Part I
Introductory Overviews

Astronomical Research at the Institute of Astronomy, BAS

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In this report review has been done of the research departments and the observational facilities of the Institute of Astronomy, Bulgarian Academy of Sciences (BAS). The research departments are: Sun, Solar system, Nonstationary stars, Chemically peculiar stars, Stellar atmospheres and envelopes, Stellar clusters, and Galaxies. The research projects of IA comprise: studies of the solar atmosphere and its activity phenomena, dynamical evolution of the small bodies in the solar system, physical and chemical processes in comets, nonstationary processes of early-type stars, circumstellar matter in close binary systems, physical processes in stellar atmospheres, mass loss rate from hot supergiants, chemical composition of early-type B and A stars and peculiar anomalies of abundances, evolutionary status and evolution of stars in old open clusters and in the cores of some globular clusters, structure of the galaxies and their systems and the large-scale distribution of matter in the Universe. The IA has a number of international collaboration agreements with many european countries and good relations with colleagues from all Balkan countries. The scientific staff of IA consists of 42. The observatories of IA are: Rozhen National Astronomical Observatory (peak Rozhen, 1750 m), some 30 km from the town of Smolyan, and the Belogradchik Observatory (BO). In both observatories, there are modern facilities for astronomical observations and researches. In the NAO Rozhen, there are 3 telescopes for stellar observations and one solar telescope. The main telescope is a 2 m Ritchey-Chretien-Coude, made by Carl-Zeiss-Jena. This is the biggest telescope in the south-eastern Europe. The limiting magnitude observed with the 2 m telescope is about 22 mag. The telescope is equipped with a Coude spectrograph for high dispersion spectra (3 cameras: 35 Å/mm, 18 Å/mm and 8 Å/mm). The spectra are recorded with a Photometrics CCD camera. The 60 cm Cassegrain is a photometric telescope, equipped with an UBV photoncounting, computer controlled photometer. The 50/70 cm Schmidt telescope was used for wide-field (up to 5 X 5 deg) observations. Now the telescope is equippt with a CCD camera SBIG ST8. The solar telescope is an 18 cm refractor photoheliograph. In the BO, the main telescope is a 60 cm Cassegrain for photoelectric and CCD observations. The research papers of IA are published in all international astronomical journals. In 1999 the Institute of Astronomy marked its 40-tieth anniversary.