

SUB-REGIONAL EUROPEAN ASTRONOMICAL COMMITTEE (SREAC)

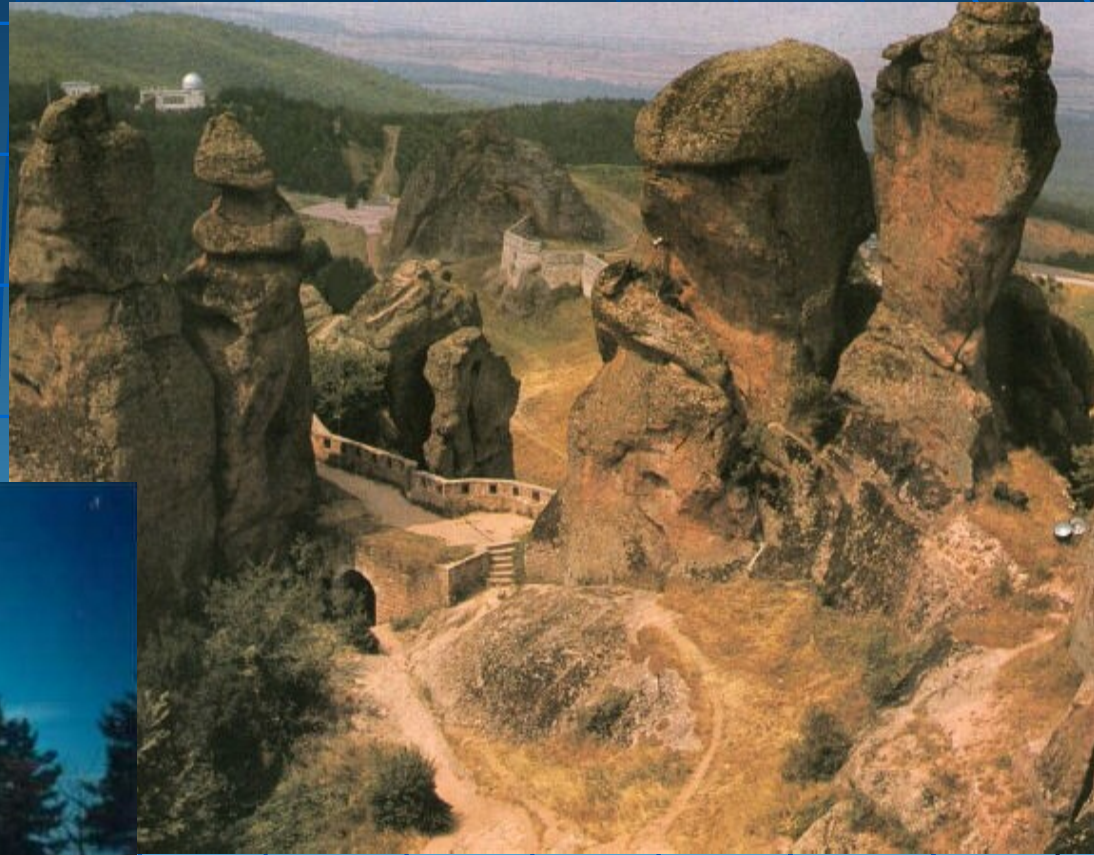
**Created within the framework of the
project "Enhancing astronomical
research and observation in South-
East Europe and Ukraine" of the
UNESCO Regional Bureau for
Education, Science and Culture in
Europe (UNESCO-BRESCE)**

The idea for the SEE collaboration in astronomy:
To solve our problems TOGETHER for the benefit of all the community.

The precursor of SREAC is the Sub-regional Branch of EAS, established in 2000 at Belogradchik Observatory by Bulgaria, FYR of Macedonia, Greece, Romania, Ukraine and Yugoslavia. This year, we'll celebrate 10 years of its establishment during the 7th SREAC meeting in Ochrid.

But, we had no funding then to solve our problems. After a discussion and consultations with the UNESCO-ROSTE (now BRESCE) officer Prof. Boksenberg, Bulgaria, Romania, Serbia and Montenegro, Turkey and FYR of Macedonia applied with a proposal to UNESCO-ROSTE for a new CCD camera for the 2m telescope at BNAO Rozhen to be used by researchers from these countries.

Belogradchik Observatory, Bulgaria



After that, in May 2004 Sub-regional European Astronomical Committee (SREAC) within the framework of the common project was established in Bucharest, Romania. The members then were: Bulgaria, FYR of Macedonia, Greece, Romania, Serbia and Montenegro, Turkey and Ukraine. Statutes were elaborated, webpage (www.astro.bas.bg/SREAC/), and a Newsletter began to be spread. Later, Armenia joined SREAC as Associated member. Recently, in 2009, Albania also joined SREAC as a full member. SREAC Newsletter began to be spread not only among the SREAC representatives, but to a wide mail list.

Aims: According to p.2 from the Statutes: "The main objective of SREAC is to elaborate and implement a sub-regional strategy for the development of astronomy in South-East Europe and Ukraine and to strengthen astronomical co-operation in the sub-region, and between the region and countries outside".

Actions: For this purpose, SREAC according p.3 of the Statutes carries the following:

- foster bilateral and multilateral collaboration between participating and other institutions;
- address issues concerning the training and mobility of young researchers in astronomy;
- organize sub-regional research workshops on given themes;
- identify priority areas for research co-operation and elaborate projects to be carried out by participating research institutions;
- prepare appropriate joint project proposals to be submitted to funding sources;
- identify ways and means of sharing experience and research facilities, including the preparation of inventories of expertise and infrastructure;
- seek better access to scientific literature and research data.

SEE Expert Meeting: Tirana, 21-22 May 2010

Funding by UNESCO: till 2004 – we had no funding. Bulgaria, Institute of Astronomy, BAS organized 3 events by their own resources: two Balkan meetings (2000 and 2004), and one SEE School on “Photometry with Small Telescopes” at Belogradchik Observatory. **End of 2003:** Bulgaria, Romania, Serbia, FYR of Macedonia and Turkey applied to UNESCO-ROSTE (now BRESCE) with a project **“Enhancing astronomical research and observations in South-East Europe and Ukraine. The Rozhen Astronomical Observatory – Major facility for the South-East European region”** for a high-quality CCD camera for the 2m telescope at the Bulgaria National Observatory “Rozhen” to be used there by the countries participating in the project. The donated by UNESCO-ROSTE CCD camera was inaugurated in May 2005. Astronomers from FYR of Macedonia, Romania, Serbia and Turkey began to observe at Rozhen and Belogradchik Observatory.



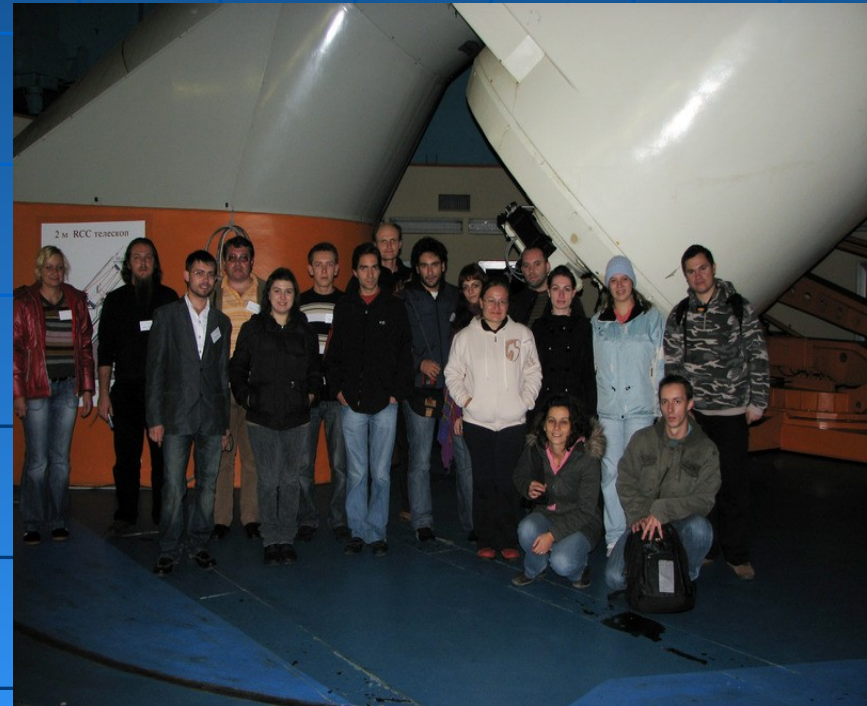
Second project funded by UNESCO-ROSTE (2006, 2007):

"Enlargement of Collaboration in Ground-Based Astronomical Research in SEE Countries. Variable Stars Research and Studies of Small Bodies in the Solar System".

A Round Table discussion was organized at the Balkan Meeting at Rozhen Observatory, Bulgaria, June 2004, where UNESCO was presented by Profs. Boksenberg and Anguelov. The discussion was on the further development and enhancement of the quality of astronomy research in the region. A resolution was accepted and signed by the SREAC representatives with the idea we to apply with a big proposal to the UNESCO-IBSP program for equipment upgrade with a high-quality spectrometer (2m Rozhen) and other equipment for some important instruments in the region. The idea was supported by colleagues from Germany, France, Hungary and other European countries who took part in the project as "associated". It was a big project for several thousand USD. The project was redirected to UNESCO-BRESCE. Funding received for the 2 years was 45000 USD. Part of them were used for equipment, part – for Meetings and Schools.

Third project funded by UNESCO-BRESCE(2009,2010): “Collaboration in Astronomical Research in SEE Countries and Common Activities during IYA2009 and 2010”.

Received funding: 25000 USD for a meeting, a school and for public events of celebration IYA2009. In 2010 are scheduled the 7th SREAC Meeting+conference at Ochrid, FYR of Macedonia and School on photometry in Athens, Greece.



Funding by other sources:

- **Bulgarian NSF:** Contract DO 02-85/2009 won by a Bulgarian collective including IA, BAS, Sofia University and Shumen University, i.e. the whole professional astronomy in Bulgaria. New control electronics for the 2m telescope at Rozhen Observatory and partial funding for high-quality spectrometer. The first one is already in operation since end of 2009. **For the evaluators was important that "Rozhen" is not only national, but also regional center for astronomy.** In this way, SREAC with UNESCO fostered astronomical research in the region.
- **Regional Astronomical Centre for Research and Education.** This program is a part of the EU Roadmap for development of science and education. The Institute of Astronomy with NAO "Rozhen" and Belogradchik Observatory, Sofia University and Shumen University were invited by the Ministry of Education, Youth and Science, Bulgaria to present a common proposal and were evaluated by the ESF in 2009. They received the best score among the other candidates for Regional centers. For the moment, however, due to the financial crisis, this project is in a phase of hibernation.

Funding by other sources:

- **Serbia, Astronomical Observatory of Belgrade**, with the support by Bulgaria and SREAC has recently **won Western Balkans REGPOT call** for building **1.5m telescope**.
- The **Aristotle University of Thessaloniki, Greece** received funding under the **EU program for less developed regions** for building **1.2m telescope** at Mt. Orlyakas close to the Albanian border. Bulgarian astronomers were invited for consultations on the instrument and the equipment.

Output:

- Upgrade of the equipment in Bulgarian NAO "Rozhen". Possibility astronomers from the SREAC countries to use the Bulgarian telescopes, including the 2m one, what they continue to do since 2004. One colleague from FYROM, Dr. Gordana Apostolovska defended PhD Thesis based on observations obtained at the observatory and with a Bulgarian supervisor. As a result, the Bulgarian **NAO "Rozhen" is forming as a regional center for astronomy**. We have also successful applications for two 1m class telescopes (Serbia and Greece) that will be built during next years.
- More than 15 meetings were organized in the period 2000-2009 (Romania, Bulgaria, Turkey, Greece, Serbia, Ukraine), 3 schools (Bulgaria), 9 books with Proceedings were issued (5 of them in Romania, 2 – Bulgaria, 1 – Turkey, 1- Serbia). Most of them received full or partial financial support by UNESCO-BRESCE. Hundreds of papers were published for the period. Some of these papers include co-authors from other EU countries and elsewhere (see the reports to UNESCO-BRESCE).

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Current problems:

- We still haven't finished the upgrade of the 2m telescope at Rozhen: we need additional funding for the spectrometer for the 2m telescope at Rozhen that will be a very powerful modern tool for study of the stellar structure and evolution and will boost further the astronomy in the region.
- We hope, the Aristarchos 2.3m telescope will be also available for observations soon.
- The region still seriously suffers from the financial crisis. We need the UNESCO support for our educational activity and SREAC meetings, to be able SREAC to continue to function. In fact, due to the continuous support by the UNESCO Office in Venice since 2004, SREAC was able to function. With the present financial situation, we do not see other real possibility for funding of these activities. In this way, SREAC could have security and perspective at least for 2 years.

In conclusion: we try to use the SEE cooperation in astronomy and the UNESCO-BRESCE support to SREAC as much as possible to meet our goals – higher level of research and education in astronomy in the region. Such a level will attract more interest from countries outside the region to collaborate with us. We'll be able to apply and win competition in big EU etc. programs and also to meet the European strategy for development of science and education, part of which is the ASTRONET Strategy for development of astronomy in EU till 2020.

Acknowledgement:

SREAC members acknowledge with gratitude the financial support by UNESCO-ROSTE and now BRESCE (UNESCO Office in Venice) and the role they play for the SEE cooperation in astronomy. Special thanks are due also to the former and present Directors Dr. Lasserre, Dr. Moore and Dr. Ruoss, to the project officer Mrs. I. Nechifor and to the Consultants Prof. Boksenberg and Prof. Anguelov for their help to the development of the regional collaboration.



Comet Hale-Bopp observed at BNAO "Rozhen"

