

## ASTRONOMICAL SOCIETY "MAGELLANIC CLOUD"

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**Abstract.** Astronomical society "Magellanic cloud" was founded on May 16, 2001 in the town of Prokuplje, Serbia, by A. Simonović, A. Valjarević, then students of geography at the University of Priština, Ž. Mijajlović professor of mathematics, S. Šegan, professor of astronomy, both of the University of Belgrade. In this paper we present the activities of the Society in the popularization of astronomy and mathematics in Prokuplje and its vicinity. Also, the role of the Society in building the Astronomical station of the Astronomical observatory of Belgrade at the mountain Vidojevica close to Prokuplje is described.

### 1. FROM THE HISTORY OF THE SOCIETY

The astronomical society "Magellanic cloud" is founded in the town of Prokuplje on May 16, 2001. The Society is recorded in the Register of civil associations of Serbia under the registration number 2735, page no. 983. The founders of the Society are A. Simonović, A. Valjarević, then students of geography at the University of Priština, Ž. Mijajlović professor of mathematics, S. Šegan, professor of astronomy, both of the University of Belgrade. Apart from the founders, the members of the Board of the Society are professor Dušan Ćirić from the University of Niš, professor Nadežda Pejović from the Faculty of Mathematics, University of Belgrade and Dr. Stojan Obradović, at the time professor of physics in the Grammar School in Prokuplje. At this moment there are about twenty members of the Society, mostly students and professors from the Grammar School.

The Society was born as follows. Žarko Mijajlović built two telescopes of Newton type at the end of 1970's. The first telescope has an 18 cm primary mirror and a focal length of 145 cm. This telescope is still in good condition. In 2006 it was donated to the Grammar school in Prokuplje. The second telescope has a 23 cm primary mirror and a relative aperture f/8. The owner donated this telescope to the Society when it was founded, in 2001. Members of the Society, other people and scholars from Prokuplje had many opportunities to observe various celestial objects and phenomena through these telescopes. The observations included the last transition of Halley's

Comet in 1986, dark spots on Jupiter left after fragments of the Shoemaker-Levy (SL9) comet collided with Jupiter in 1994, the Great Red Spot and shadows of Jovian satellites on Jupiter, Cassini Division in Saturn rings, the Alpine Valley on the Moon, geostationary satellites and most of Messier objects. Aleksandar Valjarević, already as a pupil showed great interest in astronomy and observations of the sky. In the summer of 2000, Valjarević and Simonović, already students of geography, asked Mijajlović how to build or buy a telescope. Mijajlović gave them his 23 cm telescope, mentioning that this borrowing may last long if they could justify this somehow. Valjarević and Simonović did not waste time. During the next winter they organized sky observations through the telescope for the general public in Prokuplje. Many people gathered on this occasion, even the representatives of local authorities took part in the event. In the part of the town where the observations were organized, the street lights were turned off. That was probably the first successful action in our country against light pollution, the main enemy of astronomers. However, someone ironically noted that municipal officials welcomed this light shutdown with delight since at that time there was the shortage of electric power. After that, Valjarević and Simonović had two appearances on local TV station dedicated to astronomy. These were received with interest and the shows were repeated several times. Thereafter the Society was founded.

In the work of the Society other instruments were used as well. For example, in 2001 an expedition to the mountain Vidojevica was organized. Participants observed the Sun using one small automatized telescope, Mead ETX 60AT, of the 60 mm aperture. At the time the Sun was very active. Four large sunspots were observed near the equator and a group of smaller sunspots at the southern hemisphere. They were of various intensity and many details could be seen such as the shapes, umbra and penumbra.

Besides sky observing, members of the Society take photographs of the cosmic objects. In this, Simonović and Mijajlović are particularly active. They are using digital cameras Canon EOS 300D and 400D and a WEB camera. They made several hundreds of photos up to now and some of them are displayed at the Society Internet site, <http://www.dorado.org.yu>.

## 2. PROMOTION OF ASTRONOMY AND MATHEMATICS IN TOPLICA REGION

Since its foundation, the Society organizes about ten lectures per year on astronomy and mathematics for general public and students of the Grammar school in Prokuplje. The lecturers are professors of astronomy and mathematics from the Belgrade University, University of Niš and researchers from the Astronomical Observatory in Belgrade. Among others, the following prominent astronomers and mathematicians gave the lectures: Stevo Šegan, Zoran Knežević, Milan Dimitrijević, Slobodan Ninković, Jelena Milogradov-Turin, Nadežda Pejović, Olga Atanacković, Dušan Ćirić, Miodrag Rašković, Aleksandar Lipkovski, Luka Popović and Žarko Mijajlović. Since 2005, Nadežda Pejović organizes these activities of the Society. Due to her efforts, the facultative teaching of astronomy in the Grammar school in Prokuplje was introduced and preparation of pupils for astronomical competitions was initiated. These activities are supported by the teachers of physics and mathematics of the Grammar School in Prokuplje, particularly by Dragan Krstić, director of the Grammar school,

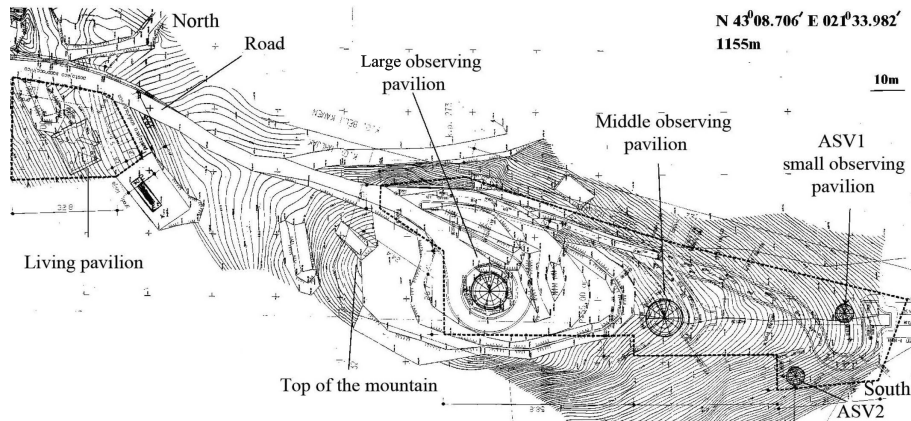


Figure 1: Situation plan of the Astronomical station at the mountain Vidojevica.

and Branislav Rosić, professor of physics. Several graduate students of astronomy of the Faculty of Mathematics took part in these activities, particularly Tatjana Jakšić and Sonja Vidojević. The members of the Society are also working on building of the Public Observatory on the Hissar hill in Prokuplje.

### 3. ASTRONOMICAL STATION AT THE MOUNTAIN VIDOJEVICA

In the period from 2000 to 2002, the Society played an important role in pursuing the idea of building the new astronomical station at the mountain Vidojevica (ASV) of the Astronomical Observatory in Belgrade (AOB). Namely, at that time Mijajlović, Valjarević and Simonović were searching for a suitable location for the observatory of the Society itself. They undertook several expeditions in Prokuplje countryside, and once, during such an expedition at the mountain Vidojevica in the summer of 2001 they have been joined by Stevo Šegan. They were inspecting the top of the mountain and instantaneously concluded that this place would be appropriate for their intention.

But Šegan said the key sentence, that not the observatory for amateur purpose, but a professional observatory should be built there. He also reminded us about the project, over twenty years old, of building an astronomical observatory exactly at this location. Soon we came to the idea of starting the initiative for renewing this old project. And later, several years after this, the Society was working on this professional project. The members of the Society were very active in many respects concerning the building of the ASV. For example, they supplied most of the documents from the local administration of Prokuplje necessary to build such an object. They also wrote several papers concerning the future function of the ASV and on astro-climate conditions on the mountain Vidojevica. We can say that the founding of the Society was the first step in building the Astronomical Station at the mountain Vidojevica.



Prokuplje



Valjarević and Simonović at Vidojevica



Solar eclipse 31.05.2003 (Simonović)



Newton telescope of the Society, apert. 23 cm



Starry sky (Simonović)



Seal of the Society



ASV living pavilion at Vidojevica



ASV observing pavilion under construction

Figure 2

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