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Professional paper

LIFE AND SCIENTIFIC ACTIVITY OF PROFESSOR IVAN ATANASIJEVIĆ (1919-1998)

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SUMMARY: The life and scientific, professional and other activities of professor Ivan Atanasijević (1919-1998), the founder of radio astronomy in Serbia, professor of the Belgrade and Nimegen University, are presented, followed by Bibliography of his works.

Ivan Atanasijević

On june 26, 1998 in Nimegen, Holland, passed away Ivan Atanasijević, the founder of the Serbian radio astronomy, professor of the Belgrade and Nimegen Universities. It is he who introduced and instituted the astrophysics as a separate subject at the Belgrade University. He was a fellow of the Belgrade Observatory in the period 1945-1948.

Ivan M. Atanasijević was born on February 22, 1919, in Belgrade. He took an interest in astronomy very early, starting collaboration with the first Serbian journal for popularization of astronomy "Saturn" already as a secondary school pupil. He published his contributions, for the writting of which he had the benefit of the Belgrade Observatory's library, under his full name, but also under the pseudonym St (Atanasijević's written statement in the authors's files) and under the initials I.M.A. and I.A.. In "Saturn" No. 3, 1936, we find on the page 80, in the Section "Society's News", Mr. I. Atanasijević having been elected full member of the Astronomical Society at the session of the Menagerial Board on March 15, 1936.

He completed his elementary and secondary education in Belgrade. On completing the secondary school in 1937 he enrolled in the Faculty of Philosophy, Group for Applied Mathematics. Acording to Atanasijević's written statement (in author's files)

this Group, with its main subjects Rational Mechanics, Celestial Mechanics and Theoretical Physics, seemed to him to be the closest to the astrophysics.

The Second World War made him break off his studies. He resumed them after the war ended. He graduated from the Group for Applied Mathematics in 1947 with the average mark 9.98. From January 1945 to 1948 he was engaged at the Belgrade Observatory, first as an observer, being promoted to assistant on completing his studies.

In April 1948 he joined the Department of Physics of the Faculty of Sciences. At this time he became interested in radio astronomy, trying to construct a radio-astronomical receiver. The school year 1951/52 was spent by him in the Laboratory for Radio-astronomy of the Institute for Astrophysics in Paris, with the French radio-astronomy pioneer M. Laffineur. Here he took part in the first measurements in France of the radio-emission of the Milky Way (wavelength 117 cm). Besides, he carried out measurements, using Institute's radio-telescope during the partial solar eclipse of February 25, 1952. Having returned to Belgrade he took on constructing a receiver for the solar radio-emission at the wavelenth 50 cm, registering successfully in July 1955 for the first time the radio-emission of the Sun. In 1954 he was elected a lecturer for the subject Astrophysics, just introduced at the Department of Physics. In 1956 he defended his doctoral disseration "Radiation of the Milky Way on the wavelength 117 cm", before the Examination Board with Milutin Milanković, Dragoljub Jovanović and Pavle Savić as its members, following which he was elected assistant professor. On invitation he left for Paris where he worked at the Institute of Astrophysics in the Group for spectrophotometry of continuous stellar spectra. He carried out these observations at the Haute Provence Observatory in the Southern France and at the high altitude observatory on Jungfraujoch in Switzerland. Jointly with Vladimir Kurganoff he participated in the international campaign of photo-electrical measurements of the Beta Lirae radiation, performed at the Lille University Observatory. In his absence the subject Astrophysics was suspended at the Department of Physics and transferred to the Department of Mechanics and Astronomy of the Belgrade Faculty of Sciences where he took it on after having returned to Belgrade. Thanks to his initiative and endeavours a small light construction building was erected within the Belgrade Observatory's grounds serving for the practical works of the students. Next to this building Atanasijević installed a radio telescope and a radio-interferometer, starting therewith measurements of the solar radio-radiation. These measurements and researches were conducted until the end of 1965.

In the meantime Astronomy was detached from and instituted as a separate Department, Atanasijević being elected in 1964 as its associated professor. In the procedure of his election he submitted the manuscript of the textbooks "Lectures in the Practical Astrophysics" and, together with Jelena Milogradov, "Selected chapters of stellar astronomy". These are the first textbooks of astrophysics with us. The second one has been published in 1968, 1974 and 1997 (Atanasijević, Milogradov 1968, 1974, 1997) but the first one unfortunately remained a manuscript. For reason of its historical interest and its contents, testifying to pedagogic talents of Professor Atanasijević, its contents are given in the Appendix.

On January 1, 1960 Atanasijević got the appointment at the Faculty of Sciences in Nimegen, Holland, and left the country. There he lectured in General Astronomy and Selected Chapters of Astronomy all through until he retired on January 1, 1984. He conceived and organized practical exercises in Astronomy which included observations and photographing of the sky. For the series of exercises "Introduction into Research Work", destined to his students of physics and Astronomy he designed a celostat with the aid of which the distribution of monochomatic light over the solar disc could be monitored. Atanasijević inspired and instituted regular observations of the Sun in white light and in H alpha line, as well as the Service for observing the ionospheric disturbances of other radio waves. These observations are kept on at the present time within the framework of international nets (SIDC, Brussels and RWC, Meudone, France). He was a member of the International Astronomical Union, British Astronomical Society, Italian Astronomical Society and the Dutch Astronomical Club. He died on June 26, 1998 in Nimegen.

Ivan Atanasijević's Bibliography, given here, comprises 91 entries. There are among others the first Serbian scientific papers concerning radio-astronomy. Those of them treating the first measurements of the radio-emission of the Milky Way, executed in France, are pioneering in this field on the international scale. A testimony to Atanasijević's pedagogical talents is the fact that the Science Citation Index, publishing in the USA, registers seven citations in the international scientific literature of his textbook "Selected Exercises in Galactic Astronomy". From the enclosed Bibliography we see Ivan Atanasijević as a great popularizer of Astronomy in our midst, his activity in this field begun in 1936, when he as a secondary school pupil became a collaborator of "Saturn", the first journal dedicated to the popularization of Astronomy in Serbia.

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APPENDIX

PREDAVANJA IZ PRAKTIČNE ASTROFIZIKE

Sadržaj

Beograd, 1964, rukopis

IV. Astrofotometrija

Vizualna fotometrija

Fotoelektrična fotometrija

Fotografska fotometrija

V. Opšte osnove fotometrijskih metoda

VI Astrospektroskopija

ЖИВОТ И НАУЧНА АКТИВНОСТ ПРОФЕСОРА ИВАНА АТАНАСИЈЕВИЋА (1919-1998)

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Стручни рад

У раду су приказани живот, научни и стручни рад, као и друге активности професора Ивана Атанасијевића (1919-1998), оснивача радио-астрономије у Србији, професора Универзитета у Београду и Нимегену. На крају је дата библиографија његових радова.