

Jan Jędrzejewicz and Polish and European astronomy in 2nd half of the 19th century

The main purpose of my doctoral thesis was to analyze activity of Jan Jędrzejewicz (1835-1887), amateur astronomer and the owner of the private observatory in Płońsk, and its comparison to Polish and European observatories in 2nd half of 19th century.

In the first chapter I analyzed the document “Les observatoires astronomiques et les astronomes” containing list of all the observatories around the world with information about their equipments and conducted observations. This document is a rich source of information not only about professional observatories but also about private observatories and activity of amateur astronomers. Based on gathered data I was able to show what kind of instruments were the most popular in European observatories, what their sizes were and whose workshops they came from. In the next part I presented what celestial bodies were the most observed and studied in the European observatories. I also made a similar analysis of observations published in “Astronomische Nachrichten” during the period of time when Jędrzejewicz’s articles appeared there. From my analysis of the list of observatories I also established the rising significance of new types of observations then – photographic, spectroscopic and photometric.

The second chapter of the dissertation concerns Polish observatories in 2nd half of the 19th century, both professional and private. The first group includes observatories in Cracow, Warsaw and Lvov, the second one – observatories of Kajetan Kraszewski, Antoni Lewicki, Adam Ostaszewski and Karol Trattinig. For each of this institution equipments and conducted observations were discussed.

In the third chapter I focused on the Jędrzejewicz’s observatory and the astronomical observations he made there. I described in details all of the astronomical instruments he owned and each type of celestial bodies he studied. Most information on the subject I gathered from articles published in the most popular at that time astronomical journal “Astronomische Nachrichten” and in the journal of German astronomical society “Vierteljahrsschrift der Astronomischen Gesellschaft”. Some of the information about the observations, which Jędrzejewicz did not publish, were found in his popular articles in the Polish magazine “Wszechświat”.

Then I compared equipment of Jędrzejewicz 's observatory and his astronomical work to the observatories located on a Polish land.

Based on the analysis presented in the first chapter I managed to establish the position of Jędrzejewicz 's observatory in the international arena and whether Jędrzejewicz's astronomical work was in a mainstream of nineteen-century astronomy. Also other Polish observatories were taken into consideration and I assessed whether they followed European astronomy.

Results of Jędrzejewicz's observations published in the international journals were noticed and used by professional astronomers. An important indicator of the level of observation in a given institution is the number of catalogs in which the results of these observations were taken into account. Among the astronomical observations of Jędrzejewicz, the greatest appreciation of foreign astronomers deserved the measurements of double stars. Thus, I searched for Jędrzejewicz's measurements in the double stars catalogs from the end of the 19th century and the beginning of the 20th century. In addition to this I gathered information and opinions on the observatory and observation skills of its owner in the international journals.

Jędrzejewicz's insight in astronomical subjects and the ability to handle instruments raises the question of how an amateur in astronomy knew how to run an observatory. To answer this question, I analyzed information Jędrzejewicz provided about his advisers and I investigated the possibility of Jędrzejewicz's foreign travels to European observatories, which were mentioned by other researchers of his activity.