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Peter L. Smith Wolfgang L. Wiese (Eds.)

Atomic and Molecular Data for Space Astronomy

Needs, Analysis, and Availability

A Selection of Papers Presented at
the Joint Commission Meeting III
of the 21st IAU General Assembly
Held in Buenos Aires, Argentina
23 July – 1 August 1991

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Preface

In recent years, as new astronomical satellite spectrometers have been developed and planned, questions about the atomic and molecular data base have arisen. In particular, astronomers have asked: Are the atomic and molecular data required for space astronomy available and of adequate quality, and, if not, what improvements are necessary?

In order to explore these questions, Commission 14 (Atomic and Molecular Data) of the International Astronomical Union (IAU) proposed that a Joint Commission Meeting on the subject of *Atomic & Molecular Data for Space Astronomy: Needs and Availability* be held at the XXIst General Assembly of the IAU. The proposal was supported by Commissions 10 (Solar Activity), 12 (Solar Radiation and Structure), 15 (Physical Study of Comets, Minor Planets, and Meteorites), 16 (Physical Study of Planets), 29 (Stellar Spectra), 34 (Interstellar Matter), 35 (Stellar Constitution), 36 (Theory of Stellar Atmospheres), and 44 (Astronomy from Space).

This book comprises written versions of the majority of the presentations made at the meeting, which was held on 26 July, 1991, in Buenos Aires, Argentina. Abstracts of all the presentations can be found in *Highlights of Astronomy, Vol. 9*, edited by J. Bergeron and published by Kluwer Academic Publishers. We hope that this book will be valuable to laboratory astrophysicists who are trying to provide the data needed for analysis of data from astronomical spectroscopic satellites.

The editors thank the IAU for graciously permitting publication of these proceedings in this format, and the Presidents and members of the IAU Commissions, who shared in recommending and supporting this Meeting. The editors also thank the members of the organizing committee, S. Sahal-Brechot, Past President of Commission 14 (Atomic & Molecular Data), M. C. E. Huber, and D. C. Morton, for their advice and assistance in planning and running the meeting, and we thank the authors for their diligent efforts at succinctly summarizing their oral presentations.

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