

puter. In this case small modifications in some statements are necessary in addition to an expedient to overcome the limitations of the core storage.

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Laboratory Note

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A miniature goniometer head*

A miniature, two-arc, lockable, non-magnetic goniometer head with all movements confined within a cylinder of 1.5 cm diameter has been constructed. The upper and lower arcs are adjustable to $\pm 10^\circ$ and $\pm 5^\circ$ and the common center of arcs lies 0.95 and 1.6 cm above the top and bottom pedestals respectively. It has functioned satis-

* Work performed under the auspices of the U. S. Atomic Energy Commission.

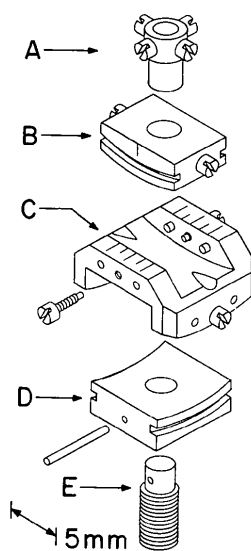


Fig. 1. An exploded view of the miniature goniometer head.

factorily, withstanding repeated thermal cyclings between 300–4°K and upholding the mounted ferromagnetic crystal exerting a large field-induced torque in the cryomagnetic neutron experiment.

In our instrumentation, the sample space in the cryostat tail situated between the magnet poles is about 1.8 cm in diameter. Three different goniometer heads for this configuration have been constructed and tested successfully. The smallest model is shown in Fig. 1 where *A* is an exemplary crystal holder; *B*, the upper cradle with two locking screws for *A* and a pair of curved grooves for the upper arc; *C*, the lower cradle with a pair of slide-guiding dowel pins and a locking screw for each of the mating grooves in *B* and *D*; *D*, the lower-arc grooved base with a press-fitting hole and a dowel pin for the mounting stud *E*. Steric clearance necessitates an intricate shaping of *C*. High thermal conductivity of the sample mount is preferable in our temperature-control monitoring and hence construction metals chosen were Ti–Zr null-matrix alloy for *A* and the locking screws, tempered aircraft aluminum alloy (7075, ASTM B211) for *B*, *C*, and *D*, copper for *E* and stainless steel for the dowel-pins. An auxiliary micrometer is used in the cradle positioning. The X-ray method is employed for the prealignment so as to attain the least correction in the multiparameter angular settings of the neutron-scattering and magnetic-field vectors. The final translational alignment is made externally with the centering devices for the whole cryostat–magnet assembly (Atoji, 1965). A miniaturized model of the one-arc one-rotor goniometer head (Davies & Mathieson, 1965) is also being designed.

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Crystallographers

This section is intended to be a series of short paragraphs dealing with the activities of crystallographers, such as their changes of position, promotions, assumption of significant new duties, honours, etc. Items for inclusion, subject to the approval of the Editorial Board, should be sent to the Executive Secretary of the International Union of Crystallography (J. N. King, International Union of Crystallography, 13 White Friars, Chester CH1 1NZ, England).

Professor Alexandru Codarcea died on 29 May 1974. He was Professor of Mineralogy at the Department of Geology of the Institutul Politehnic 'Gh. Gheorghiu-Dej', Bucharest, and a member of the Academy of the Romanian Socialist Republic. He had been President of the Republican Commission of Geological Reserves.

Professor G. V. Raynor, Professor of Physical Metallurgy at the University of Birmingham, is now in South Africa, where he has taken up the appointment of Royal Society Leverhulm Visiting Professor in the University of Witwatersrand.

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