EMITS ENTITY NO 81007	The **Astronomical Institute of Romanian Academy** was founded in 1908 and currently includes three astronomical observatories: Bucharest, Cluj-Napoca and Timisoara. Address: Str. Cutitul de Argint 5, Bucharest, RO 040557 http://www.astro.ro
Bucharest Observatory Astronomical Instruments	THE SOLAR REFRACTORS A Carl Zeiss Jena 13/195 cm refractor (1957) is used for white light observations of the solar photosphere (sunspots drawing). A Carl Zeiss Jena 8/120 cm refractor (1958), with a **H-alpha** filter and ST7 CCD is used chromosphere observations (filaments, prominences, flares). THE CASSEGRAIN TELESCOPE was set up by the Zeiss-Jena firm in 1964. It is endowed with a photoelectric photometer with photomultiplier of EMI 9502 B type and with UBV-Johnson filters. The telescope is used mainly for the observation of variable stars. The telescope (50/750 cm) is endowed with a CCD camera.
Computing infrastructure	• SGI ALTIX 3700 Supercomputer (HPC CPU) – ESA property (PECS C98054 Contract) , 44proc. Itanium 2/1.3Ghz, 80Gb RAM, 2Tb RAID; • 4x Intel Xeon 6 Core Servers (HPC, CPU/GPU), 128Gb RAM, 4Tb HDD. • RPC Ultimate CPU AMD Phenon X4 9650 Quand Core,Ram 4G, DDR2 800, HDD 500 GB Sata 16 Mb 7200 rpm, VGA Radeon HD 3870, GDDR2 256 bit HDTV • PCs network
RESEARCH TOPICS AND PROJECTS	
Solar and Heliospheric Researches	Dynamics of solar atmosphere and heliosphere Data analysis, interpretation and modelling Multiwavelengths active regions study Filaments evolution and stability Coronal mass ejections: onset, evolution, solar sources Interplanetary mass ejections and solar wind MHD numerical simulations Multispacecraft data analysis **ESA- PECS Contract (2007-2009) - Romanian contributions to the Sun-Heliosphere Studies (SOHO- Ulysses)**
Space weather	Development of empirical models Coronal mass ejections and interplanetary disturbances Investigation of plasma instabilities in the interplanetary space Local and global helioseismology (observations, theory) Sun-Earth connections Forecast
Stellar Astrophysics and Asteroseismology and Exoplanets	Stellar evolution models (from PMS to AGB) (Theory) Stellar pulsation models and helioseismology for Solar-like stars, B and Be stars, Delta Scuti stars, Cepheids,and RR Lyrae Stars) (Observations and theory) Close eclipsing binaries (Observations and Theory)

	Exoplanets (Observations and Theory) Asteroids, Comets and Mutual Phenomena in the Solar System (Observations) **ESA-PECS Project C98054 (2007-2009): Romanian participation to the Corot Space Mission (stellar evolution, stellar seismology, exoplanets)** Participation to the NASA/KASC KEPLER Space Mission (Chair of WG 3.2) (stellar evolution, stellar seismology, exoplanets)
Products and services	
- Astronomical observations campagns - Data analysis and interpretations - Empirical models developments - Numerical simulations - Trajectory computations - Data bases and data mining - Interdisciplinary studies - HPC for the Solar System barycenter: - HPC in NEO models and orbits.	

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