

# **Instrumentation for Astronomy with Large Optical Telescopes**

Proceedings of IAU Colloquium No. 67, held in Zelenchuk,  
U.S.S.R., September 8–10, 1981

edited by C. M. HUMPHRIES

1982, xviii + 322 pp.

Cloth Dfl. 110,- / US \$ 48.00      ISBN 90-277-1388-X  
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At a time when recent advances have produced a dramatic increase in the detection efficiency of astronomical instrumentation (e.g. with the advent of charge coupled detectors and single photon counting systems), it would seem appropriate to review the progress which has been made. To this end, IAU Colloquium No. 67 was recently held in Zelenchuk, U.S.S.R. Topics discussed included spatial and spectral interferometry, conventional and new designs for spectrographs, image intensifiers and solid state detectors, large telescopes, and the efficient matching of telescope images and instrumentation. The spectral region considered included the infrared as well as the visible.



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# Progress in Cosmology

Proceedings of the Oxford International Symposium, held  
in Christ Church, Oxford, September 14-18, 1981

edited by A. W. WOLFENDALE

1982, viii + 344 pp.

Cloth Dfl. 125,- / US \$ 54.50      ISBN 90-277-1441-X

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Cosmology is the meeting place of ideas on the behaviour of matter on distance scales which may be very large or very small, and phenomena occurring during time intervals which may be very long or very short. It is an area of intense interest, not only for the cosmologist, but for the scientist in general. This volume covers the proceedings of a specialist symposium which brought together experts in most of the research areas which have a bearing on cosmology: elementary particles, astronomy, and across the whole range to Cosmic Rays. In view of the amount of important developments and new, often dramatic ideas in all these areas, it was an opportune time for such a meeting of expertise, and the volume reflects the present sense of excitement in cosmology as more and more discoveries are made.



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# Sun and Planetary System

Proceedings of the Sixth European Regional Meeting in Astronomy, held in Dubrovnik, Yugoslavia, 19–23 October, 1981

edited by  
W. FRICKE and G. TELEKI

1982, xxii + 504 pp. + index  
Cloth Dfl. 150,- / US \$ 65.00 ISBN 90-277-1429-0  
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This volume presents reports on recent research of the solar system. Under consideration are, the *Sun as a Star*, the Earth from the astronomical, geophysical and geodetic point of view, the physics of planets, comets, minor planets, satellites, the interplanetary medium, and the motions in the planetary system. A special part is devoted to the problems of astronomical refraction. Unprecedented progress has been made in recent years in all these fields by observers and theoreticians, and the subject has become attractive, not only to European astronomers, geophysicists, geodesists and physicists, but also to experts from non-European countries who took an active part in the *European Meeting*. The volume is unique in its combination of reviews of recent research on such entirely different problems, as they are offered by the various objects of the solar system.



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# Solar Phenomena in Stars and Stellar Systems

Proceedings of the NATO Advanced Study Institute held at Bonas, France,  
August 25 – September 5, 1980

edited by  
ROGER M. BONNET and ANDREA K. DUPREE

1981, x + 591 pp.

Cloth Dfl. 135,- / US \$ 69.50

ISBN 90-277-1275-1

NATO ADVANCED STUDY INSTITUTES SERIES

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The Sun is no longer an isolated astrophysical object but serves the role of representing the basic element of comparison to a large class of objects. This book reviews solar phenomena comprehensively and at each stage a general summation is attempted. Where necessary, as for instance in the case of solar flares, problems are also considered from a basic physics perspective.

The volume is organised into four sections, starting with an overview of the subject matter and then proceeding to a review of the physics of Stellar Interiors. Section 3 deals with the crucial aspect of existence and physics of chromospheres and coronae and how they relate to the presence of convective phenomena in stellar subsurface layers. The final section considers the question of variability. An extensive bibliography will be found throughout the various sections, to which the reader may refer for more detailed developments in different specialist areas.

**Audience:** Astronomers and other scientists who have an interest in variations in the earth's climatic conditions.



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