

Astronomical Union. The spectrum of iron contains thousands of lines, many of which are well adapted for use as standards. The work of determining their positions was undertaken by the members of an international committee, in accordance with certain specifications formulated by the Solar Union. But those who took part in the investigation were not bound by any rigid rule. On the contrary, they were encouraged to make every possible innovation in the manner of attack, in order that obscure sources of error might be discovered and the highest possible accuracy in the final results attained. The outcome demonstrates most conclusively that organized effort and freedom of initiative are by no means incompatible. Important instrumental improvements of many kinds were effected, sources of error previously unsuspected were brought to light, and means of eliminating them were devised. A by-product of the investigation, of great fundamental interest, was the discovery that the peculiar displacements of certain lines in the spectrum of the electric arc, which are greatest near the negative pole, are due to the influence of the electric field. These displacements, previously unsuspected, are sufficient to render such lines wholly unsuitable for use as standards unless rigorous precautions are observed. The international committee, in the light of the new information thus rendered available, will now have no difficulty in completing its task of determining the positions of standard lines with an accuracy formerly unattainable.

The variation of latitude is another subject in which international co-operation has yielded important results. It was found some years ago by astronomical observations that the earth's axis does not maintain a fixed direction in space, but moves in such a way as to cause the earth's pole to describe a small but complicated curve around a mean position. The change in the direction of the axis is so slight, however, that the most accurate observations, made simultaneously at different points on the earth, are required to reveal it. These were undertaken at several stations widely distributed in longitude, in Italy, Japan, and the United States. A new photographic method has recently been devised which will probably render unnecessary the use of more than two stations in future work.

An extensive co-operative investigation, planned by the Division of Geology and Geography of the National Research Council, involves the joint effort of geologists and chemists in the study of sediments and sedimentary deposits. This is of great importance in connection with many aspects of geological history, and also because of its bearing on economic problems, such as the origin and identification of deposits or