**Institution:** Faculty of Physics, Astronomy and Informatics

**City:** Toruń

**Position:** Student Stipends

**Discipline:** The Field of Exact and Natural Sciences – Astronomy

**Posted:** 2022-mm-dd

**Expires:** 2022-11-10

**Keywords:** high energy astrophysics, blazars, light curves, time series analysis, statistical methods.

**Description (field, expectations, comments):**

The competition is open to persons who meet the following qualification criteria:

1. required: being enrolled as the 1st or 2nd year master’s student of astronomy at the Nicolaus Copernicus University in Toruń;
2. required: basic knowledge of statistics and blazar physics;
3. required: programming skills (python, Mathematica, R, etc.);
4. required: good English skills, both spoken and in writting;
5. prior experience with data analysis is welcome.

Project description:

The successful applicants will work with dr Mariusz Tarnopolski in the project "Constraining the physical mechanisms of blazar variability" funded by the Polish National Science Center through the Sonata 17 grant.

The gamma-ray light curves of blazars will be examined with a broad set of time series analysis tools, complemented by a SED modeling, ultimately leading to insights into the physical processes governing the variability.

Responsibilities:

1. performing the statistical analyses;
2. aid in the programming tasks required in the course of the project;
3. support comparisons with literature results;
4. participation in the discussions on the physical interpretations of the obtained results;
5. students will be expected to write their master's theses within the project.

Remuneration/stipend amount/month:

1500 PLN/month, no tax, for two academic years or until thesis defence.

Prospective start day: December 2022 – January 2023

**Required documents:**

* CV including any relevant scientific achievements;
* electronic copy of the bachelor's thesis;
* transcript of grades.

**Additional information:** Please submit the aforementioned documents to mariusz.tarnopolski@umk.pl with annotation “Blazar stipends” in the subject field. Application deadline: 10.11.2022 or until positions are filled. Short-listed candidates will be invite to interviews.