

OPTICON TDF Meeting

Vassilis Charmandaris
IAASARS/NOA Director



Background Information

Background

Helmos Obs

Kryoneri Obs

OPTICON Impact

IAASARS operates all astronomy facilities of NOA. It was formed in 2012 by merging the Institute of Astronomy and Astrophysics with the Institute for Space Applications and Remote Sensing.

Its permanent personnel consists of 22 researchers and 5 research support specialists and 5 engineers. In soft-money there are 22 postdocs and 20 engineers/IT development. We currently train 15 PhDs

The telescope operation/support is performed by 4 tenure researchers, 3 engineers and 2 postdocs



Helmos Observatory

The Observatory is located on mount Helmos at an altitude of 2340m, ~240km from Athens at a distance of 15km from the city of Kalavryta. An investment of ~10MEuro.



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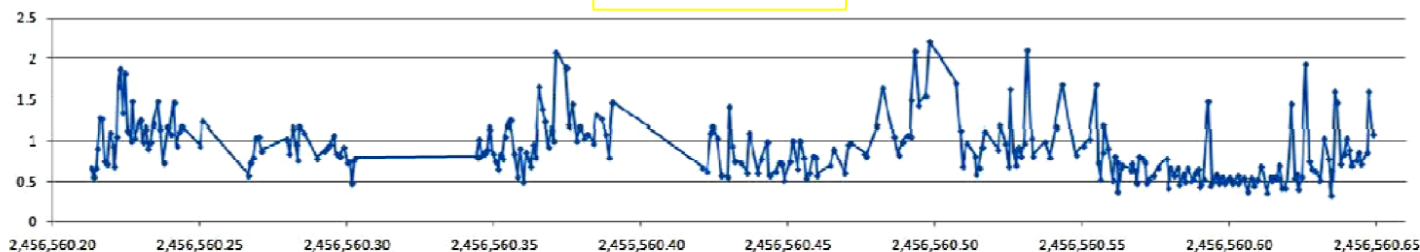
Helmos Observatory

The quality of the site has been evaluated using meteo data over the past 5 years.

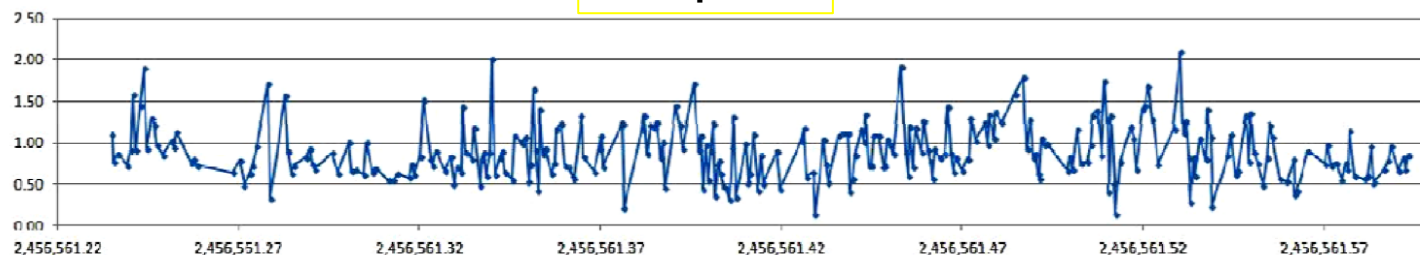
- ❑ It is very dark with V band brightness ~ 21 mag/arcsec²
- ❑ It is accessible 9 months per year
- ❑ Measured ~ 60 clear nights during June-November season
- ❑ Seeing measurements median $\sim 0.78''$, lowest $0.25''$

Helmos Observatory: Summary report from the observers

24 Sep 2016



25 Sep 2016



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Background

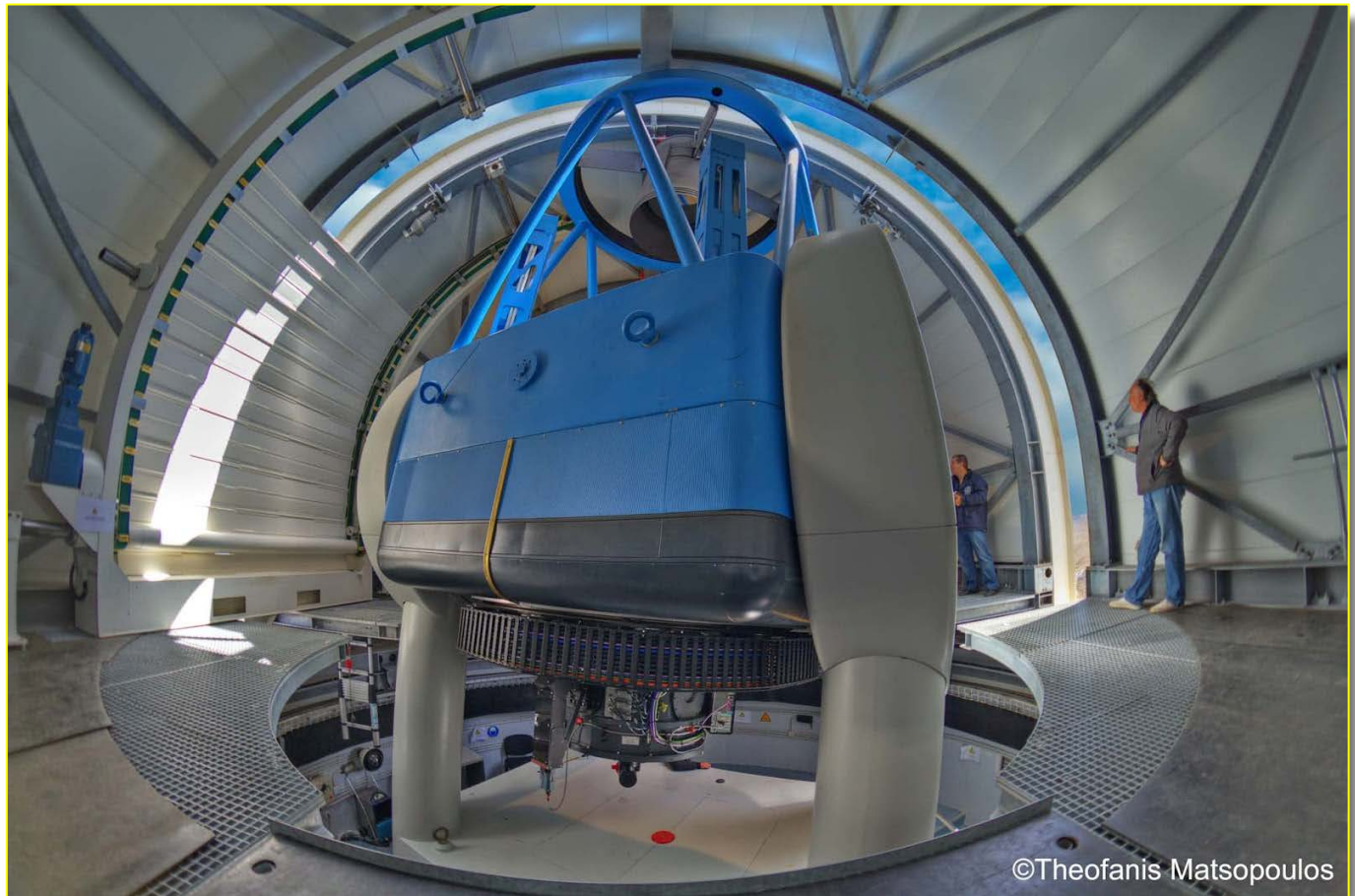
Helmos Obs

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OPTICON Impact

The 2.3 Aristarchos Telescope

Very modern & complex, the 2nd largest in continental Europe. Its construction and commissioning was challenging. First light was in 2007, first full season of nominal operations in 2013. Active part of OPTICON as of 2015.



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Current Telescope Instrumentation

Imaging

- ❑ Cassegrain Camera (2k x 2k), with a FOV 5' x 5'
- ❑ RISE2 (1k x 1k) Exoplanet finder (FOV 10' x 10') in collaboration with QUB and Liverpool JM Univ.
- ❑ Full suite of standard wide and narrow band filters.

Spectroscopy

- ❑ ATS low-/medium-resolution optical spectrograph (fiber fed, 4270 – 7730 Angstrom)
- ❑ Manchester Echelle Optical Spectrometer (TBC)

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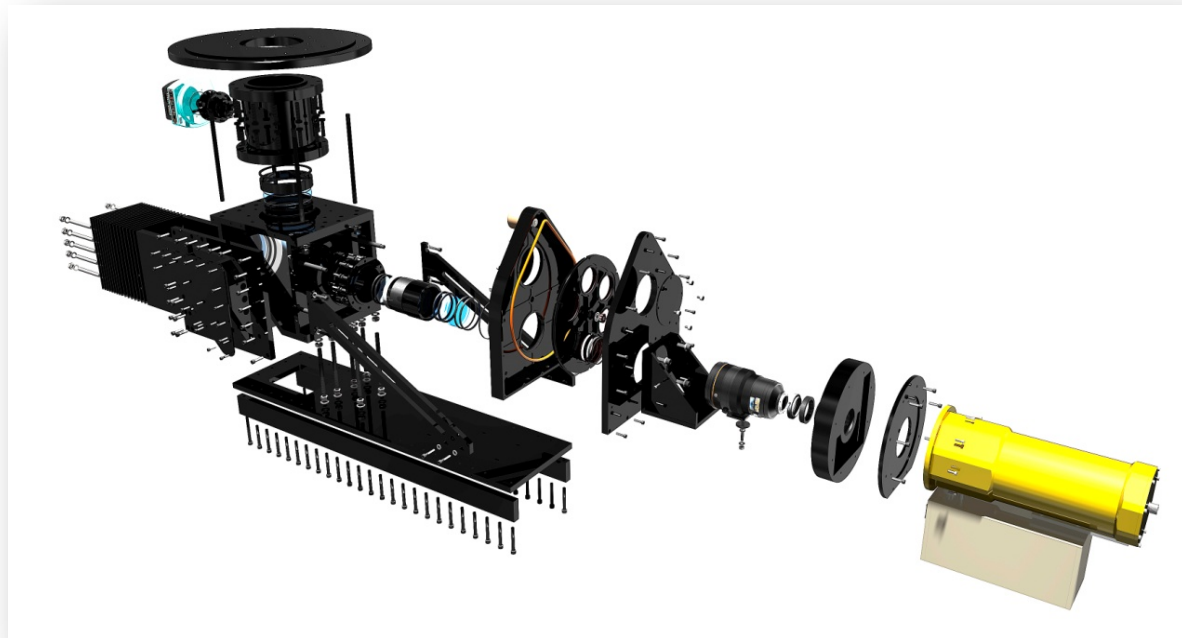
OPTICON Impact



Upcoming Instrumentation

New Instrument

- ❑ Manchester Wide-Field Camera (FOV 27'x27')
- ❑ TEK 4k x 4k CCD
- ❑ Full suite of standard wide and narrow band filters.
- ❑ Fabrication completed – To be commissioned in 2017



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Kryoneri Observatory

Kryoneri Observatory was established in 1975 to house the first modern (1.2m Cassegrain) telescope of NOA.

It is located at an altitude of 840m, near Corinth just 140km south of Athens.

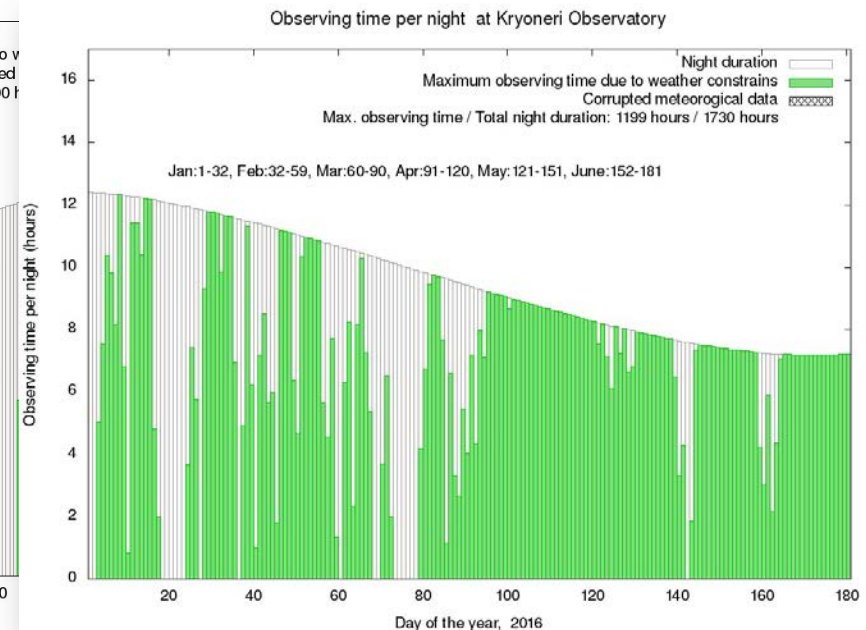
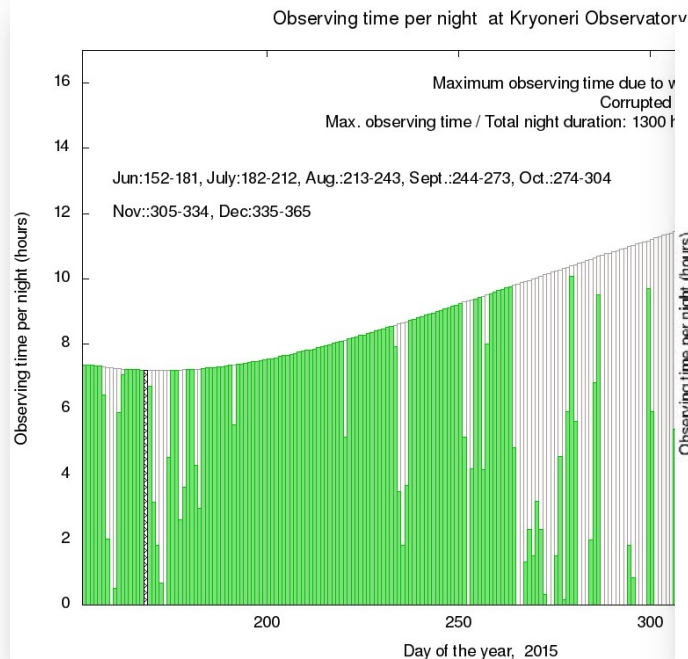
- ❑ It is moderately dark V band brightness ~ 20 mag/arcsec²
- ❑ It is accessible throughout the year (good weather 67%)
- ❑ Seeing measurements median $\sim 1.5''$

Background

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Kryoneri Obs

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The 1.2m telescope

The telescope was fully refurbished in 2016 to start regular monitoring of the unilluminated part of the moon in search of impacts from NEOs. Part of the ESA NELIOTA project. It is located at an altitude of 840m, near Corinth just 140km south of Athens.



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The 1.2m telescope

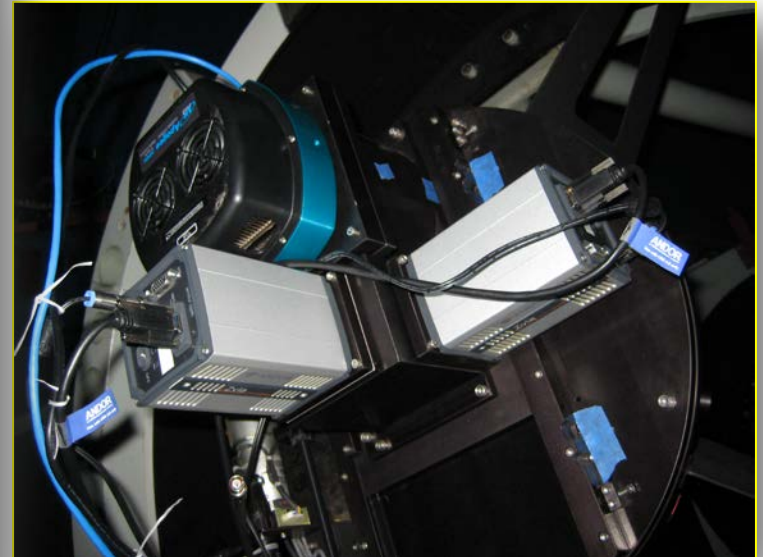
Two fast frame cameras (30fps) and R & I-filters are placed in the prime focus. Also being used for imaging transients (GAIA-alerts)

Background

Helmos Obs

Kryoneri Obs

OPTICON Impact





Impact of OPTICON

The involvement of NOA at OPTICON/H2020 is critical because:

- ❑ It provides direct access to established knowhow on “good practice” methodology in running a facility
- ❑ It provides inside information on trends and plans regarding upcoming technology developments
- ❑ Facilitates our involvement in science collaborations (ie GAIA alerts)
- ❑ Brings scientists to our facilities (via TNA) which helps the networking of the local staff and students
- ❑ May bring some funding which will help in supporting the operation costs.

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