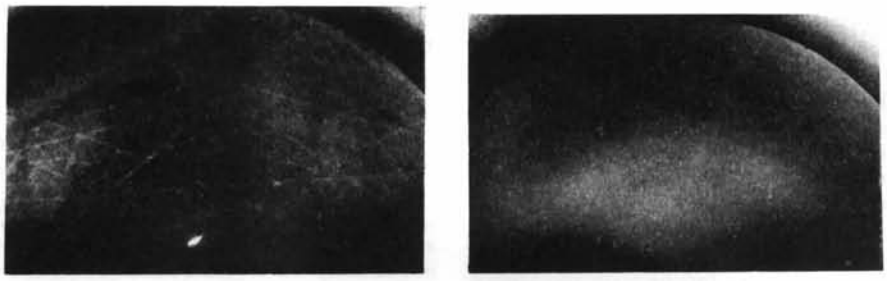

(*a*) (*b*)

Fig. 1. (*a*) Kikuchi pattern from rock-quartz crystal surface after treatment with boiling hydrochloric acid for 1 hr. (*b*) Pattern from crystal with aluminium layer of mean thickness 0·9 Å covering surface.

which may escape detection may be estimated as $\leqslant$ 40 Å.

A simple experiment served to determine the minimum detectable amorphous layer on the quartz crystals being examined. A thin (invisible) film of aluminium was evaporated on to the quartz, simultaneously with layers on glass plates placed nearer to the source. The thickness of the latter deposits were determined from their optical transmission using the results given by Walkenhorst (1941). The thicknesses observed on the nearer plates indicated that the thickness variation was approximately given by the inverse square law. The diffraction pattern shown in Fig. 1(*b*) was obtained with an aluminium layer of mean thickness 0·9 Å covering the surface; the Kikuchi lines are almost completely obliterated. The quantity of aluminium deposited corresponds to less than one atomic layer; from the known tendency to aggregation of such deposits, it is likely that under these conditions the quartz surface is covered with small nuclei, one or two atoms thick. The scattering power of aluminium is approximately the same as that of the atoms in quartz. Since so small an amount of aluminium suffices to obscure the Kikuchi lines, it is clear from the sharpness of the patterns obtained from the rock-crystal that any non-crystalline surface disorder cannot extend beyond the first one or two molecular layers.

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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).

Exhibition of X-ray Crystallographic Equipment

The X-ray Analysis Group of The Institute of Physics announces that its autumn conference will be held in London on 20 and 21 November 1953, and an exhibition of X-ray diffraction equipment will be an important feature of it. Offers of exhibits are invited under two headings: (*a*) apparatus commercially available in the U.K.; (*b*) examples of recent developments in X-ray crystallographic equipment that have been made in universities and other research centres in the U.K. Examples of the kind of exhibit envisaged are: X-ray tubes, diffraction cameras of all types, micro-beam techniques, counters and counter-spectrometers for diffraction work, any aids to interpretation, monochromators, microdensitometers, travelling microscopes, X-ray films and photographic accessories, and spectrometers for fluorescent analysis. Owing to the limited space available a selection will no doubt have to be made from the offers submitted.

Offers of exhibits giving details of approximate bench and floor space required and of any services needed should be submitted before 1 September 1953 to the Conference Secretary, Mr H. J. Goldschmidt, c/o The Institute of Physics, 47 Belgrave Square, London S.W.1, England.