
SCIENCE NOTES AND NEWS

V-2 Solar Spectra

The ultraviolet spectra of the sun obtained during the V-2 flights of October 10, 1946 (*Sky and Telescope*, February 1947, p. 3), and March 7, 1947, have now been measured. In a report by E. Durand, J. J. Oberly, and R. Tousey, released by the Naval Research Laboratory, some 200 atomic lines between wave lengths 2200 and 3000 angstroms have been identified as arising from 10 elements, either in the neutral (I) or the singly ionized (II) state. These are iron I and II, chromium I and II, vanadium I and II, manganese II, magnesium I and II, calcium I, nickel I, titanium I, cobalt I and II, and silicon I. In these identifications the authors made extensive use of laboratory results and theoretical multiple tables by Dr. Charlotte Moore Sitterly, of the National Bureau of Standards.

Special attention is drawn to strong emissions of ionized magnesium at wave lengths 2803 and 2796 that had been predicted by Dr. Donald H. Menzel, of Harvard. In the previously observable spectra of the solar disk only the H and K lines of ionized calcium had shown emission, and they are weak in comparison with the newly observed ionized magnesium pair.

Noted incidentally was a strong band of nitric oxide at wave length 2264, presumably arising in our atmosphere. This spectrum had been obtained at an altitude of 55 kilometers. An average concentration of 0.01 per cent. of nitric oxide in the outer atmosphere would be detectable.

The complete report on the identification of the lines in the solar spectra obtained from V-2 flights will appear shortly in the *Astrophysical Journal* (By Courtesy to *Sky and Telescope*, 1949, Vol. VIII, P. 89.)

Central Institute Potato for Research

The Central Potato Research Institute set up a few months back by the Ministry of Agriculture, Government of India, started functioning at Patna, its permanent location, about a fortnight ago. The Institute which is believed to be the first of its kind in the East, will co-ordinate research so far undertaken in various sub-stations of the Indian Council of Agricultural Research at Simla, Bhowali and Kufri and will chalk out a scheme for fundamental research on the production and utilization of the potato crop.

For the present, the Institute has started

functioning in premises borrowed from the Government of Bihar who have placed a 25 acre plot and a few rooms, for laboratory and office purposes, at its disposal. Permanent buildings are not proposed to be built now in view of the need for economy in Government expenditure. When the financial situation eases, construction of permanent buildings will be taken up.

In India, although the soil is suitable in most areas for potato cultivation, only about 0.2 per cent of the total crop area is under potato and the annual production is about 1,800,000 tons. Leaving aside the quantity required for seed purposes, about 8 lbs. of potato are available annually per head as against about 500 lbs. per head per annum in some of the Western countries.

The main obstacles in the way of increased production of potato in India are: 1) absence of different varieties of potato suited to varying conditions of climate and soil in different parts of the country; 2) non-availability of sound, healthy seed in adequate quantities, at the right time and at a reasonable price and 3) the heavy toll taken by fungal, bacterial and virus diseases and insect pests. The Institute will undertake research into these problems.

Indian Medicinal Plants

A scientific enquiry, extending over a period of 12 years, on Indian medicinal plants and food poisons which was launched under the auspices of the Indian Council of Agricultural Research in 1935 has now been completed and Col R. N. Chopra, at present Director, Drugs Research Laboratory, Srinagar, who conducted the enquiry, has submitted his final report to the Council.

Publications of a monograph on poisonous plants in India, establishment of a Herbarium of medicinal and poisonous plants, preparation of a list of Indian Pharmacopoe and encouragement to the cultivation of medicinal plants in the country are some of the tangible achievements arising out of the scheme. Besides, the results of the enquiry have also been of considerable assistance to the establishment of the Central Drug Research Laboratory at Lucknow.

The Report says that the enquiry has definitely advanced the knowledge with regard to pharmacopoeial and allied drugs in India. A number of firms manufacturing drugs from Indian medicinal plants have come into existence and, instead of depending on concentrated

extracts from foreign countries, practically every type of galenical is now being manufactured in India from materials produced in the country.

India is the emporium of all kinds of medicinal herbs and drugs and, with suitable facilities, she can produce not only enough for her internal requirements but can also spare considerable quantities for export. The enquiry has stimulated cultivation of medicinal plants. Among drugs which have been brought into extensive cultivation may be mentioned belladonna, digitalis, hyoscyamus, colchicum, gentian, ephedra, pyrethrum, etc., etc.

Indian Central Cotton Committee

The Government of India have appointed the following as members of the Indian Central Cotton Committee, representing the various interests concerned:

Shri R. G. Saraiya (Co-operative Banking), Shri Madanmohan Mangaldas (Ahmedabad Millowners' Association), Shri G. M. Kothari, M. L. A. (Cotton Ginning or Manufacturing Industry in Madras), Shri A. K. D. Balarama Raja (Cotton Growing Industry in Madras), Shri Narayan Dass Mukerjee, Director of Food and Civil Supplies, Vindhya Pradesh, and Seth Bhogilal M. Shah (United State of Kathiawar).

The following have been appointed as Additional Members:—

Shri Neville Wadia, Pandit Thakar Dass Bhargava, Member, Constituent Assembly of India, Shri Bhawanji A. Khimji, President, Indian Merchants' Chamber, Bombay, and Shri T. P. Barat, Textile Commissioner to the Government of India.

Post-Graduate Research Grants for Indians

Two Indians are among the 32 Commonwealth university teachers and post-graduate research workers to whom travel grants under a new scheme have been awarded by the British Council for the purpose of study at British universities.

The Indian beneficiaries are Mr. O. P. Bhatnagar of Allahabad University, who is now studying history at the University of London, and Mr. B. Bhattacharya from Benares University who will shortly be reaching Cambridge to study spectroscopy.

The scheme, established as a result of the discussions at the first post-war Congress of Universities of the Commonwealth held last year at Oxford, is intended to facilitate the interchange of university teachers and scholars between the Commonwealth countries and the United Kingdom.

Facilities for Displaced Students

The University of Saugor and the Birla Education Trust, Pilani, have offered to take refugee students who may be unable to continue their college studies in Delhi for want of accommodation in local colleges. Students desirous of availing this opportunity may contact the Registrar, University of Saugor, Saugor C. P. or Principal, Birla College of Arts, Science and Commerce, Pilani, Jaipur Division, Rajasthan for terms and conditions of admission.

Mathematical Society

The Sixteenth Conference of the Indian Mathematical Society will be held in Madras under the auspices of the University of Madras on the 26th, 27th and 28th December, 1949.

Prof. M. H. Stone of Princeton, Dr. Tietjens of the Indian Institute of Science, Prof. Hermann Wold of Sweden are expected to attend the session. A Mathematical Exhibition will be held during the period.

The Geological, Mining & Metallurgical Society of India

The Geological, Mining and Metallurgical Society of India held its 25th Annual General Meeting on Friday, the 16th September 1949, in the Rotary Hall of the Great Eastern Hotel, Calcutta. Dr. M. S. Krishnan presided and Dr. D. N. Banerjee, the Vice-Chancellor of the Calcutta University, was the Chief Guest on this occasion.

Andhra University—Award of Research Degree in Chemistry

On the recommendation of the Board of Examiners consisting of:—

1. Dr. N. H. Burman (*Chairman*), Professor of Chemistry, Frick Chemical Laboratory, Princeton University, Princeton, New Jersey, U.S.A., 2. Dr. James J. Lingane, Harvard University Department of Chemistry, 12, Oxford Street, Cambridge 38, Massachusetts, U. S. A., 3. Professor G. Fredrick Smith, Associate Professor, University of Illinois, Illinois, U. S. A. appointed to adjudicate on the thesis entitled "Catalyzed and Induced Reactions in Analytical Chemistry". the Syndicate has resolved that Mr. J. V. S. Ramanjaneyulu, M. Sc., be declared qualified for the Degree of Doctor of Science (D.Sc.)

ERRATUM

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Article on "The Theory of the Christiansen Experiment"—In Column 2, the correct formula should read as follows:

$$I = I_0 \cdot e^{-\pi^2(\mu_1 - \mu_2)^2 \Delta z / \lambda^2}$$