

35 YEARS OF THE ASTRONOMICAL SECTION OF RESEARCH SOCIETY FROM VALJEVO

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Abstract. Research Society "Vladimir Mandić Manda" was founded in 1969 and its Astronomical section was established in 1973. Members of the Section have been working on various projects (observations of meteors, planets, the Moon, solar activity and variable stars), on astrophotography and ethno-astronomical research. Many important astronomical phenomena have been observed (lunar and solar eclipses, planet transits). The results of the projects are published in the Proceedings of the Research Society. Also, astronomical education and popularization are very important parts of its activity. For 35 years, the Department had around 500 members, completed about 50 projects, and organized hundreds of public events.

Research Society "Vladimir Mandić Manda" (former Club of Young Researchers) from Valjevo was established in 1969 with an idea that young people interested in science could organize some scientific activity, while spending time in nature. The existing youth organizations (scouts, mountaineers) were not able to meet their creative needs. They wanted to do some scientific research so that their stay in the countryside would have been more fulfilled.

The idea was to organize thematic amateur groups to study geography, biology, archeology, astronomy, speleology, ethnology... Young people would prepare their travel and stay in the countryside, as well as their activities in the relevant field.

Astronomical section was founded in 1973. Since then the Section has been working on various observational projects, popularization of astronomy and public education (Božić 2003).

1. MEMBERSHIP

The members are mostly secondary school and undergraduate students. University students are some kind of peer tutors and creators of programs and activities. Also all technical aspects (organization of the activities, fund raising, etc.) are realized by them.

The older members (aged over 25) are active in the Society only as supervisors and consultants.



Figure 1: Research Society logo (left) and Astronomical section logo (right).

2. PROGRAMS

Since its foundation, Astronomical section has been working on several projects: meteor showers observations, solar activity, astrophotography, variable star observations and ethnoastronomy (Božić, 2006).

Observation of meteor showers is one of the most important continual activities. The following meteor showers: Lyrids, Eta Aquarids, Perseids, Orionids, Leonids, Geminids are regularly observed. The observations are visual, and all data are forwarded to the International Meteor Organization (IMO).

A valuable project for the Section is continuous recording of the solar activity. Using the number of sunspots and their groups we determine Wolf's number.

The project of observation of variable and double stars has been realized. Argelander's visual method of estimating the magnitudes of variable stars was used. The light curves are analyzed and parameters of numerous variable and binary stars have been determined.

Astrophotography is a part of each project, but it is also an activity used for popularization of astronomy. There is a great collection of photographs of night sky, planets, Sun, deep sky objects, etc.

Ethno-astronomical researches started in the end of 1970s. From 1997 the project "Ethnoastronomical research in Serbia" was aimed at collecting all kinds of people's beliefs related to the astronomical phenomena. Firstly the region near Valjevo was covered, and then the Kopaonik region and the vicinity of Pirot. The project is important for understanding the development of ideas about astronomy among citizens of Serbia (Božić, 2003; Božić 2006).

Apart from these programs, rare astronomical phenomena (transits, eclipses...) have been observed by the members of the Section. An expedition to Kelebija (north Serbia) for observing the total solar eclipse in 1999 was organized, around 50 people gathered and a few observation projects were carried out (Božić, 2003). A similar expedition including 10 members was organized to Antalya (Turkey) in 2006.

3. RESEARCH CAMPS

The research camp represents a specific activity of the Research Society. It means implementation of educational activities or research projects staying in the countryside. The Astronomical section realizes 5 to 10 such camps per year, lasting from 2 to 15 days.

Most of these camps are practical, serving to realize the observations and other astronomical projects. Other camps are educational; new members learn how to use instruments, the observing techniques and theoretical basis of astronomy.

4. EDUCATION AND POPULARIZATION

A very important segment of the program of the Research Society is education and popularization of astronomy.

The Astronomical section organizes regular "Astronomical course". It offers introduction to astronomy divided into 25 lectures, once a week. Besides, special lectures are organized to present and explain topics and events of public special attention. Presentations of certain astronomical web pages, software and video movies are also usual activities.

The work on astronomy popularization and education of people interested in astronomy is very important. The Section has a very good cooperation with local media, which help to announce and explain emerging astronomical events. The Astronomical section also organizes public observations, open lectures, tribunes, and video presentations.

5. PUBLICATIONS

The members of the Research Society publish their scientific results in the proceedings which are issued every 2 to 3 years. All papers are reviewed by professional scientists. In this way amateur scientific work of young people is verified.

Once a year, the Research Society publishes magazine "Researcher", representing activities of all the departments together with popular scientific texts. Also, for explanation of various astronomical phenomena, the Section publishes adequate promo material, such as sky maps, Moon charts, CDs with popular astronomical contents, etc.

6. COOPERATION

The Astronomical section of the Research Society has a very good cooperation with the professional institutions like the Society of Astronomers of Serbia, Astronomical Observatory Belgrade, and Departments of Astronomy at the Universities of Belgrade and Novi Sad. Professional astronomers from these institutions are often mentors and associates in activities of the Research Society "Vladimir Mandic – Manda".

Apart from this, an intensive cooperation with other astronomical societies in our country as well as in the region of South Eastern Europe is very important. Members of the Section are often guests of other organizations, also the Section is a host to astronomers from all over Serbia. Cooperation with the Petnica Science Center is very important, because this institution is always ready to share its equipment with the young researchers.

The Astronomical section cooperates with magazines "Astronomija", "Vasiona" and with on-line magazine "Astronomski magazin". In these publications, results of its activities are presented and its members are the authors of some popular texts.

7. RESEARCH SOCIETY TODAY

After almost 40 years of the Research Society work and 35 years of the Astronomical section, this organization is still developing.

In 2006, the Research Society started to build a new modern building (300 square meters). At the beginning, the support was given only by old members, but with time the support started to grow. Thanks to the support given by Serbian government, the works are almost completed so that young researchers will use the new facilities soon.

During 40 years, the Research Society had around 5000 participants in its programs. The Astronomical section organized about 250 research activities that lasted between 2 and 20 days and about 150 public events. Apart from this, about 100 projects were organized and a large number of scientific papers and hundreds of popular texts were published.

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