# INAF OACT facility in Sicily: Status


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Osservatorio Astrofisico di **Catania**



**9th Gaia Science Alerts Workshop**
**8-10 October 2018, Vipava, Slovenia**

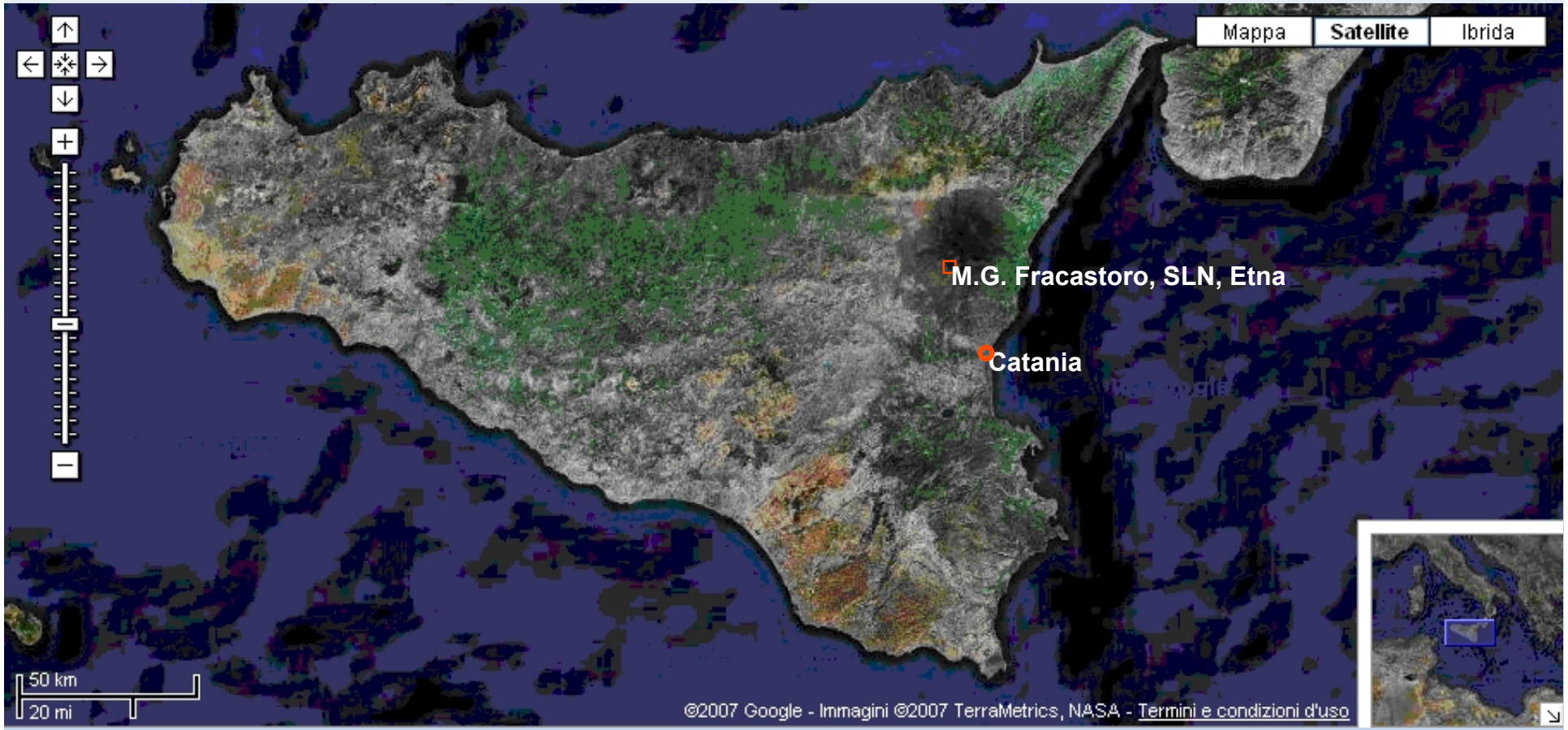
# Site

INAF IN ITALY
MILANO
TORINO
PADOVA
TRIESTE
BOLOGNA
FIRENZE
TERAMO
ROMA
NAPOLI
CAGLIARI
PALERMO
CATANIA

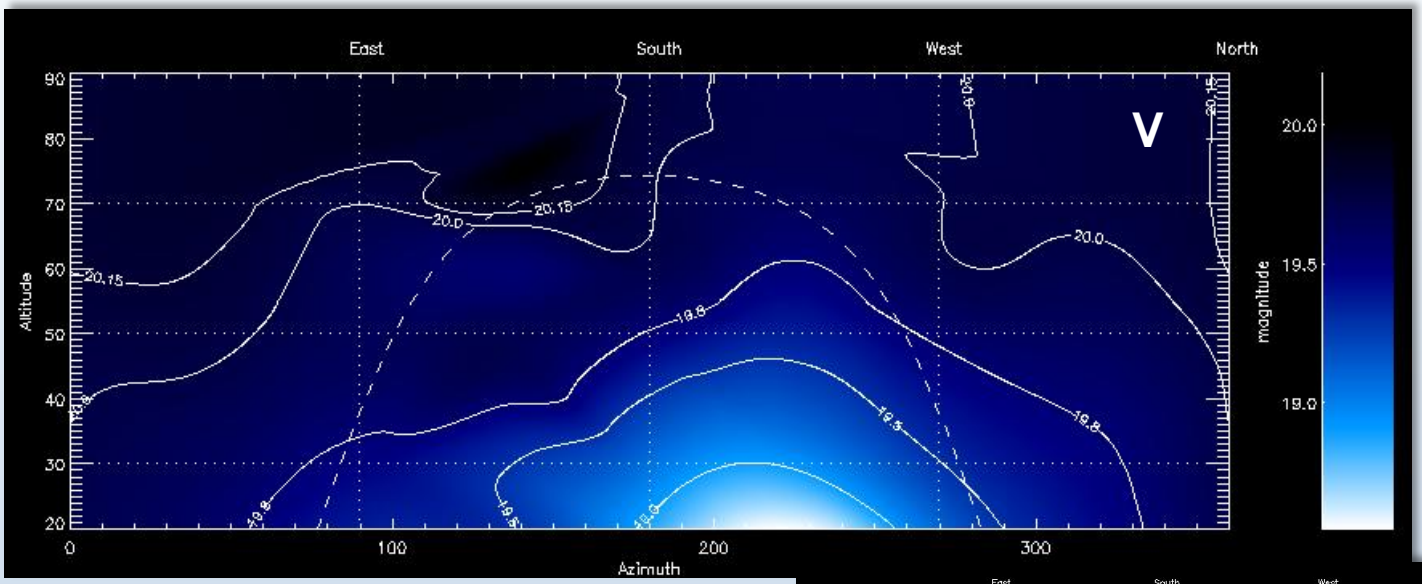
# M.G. Fracastoro Station

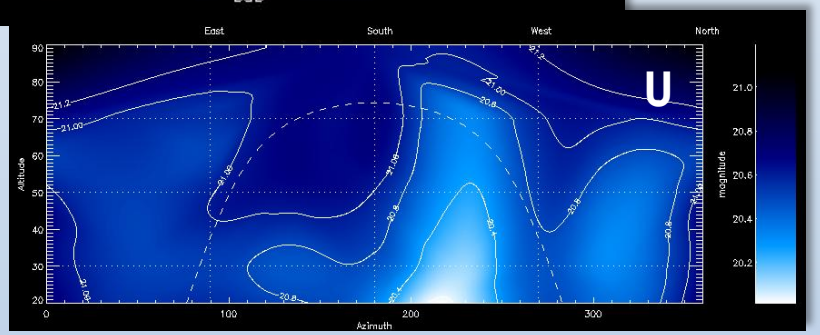
## Serra La Nave (Mt. Etna)

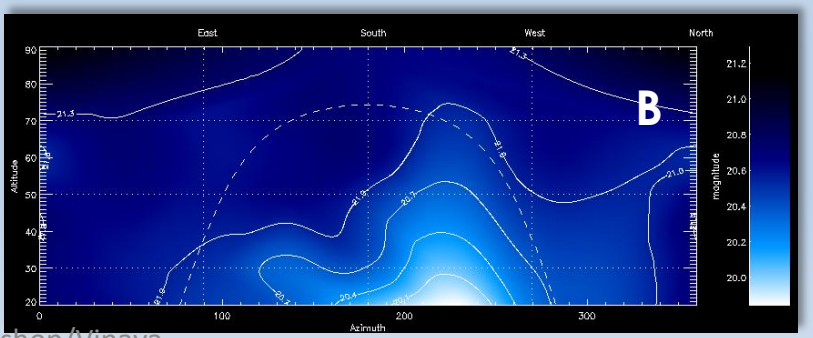
+14.973°E, +37.692°N, 1725m a.s.l.



# Night Sky Background @ Serra la Nave




| | U | B | V |
|---|---|---|---|
| **Min** | 20.0 | 19.8 | 18.5 |
| **Max** | 21.2 | 21.8 | 20.2 |
| **Zenith** | 21.1 | 21.2 | 20.1 |

Catanzaro et al.

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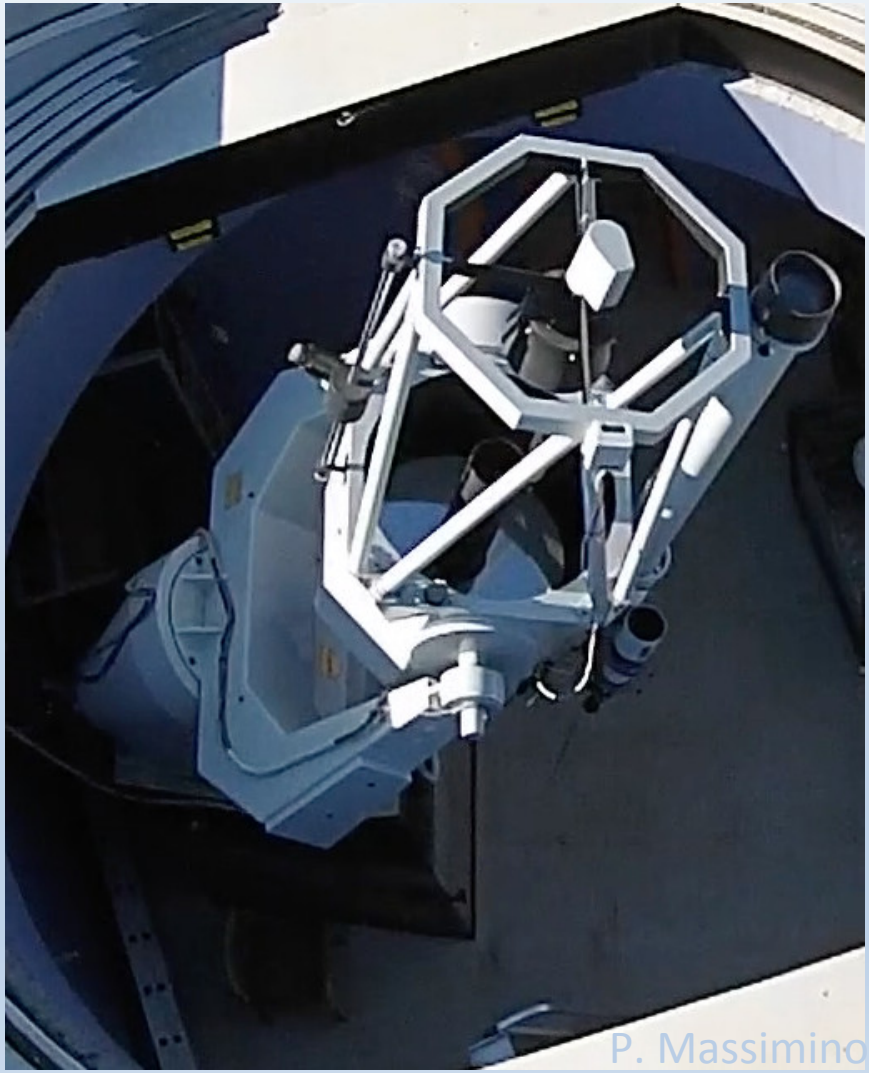
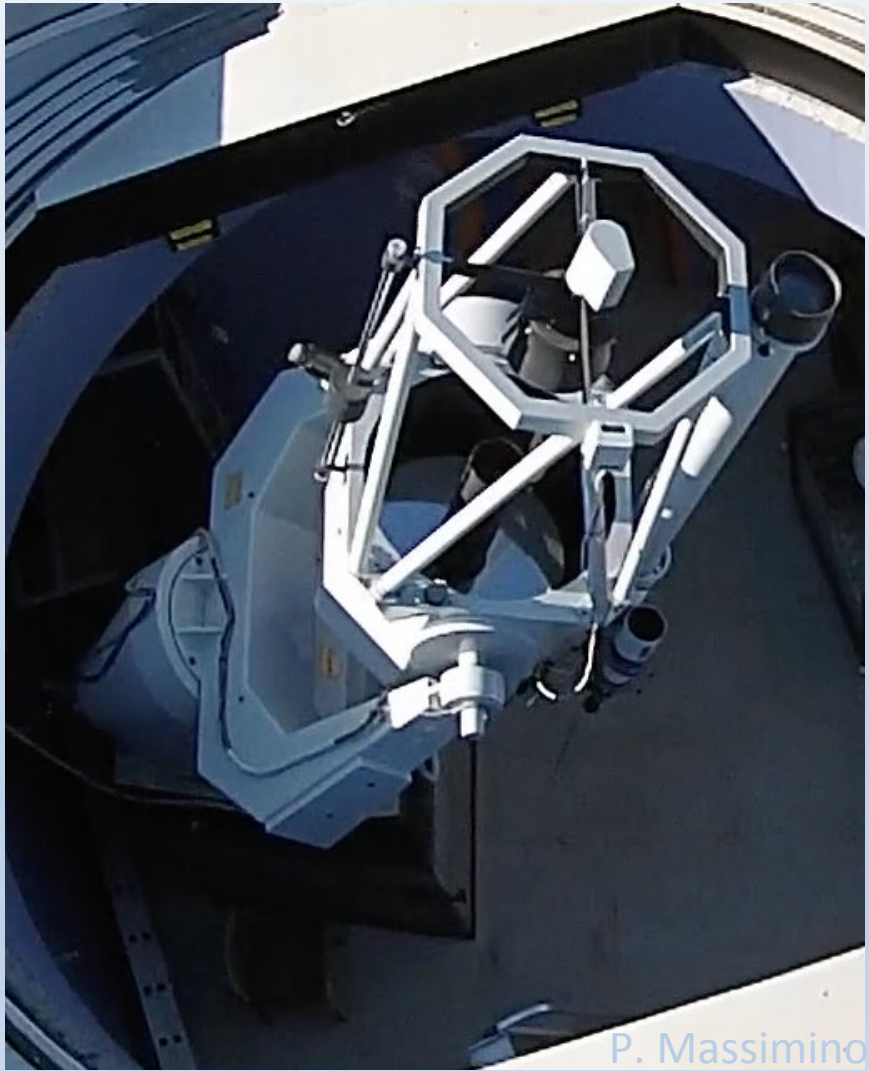
# The APT2 Telescope

- **Ritchey-Chrétien, 80cm, f/8**
- **Fully automated**
  - Checks of local meteo, dome, rain sensor, calibration images (twilight flats), autoguide
- **Pointing speed:** 0.75 deg $sec^{-1}$.
- **Focal plane:**
  - AspenCCD camera (CG230-42), with a 2K x 2K detector
  - linear scale of 0.47 arcsec $pixel^{-1}$.
- **FoV**: 16 arcmin.
- **Filters:** UBVRI & neutral



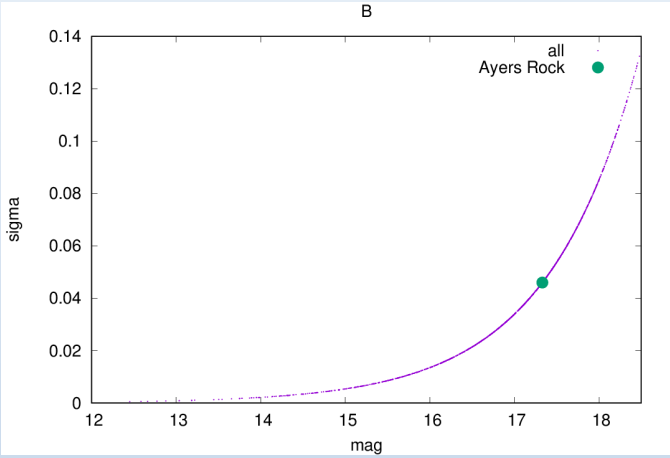
# The APT2 Telescope

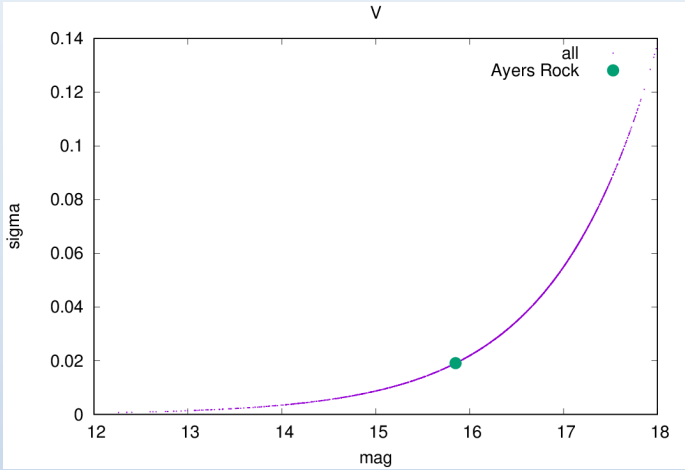
- **Operating modes:**
  - Pre-ingested schedule
  - Local operator
  - Remote operator
- **Data delivery:**
  - Raw and pipeline reduced data with astrometry and aperture photometry

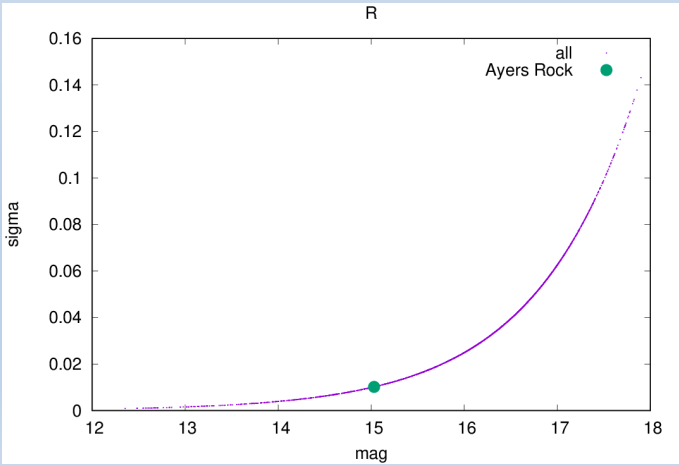


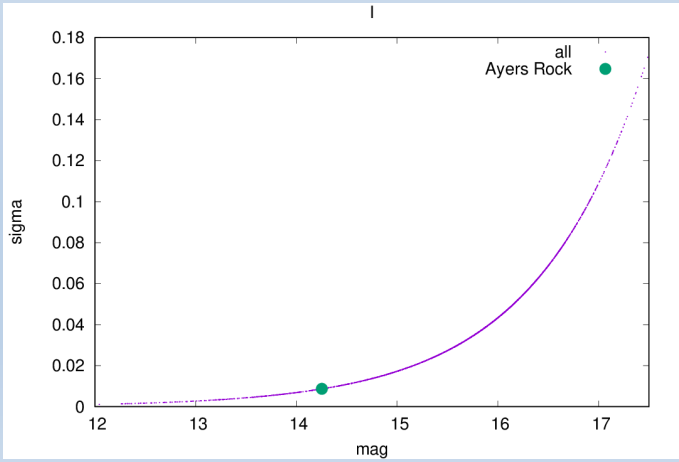
# APT2 photometric performance

- [300, 300, 240, 180]s exposure of a in BVRI, respectively.
- Dynamic range ≈ 6 mag.



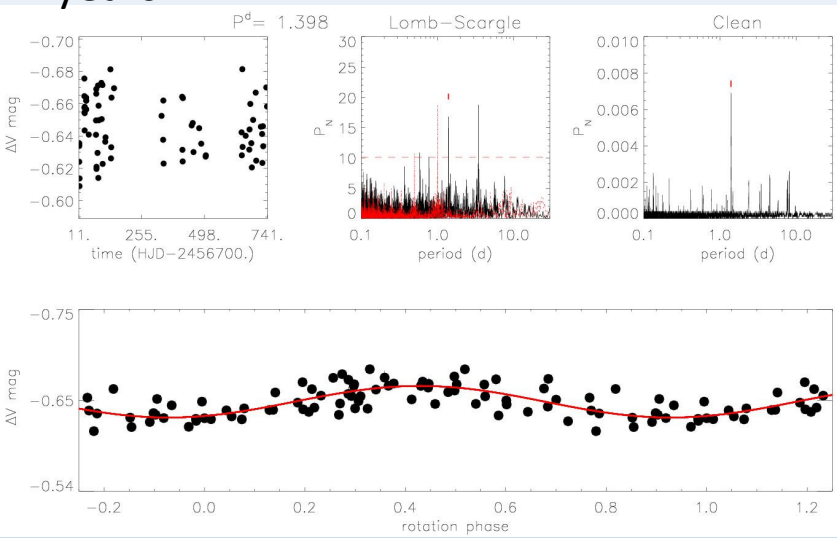



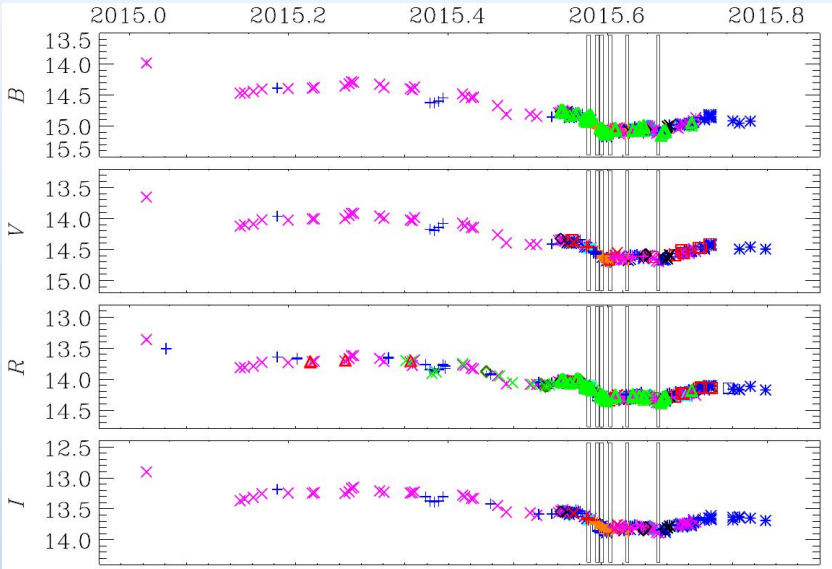
# Science with APT2

2 years

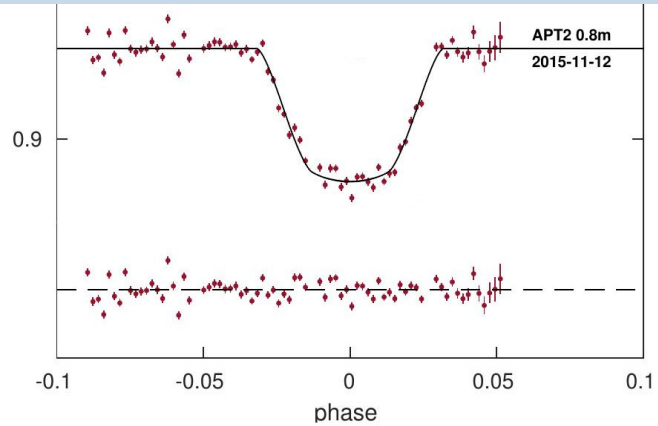



Mag. active star Messina et al. in preparation

1 night




Blazar PG1553+113
WEBT Network. Raiteri et al, MNRAS, 2017



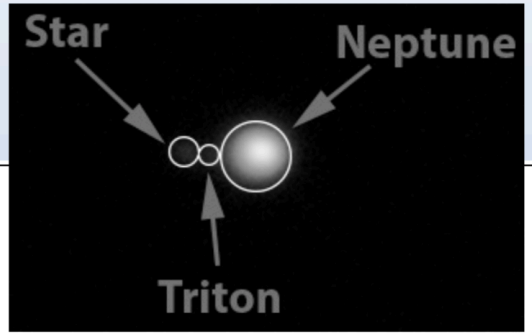

Few ours

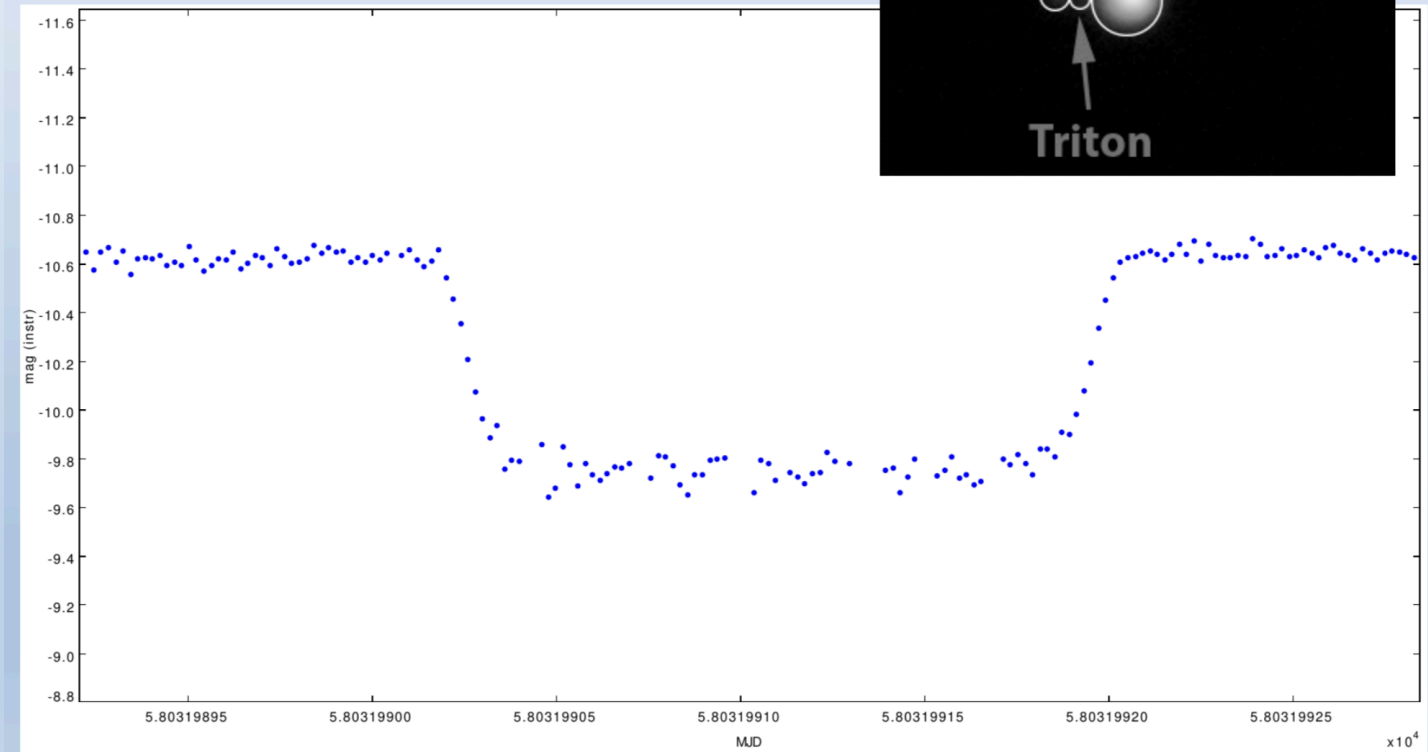
Wasp-43b planet
Esposito et al A&A, 2017

# Science with APT2

Occultation by Triton

few minutes

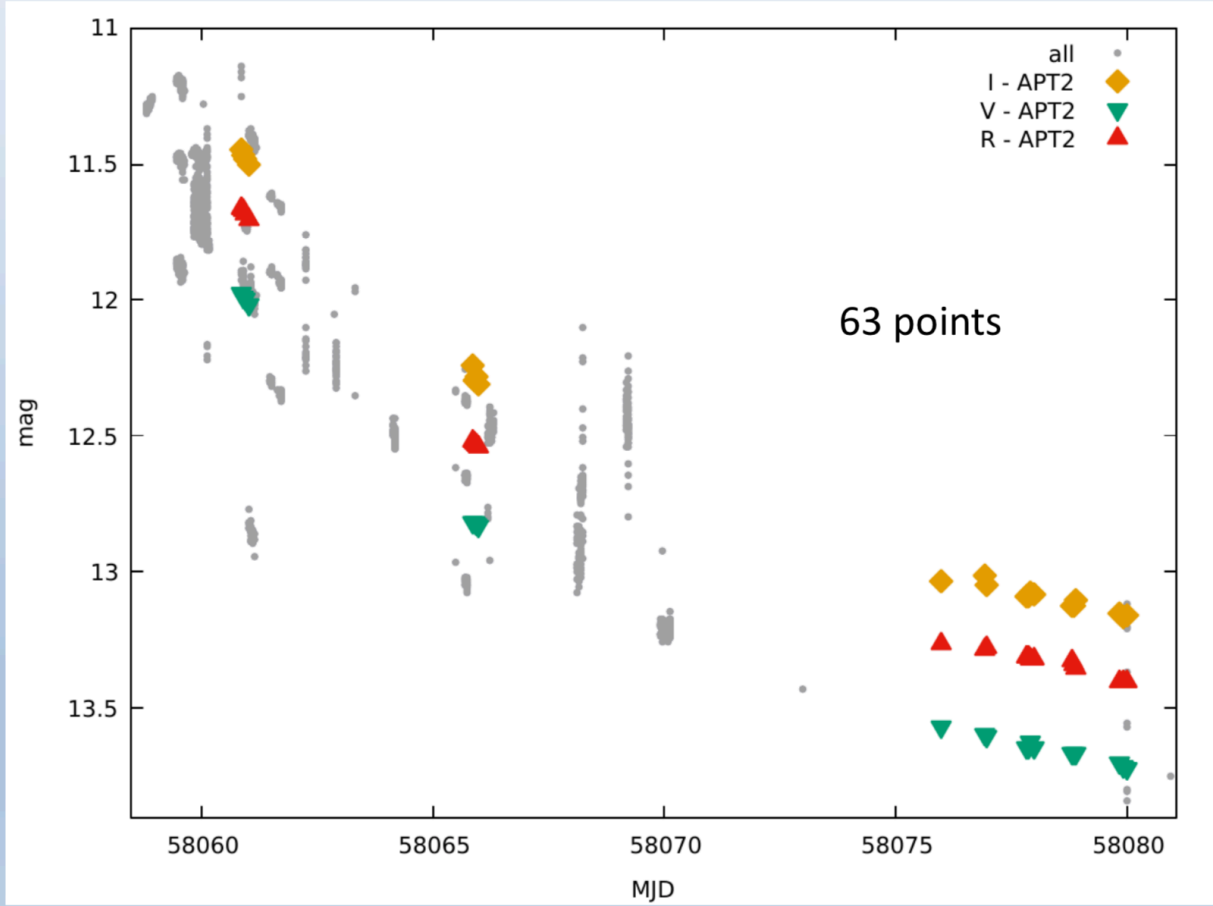



Oct 5,2017

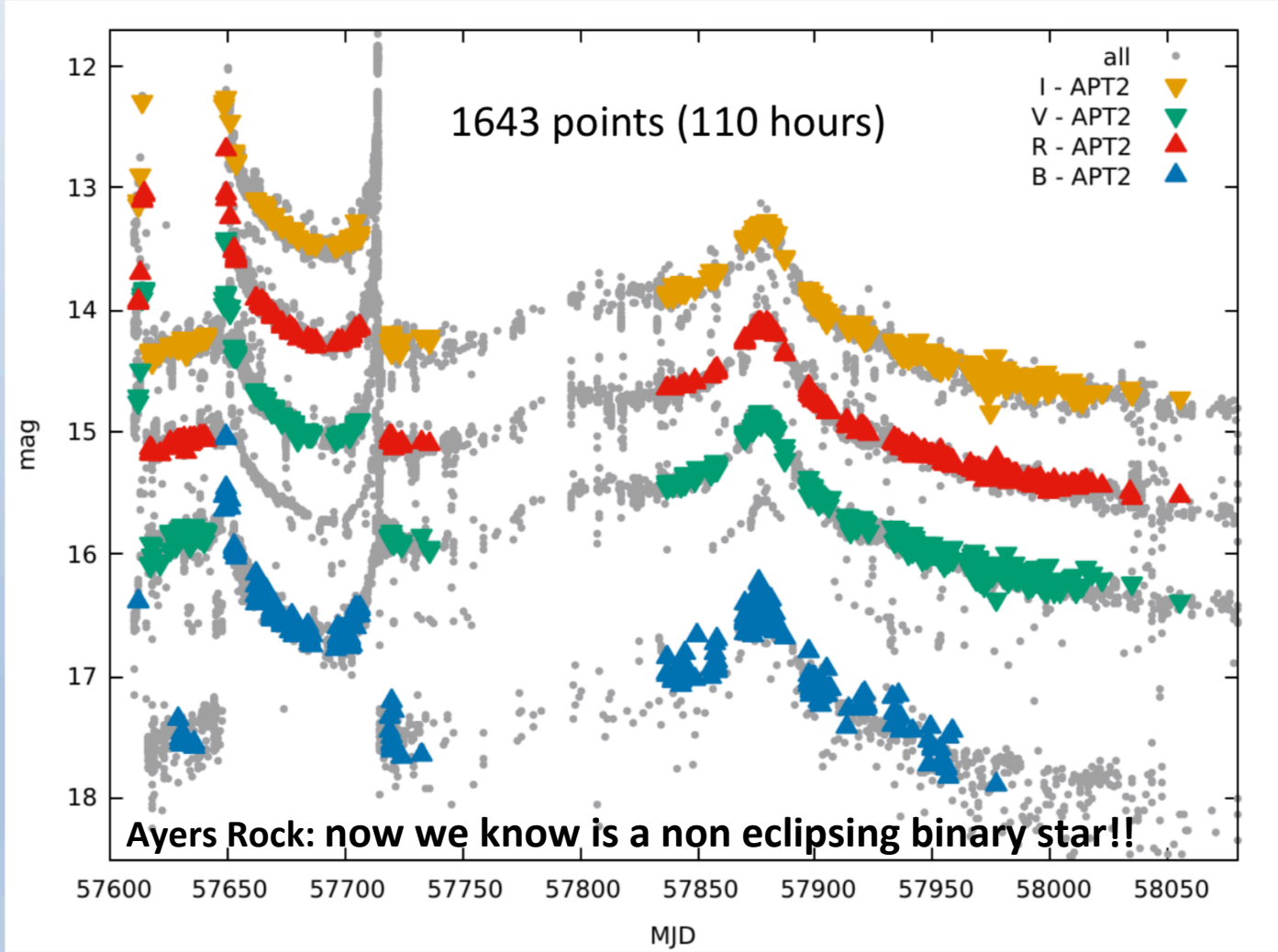
# Science with APT2
# GAIA ALERTS

Kojima



# Science with APT2

GAIA Ayers Rock



# APT2 dome broken ☹

# APT2 dome recovery actions

# A

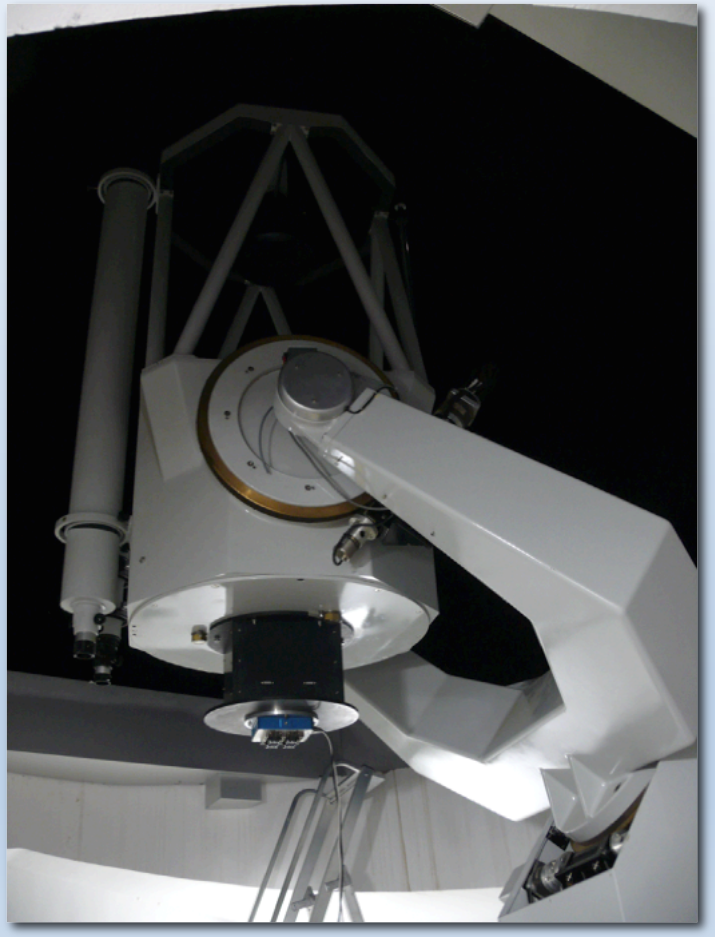
# APT2 dome broken

# Conclusions

- Robotic telescopes works well in follow-up science.
- APT2 is in recovering mode, will be ready to react during the next additional 2 years left ☺

# Acknowledgments

- Pietro Bruno
- Eugenio Martineti
- Gianfranco Occhipinti
- Giancarlo Bellassai



# BEFORE THE END

Thank you Andreja and local organisers for the beautiful meeting!

Thank you to Lukasz and Simon for the meeting and for their long standing efforts on the “GAIA Alerts”

Thank you

# THE END