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PART 1

REPORTS ON ASTRONOMY

**TRANSACTIONS
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INTERNATIONAL
ASTRONOMICAL UNION
VOLUME XVIIIA - PART 1
REPORTS**

INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS
INTERNATIONAL ASTRONOMICAL UNION
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OF THE
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VOLUME XVIIIA - PART 1

REPORTS
ON
ASTRONOMY

Edited by

EDITH A. MÜLLER

General Secretary of the Union



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PREFACE

Three years ago the Reports on Astronomy were for the first time published in three separate parts whereby related astronomical topics were collected in one volume and each volume was kept to a size of no more than about 250 pages. The aim was to facilitate a wider distribution of individual volumes among astronomers and other scientists interested in specific subjects of astronomy.

The same system was adopted for the present volume A of the IAU Transactions which covers the activities in astronomical research from January 1976 to December 1978. The Commission Presidents were invited to restrict their reports, to present a selection of the most important developments in the field of astronomy covered by their Commission, and to avoid overlaps with other Commission reports. As a result of the restriction in the number of pages some Commissions present a large, concentrated list of references with little discussion, whereas others review some of the most exciting recent research developments in their subject.

The distribution of the Commission Reports into the three parts of volume XVII A is as follows:

VOL. XVII A - PART 1

See the Contents for this volume, p. vii

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Commission	8.	Positional Astronomy
"	10.	Solar Activity
"	12.	Radiation and Structure of the Solar Atmosphere
"	24.	Photographic Astrometry
"	25.	Stellar Photometry and Polarimetry
"	26.	Double Stars
"	27.	Variable Stars
"	29.	Stellar Spectra
"	30.	Radial Velocities
"	35.	Stellar Constitution
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"	42.	Close Binary Stars
"	45.	Spectral Classifications and Multi-band Colour Indices

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"	33.	Structure and Dynamics of the Galactic System
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"	40.	Radio Astronomy
"	44.	Astronomical Observations from outside the Terrestrial Atmosphere
"	47.	Cosmology
"	48.	High Energy Astrophysics

In order to minimize the price of each volume the method of offset printing was used which required the preparation of the typescripts of the reports ready for photographic reproduction.

On behalf of the IAU I thank all Presidents of Commissions and all Colleagues who contributed to the reports for the wealth of interesting and useful information they have collected and presented in this volume.

Thanks are also due to the Secretaries of the Commission Presidents for their careful preparation of the camera-ready typescripts. My personal thanks go to my secretaries Mme R. Bertschi and Mme R. Läubli for their most valuable editorial help.

EDITH A. MÜLLER
General Secretary

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