maximum difference of sensitivities on increasing or decreasing the incident electron current is about 10%. Probably it would be much diminished if the intensity of the electron current were restricted to a narrower range. Fig. 3 shows the intensity curve for electron diffraction by a polycrystalline silver film. The broadening
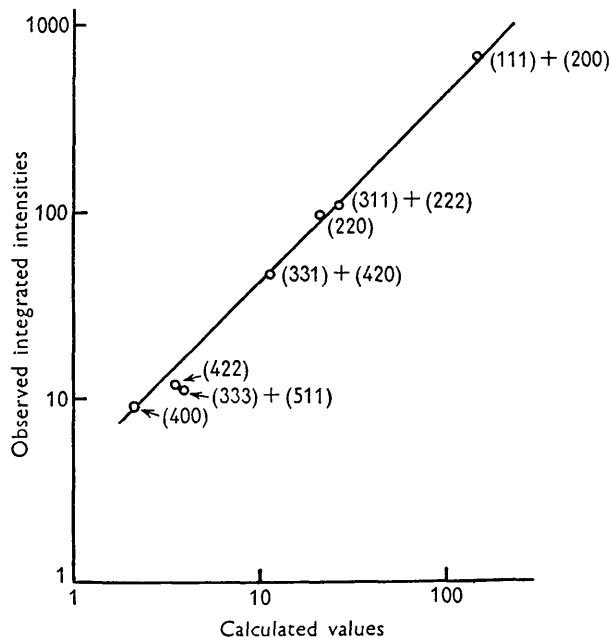

Fig. 4. Comparison of the integrated intensities obtained from Fig. 3 with the values calculated by the kinematical theory.

of the diffraction lines seems to be due to the small size of the crystal grains; the estimated mean grain size is 20–30 Å. The integrated intensities obtained from Fig. 3 are compared with the values calculated by the kinematical theory. The results agree well, as shown in Fig. 4.

This agreement, however, must not be over-emphasized because the silver film used in this experiment was prepared by vacuum evaporation on collodion film and the influence of the base collodion film was only approximately taken into account. Owing to the presence of the hysteresis effect, it is too early at present to consider this method to give an accurate measurement of intensity. Still, considering the elaborate procedures needed for the photographic method and for d.c. amplification in the direct measurement of the diffracted electron current, the present simple method seems to be worthy of further investigation. Even at the present stage it can be applied for some purposes, e.g. the detection of weak halos, measurement of the widths of Debye–Scherrer rings and the rough estimate of their intensity, etc.

We express our hearty thanks to Assistant Prof. M. Eguchi of the Institute of Industrial Science, University of Tokyo, for his valuable advice and suggestions, and also for his kindness in supplying the crystals.

References

FRERICHS, R. (1947). *Phys. Rev.* **72**, 594.
FRERICHS, R. (1949). *Phys. Rev.* **76**, 1869.
FRERICHS, R. (1950). *J. Appl. Phys.* **21**, 312.
KALLMAN, H. & WARMINSKY, R. (1948). *Ann. Phys., Lpz.* **4**, 69.
SIMON, H. (1953). *Ann. Phys., Lpz.* **12**, 45.

Notes and News

Announcements and other items of crystallographic interest will be published under this heading at the discretion of the Editorial Board. Copy should be sent direct to the British Co-editor (R. C. Evans, Crystallographic Laboratory, Cavendish Laboratory, Cambridge, England).

Thirteenth Annual Pittsburgh Diffraction Conference

The Thirteenth Annual Pittsburgh Diffraction Conference will be held on 3 and 4 November 1955 at the Mellon Institute in Pittsburgh, Pa., U.S.A. As in previous years, it is planned to hold sessions on 'Instrumentation and methods', 'Neutron diffraction', and 'Metals', with provisions also for papers on general diffraction subjects.

In so far as is possible, it is the practice at the Pittsburgh Conference to give ample time for the presentation and discussion of a limited number of papers. It is the desire of the Conference Committee this year to emphasize diffraction studies of imperfections and phase transformations, and papers pertaining to these subjects will be particularly welcome.

Titles of contributed papers should be sent to the Program Chairman, Mr W. L. Kehl, Gulf Research and Development Company, P.O. Drawer 2038, Pittsburgh 30, Pa., U.S.A., before 1 September 1955. Abstracts should be submitted by 20 September.

International Union of Crystallography

1. The Union has received a most generous donation of 10,000 Swedish crowns (approximately £700) as a contribution towards the expenses of its publications from the following Swedish Industrial firms:

Stora Kopparbergs Bergslags A. B., Falun.
Sandvikens Jernverks A. B., Sandviken.
A. B. Svenska Metallverken, Västerås.
ASEA. Allmänna Svenska Elektriska Aktiebolaget, Västerås.
Georg Schönander A. B., Sjöbjörnsvägen 62, Grondal.

2. With the approval of the Executive Committee, the Commission on Crystallographic Teaching has co-opted T. Watanabé (Japan).