

NEW EVENTS IN THE ASTRONOMICAL SOCIETY “RUDJER BOŠKOVIĆ”

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Abstract. Astronomical society “Rudjer Bošković” is the oldest society in the territory of the former Yugoslavia, whose main goal is the popularization of astronomy. Since its foundation, it has relied on input from enthusiasts as well as professional astronomers. The merits of the Belgrade Astronomical Observatory and its employees for the work of the society are immeasurable from the foundation of the society until the present day. Of particular importance is the society’s magazine “Vasiona”, which over several decades informs the general public about news in astronomy, as well as about events in society. In addition to the improvement of the workspace of the Public observatory and the Planetarium, a complete reconstruction of the Zeiss refractor, as well as other astronomical instruments and objects significant for the history of the society, was recently carried out. New observational methods were introduced, such as CCD astrophotography, spectrometry and photometry. Computer capabilities for processing observations have been improved, access to star catalogs has been made possible, and in the near future the process of automating the operation of the telescope will be completed. The first results of observation, some of which have been published, also came from these methods. “Vasiona” magazine has continued to be published after a significant break, and educational courses and thematic gatherings are going on smoothly. In the coming period, the improvement of spatial and working conditions will be continued, as well as the preservation of cooperation with professional astronomers and motivated individuals with the aim of sustainable progress and preservation of the achievements of society.

1. HISTORICAL FACTS

Astronomical society “Rudjer Bošković” has been engaged in popularizing astronomy and educating a wide audience interested in the oldest science for 90 years. From its beginnings to the present day, the society was founded and led by both professional and amateur astronomers, who were united in a common goal and left a deep mark with their work. As the society from the beginning aspired to perform astronomical observations, the need for a permanent observatory was met on December 20, 1964, when the society moved into Despot’s Tower on Kalemegdan, which has since been called the Public observatory. The most involved in building and equipping the observatory were Radovan Danić, Pero DJurković and Nenad Janković. The formation of the most important inventory of the Public observatory was made possible thanks to the Astronomical Observatory Belgrade, which donated an achromatic refractor manufactured by Carl Zeiss Jena (110/2030 mm), as well as other astronomical instruments, including a theodolite, a precise Riefler chronometer with a seconds pendulum, and many others. In the meantime, the Public observatory, with the help of the state and individuals, has for years created the necessary means for work and

observation activity while popularizing science. Certainly one of the most significant moments was the formation of the Planetarium, which the society moved into in 1969. in the space of the former Turkish bath. From then until today, the Planetarium has remained the main place for holding expert meetings, projections of the night sky for citizens, as well as astronomy courses. Since its foundation, the society has formed the magazine “Saturn“, which was later renamed to magazine “Vasiona“, which until today is a regular periodical covering news in numerous fields of astronomy. One of the important contributions of the society to the wider community is the holding of the “Development of Astronomy among Serbs“ Conference, the Astronomy Course for Beginners, the Belgrade Astronomical Weekend, Belgrade Astronomical Meetings, as well as many other gatherings organized on the occasion of astronomical events and current events in science. The society spreads its mission through its web presentation, social networks, electronic and print media. In addition to its official magazine, the society has published a large number of publications and books in the field of astronomy.

2. DIFFICULTIES IN THE PREVIOUS PERIOD

Despite the great results of numerous members of the society, professionals and amateur enthusiasts, the society also went through difficult times, especially since 2010, when state funding was permanently terminated, which was one of the reasons for the outflow of a significant number of employees who maintained program activities. In the years that followed, the ageing process brought its results, leaving a deep destructive mark on the Public observatory and the Planetarium. Also, the regular publication of “Vasiona“ magazine was also stopped in the period 2012-2018. All things considered, the difficult period affected both the facilities and material resources, as well as the membership, but thanks to the rare individuals, who gave the society their time and enthusiasm, working completely free of charge, the society survived and maintained all its activities, for the general benefit of members and visitors.

3. NEW EVENTS

In order to improve the situation and respect the results of previous generations, at the end of 2022, the resolution of numerous problems that have formed over the years was started. The symbolic beginning of the works included the complete restoration and reconstruction of the Carl Zeiss Jena refractor of the Public observatory, which entered the second century of its existence in the previous year. The works were carried out in the period August-September 2022, and on that occasion the mount was completely revitalized, as well as the tube of the telescope, which can be seen in Figure 1.

In addition, the terrace of the Public observatory was also reconstructed, and the works included painting of metal elements, waterproofing and works on the sub-platform room, which was transformed from a warehouse space into a room for observation control and storage of astronomical instruments (Figures 2).

Monitoring of climatic conditions was also introduced, and free internet access was provided for all visitors. Further work on the restoration of the Public observatory area included repairs to electrical installations and the replacement of complete light-



Figure 1: The Carl Zeiss Jena achromatic refractor (110/2030 mm) before (left) and after (right) the restoration.



Figure 2: The look on the reconstructed platform of the Public observatory.

ing. The complete metal structure inside the observatory was restored and repainted, and renovation work was done on the walls both inside the observatory and outside (Figure 3).

A large amount of unnecessary material was removed from the observatory and space was freed up. The office of the manager of the observatory was completely re-



Figure 3: Restoration works on the Public observatory exterior.



Figure 4: Library of the Public observatory.

constructed, and the library and classroom space were made functional again (Figure 4).

Rifler's astronomical chronometer, which was extremely damaged by the effects of moisture due to inadequate storage, was also reconstructed (Figure 5).

A particularly significant result in the past period is the revitalization of old and acquisition of new observation equipment. A motorized Goto mount EQ 5, a set of numerous filters and adapters, an observation computer, a CCD camera, a diffraction grating for spectroscopy, as well as relevant astronomical software were purchased. The works at the Planetarium included painting part of the exterior facade, renovating the roof and freeing the workspace from numerous inventory that was in an unusable condition. Also, the presence of water in the Planetarium was



Figure 5: Riefler astronomical chronometer after thorough reconstruction.

restored, and the toilets were put into operation. Significant work has been done on the issue of replenishing the library fund of the magazine "Vasiona", both in the library of the Public observatory and in the National Library of Serbia. Obligatory copies are bound, and excess old copies are recycled.

4. CONCLUSIONS AND FURTHER PLANS

After the works on the revitalization of the facilities of the Astronomical society "Rudjer Bošković" and the solving of various problems, the membership was enriched and the society was approached by young enthusiasts who are lovers of astronomy. There are numerous plans to continue improving the conditions for work and education that

will be carried out in the coming period. In addition to the intention to further improve the spatial and observational conditions, special emphasis will be placed on attracting new members and enthusiasts, as well as improving contacts with other astronomical societies. With our own human and material resources, as well as with the help of other institutions, in the first place of the Belgrade Astronomical Observatory and its staff, as well as with the vision of the development of society and respect for tradition, it is our hope that the society will continue to provide a quality program to all interested members and visitors.