



# The Robotic Telescope APT2

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# Acknowledgments

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





# Site

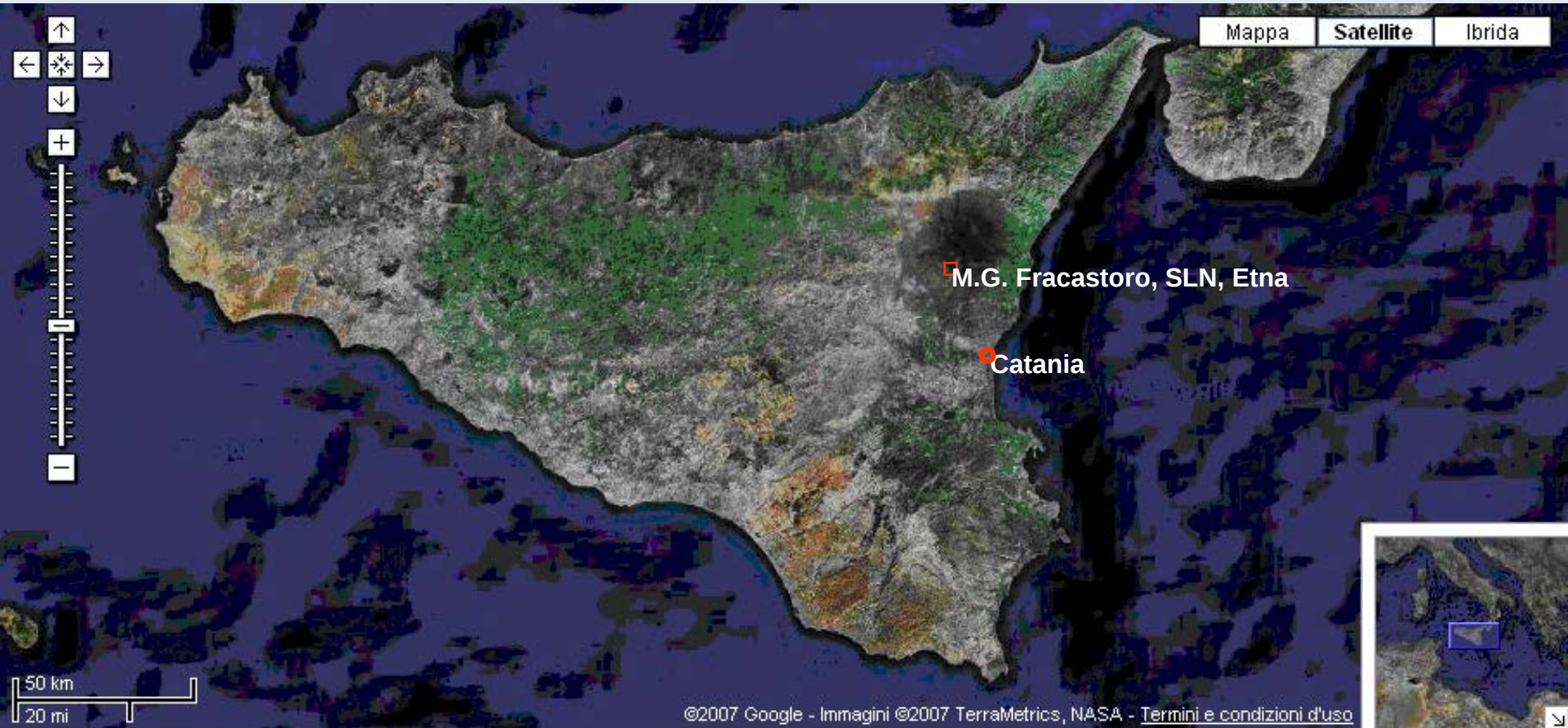




# M.G. Fracastoro Station

Serra La Nave (Mt. Etna)

+14.973° E, +37.692° N, 1725m a.s.l.





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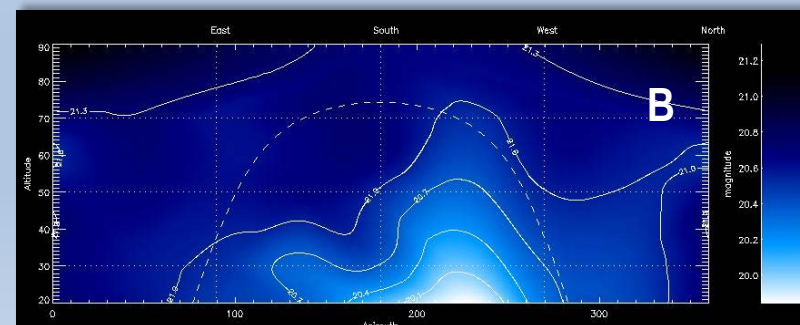
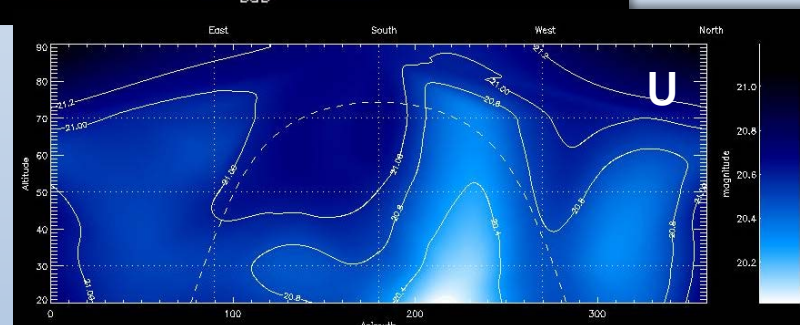
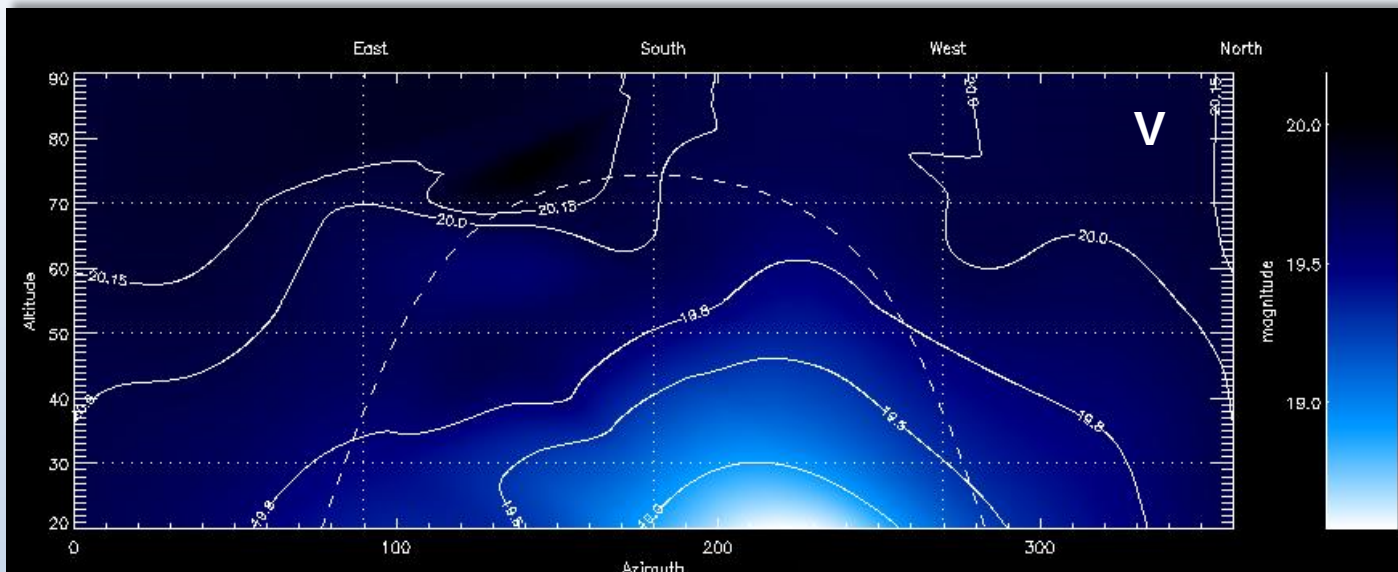
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# Night Sky Background @ Serra la Nave



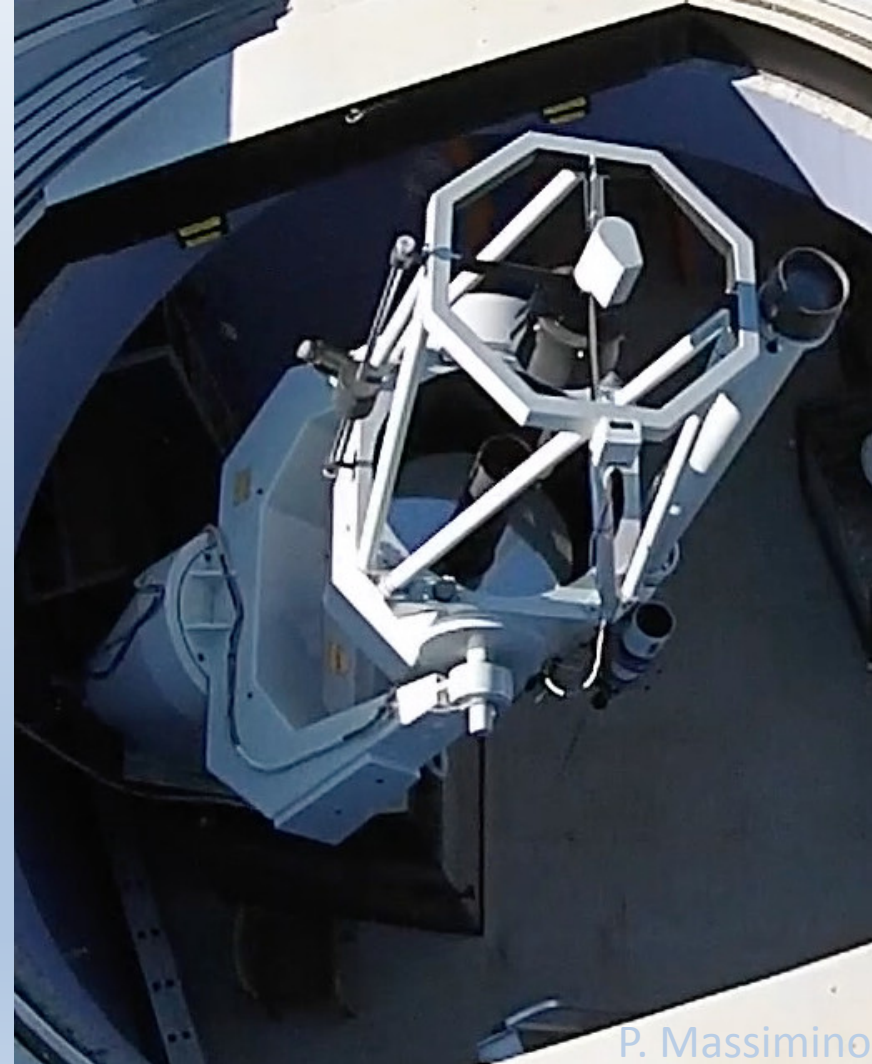
|               | U    | B    | V    |
|---------------|------|------|------|
| <b>Min</b>    | 20.0 | 19.8 | 18.5 |
| <b>Max</b>    | 21.2 | 21.8 | 20.2 |
| <b>Zenith</b> | 21.1 | 21.2 | 20.1 |

Catanzaro et al. 2016, *in preparation*



# The APT2 Telescope

- **Ritchey-Chrétien, 80cm, f/8**
- **Fully automated**
  - Checks of local meteo, dome etc.
- **Pointing speed:**  $0.75 \text{ deg sec}^{-1}$ .
- **Focal plane:**
  - Apogee CCD camera (CG240), with a 2K x 2K detector
  - linear scale of  $0.47 \text{ arcsec pixel}^{-1}$ .
- **FoV:** 16 arcmin.
- **Filters:** UBVRI & neutral
- **Operating modes:**
  - Pre-ingested schedule
  - Local operator
  - Remote operator
- **Data delivery:**
  - Raw and pipeline reduced data

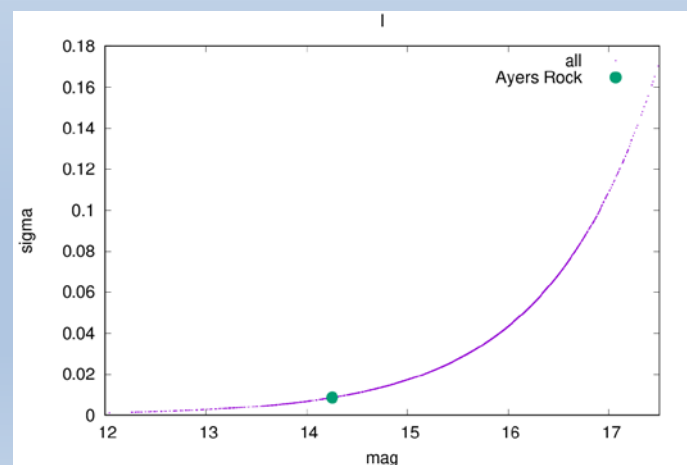
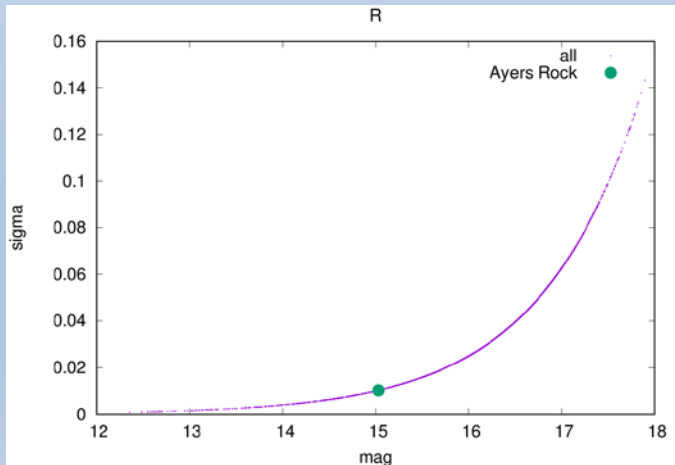
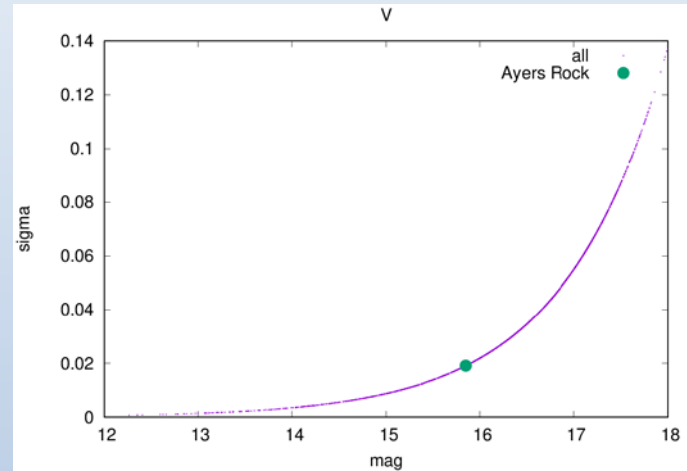
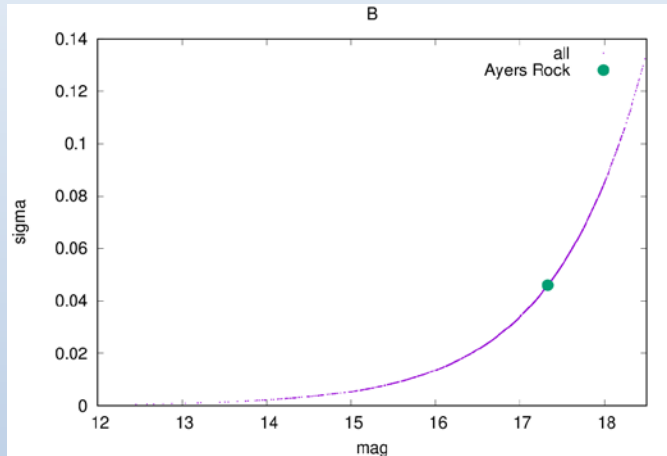


P. Massimino



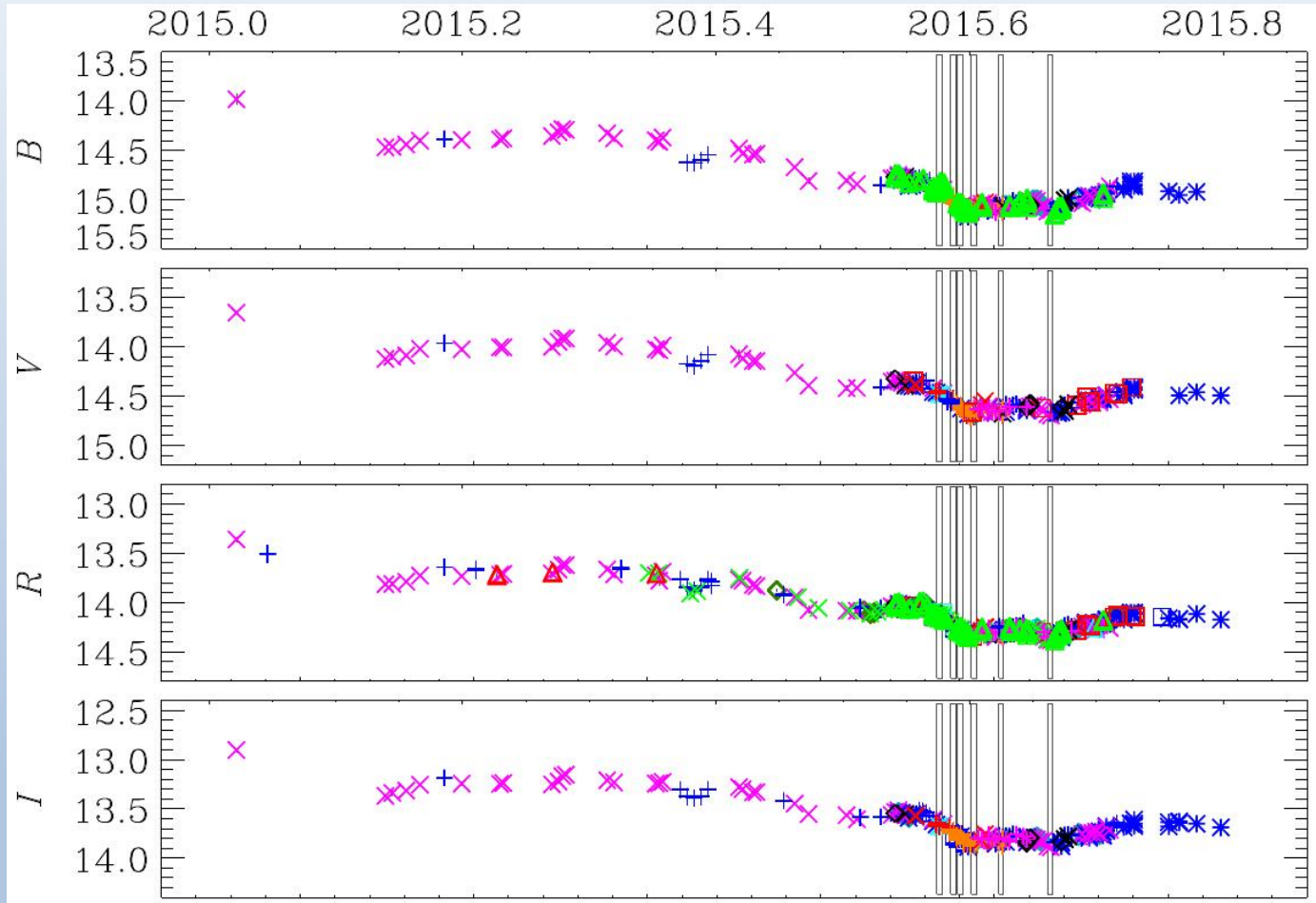
# APT2 photometric performance

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





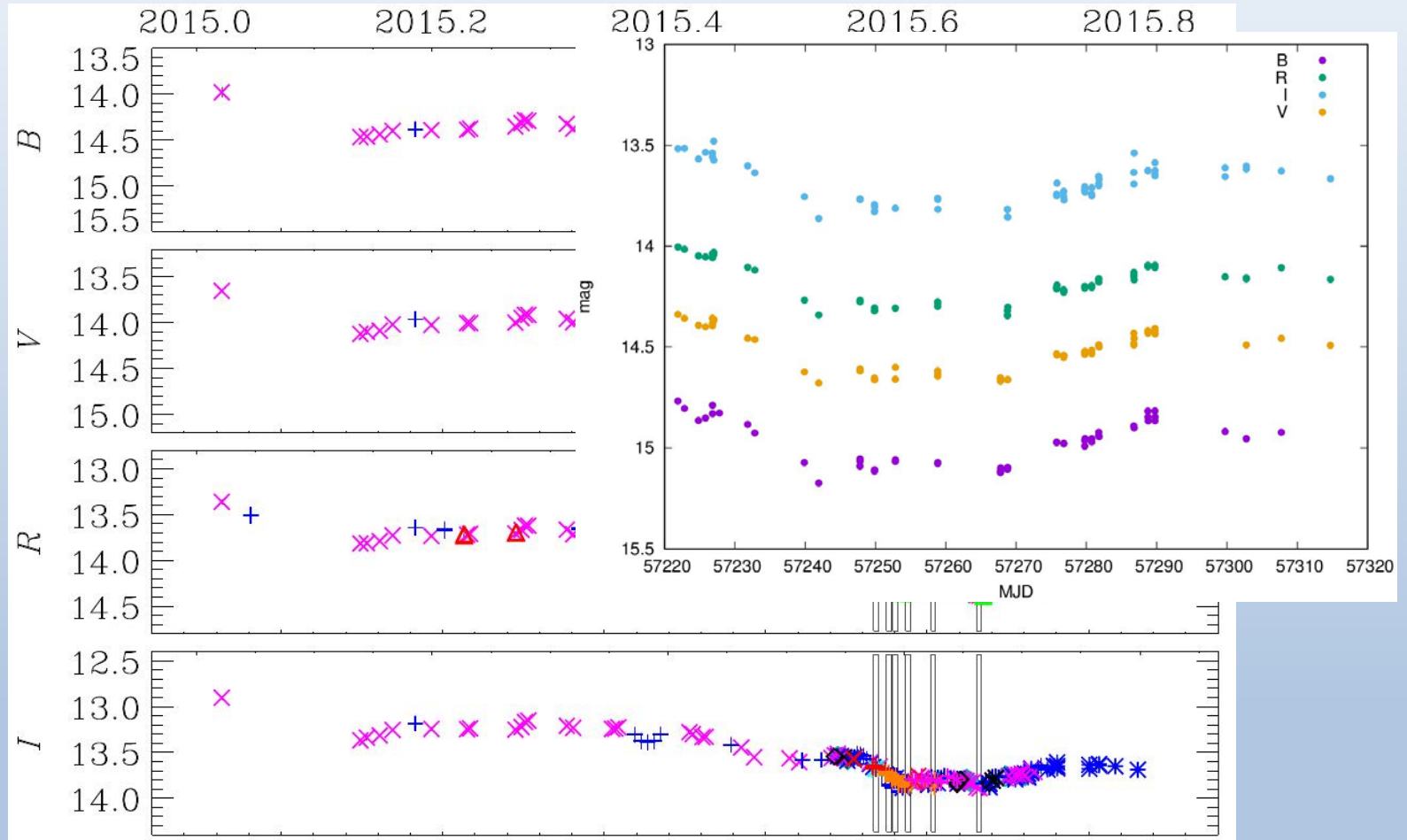
# Science with APT2



WEAT Network. Raiteri et al, MNRA (referee), 2016



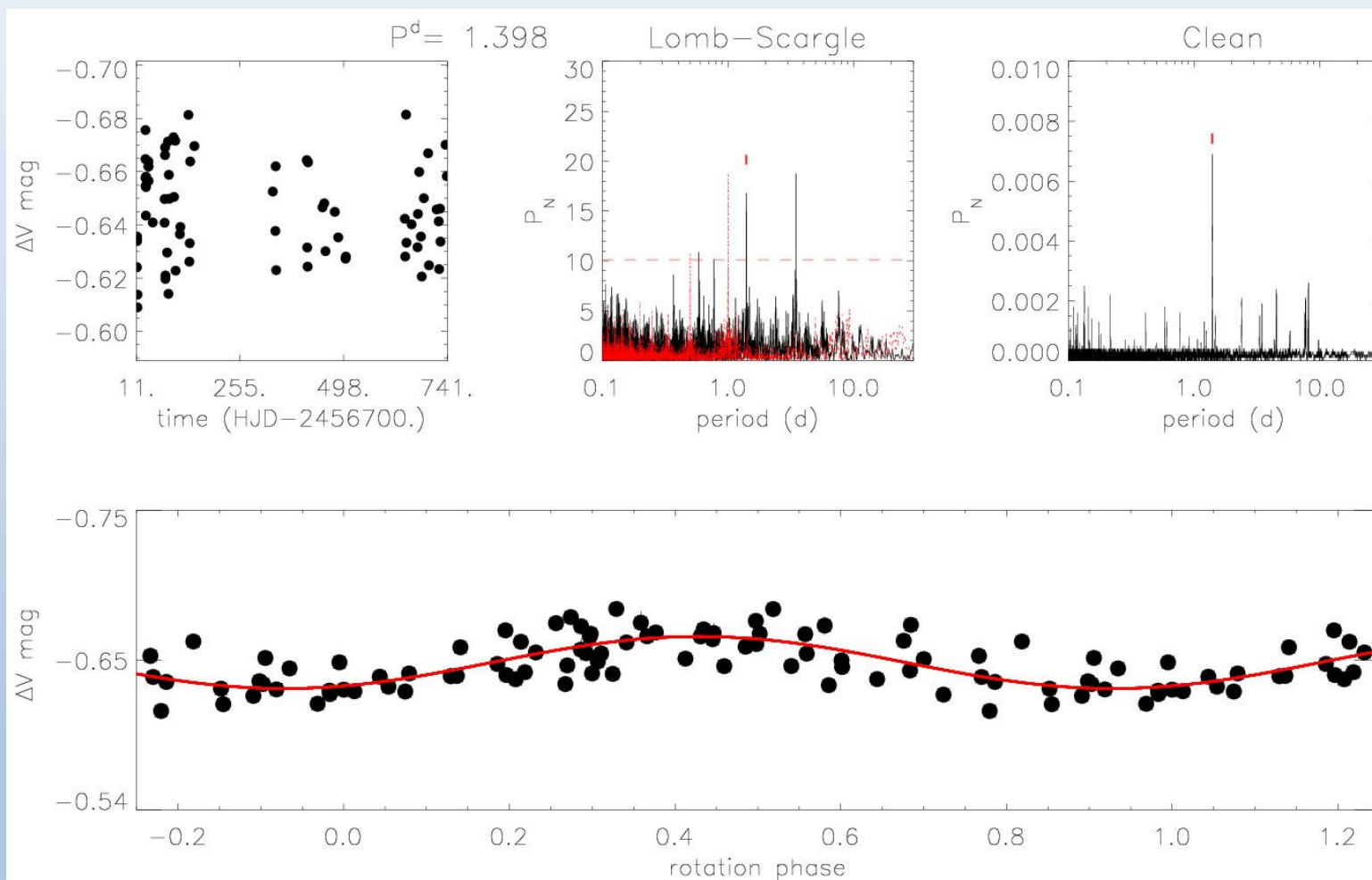
# Science with APT2



WEAT Network. Raiteri et al, MNR A (referee), 2016



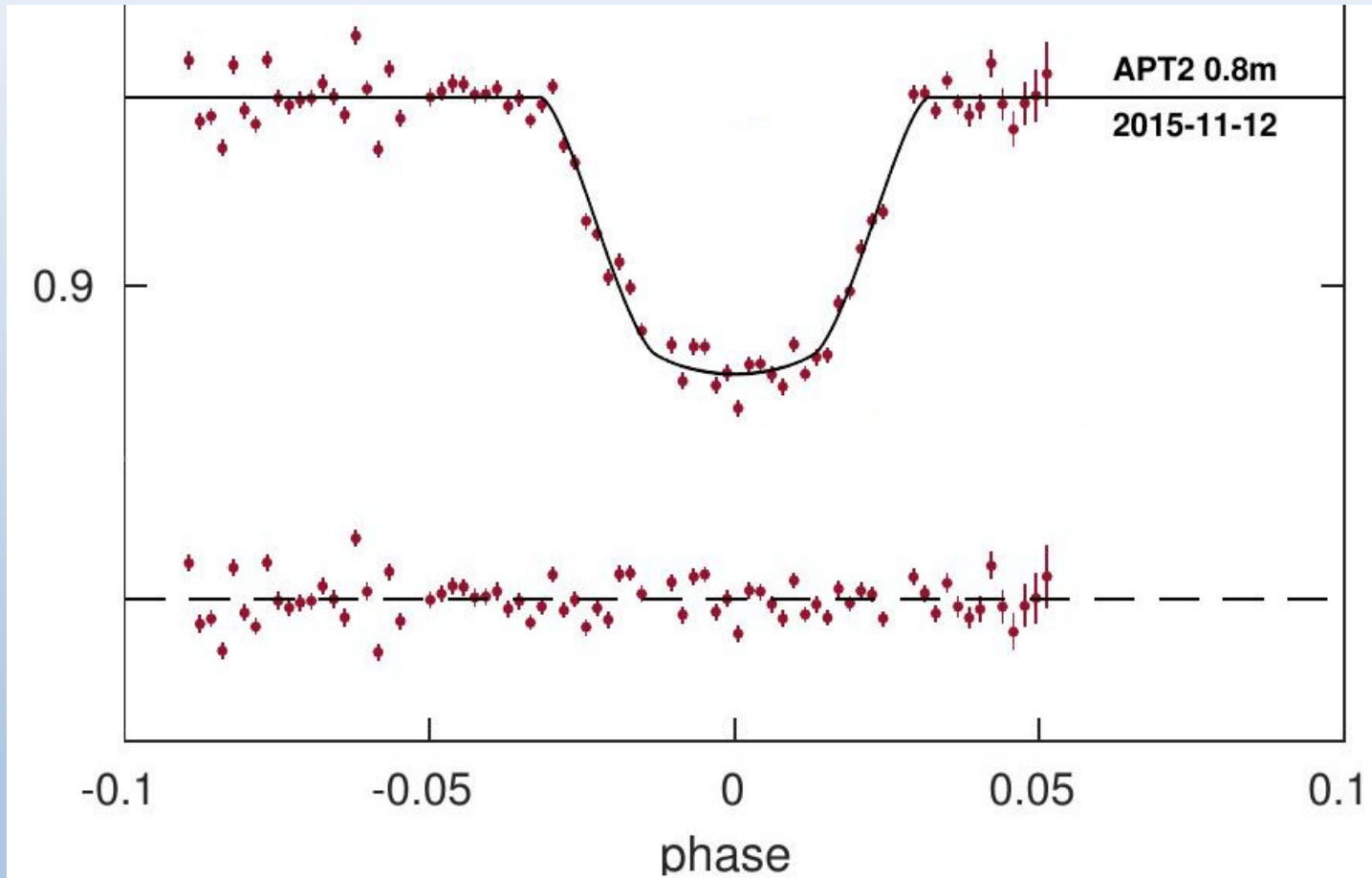
# Science with APT2



Messina et al. in preparation. Stellar Rotation



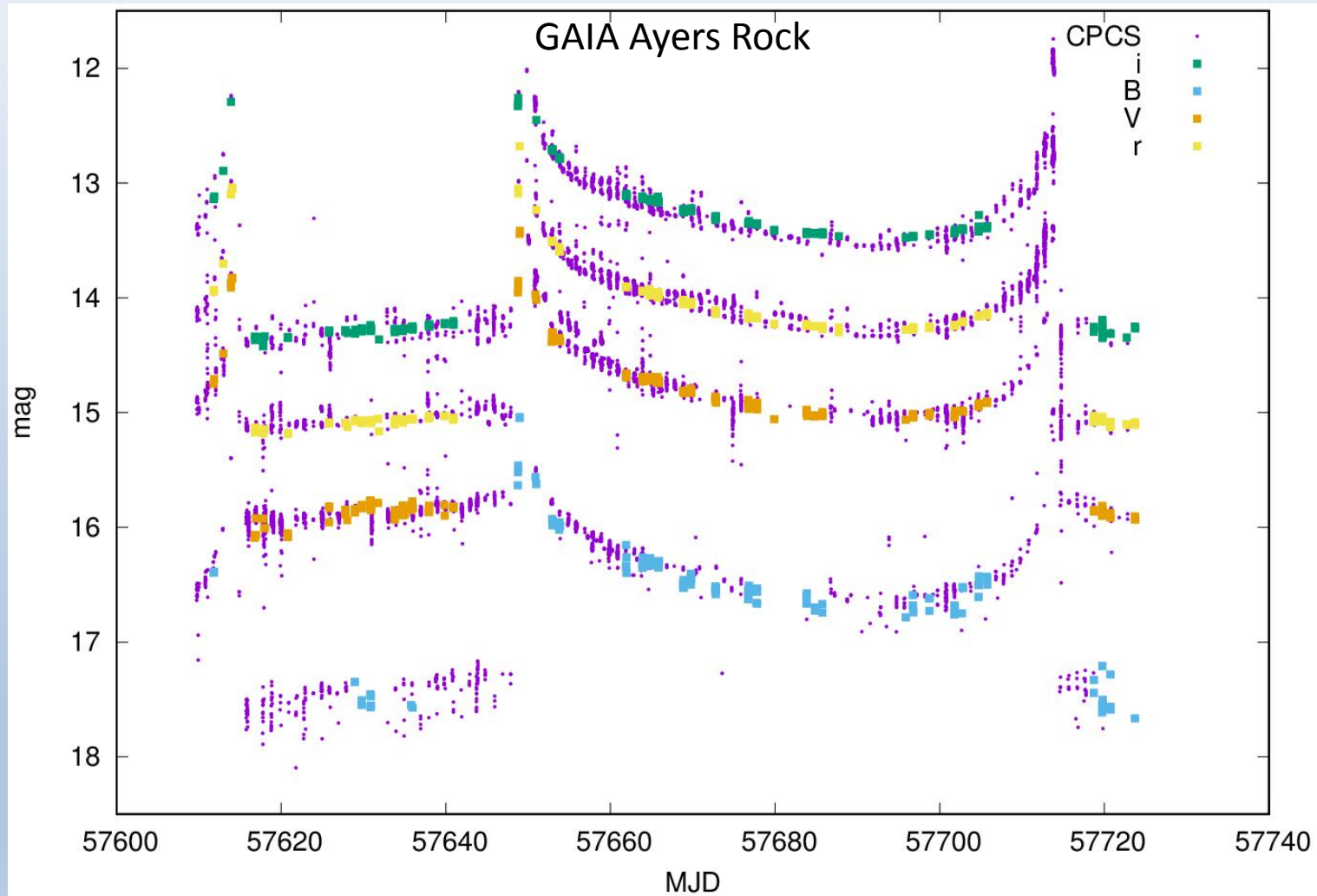
# Science with APT2



Esposito et al (referee) A&A, 2016. WASP 43b planetary transit.



# Science with APT2





# Conclusions

- APT2 works
- Robotic telescopes Rock and Roll in follow up science.



Thank you  
**THE END**