For the silicon specimen, with negligible natural broadening, the observed and calculated breadths are in excellent agreement. Correction curves (Alexander, 1954) indicate a natural breadth of 4–5′ for the iron specimen.

The predominant source of broadening in the fluorescent method is the effective source width (1 mm.). It does not appear practicable in the present method to reduce this appreciably and still maintain sufficient intensity for accurate line profile determinations (although a development of the fluorescent X-ray tube outlined by Guinier (1950) might perhaps be more suitable for this purpose). Nevertheless, where poor resolution can be tolerated, the method does appear to have a number of attractive features.

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References

ALEXANDER, L. (1950). *J. Appl. Phys.* **21**, 126.
ALEXANDER, L. (1954). *J. Appl. Phys.* **25**, 155.
GUINIER, A. (1950). *Brit. J. Appl. Phys.* **1**, 310.
WEISS, R. J., DEMARCO, J. J. & WEREMCHUK, G. (1954). *Acta Cryst.* **7**, 599.

International Union of Crystallography

Commission on Crystallographic Apparatus: Recommendations on Goniometer Heads*

The Commission wishes to draw the attention of all apparatus manufacturers to the great importance of making interchangeable goniometer heads, so that one sample can be rapidly and precisely moved from one goniometer to another, regardless of manufacture.

The Commission recommends for general adoption the dimensions and design data recently approved by the American Crystallographic Association. The chief features and dimensions to be adopted imperatively are given in Fig. 1.

The Commission notes that most cameras and goniometers in use today require that the head be usable with an inclination of plus or minus twenty degrees (±20°) of both arcs inside a cylinder of fifty (50·0) millimetre diameter. Since this limits the maximum radius of the lower arc, a shorter standard height is shown to be *permissible only* on eucentric goniometer heads (i.e. those having a fixed common intersection of principal axis and the axes of both arcs and providing translations and elevations only above the arcs).

Correspondence concerning this note should be addressed to the Chairman of the Commission (Prof. A. GUINIER, Conservatoire des Arts et Métiers, 292 Rue St Martin, Paris 3, France).

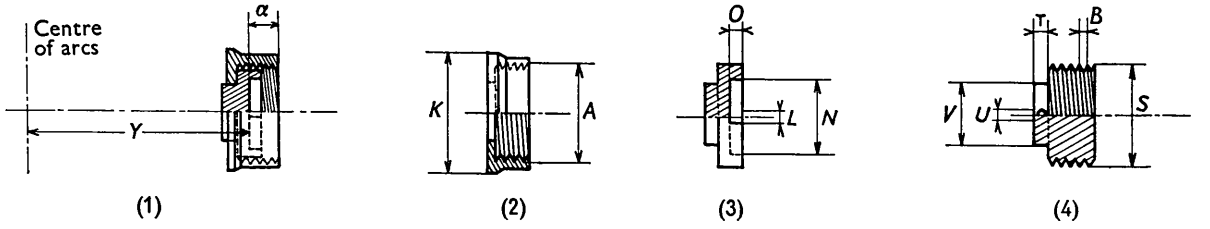

Fig. 1. Description, dimensions and tolerances of goniometer heads (excerpts from the specifications adopted by the American Crystallographic Association).

		Inches	Millimetres
Y	Above male fitting (4)	2·518±0·001 [1·929±0·001]*	63·96±0·03 [49·00±0·03]*
α	Overlap of nut	0·281 (0·295 maximum)	7·14 (7·50 maximum)
A	Pitch diameter for loose nut	1·144	29·06
K	Outside diameter of knurl	1·375 (1·400 maximum)	34·92 (35·56 maximum)
L	Slot for pin	0·1250 +0·0005, −0·0000	3·18 +0·01, −0·00
N	Inside diameter of cup	0·8660 +0·0005, −0·0000	22·00 +0·01, −0·00
O	Depth of cup	0·155 maximum	3·94 maximum
B	Single thread pitch	0·0394 (60° vee threads)	1·00 (60° vee threads)
S	Pitch diameter of fitting	1·138	28·91
T	Height of stud	0·157 minimum	3·99 minimum
U	Diameter of pin	0·1245 +0·0000, −0·0005	3·16 +0·00, −0·01
V	Diameter of stud	0·865 +0·0000, −0·0005	21·97 +0·00, −0·01

* Alternative height to centre of arcs *permissible only* on eucentric goniometer heads.