

**ASTRONOMICAL SOCIETY "RUDJER BOSKOVIC":
80 YEARS OF THE SOCIETY, 50 YEARS OF PUBLIC
OBSERVATORY AND 45 YEARS OF PLANETARIUM**

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Abstract. Astronomical Society "Rudjer Boskovic" is one of the oldest astronomical societies in Europe and the oldest one in the Balkans. It was founded in 1934, and its main goal is popularization of astronomy. The Society is located in two buildings, Public Observatory and Planetarium. Both of them, as well as the society itself, are celebrating anniversaries this year - the Society 80 years, Public Observatory 50 years and Planetarium 45 years since the establishment. In this paper, a brief history of the Society and its activities are presented.

1. THE SOCIETY

Astronomical Society "Rudjer Boskovic" is among the oldest astronomical societies in Europe and the oldest one in the Balkans. The founding meeting was held on April 22, 1934, by group of students of Belgrade University (Djordje Nikolić, Pavle Emanuel, Frano Simović) when Academic Astronomical Society was found. The activity of the Society during this period was the organization of a large number of popular lectures, with the aim to contribute to education and cultural life in our midst. The Society also organized occasional observational expeditions and observations for citizens. In 1935 the Society started publishing the first magazine for the popularization of science in Serbia, Saturn. Soon afterwards, other members outside of the university joined the Society, so the word Academic was removed in 1936 and the name changed to Astronomical society. In this period, Yugoslav ideology was popular, so in 1939 the name changed to Yugoslav astronomical society. After the occupation of Yugoslavia by the Germans in 1941, all activities were forbidden. The Society continued to work in 1951 under the name Belgrade astronomical club "Rudjer Bošković", while the following year it was finally renamed to Astronomical society "Rudjer Bošković", the name that is current today. Since its founding in 1934, many eminent members of the cultural and scientific community have led the Society. At its head were Djordje Nikolić (1934-1936), Vojin Djuričić (1936-1941),

Radovan Danić (1951-1966), Branislav Ševarlić (1966-1970), Pero Djurković (1970-1972), Nenad Janković (1972-1974), Božidar Popović (1974-1979), Zoran Knežević (1979-1982), Milan S. Dimitrijević (1982-2004), Jelena Milogradov-Turin (2004-2011) and since 2011, the current president has been Miodrag Dačić.

2. LOCATIONS



Figure 1: Public Observatory and Planetarium.

2. 1. PUBLIC OBSERVATORY

During and after the World War II, the army was located in the Kalemegdan fortress. Around 1950, the army left Kalemegdan and the fortress became abandoned. Thanks to the exertion of Pero Djurkovic, Radovan Danic and Nenad Jankovic with the authorities concerned, the Society obtained for itself the Despot Tower [Dimitrijevic]. It was adapted from 1962 to 1964, and was opened as Public Observatory on December 20, 1964.

Public Observatory includes a terrace, classrooms & library and offices. The terrace is located on the top of the tower, and its primary purpose is observation. The static telescope Zeiss (110/2050) is placed on the terrace, while other telescopes are brought from time to time, mostly Tall 200K (200/2000). Classroom and library are places for educative programmes, such as lectures, movies, meetings or workshops. Various activities are performed there. Offices are rooms for the staff. Administrative work is done in offices, and also organized activities, such as school visits etc. can be arranged there.

2. 2. PLANETARIUM

At the Technical Fair 1966, a German manufacturer of optical systems Carl Zeiss demonstrated Zeiss Kleine Planetarium (ZKP), a new instrument for projecting starry sky on a spherical dome. President Tito visited the fair and was so impressed by this instrument that he suggested to procure it. Soon thereafter, a meeting was arranged in the Republic Fund for education and the decision to purchase it was made. After procurement of the instrument, the need for projection dome emerged. The old steam bath-house, Turkish Hamam at Kalemegdan, was found as an ideal building for this purpose. Adaptation lasted 4 years, and Planetarium started working in 1969. First trial lecture was held on February 23,1969, the first trial show on March 16,1969, and the official opening was on February 27,1970. The main room is large, with the dome of 8 metres. It has 80 seats, although more than 100 visitors can attend the show. Due to its spherical shape, it is primarily designed for planetarium shows, but other activities are also held in this place.

3. ACTIVITIES

The Society realizes its goals through various activities.

- **Observations** - Basic activity is the observation of celestial objects and events from Public observatory terrace, using telescopes. Observations are followed by the comments of the associates. Daily observations of city landscape, using panoramic telescopes, are also performed.
- **Planetarium shows (fixed)** "Star cinema", where visitors can learn about celestial sphere, constellations and the sky view from different latitudes on the Earth. There are regular shows, open to public, without prior announcement, and scheduled ones, for organized groups (e.g. schools). The duration of the show is about one hour and there are about 20000 visitors per year.
- **Planetarium shows (mobile)** Several members of the Society have taken part in the performance of shows in mobile, digital planetarium. This equipment is mobile, so that visits to schools, science festivals etc. are carried out. Since it is digital, it allows full-dome projections, images and movies. About 14000 visitors attended the show in 2013, and 6000 in the first half of 2014.
- **Astronomy course** A complete course for beginners, covering all topics of basic astronomy. The course begins with celestial sphere, constellations and time, following by the Earth, going further to the Moon, the solar system (the Sun, planets, other objects), and beyond - stars, the Milky way, other galaxies, and finally the universe as a whole. The course lasts 3-4 months and contains 20-30 lectures. The level is popular and is free of charge.
- **Belgrade astronomical weekend** Various programmes for citizens, amateurs and fans of astronomy. Founded in 1983. by N.Čabrić and A.Tomić, it is held during 2 days in June. Amateur astronomers gather here and their activities and publications are presented. The programme contains lectures, movies, planetarium shows, observations, visit to AOB,

- **Summer astronomical gatherings** A series of about 6 lectures on some particular topic. Founded in 1999. by Milan Ćirković. Held in August.
- **Summer school of astronomy** A school with theoretical and practical content. Held during August on a mountain, away from the urban environment (to avoid light and atmospheric pollution). During the day, participants attend lectures, and observations are performed during the night. The school lasts a few days (recently eight), and the schedule is very intensive. Eleven schools were held, the first one in 2002, and then regularly from 2004 to 2013.
- **Conferences** The Society organizes or participates in professional conferences. The most noteworthy are Development of astronomy among Serbs, Serbian-Bulgarian astronomical conferences and National Conferences of astronomers.
- **Publishing** Publishing is one of the activities of the Society. Here, only brief review will be presented, and detailed survey including descriptions, publication years, sizes, number of pages, number of copies, ISBNs etc. can be found in [4]
 - *Saturn* was a magazine for astronomy, meteorology, geophysics and geodesy, but more than 80% of the content were astronomical topics. It was published from 1935. to 1940. with 12 volumes per year
 - *Vasiona* magazine started in 1953. as a magazine for astronomy and astronautics. The number of astronomical articles decreased over time, and since 1980. *Vasiona* has become the official magazine exclusively for astronomy. From 1953. to 1961. (9 years) the page size was A4, from 1962. to 2004. (43 years) B5 size, and since 2005. the page size is A4 again. From 1953. to 1983. (31 years) there were 4 volumes per year, then 5 volumes, while in recent years, there are 4 volumes.
 - *Publications ASRB* - "Publications ASRB" is a series of books and so far 13 volumes have been published. Volumes 1-3 are books covering one astrophysical and two historical topics, while volumes 4-13 include conferences proceedings. Volume 4 contains proceedings from the 7th national conference of Yugoslav astronomers (1984), and volumes 5-13 are proceedings from Serbian-Bulgarian astronomical conferences and Development of astronomy among Serbs. Most publications from this edition have been printed in 150 copies.
 - *Summer school handbooks* - The society publishes handbooks for summer school participants with relevant content. Ten handbooks have been published so far, each summer school one, from 2004 to 2013, each in up to 100 copies.
 - *Other books and printed materials* - Several books were published, such as Total Solar eclipse 1961 (1960), Comets - the witnesses of the past (1986), Rudjer Boskovic: Sun and Moon eclipses (1995). In addition, a variety of other printed materials has been published, such as Astronomical bodies and events, Sky maps, Constitution, flyers, posters etc.



Figure 2: Some volumes from the edition Publications ASRB.

4. CONCLUSION

Founded in 1934, ASRB is the oldest astronomical society in the Balkans. In its 80-year history, located at Public Observatory (since 1964) and Planetarium (since 1969), it greatly contributed to the popularization of astronomy. Due to numerous activities of the Society, many people got to know the universe, and it continues to be one on the most active societies today.

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