gives agreement to better than one unit. One particle has been found with $Z = 30$.

Mrs. R. Gall, of the Institute of Geophysics, University of Mexico, gave an account of the work carried out there by the theoretical group on the trapping of charged particles in the geomagnetic field and on the relation between the radiation belts and the inner allowed region of Störmer. Work is also being carried out on the motion of cosmic ray albedo particles in Earth's field and on the changes in threshold momenta resulting from the secular variation in the geomagnetic field. At some points on Earth's surface these changes have amounted to as much as 25 per cent during the past hundred years.

This course, which is a biennial event, provides, in addition to the presentation of original work and review lectures, a forum for the discussion and co-ordination of future programmes in cosmic-ray research in the participant countries. The two previous courses were held in La Paz, Bolivia, and San Carlos de Bariloche, Argentina, and it is intended that the next one should be held once again in Bolivia. In a report of this length it has only been possible to select a few representative aspects of the work reported by the Latin-American groups. H. Elliot

PHARMACEUTICAL CONTROL IN BRITAIN

In his chairman's address to the British Pharmaceutical Conference, held at Portsmouth during September 18–22, Dr. D. C. Garratt states a case for a more effective control of the quality of medicinal substances. Drugs not governed by official standards should not become available to the public except under a notification scheme, similar to that already in force for pesticides, so that their clinical characters and standards of purity, with appropriate methods of analysis, would have prior approval. Standards for all medicines should be enforced by testing in regional laboratories specialized for the purpose and maintained by the Ministry of Health. For reputable approved firms, the contractor's own inspection organization could be given the initial responsibility for compliance of goods with specification. The pharmaceutical analysis involved should be admitted as a distinct discipline, by the institution of special training courses and recognized qualifications.

At present, control analysis is too often rendered pointless by insufficient attention to the precision of the methods involved; and for a full realization of the potentialities of such techniques as, for example, ultra-violet spectrophotometry, a national collection of standard specimens of authentic materials of known impurity content is essential. Authority for the enforcement of those standards should be incorporated in an Act of Parliament.

It should be every analyst's concern to consider what can be done to reduce costs of examinations, for example, by using equally effective, but cheaper, solvents, by applying rapid instrumental techniques or, where possible, by replacing costly bio-assay investigations by simpler paper chromatographic techniques.

Dr. Garrett suggests that the public would receive better protection if the control of drugs were divorced from the present Food and Drugs Act and incorporated in a new Medical Substances and Preparations Act built around Sections 11, 12 and 13 of the Pharmacy and Medicines Act. Imported drugs should be subject to stringent examination by analysts of acceptable status. Such status might be conditional on the possession of a special diploma incorporated as a requirement of competence in the proposed Medical Substances and Preparations Act. Examinations for such diploma qualifications would be conducted by those chemical or pharmaceutical institutions approved by the Ministry of Health.

THE LABORATORY OF THE GOVERNMENT CHEMIST

The very varied work done in the Laboratory of the Government Chemist during 1960 has recently been reported*. The Laboratory, which forms part of the Department of Scientific and Industrial Research, exists to provide a service to any Government department that requests it on matters broadly concerned with chemistry, and more particularly with chemical analysis. The Laboratory is the oldest Government chemical institution in the Commonwealth. It was created in 1842 by the Board of Inland Revenue, principally to assist the revenue authorities in detecting and preventing the adulteration of tobacco with worthless additives. The special responsibilities which the Laboratory retains to H.M. Customs and Excise are highlighted by the number of samples received from this authority. Of a total of 327,460 samples examined and reported on by the Laboratory during the year, no less than 280,125 were submitted by H.M. Customs and Excise. These samples cover a wide range of dutiable commodities such as wines, beers and spirits, sugar, textiles, fuel oils, etc.

The statutory duties of the Government Chemist under the Food and Drugs Act, the Fertiliser and Feeding Stuffs Act, and the National Health Act, involve the Laboratory in such work as the analysis of orange juice, dried milk, fertilizers, pesticide chemicals and formulations thereof, pharmaceuticals and drugs, canned foods. Examples of the variety of this work are the determination of glycogen in oysters and the iodine content of school dinners.

An organization which exists to provide an advisory service must carry out a considerable number of routine analyses as, for example, on the variety of materials purchased by various Government departments ; this work varies little from year to year.

Important work from the public health point of view concerns the examination of water and sewage. Much attention is given to the control of fluoridation in municipal supplies (where this is practised). The control of micro-organisms in the Serpentine bathing area is an item of special interest to Londoners.

* Department of Scientific and Industrial Research: Laboratory of the Government Chemist. Report of the Government Chemist, 1960. Pp. iv+79. (London: H.M.S.O., 1961.) 5s. net.