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REPORTS ON ASTRONOMY



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TRANSACTIONS  
OF THE  
INTERNATIONAL ASTRONOMICAL UNION  
VOLUME XVIIIA - PART 3

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

Commission	4.	Ephemerides
"	5.	Documentation
"	6.	Astronomical Telegrams
"	7.	Celestial Mechanics
"	9.	Instruments and Techniques
"	14.	Fundamental Spectroscopic Data
"	15.	Physical Study of Comets, Minor Planets and Meteorites
"	16.	Physical Study of Planets and Satellites
	-	Working Group on Planetary System Nomenclature
"	17.	The Moon
"	19.	Rotation of the Earth
"	20.	Positions and Motions of Minor Planets, Comets and Satellites
"	21.	Light of the Night-Sky
"	22.	Meteors and Interplanetary Dust
"	31.	Time
"	38.	Exchange of Astronomers
"	41.	History of Astronomy
"	46.	Teaching of Astronomy
"	49.	The Interplanetary Plasma and the Heliosphere
"	50.	Identification and Protection of Existing and Potential Observatory Sites.

### VOL. XVII A - PART 2

Commission	8.	Positional Astronomy
"	10.	Solar Activity
"	12.	Radiation and Structure of the Solar Atmosphere

Commission	24.	Photographic Astrometry
"	25.	Stellar Photometry and Polarimetry
"	26.	Double Stars
"	27.	Variable Stars
"	29.	Stellar Spectra
"	30.	Radial Velocities
"	35.	Stellar Constitution
"	36.	Theory of Stellar Atmospheres
"	42.	Close Binary Stars
"	45.	Spectral Classifications and Multi-band Colour Indices

## VOL. XVII A - PART 3

*See the Contents for this volume, p. vii*

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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