The Natural Hydrochemistry of the Little T'eng-ko-li Desert of Inner Mongolia," by Ch'en Ching-sheng (7115/7234/3932).]

The Little T'eng-ko-li Desert stretches somewhat over 300 kilometers from east to west; from north to south, it varies in width from 30 to 80 kilometers. The elevation of the area ranges from 1,100 to 1,300 meters. The mean temperature during January is below minus 20 degree centigrade, and the mean temperature during July seldom exceeds 20 degrees centigrade; at its lowest, the temperature reaches minus 40 degrees centigrade; and at its highest, 30 degrees centigrade. The annual precipitation ranges from 403.2 millimeters in the East to 240.3 millimeters in the west.

The most significant aspect of this areas geomorphology is the stable nature of the great majority of sand dunes; the area covered by moving sand dunes is only about 2 percent of the total area. The moving sand dunes are usually 15-20 meters high, a few exceeding 30 meters in height. The windward slope is facing west or west-north-west, at an angle of 8 to 10 degrees; the leeslope is 30-32 degrees. These moving dunes are oriented in a north-south direction. The stable and semistable dunes range in height from 15 to 30 meters; they vary in inclination from 20 to 30 degrees. The distance between dunes is about 50-100 meters.

There are three small rivers in the desert area proper; they are narrow (5-15 meters wide) and supply an estimated 1-2 cubic meters per second of water. The usual depth of irrigation water between the dunes is 1-2 meters.

The average degree of mineralization of the irrigation water is 1-1.5 g/l (grams per liter), although in some areas it is greater than 3 g/l. More specifically, there are five types of water:

1. Water containing 0.5-1 g/l of HCO_3 , Ca, and Mg ions is found in the eastern part of the desert, far from the lake basins.
2. Water containing 0.5-1 g/l of HCO_3 and Na ions is found in the eastern region, near the lake basins.

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3. Water containing 1-1.5 g/l of HCO_3 , Ca, and Mg ions is found in the western regions, far from the lake basin.

4. Water containing 1-1.5 g/l of HCO_3 and Na ion is found in the western region, near the lake basins.

5. Water containing over 3 g/l HCO_3 , SO_4 , and Na ions is found in the western region, beside the salt lakes.

In general, the degree of mineralization of fresh water lakes is 1.5-2 g/l; the most important cation is HCO_3 ; the most important anion is Na. The mineralization of salt lakes is 20-30 g/l or greater. These salt lakes contain large amounts of CO_3 and Cl ions, in addition to Na and HCO_3 ions. Most of the lakes in this area are fresh water lakes. The fresh water lakes in the western region are rather uniform, containing 1.5-2 g/l of HCO_3 and Na ions.

River water in the area is believed to contain 0.7-0.9 g/l of HCO_3 , Ca, and Mg ions; these figures are only a rough estimate because of the lack of data. (CONFIDENTIAL)

CHINA'S LARGEST PEAT DEPOSIT DISCOVERED IN NORTHWEST SZECHWAN -- Canton, Chung-kuo Hsin-wen, 7 Oct 62, p 6

A comprehensive prospecting team of the Chinese Academy of Sciences has recently discovered the largest peat deposit in China in the marshy areas of northwest Szechwan. The prospecting team believes that this peat, which is in the region named the Jo-erh-kai grasslands, is in thick layers, broadly distributed, stable, and suitable for exploitation. Peat can be used, not only as fuel and fertilizer, but also as industrial raw material. Herdsmen in the area are already using the peat as a substitute for wood and dung fuels. Some newly built cities, towns, and plants are experimenting with the use of peat as a motive power fuel. In addition, some farms are beginning to experiment with the manufacture of organic fertilizer and the extraction of chemical fertilizer from peat. The Jo-erh-kai grasslands is an area with one of the broadest marshy surface areas in all of China. The investigators say that the prospecting of this area, with its unique geographical peculiarities, has great significance for the study of marshes in China.

WUHAN CARTOGRAPHY COLLEGE OFFERS CORRESPONDENCE COURSE -- Peiping, Kuang-ming Jih-pao, 17 Sep 62, p 2

During the past 4 years, the Wuhan Surveying and Cartography College has offered specialized correspondence courses in astronomical geodesy, aerial photography surveying, engineering surveying, and

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cartography. More than 1,200 cadres working in surveying and cartography departments have taken part in these courses. Since these students work in the field a great deal of the time, the conditions for self-study are not good. Through close liaison with the students' employing units, the school has enabled them to obtain the required self-study conditions and has helped them to solve study difficulties. In addition, more than 20 special instructors and cadre have been assigned to assist the correspondence students in their studies.

CHINESE COMPILE INDEX OF GEOLOGICAL DOCUMENTS -- Peiping, Kuang-ming Jih-pao, 15 Oct 62, p 1

China's first Chinese language architectonics catalogue, Ta-ti Kou-tsao Wen-hsien Mu-lu (Index of Documents on Architectonics), was compiled recently by the Research Academy of Geology, Ministry of Geology, and will be published by the Chinese Industrial Publishing Company. This index records more than 2,000 domestic and foreign documents concerned with architectonics, most of them Chinese documents. The index records mainly other indexes of geological documents which have already been published, as well as more than 180 periodicals from before and after the liberation which are concerned with geology. The inclusive dates are 1903 to June 1962.

The index is arranged according to a classification system determined by Chinese specialist in architectonics Huang Chi-ch'ing (7806/3078/3237). There are 29 major categories, including regional geology, regional structure, structural movement, rifts, geosynclines and platforms, geomechanics, etc. In addition, the index lists the writings of such specialists in architectonics as Li Ssu-kuang (2621/0934/0342), Huang Chi-ch'ing, Ch'en Kuo-ta (7115/0948/6671), and Chang Wen-y (1728/2329/0147).

MATHEMATICAL AND PHYSICAL SCIENCES

SCALAR TOPOLOGICAL INVARIANTS DISCUSSED -- Peiping, Shu-hsueh Hueh-pao (Acta Mathematica Sinica), Vol 12, No 2, Jun 62, pp 113-119

[The following is an abstract of an article, "Imbedding Classes and Cohomology Operations," by Yueh Ching-chung (1471/2529/0022), Institute of Optical and Precision Instruments, Chinese Academy of Sciences. The article was received for publication on 14 July 1961; the revised draft was received on 13 December 1961.]

At present, we know very little about the so-called "scalar" topological invariant, that is, a topological invariant that is a nonhomologous invariant. Only Wu Wen-chun (0702/2429/0193) has put forward a comparatively general method for dealing with these "scalar" topological invariants (see Shu-hsueh Hsueh-pao, No 3, September 1953, pages 261-290). In this paper, the author presents a simplified discussion of Wu's work in this area.

Imbedding classes are "scalar" topological invariants of a space X . It is, therefore, logical to ask whether or not imbedding classes are more fundamental than other known invariants, such as cohomology operations, etc. In this paper, the authors prove that the cohomology operations of a space can be determined by its imbedding classes, and an explicit formula for this determination is given. In this way, it is demonstrated that this kind of imbedding classes invariant at least is more fundamental than cohomology operations.

PEACEFUL USE OF ATOMIC ENERGY IN CHINA -- Hanoi,

[The following item was originally broadcast over Peiping radio.]

As early as 1958, with the help of the USSR, Chinese scientists successfully built an atomic reactor and a cyclotron accelerator device. This tremendous accomplishment has testified clearly that the People's Republic of China has stepped from that beginning into the atomic age. The use of atomic energy for peaceful purposes, to serve the welfare of the people, definitely promises much hope for the vast area of China. As we already know, uranium ore exists in many forms in the natural state and, at the present time, there are 150 types. China is a country that has great deal of uranium ore scattered over many areas. The production of this material gives every person confidence that China has the ability to develop the use of atomic energy in industry, agriculture, and medicine. The energy from one gram of uranium can perform one day's confined labor of 46,000 persons. At the present time, China is considering ways of selecting and refining uranium ore by the simplest procedures, at the lowest cost.

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Meanwhile, the Chinese scientists have made successful experiments in the use of atomic energy for the national economy. China herself has created a device for detecting broken places intricate machinery by means of gamma rays. With this device, even the smallest crack in the equipment can be detected. The blast furnaces at the steel mills of use of radioactive isotopes to check the stage of refinement of the iron. Besides, China was able to produce insecticide No 666 and then devised a way of letting radioactive isotopes pass through it. The effectiveness of this type of insecticide is very great, being even more powerful than the No 666 insecticide produced by the US through the same method.

The use of radioactive isotopes has opened a new road toward increased agricultural production in China. China has successfully experimented with the production of phosphate fertilizer by using radioactive elements to cause a 12-percent increase in the yield, has used radioactive isotopes for treatment of seed corn to cause a 20-percent increase in yield, and has treated the seed of beans with radioactive isotopes to bring about a 13-percent increase in yield.

The use of radioactive isotopes in medicine has helped China find the answers to many problems. The cadres doing research at the Chinese Academy of Medical Sciences have used radioactive isotopes in the study of antidotes for poison and the cure of parasitic diseases and here discovered an excellent new type of antidote. Chinese facilities making equipment for treatment of physical disability have developed "Cobalt 60" for effective treatment of cancer. Building upon the scientific foundation of advanced modern nuclear physics, the People's Republic of China is making steady progress and is hurrying to train technical cadres to fill the growing demands of that branch of science.

DANISH SCHOLARS VISIT CHINA -- Peiping, Kuang-ming Jih-pao, 15 Oct 62, p 1

Two Danish scholars who have come to China to lecture at the invitation of the Chinese Academy of Sciences arrived in Peiping on 14 October. They are Prof Ai Po-erh [l. Boehr?], director of the Experimental Physics Research Institute at Copenhagen University, and Assistant Prof Ni-erh-sen [Neilson?], [fo the same organization]. On the evening after their arrival, Ch'ien San-ch'iang (6929/0005/1730), director of the Institute of Atomic Energy, gave a banquet to welcome them.

BIOGRAPHIC INFORMATION

[The following biographic information on selected Chinese Communist scientific and technical personnel was taken from sources cited in parentheses.]

- AN Pao-chu, Physics Institute, Leningrad State University; coauthor with E. V. Frisman of article, "Optical Anisotropy of Polyvinylacetate (PVA) Molecules, II: Temperature Dependence of the Segmental Anisotropy Shape of the Macromolecules in Solution," in Russian. (Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 4, No 10, Oct 62, pp 1564-1570.
- CHANG Cheng-tieh, Institute of Organoelemental Compounds; coauthor with M. I. Kabachnik, V. A. Gilyarov, and Ye. I. Matrosov of article, "Problem of Tautomerism of N-Acylamido Phosphates and N-Acylamidophosphinates," in Russian. (Moscow, Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, No 9, Sep 62, pp 1589-1599.
- CHANG Ch'un-pin (1728/2504/1755), Institute of Geology and Paleontology, Chinese Academy of Sciences; author of an article, "A Sporo-Pollenin Aggregate in the Lower Cretaceous, Chu-jung [Hsien], Kiangsu [Province]." (Peiping, Ku-sheng-wu Hsueh-pao [Acta Paleontologica Sinica], Vol 10, No 2, May 62, pp 246-286)
- CHANG Fu-chu, Institute of Soil Science imeni V. V. Dokuchayev; author of article, "Use of an Anionite for Determining Available Phosphates in Soils," in Russian. (Moscow, Akademiya Nauk SSSR, Pochvovedeniye, No 10, Oct 62, pp 101-104)
- CHANG I-wei, author of article, "Geological Formation of Apsheron Rock," in Russian. (Moscow, Izvestiya Akademii Nauk SSSR, Seriya Geologicheskaya, No 10, Oct 62, p 109)
- CHANG Kuang-yin, author of article, "Possible Shapes of the Reflection Band and Their Variation As a Function of the Incidence Angle and of the Polarization of Light and the Dispersion Effect of Reflection Bands," in Russian. (Moscow, Akademiya Nauk SSSR, Optika i Spektroskopiya, Vol 13, No 4, Oct 62, pp 536-541)

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CHANG Kuang-yin, coauthor with Ye. F. Gross and L. Ye. Solov'yev of article, "Absorption Spectrum in the Pale Blue and Dark Blue Regions and Deformation Effects in Thin Samples of Cuprous Oxide," in Russian. (Moscow, Doklady Akademii Nauk SSSR, Vol 146, No 3, 21 Sep 62, pp 577-580)

CHAO Ju-i (6393/3067/5065), deputy director of Department of Biology, Kirin Normal University. (Peiping, Kuang-ming Jih-pao, 21 Sep 62, p 2)

CHAO Pang-t'ing
HSU Ch'ang-fa

Both affiliated with Moscow State University; coauthors with G. N. Zaytseva and A. N. Belozerskiy of article, "A Study of Certain Nucleotid-Peptids in the Process of Development of Azotobacter Vinelandii," in Russian. (Moscow, Doklady Akademii Nauk SSSR, Vol 146, No 4, 1 Oct 62, pp 937-940)

CH'EN Ch'u-chen (7115/2806/7201), Institute of Geology and Palaeontology, Chinese Academy of Sciences, author of an article, "Lamellibranchiata From the Upper Permian of Tzu-yun, Kweichow [Province]." (Peiping, Ku-sheng-wu Hsueh-pao [Acta Paleontologica Sinica], Vol 10, No 2, May 62, pp 191-205)

CH'EN Feng-ch'i, coauthor with A. A. Sivkov of article, "Camera for the Observation of the Negative Optic-Acoustic Effect," in Russian. (Moscow, Akademiya Nauk SSSR, Optika i Spektroskopiya, No 4, Oct 62, pp 609-610)

CH'EN I-hsiang, Moscow Technological Institute of the Food Industry; author of article, "Speed of Crystallization of Inferior-Quality Sugar," in Russian. (Moscow, Sakharnaya Promyshlennost', No 10, Oct 62, pp 21-25)

CH'EN Ta-hsieh (7115/1129/3610), vice-president, Sian Chiao-t'ung University. (Peiping, Kuang-ming Jih-pao, 14 Sep 62, p 1)

CHUAN T'ung-shen (0278/2717/3932), director of Department of Biology, Kirin Normal University. (Peiping, Kuang-ming Jih-pao, 21 Sep 62, p 2)

HOU Yun-tieh, Institute of Virology, Academy of Medical Sciences USSR, in Moscow, and Institute of Infectious Diseases, Academy of Medical Sciences USSR, in Kiev; coauthor with N. A. Maksimovich of article, "Latent Infection Due to Parainfluenza Virus Sendai in Laboratory Animals. Report 3: Histopathological Changes in the Lungs During Latent Infection," in Russian. (Moscow, Voprosy Virusologii, No 5, Sep/Oct 62, pp 563-567)

HOU Yun-tieh, author of article, "Comparative Study of the Hemolytic Activity of Different Variants of the Parainfluenza Virus 1," and coauthor with N. A. Maksimovich of article, "Pathogenesis and Morphological Changes in the Lungs of Mice in Experimental Infection by the Parainfluenza Sendai Virus," in Russian. (Moscow, Meditsinskiy Referativnyy Zhurnal, Section 3, No 10, Oct 62, p 54)

HSIA Tao-hsing (1115/6670/5887), Fudan University; author of an article, "On Nonnormal Operators (I)." (Peiping, Shu-hsueh Hsueh-pao Acta Mathematica Sinica), Vol 12, No 2, Jun 62, pp 216-227)

HSIUNG Ch'ing-lai (3574/1987/0171)
HO Yu-tsan (0149/5148/6363)

Both of the Institute of Mathematics, Chinese Academy of Sciences, Coauthors of an article, "On the Multiple Values of a Meromorphic Function and Its Derivative." (Peiping, Shu-hsueh Hsueh-pao Acta Mathematica Sinica), Vol 12, No 2, Jun 62, pp 144-155)

HSU Chi-p'ing, Institute of Organoelemental Compounds, Academy of Sciences USSR; coauthor with S. R. Rafikov of article, "Chemical Changes of Polymers VII: Rate of Gas Evolution and Quantum Yield in Photolysis of Polycapromide," in Russian. (Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 4, No 10, Oct 62, pp 1474-1478)

HU Shou-hsi (5170/0649/1153)
CHI Shou-yuan (1323/1108/0337)

Coauthors of an article, "A study of the Intrusion of Wall Rocks on Wolframite-Quartz Veins of a Tungsten Deposit in the Nan-ling Region." The authors acknowledge the assistance of Prof Hsu K'o-ch'in (1776/0344/0530) and Prof Li Hsueh-ch'ing (2621/1331/3237), Huang Ch'eng (7806/2052), Hsu Chien-kuo (1776/1696/0948), and Wang Jui-i (3769/3843/1837). (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62, pp 236-254)

HUANG Chi-ch'ing (7806/3078/3237)
CHIANG Ch'un-fa (1203/2504/4099)

Coauthors of an article, "Preliminary Investigation of the Evolution of the Earth's Crust From the Viewpoint of Polycyclic Movements." The paper was read at a symposium held by the Research Academy for Geological Sciences, Ministry of Geology. The authors acknowledge the assistance of Chang Wen-yu (1728/2429/0147), Chinese Academy of Sciences; Hsieh Chia-jung (6200/1367/2837), Research Academy for Geological Sciences; Wu Ch'eng-t'ung (0702/2110/2767); Lu Ping-hsueh (7627/4426/1331); Li Yung-huang (2621/3057/3552); Liu Yung-ch'uan (0491/8673/3123); Hu Ching-kuo (5170/4842/0948); and Yang Yun (2799/5366). (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62, pp 105-152)

HUANG Chien-lin (7806/1696/7792), Kwangtung Institute of Aquatic Products; author of a paper, "A Discussion of the Classification of the Important Varieties of Cultured Oysters in Kwangtung Province," presented at a conference held by the Kwangtung Society of Oceanography and Limnology. (Peiping, Kuang-ming Jih-pao, 19 Oct 62, p 1)

HUANG Yu-shan (7806/3768/3790), Professor, Northwest Industrial University. (Peiping, Kuang-ming Jih-pao, 14 Sep 62, p 1)

KU Ch'ao-hao (6253/6389/6275)
LI Ta-ch'ien (2521/1129/3480)
HOU Tsung-i (0186/1350/5030)

All of the Mathematics Department, Fu tan University; coauthors of an article, "The Cauchy Problem of Quasi-linear Hyperbolic System With Discontinuous Initial Values (III)." (Peiping, Shu-hsueh Hsueh-pao Acta Mathematica Sinica, Vol 12, No 2, Jun 62, pp 132-143)

KU Fang-chou (7357/2455/5297), author of an article, "Cancer and Viruses." (Peiping, Kuang-ming Jih-pao, 17 Sep 62, p 2)

KUAN Ch'iao, Moscow Higher Technical School imeni N. Ye. Bauman; coauthor with S. A. Kurkin of article, "Relieving Residual Welding Stresses of Thin-Sheet Elements in Titanium Alloys," in Russian. (Moscow, Svarochnoye Proizvodstvo, No 10, Oct 62, pp 1-5)

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KUNG Tsu-hsun, Institute of Biological Physics, USSR Academy of Sciences; coauthor with L. L. Razumova, L. P. Kayushin, and M. K. Pulatova of article, "An Investigation of Various Structural Forms of Myosin Protein by Means of Electron Spin Resonance," in Russian. (Moscow, Doklady Akademii Nauk SSSR, Vol 146, No 5, 11 Oct 62, pp 1197-1200)

KUO Tsung-shan (6753/1350/1472), author of an article, "A Variety of Cassiterite in Pegmatite." The assistance of Ting Hsiao-shih (0002/1321/4258) and Liu Chih-ting (0491/6855/1353) is acknowledged. (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62, pp 218-235)

LI Lai-jung (2621/0171/2837), concurrently president of Fukien Agricultural College and chairman of its Horticulture Department, is a pomologist who received his doctorate in horticulture while studying in the US and later carried on research in New Zealand and Australia, before returning to China in 1945. He is now writing a book titled Lung-yen Chih (a monograph on the lung-yen, a fruit similar to the Lichee nut). (Canton, Chung-kuo Hsin-wen, 24 Sep 62, p 11)

LI Sung-chi, coauthor with M. S. Zakhar'yevskiy of article, "Measure of Diffusion Coefficients in SrCl_2 Solutions by Means of Radioactive Tracers," in Russian. (Leningrad, Vestnik Leningradskogo Universiteta, No 16, Seriya Fiziki i Khimii, No 3, 10 Sep 62, pp 131-134)

LI Yu, Institute of Virusology imeni D. I. Ivanovskiy, USSR Academy of Medical Sciences; author of article, "New Method for Titration of Vaccinia Virus in Tissue Culture," in Russian. (Moscow, Voprosy Virusologii, No 5, Sep/Oct 62, pp 594-596)

LIANG Chung-ch'ao (2733/0022/6389), Mathematics Department, Shantung University; author of an article, "The Boundedness of Solutions of Certain Nonlinear Differential Equations." (Peiping, Shu-hsueh Hsueh-pao /Acta Mathematica Sinica/, Vol 12, No 2, Jun 62, pp 156-169)

LIN Pao-yu (2651/1405/3768), Institute of Geology and Paleontology, Chinese Academy of Sciences; author of an article, "Coral Fossils of Lower Permian Beds in South China." (Peiping, Ku-sheng-wu Hsueh-pao /Acta Paleontologica Sinica/, Vol 10, No 2, May 62, pp 206-245)

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LIU Ch'lung-hua, Moscow State University; coauthor with A. S. Pashinkin and A. V. Novoselova of article, "An Investigation of the Germanium-Selenium System," in Russian. (Moscow, Doklady Akademii Nauk SSSR, Vol 146, No 5, 11 Oct 62, pp 1092-1093)

LIU Shen-ch'uan, author of article, "Calculation of Laminar Boundary Layer in compressed Gas During Suction or Blasting," in Russian. (Moscow Akademiya Nauk SSSR, Zhurnal Vychislitel'noy Matematiki i Matematicheskoy Fiziki, Vol 2, No 5, Sep/Oct 62, pp 868-883)

LIU Yu-t'ang, Biochemical Laboratory, Institute of Labor-Hygiene and Occupational Diseases, Academy of Medical Sciences USSR, Moscow; author of article, "Lungs and Liver Tissue Respiration in Experimental Berylliosis," in Russian. (Moscow, Voprosy Meditsinskoy Khimii, Vol 8, No 5, Sep/Oct 62, pp 518-524)

LIU Ch'i-k'eng (7120/0796/6972), Institute of Mathematics, Chinese Academy of Sciences; author of an article, "On a Class of Homogeneous Complex Analytic Manifolds." (Peippng, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica]/

LIU Yen-hao (4151/5888/6275), Institute of Geology and Paleontology, Chinese Academy of Sciences; author of an article, "Grabau's Types of Three Silurian Trilobites From Hupeh Re-examined." (Peiping, Ku-sheng-Wu Hsueh-pao /Acta Paleontologica Sinica/, Vol 10, No 2, May 62, pp 158-175)

MA Shih-t'u (7456/6221/6634), vice-president, Southwest, Branch (Hsi-nan Fen-yuan, 6007/0589/0433/7086), of the Chinese Academy of Sciences. (Peiping, Kuang-ming Jih-pao, 14 Sep 62, p 1)

MU En-chih (4476/1869/0037)

CH'EN Hsu (7115/2485)

Both of the Institute of Geology and Paleontology, Chinese Academy of Sciences, coauthors of an article, "Sinodiversograptus multi-brachiatus (New Genus and Species) and the Stages of Its Development," (Peiping, Ku-sheng-wu Hsueh-pao [Acta Paleontologica Sinica], Vol 10, No 2, May 62, pp 143-157)

PAI Cheng-kuo (4101/2973/0948), Hangchow University; author of an article, "Some Properties of the Riemannian Space V_n Which Admit an n -Tuply Orthogonal System of Hypersurfaces." (Peiping, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica], Vol 12, No 2, Jun 62, pp 109-112)

P'AN Ya-ch'en, coauthor with A. I. Paisov and A. I. Kolpashnikov of article, "Structure and Properties of SAP," in Russian. (Moscow, Tsvetnyye Metally, No 10, Oct 62, pp 71-75)

P'IN Pi-hsien, Moscow State University; coauthor with A. A. Tolstopyaty and A. A. Balandin of article, "Kinetics of Dehydrogenation and Dehydration of Isopropyl Alcohol and That of Dehydrogenation of Tetralin on Thulium Oxide," in Russian. (Moscow, Izvestiya Akademii Nauk SSSR, Otdeleniye Khimicheskikh Nauk, No 9, Sep 62, pp 1524-1533)

SHEN Ch'ing-nang, Institute of General and Inorganic Chemistry, Ukrainian SSR Academy of Sciences; coauthor with V. A. Oleynik and Yu. K. Delimarskiy of article, "Decomposition Potentials of Oxides of Titanium, Molybdenum, and Tungsten Dissolved in Fused Borax," in Russian. (Kiev, Ukraynskiy Khimicheskii Zhurnal, Vol 28, No 5, 18 Sep 62, pp 599-604)

SHENG Chin-chang (4141/6855/4545), Institute of Geology and Paleontology, Chinese Academy of Sciences, coauthor, with Wang Yun-hui (3769/0061/1979), Anhwei Provincial Bureau of Geology, of an article, "The Fusulinids of the Mao-k'ou Stage, Southern Kiangsu [Province]," (Peiping, Ku-sheng-wu Hsueh-pao [Acta Paleontologica Sinica], Vol 10, No 2, May 62, pp 176-190)

SHENG Sang-ch'ung

HUNG Meng-ming

K'AI Jui-tsu

SHEN Hsu-tsu

TS'ANG Wen-ling

Coauthors of report on the transforming role of ribonucleic acids on bacteria presented in the work of the section of Biochemical Genetics at the Fifth International Biochemical Congress, held in Moscow on 19 August 1961. (Moscow, Akademiya Nauk SSSR, Mikrobiologiya, Vol 31, No 5, Sep/Oct 62, p 951)

SU Yu-jen, coauthor with M. M. Schultz and L. L. Makarov of article, "Activity Coefficients of NiCl_2 and NH_4Cl in Binary and Ternary Solutions at 25 Degrees," in Russian. (Moscow, Akademiya Nauk SSSR, Zhurnal Fizicheskoy Khimii, Vol 36, No 10, Oct 62, pp 2194-2198)

SUN Yung-sheng (1327/3057/3932), Mathematics Department, Peiping Normal College; author of article, "On the Best Approximation of Periodic Differentiable Functions by Trigonometric Polynomials." (Peiping, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica], Vol 12, No 2, Jun 62, pp 181-202)

WANG Chih-ta, Aspirant, Moscow Higher Technical School imeni N. Ye. Bauman; author of article, "Approximation Method for Computing the Dynamics of Free-Piston Gas Generators," in Russian. (Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Mashinostroyeniye, No 5, 4 Jul 62, pp 112-123)

WANG Hung-chi (3769/1347/1015), professor, Northwest Industrial University. (Peiping, Kuang-ming Jih-pao, 14 Sep 62, p 1)

WANG Shu-p'ing (3769/6615/1627), author of an article, "Mineralization of the Basic and Ultrabasic Magmas and the Genetic and Tectonic Classification of Their Related Mineral Deposits." The author acknowledges the assistance of Pao Shih-ch'iang (7637/0013/1730), Sun T'ing-mien (1327/1694/4875), Li Chang-ta (2621/4545/1129), Wu Yu-yao (0702/3022/5069), Lu Chih-hsiung (0712/1807/7160), and Lin Hsiu-ch'in (2651/4423/0530). (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62, pp 198-217)

WANG Yueh-lun (3769/2574/0243)

LIU Tsung-pin (7120/1350/2430)

Coauthors of article, "Discussion of Certain Problems of Pre-Cambrian Stratigraphy Based Upon Absolute Age Data." (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62, pp 186-197)

WANG Yung-ch'ang

TU Yuan-ts'ai

Coauthors with V. I. Veksler, Ye. N. Kladnitskaya, A. A. Kuznetsov, A. Mikhul, Nguyen Dinh Thi, V. N. Penev, Ye. S. Sokolova, and M. I. Solov'yev of article, "A Study of ΛK^0 and $K^0\bar{K}^0$ Pair Production in the Interaction Between 7-8 BeV/c π -Mesons and Protons," in Russian. (Moscow, Akademiya Nauk SSSR, Zhurnal Eksperimental'noy i Teoreticheskoy Fiziki, Vol 43, No 3, Sep 62, pp 815-822)

WEI Kuang-wen, Leningrad Institute of Precision Instruments and Optics; author of article, "Changes in the Spectral Coefficient of Diffuse Reflection of Magnesium Oxide in the 0.4 to 3.1 Micron Range," in Russian. (Moscow, Izvestiya Vysshikh Uchebnykh Zavedeniy, Priborostroyeniye, Vol 5, No 5, 24 Aug 62, pp 118-127)

WU Pang-yuan, Institute of Organoelemental Compounds, Academy of Sciences USSR; coauthor with V. V. Korshak, S. V. Vinogradova, T. M. Frunze, and L. V. Kozlov of article, "Heterochain Polyesters. XL. Synthesis of Polyamidoesters by the Interphase Polycondensation Method," in Russian. (Moscow, Vysokomolekulyarnyye Soyedineniya, Vol 4, No 10, Oct 62, pp 1457-1462)

WU Ta-k'o (0702/1129/3787), deputy director of Research Institute of Iron and Steel (Kang-t'ieh Yen-chiu-so, 0474/6993/4282/4496/2076), Shanghai Municipal Metallurgical Industry Bureau. (Shanghai, Chieh-fang Jih-pao, 15 Aug 62, p 2)

WU Wen-chun (0702/2529/0193)

LI P'ei-hsin (2621/1014/0207)

Both of the Institute of Mathematics, Chinese Academy of Sciences; coauthors of an article, "The Characteristic Classes of Certain Real Quadrics." (Peiping, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica], Vol 12, No 2, Jun 62, pp 203-215)

YANG Hui-fang, Moscow State University; author of article, "Atmosphere Nitrogen Fixation by Purple Sulfur Bacteria Grown in Mineral and Organic Media," in Russian. (Moscow, Akademiya Nauk SSSR, Mikrobiologiya, Vol 31, No 5, Sep/Oct 62, pp 774-777)

YEN Chih-ta (0917/1807/6671), Nan-k'ai University, author of article, "A Problem in 'Lie' Group Theory (II)." (Peiping, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica], Vol 12, Jun 62, No 2, pp 120-131)

YEN Hsiao-shan, Institute of Labor Hygiene and Occupational Diseases, Academy of Medical Sciences USSR; author of article, "Behavior of Thorium Dioxide in the Organism of Rats Following Its Intratracheal Administration," in Russian. (Moscow, Gigiyena Truda i Professional'nyye Zabolevaniya, No 10, Oct 62, pp 46-51)

YIN Hung-fu (3009/7703/4395), author of article, "Biostratigraphic Problems of the Triassic Period in Kweichow [Province]." The author acknowledges the assistance of Prof Yang Tsun-i (2799/6690/0308), Chang Hsi-t'i (1728/1598/4398), Yueh Sen-hsun (2867/2773/3769-1416), and Yang Shih-p'u (2799/1709/3302). (Peiping, Ti-chih Hsueh-pao, Vol 42, No 2, Jun 62) pp 153-185)

YU Hung-cheng (5713/1347/2973), director of Department of Soil and Agricultural Chemistry, Northwest Agricultural College; and director of the Northwest Institute of Biology and Soil, Chinese Academy of Science, is currently making noteworthy progress in physical chemistry and colloidal chemistry studies. (Peiping, Kuang-ming Jih-pao, 24 Sep 62, p 2)

YUAN Han-ch'ing (5913/5060/7230), author of article titled "Cryogenic Chemistry." (Peiping, Jen-min Jih-pao, 9 Oct 62, p 5)

YUAN K'ang, coauthor with A. A. Grinberg of article, "Complex Compounds of 4-Valent Platinum With Glycine," in Russian. (Moscow, Akademiya Nauk SSSR, Zhurnal Neorganicheskoy Khimii, Vol 7, No 10, Oct 62, pp 2304-2310)

C-O-N-F-I-D-E-N-T-I-A-L

YUEH Min-i (6390/3046/5030)

WU Fang (0702/2455)

Both of the Institute of Mathematics, Chinese Academy of Sciences,
coauthors of an article, "On a Three-Dimensional Divisor Problem."
(Peiping, Shu-hsueh Hsueh-pao [Acta Mathematica Sinica], Vol 12,
No 2, Jun 62, pp 170-174)

* * *

C-O-N-F-I-D-E-N-T-I-A-L

14-00000

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:

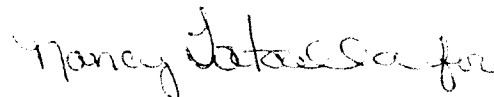
In February of this year, DTIC provided the CIA Declassification Center with a referral list of CIA documents held in the DTIC library. This referral was a follow on to the list of National Intelligence Surveys provided earlier in the year.

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.

OGA Doc ID	Job Num	Box	Fldr	Doc	Doc ID	Document Title	Pub Date	Pages	Decision	Proc Date
AD0335308	78-03117A	194	1	23	4363	Scientific Information Report Chemistry And Metallurgy (26)	3/7/1963	71	Approved For Release	3/25/2004
AD0335625	78-03117A	197	1	3	4460	Scientific Information Report Chemistry And Metallurgy (27)	4/4/1963	51	Approved For Release	3/25/2004
AD0336825	78-03117A	199	1	26	4562	Scientific Information Report Chemistry And Metallurgy (28)	5/9/1963	70	Approved For Release	3/25/2004
AD0332150	78-03117A	183	1	5	3916	Scientific Information Report Chinese Science (11)	10/4/1962	52	Approved For Release	3/29/2004
AD0332434	78-03117A	183	1	40	3951	Scientific Information Report Chinese Science (12)	10/19/1962	59	Approved For Release	3/29/2004
AD0332795	78-03117A	184	1	37	3988	Scientific Information Report Chinese Science (13)	11/5/1962	48	Approved For Release	3/29/2004
AD0333069	78-03117A	186	1	7	4028	Scientific Information Report Chinese Science (14)	11/16/1962	30	Approved For Release	3/29/2004
AD0333148	78-03117A	187	1	19	4078	Scientific Information Report Chinese Science (15)	11/29/1962	44	Approved For Release	3/29/2004
AD0333835	78-03117A	189	1	6	4144	Scientific Information Report Chinese Science (16)	12/21/1962	65	Approved For Release	3/29/2004
AD0334108	78-03117A	190	1	2	4179	Scientific Information Report Chinese Science (17)	1/10/1963	56	Approved For Release	3/29/2004
AD0334105	78-03117A	191	1	12	4230	Scientific Information Report Chinese Science (18)	1/18/1963	25	Approved For Release	3/29/2004
AD0334378	78-03117A	192	1	21	4277	Scientific Information Report Chinese Science (19)	2/1/1963	27	Approved For Release	3/29/2004
AD0334433	78-03117A	193	1	22	4322	Scientific Information Report Chinese Science (20)	2/15/1963	28	Approved For Release	3/29/2004
AD0335021	78-03117A	194	1	37	4377	Scientific Information Report Chinese Science (21)	3/8/1963	59	Approved For Release	3/29/2004
AD0335847	78-03117A	198	1	33	4526	Scientific Information Report Chinese Science (22)	4/18/1963	61	Approved For Release	3/29/2004
AD0336327	78-03117A	200	1	3	4578	Scientific Information Report Chinese Science (23)	5/2/1963	68	Approved For Release	3/29/2004
AD0337167	78-03117A	201	1	26	4643	Scientific Information Report Chinese Science (24)	5/23/1963	95	Approved For Release	3/29/2004
AD0337777	78-03117A	202	1	27	4687	Scientific Information Report Chinese Science (25)	6/6/1963	52	Approved For Release	3/29/2004
AD0338474	78-03117A	203	1	27	4727	Scientific Information Report Chinese Science (26)	6/20/1963	83	Approved For Release	3/29/2004
AD0338687	78-03117A	204	1	32	4772	Scientific Information Report Chinese Science (27)	7/5/1963	80	Approved For Release	3/29/2004
AD0339386	78-03117A	206	1	4	4820	Scientific Information Report Chinese Science (28)	7/17/1963	32	Approved For Release	3/29/2004
AD0339147	78-03117A	207	1	11	4862	Scientific Information Report Chinese Science (29)	7/30/1963	48	Approved For Release	3/29/2004
AD0340927	78-03117A	208	1	35	4924	Scientific Information Report Chinese Science (30)	8/21/1963	53	Approved For Release	3/29/2004
AD0341855	78-03117A	209	1	43	4974	Scientific Information Report Chinese Science (31)	9/5/1963	46	Approved For Release	3/29/2004
AD0342464	78-03117A	210	1	38	5013	Scientific Information Report Chinese Science (32)	9/16/1963	43	Approved For Release	3/29/2004
AD0342608	78-03117A	211	1	36	5054	Scientific Information Report Chinese Science (33)	9/27/1963	41	Approved For Release	3/29/2004