

# The Holomon Astronomical Station

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## ABSTRACT

The Holomon Astronomical Station of the Aristotle University of Thessaloniki was established in 2004 and is located within the facilities of the University Forest in Taxiarchis, Chalkidiki. The main scope of the observatory is to support the training of undergraduate students of the Physics Department. The astronomical station on Mt. Holomon is currently equipped with two telescopes (11 and 10 inches) and with a fully automated software to analyse the data obtained (HOPS).

## HISTORY

Astronomical observations on Mt. Holomon began in the early 2002 using only portable telescopes which were used by undergraduate students to obtain data for their theses.



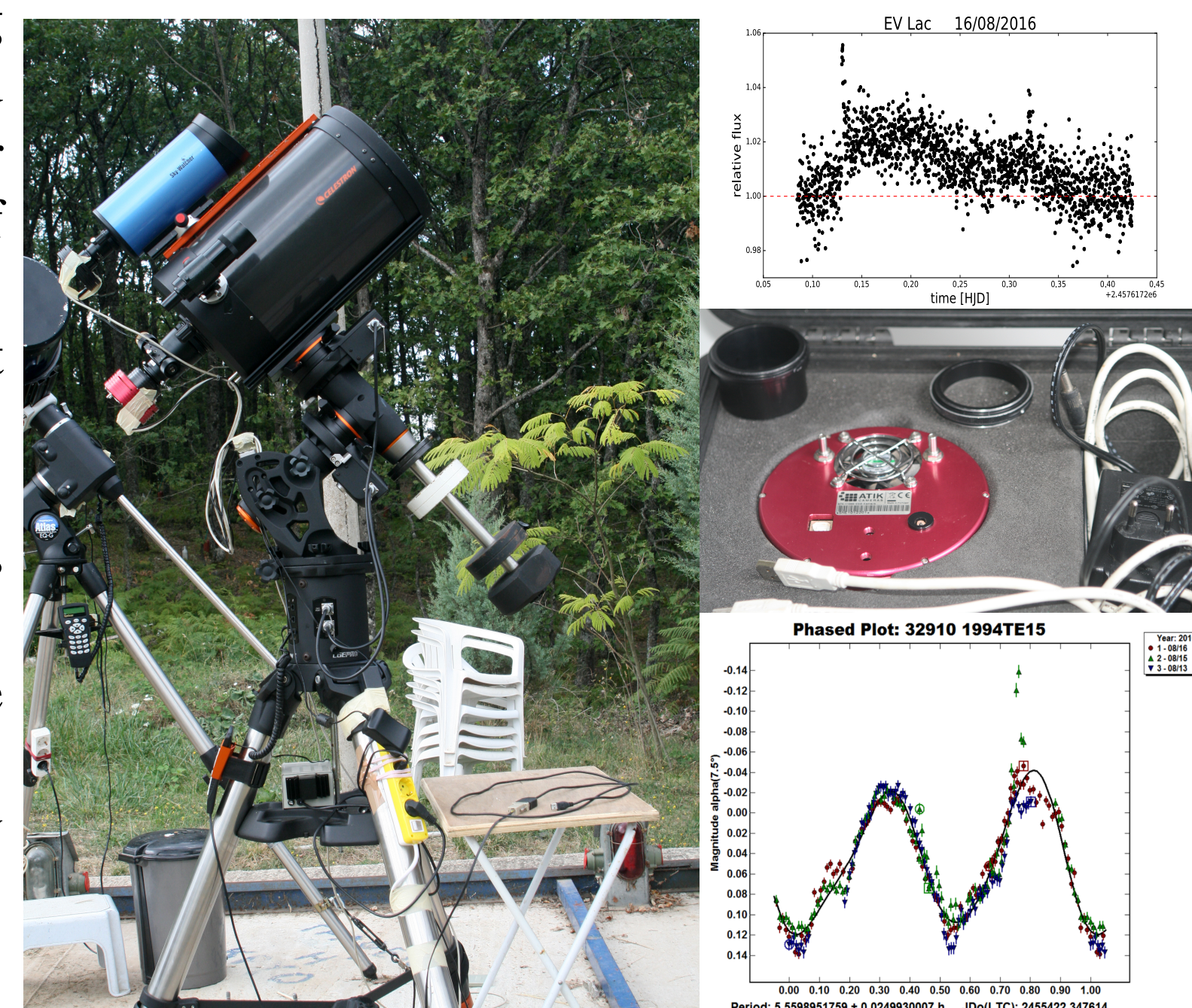
The high quality of the night sky lead to the idea of establishing a more permanent installation. In 2004, the building of the permanent station was completed.

Today, the Holomon Astronomical Station is a place where different activities related to astronomy are taking place: research, outreach, education and training for students.

## RESEARCH

The main research activities of the Holomon Astronomical station involve:

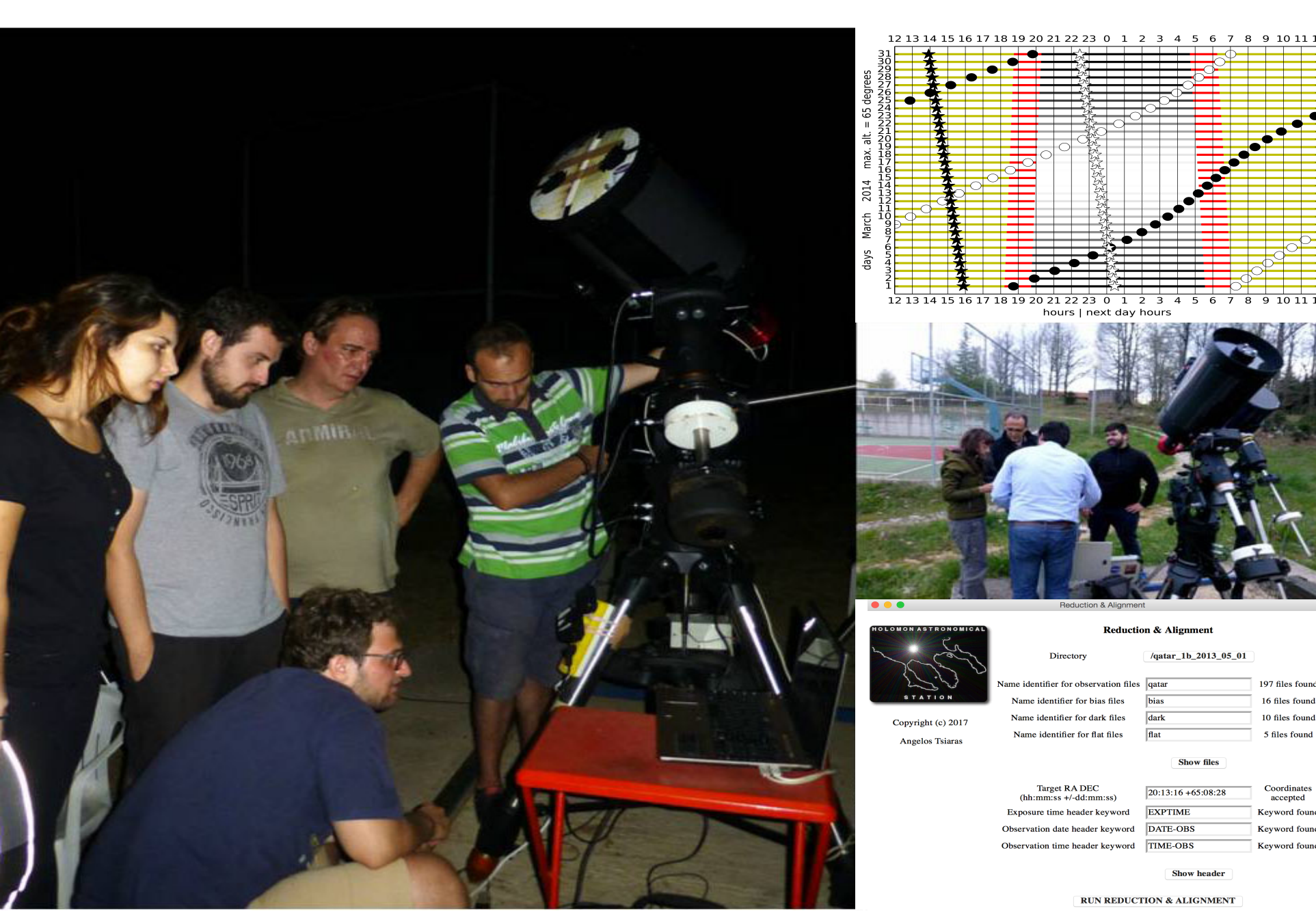
- Follow up observation of transiting extra-solar planets for the improved characterisation of their ephemeris, their orbital parameters, and the activity of their host stars.
- Observations of the transiting exoplanet in the binary system of AV CMi.
- Survey for new exoplanets.
- Observations of variable stars, such as EV Lac.
- Observations of asteroids for the characterisation of their shape.
- Measurement of the sky night quality via seeing observations.



## EDUCATION

Students of the Physics Department of AUTH are trained at the Holomon Astronomical Station in:

- Observation planning**
- Equipment handling:** Holomon Astronomical Station is equipped with six telescopes, four mounts and three CCD cameras. The main telescopes in use are: a Celestron C11, and a Meade LX200 EMC. The main CCD cameras used are: an Atik 11000, and an Atik 4000.



- Data analysis:** HOPS is the main photometry software that is being used the last years to analyse the observational data. For more information see the poster by Tsiaras et al.. HOPS is a user-friendly package that is being used both for research purposes and as an educational tool to train students in photometry.

At the link below you can find previous bachelor theses related to the Holomon Astronomical Station:

[http://www.astro.auth.gr/n/?p=b.sc.\\_theses](http://www.astro.auth.gr/n/?p=b.sc._theses)

## OUTREACH

The Holomon Astronomical Station offers a great opportunity to:

- popularise science to the general public (e.g. locals)
- communicate astronomy to students of other departments of AUTH

The main activities that were used to achieve astronomy communication during 2016 were:

- Deep sky observations
- Stellar mapping
- Public talks
- Citizen science

The positive outcome of the first efforts lay the foundation for such activities in the future.

Overall, the Holomon Station would serve as an open science center where people can learn and get involve in astronomy research.

