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**METHODS AND INSTRUMENTS
IN ASTRONOMY: FROM GALILEO
TELESCOPES TO SPACE PROJECTS**

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ABSTRACT BOOK

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AUTOMATION OF TELESCOPE TIME SCHEDULING

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A software for efficient scheduling of observations of asteroids at a given time moment has been developed to optimize the observational process at the telescope AZT-8 (Evpatoria) operating in automatic mode.

The schedule of observations is calculated with the specific conditions of visibility of objects for the given telescope. The next conditions which correspond to astrometric observations of asteroids have been chosen to constrain scheduling at the given time moment:

- 1) observations of objects should be made as close as possible to the meridian;
- 2) observations should be made for the maximum number of objects.

The software uses technical characteristics of the telescope and camera, ephemerides, calculated with the HORIZONS system, and a given SNR for each object for scheduling of observations. The theoretical extinction value, phase and position of the Moon relatively to the observational objects and horizon are also used for the calculation of exposure time. The algorithm schedules observations of photometric calibration fields. The result of algorithm depends on a ratio number of the objects planned for observation to the maximum number of objects which can be observed at night, i.e. the algorithm will provide changes to the list of objects in dependence of the previous run (it is necessary to avoid a situation, when the algorithm systematically skips a certain class of objects all the time).

HOW MANY SATELLITES ARE DISCOVERED IN THE SOLAR SYSTEM AFTER GALILEO

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The Moon as a natural satellite of the Earth was “discovered” by Nicolaus Copernicus in his heliocentric system and it was the only known satellite in the Solar System before Galileo Galilei (1564-1642).