

undergoing large deformations, while temperature stands as a relevant physical variable, the entropy production alone is no longer sufficient to provide a criterion for stability. Detailed models of cooperative defect kinetics must be worked out in addition.

Consequently, it seems advisable to extend the treatment proposed for the thermoelastic instability to other dynamic instabilities exhibited by materials under stress. We allude to creep, fatigue and fracture. Real-time monitoring of the temperature of metallic materials undergoing deformation might provide a means of detecting and highlighting internal mechanical processes responsible for the instabilities.

FURTHER READING

Proceedings of the International School of Physics "E. Fermi", *Mechanical and Thermal Behaviour of Metallic Materials*, Eds. G. Caglioti and A. Ferro Milone (North-Holland Pub. Co., Amsterdam) 1982.

Solar Physics Section

Following the elections which were concluded at the end of November, the Board of the Solar Physics Section is now composed as follows. Newly elected members are indicated by *.

Ch.: M. Kuperus, Solar Observatory, Utrecht
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To all our readers a Merry Christmas
and a Happy and Peaceful 1984.

Research Associate Position in Experimental Nuclear Physics

There is a vacancy for an experimental physicist to join the nuclear physics group as a Research Associate at the Daresbury Laboratory, an establishment of the Science and Engineering Research Council situated in the north Cheshire countryside.

The group is involved in a research programme on the Nuclear Structure Facility, a large tandem accelerator which has recently been completed and which currently is operating at up to 20 MV on terminal.

Currently, the principal areas of study are: direct reactions with light and heavy ions, production of exotic nuclei far from stability, nuclei with very high angular momentum, nuclear breakup and fragmentation and studies of isotope shifts and hyperfine structure using laser-induced resonance fluorescence. Experimental equipment includes a Q3D magnetic spectrometer, advanced gamma-ray and neutron detection apparatus, and a 1m diameter scattering chamber. An isotope separator with an associated dilution refrigerator and a beam line for laser studies is in an advanced commissioning stage, a recoil separator is due to begin initial testing by the end of the year, and a heavy-ion polarised source is under construction.

Applicants (male or female) should possess a PhD degree or expect to obtain one during 1983/early 1984 in nuclear physics.

An appointment will be made at a salary between £6,985 and £10,686 per annum depending on age, ability and experience. The post is available for a fixed term of three years and is superannuable.

CLOSING DATE: 28th February, 1984.

For further information please write or telephone Dr. J. S. Lilley on Warrington (0925) 65000 Ext. 558.

Application forms may be obtained from and should be returned quoting reference DL/835 to:

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