

The 1.52m Loiano Telescope and the Gaia Alerts challenge

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also on behalf of the INAF-OABo Gaia Alerts team:

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152cm Cassini
Telescope (1976)

1.52m telescope characteristics

- Ritchey-Chrétien optics
- English mount
- Cassegrain focus: 12m, F/8, 17 arcsec/mm
- Useful field: 70 arcmin

Instrumental set-up

- BFOSC: focal reducer, red. ratio: 0.58
- EEV CCD: 1300×1340 px, $20\mu\text{m} \times 20\mu\text{m}$
- Scale: 0.58 arcsec/px
- FOV: $13 \text{ arcmin} \times 12.6 \text{ arcmin}$
- Max. spectral resolution: 4200

Status

- 3 telescope operators: Ivan Bruni, Antonio De Blasi, Roberto Gualandi
- 1 resident astronomer (post-doc): Silvia Galleti
- Management: Italo Foppiani (technical); GMS (science and logistics)
- Used for research and teaching

Science at the 1.52m

- Open call and scheduling every 6 months
- Scientists both local ($\sim 40\%$) and external, mainly Italian
- Oversubscription $\sim 1.5 \div 2$
- Main topics: SSA, NEO, comets, extrasolar planets, GAIA Alerts, X-ray binaries & CVs, AGB stars, binary pulsars, novae, AGN
- Service observing max. 4 nights/month
- Recent major overhaul of control and tracking systems, working towards remotisation

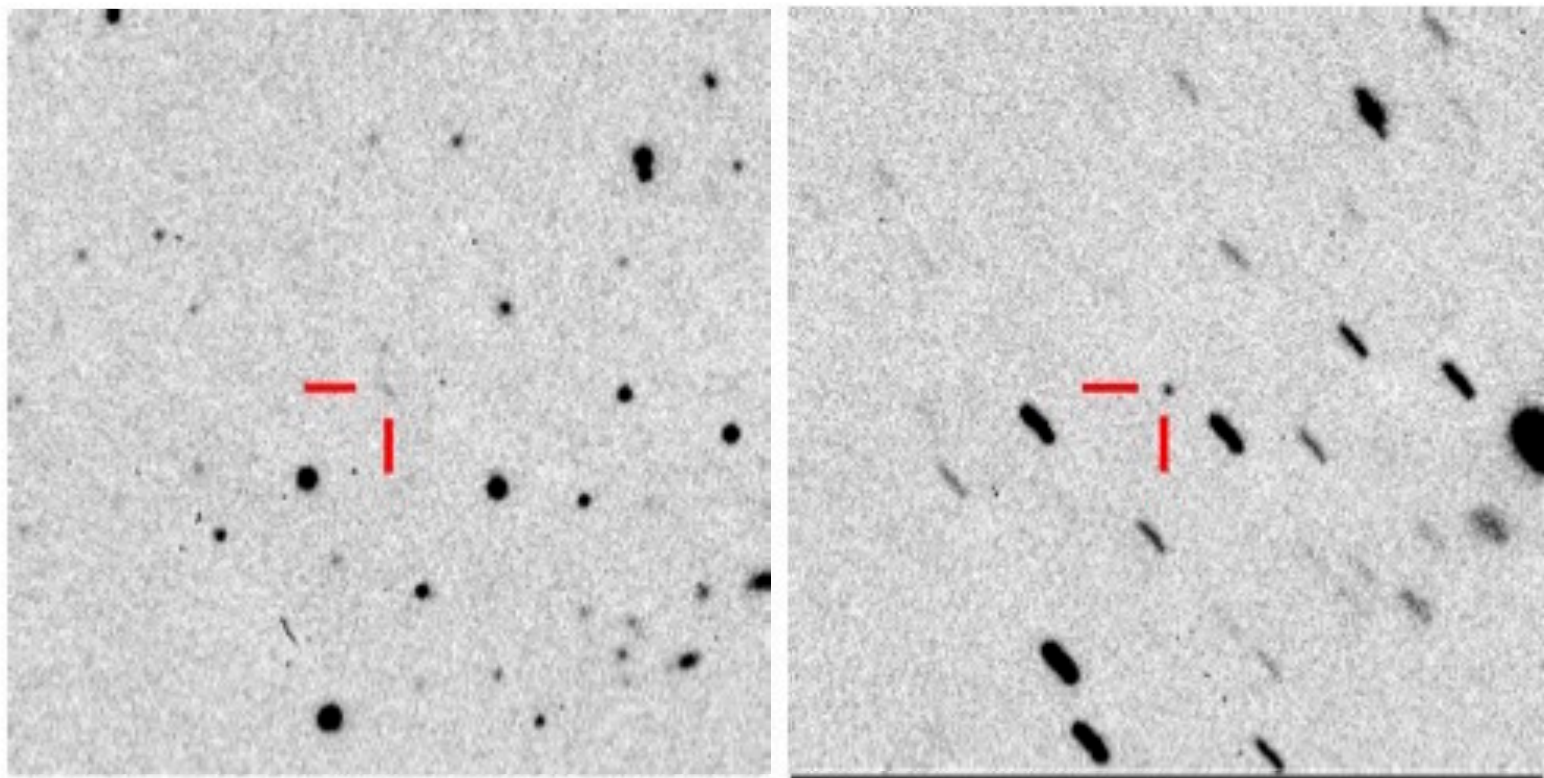
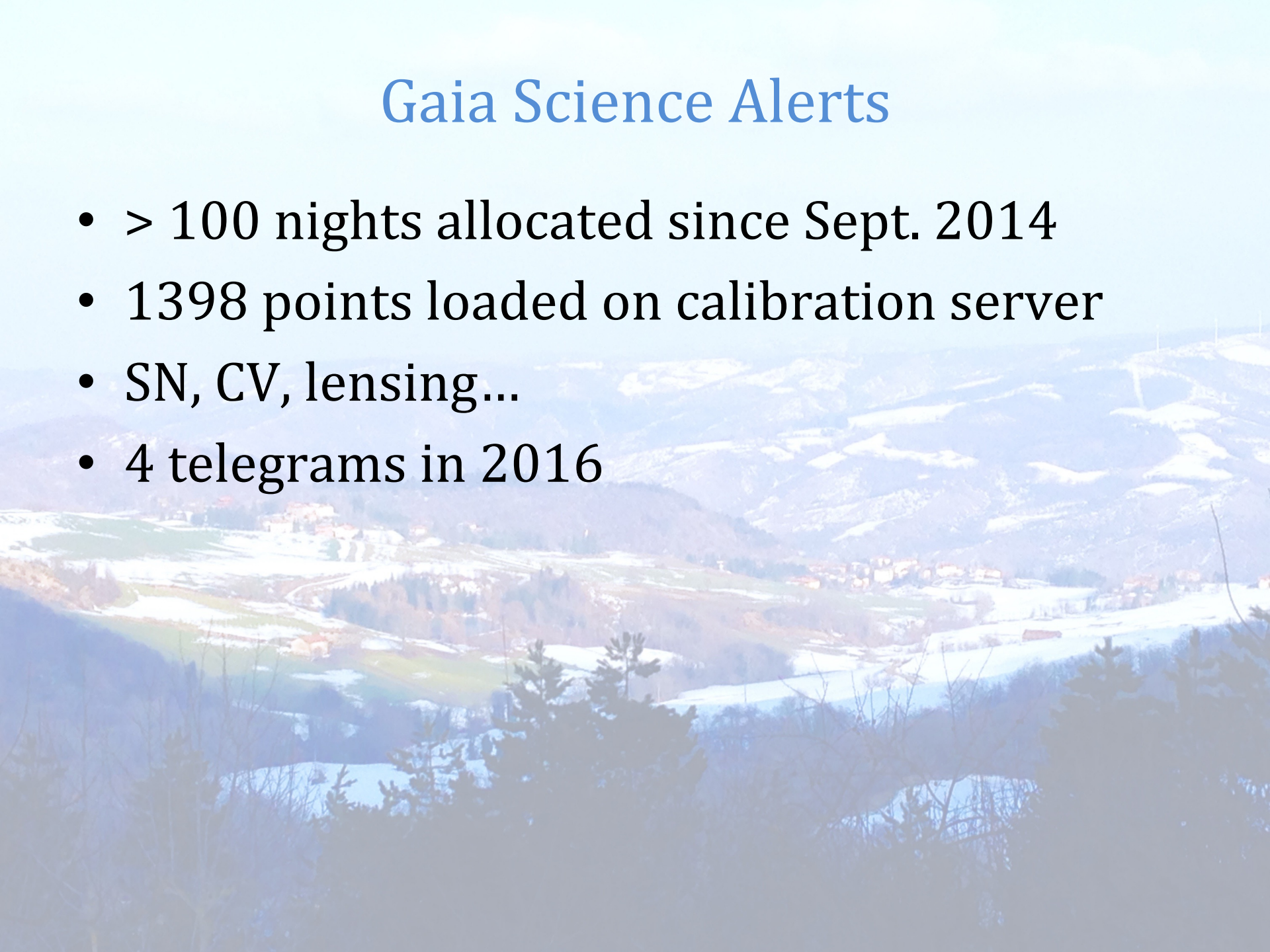


Figure 4: The spacecraft GAIA, as detected in the night of Oct 17-18, 2014 with the 1.52m telescope of the Loiano Observatory. The two panels are consecutive 300 sec exposures in "white" light (i.e. CCD with no photometric filter) of the same field with sidereal (left) and differential (right) telescope tracking on. The displayed field is 3×3 arcmin across. North is up, East to the left. Pixel size is 0.58 arcsec.

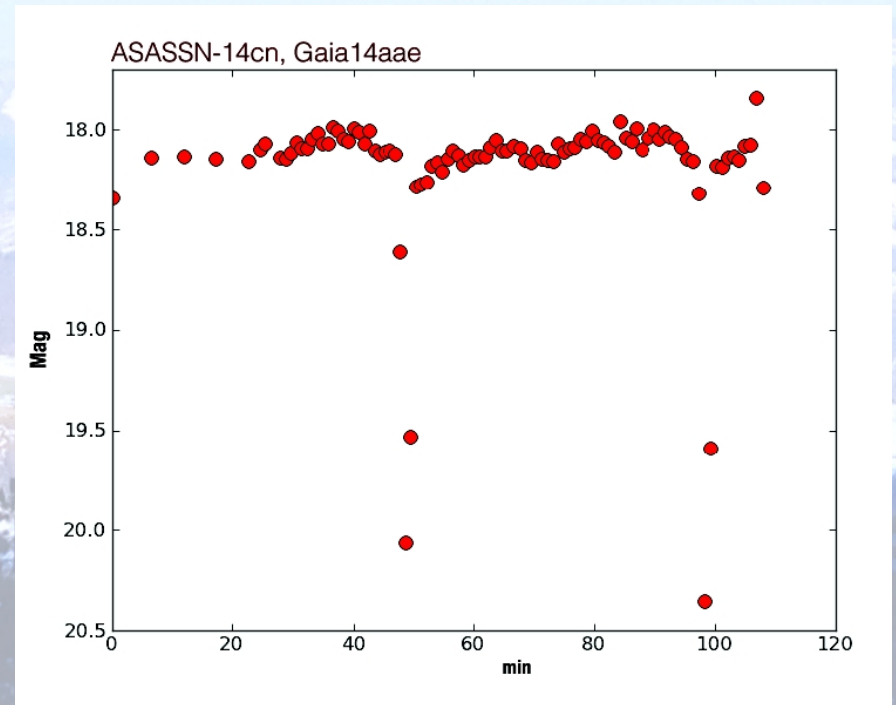
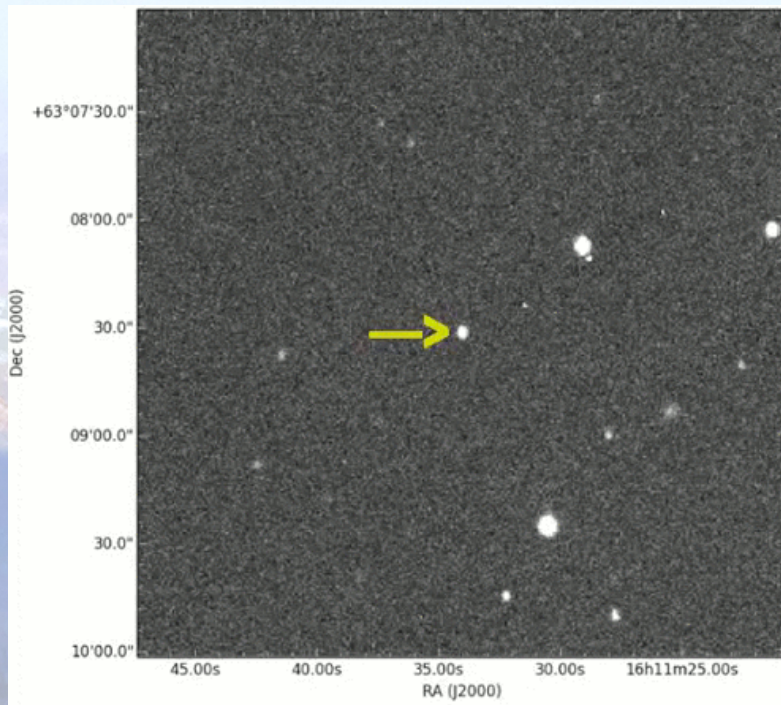
Gaia Science Alerts

- > 100 nights allocated since Sept. 2014
- 1398 points loaded on calibration server
- SN, CV, lensing...
- 4 telegrams in 2016



Gaia 14aae/ASSASN-14cn

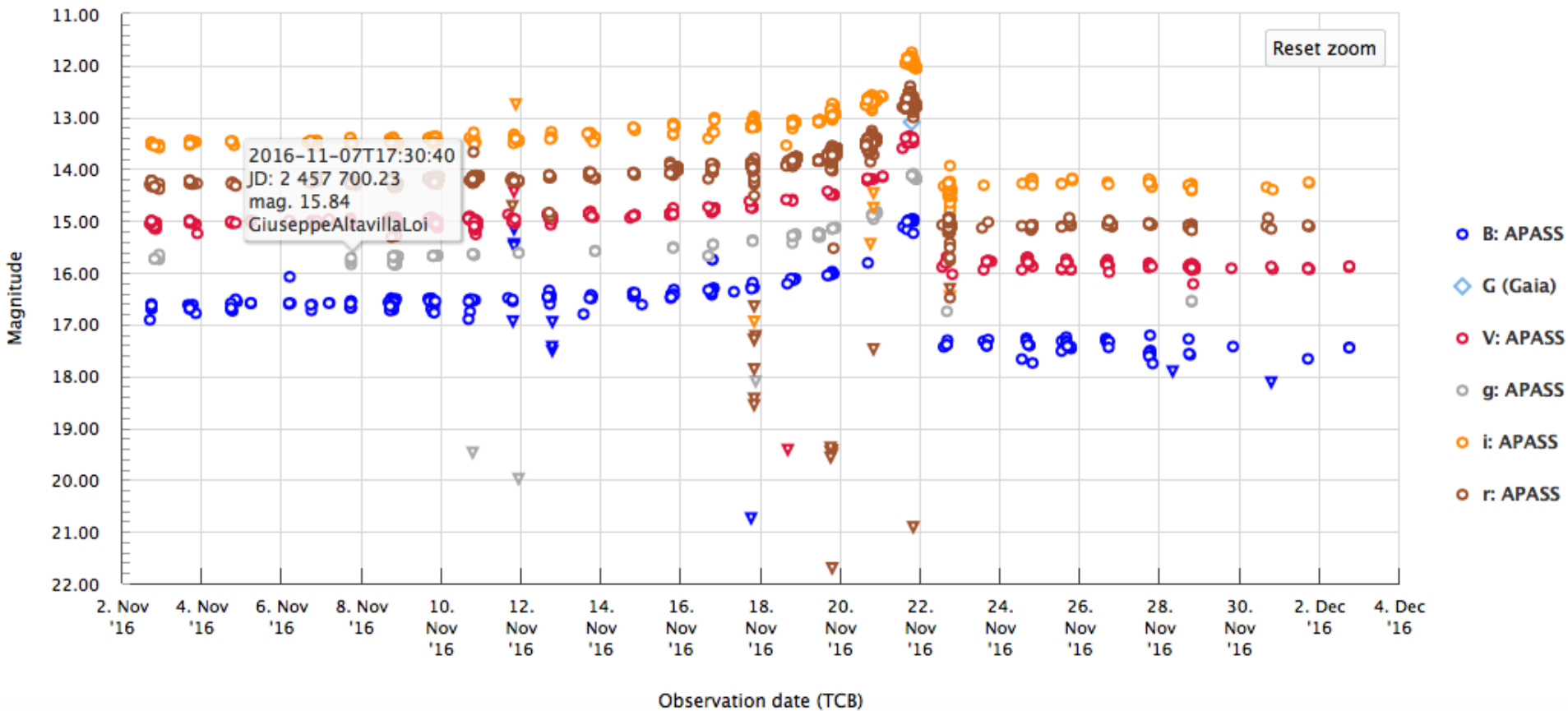
- AM CVn system




Sped up $\times 250$

Gaia16aye

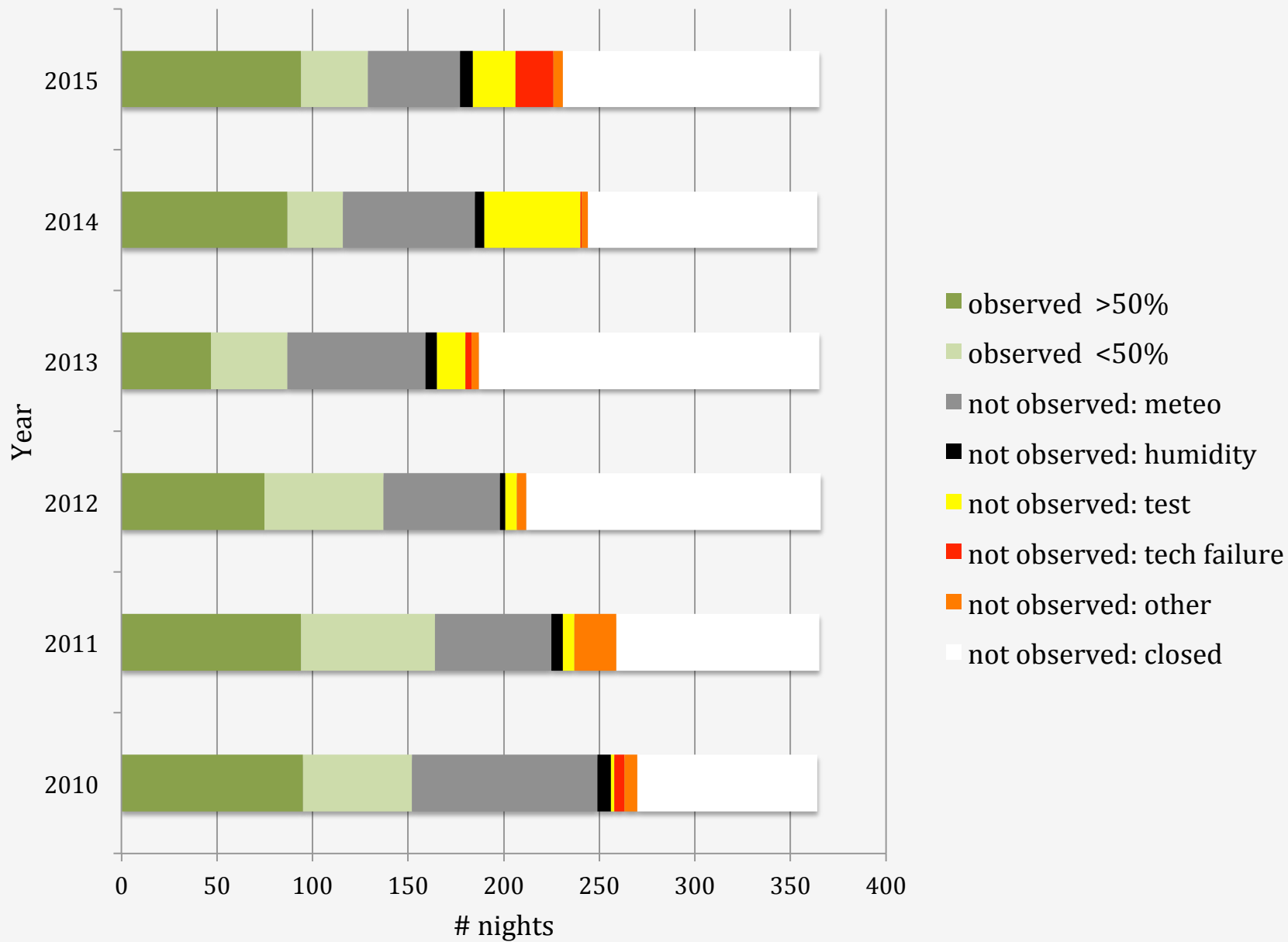
Subject: BFOSC on Gaia16aye?
From: "Lukasz Wyrzykowski" <wyrzykow@gmail.com>
Date: Mon, November 7, 2016 3:54 pm
To: "Giuseppe Altavilla" <giuseppe.altavilla@oabo.inaf.it>
"Gisella Clementini" <gisella.clementini@oabo.inaf.it>



Why is it a challenge?

- Staff shortage: closed at full moon, no backup in case of TO illness
- Upgrades slowed down more by nightmare regulations  than financial shortages
- So flexibility and quick response to alerts are a (welcome!) challenge

Thank you!



Papers

