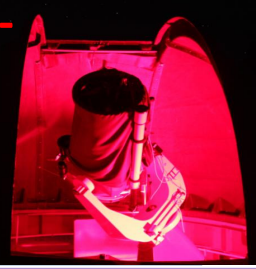
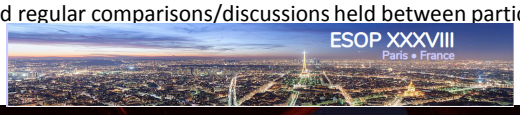
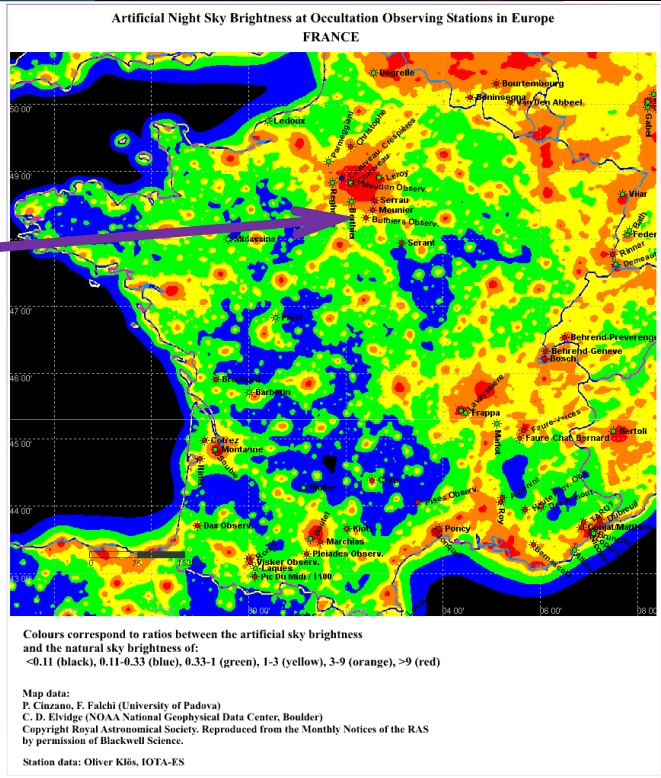
Télescope Jean-Marc Salomon -TJMS-

association **PLANETE SCIENCES**
Buthiers



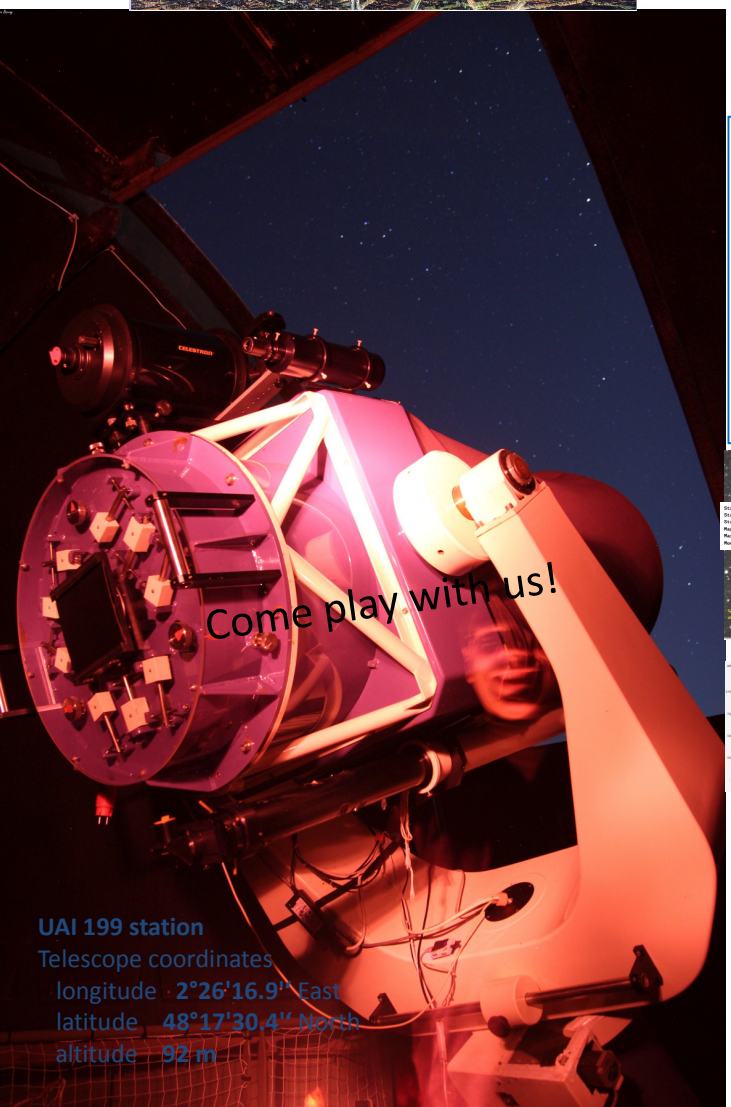
- **Since the 1950s**, **Planète Sciences** a leading national French non-governmental organization
- *Aims*: promoting sciences, engineering and technologies, in particular for new generations
- *Activities* especially in **Space** (balloons, rockets..), **Astronomy**, **Robotics** & **Environnement**
- Staff of **~70 + ~300** short-term specialized facilitators
- Over **1000 volunteers**, reaching out to **110 000 young people** per year, helping **700 clubs**, intervening in over **400 education institutions**, providing science camps for **over 500 young people** each year
- The Centre d'Astronomie JM Salomon in Buthiers was born in **1999/2000**
- Within easy reach from Paris by suburban train (**RER**) or **Highway**
- Buthiers benefits from a still quite **preserved sky** (SQM ~20, seeing ~2-3"). The local area has been recently legally protected against light pollution *("Arrêté du 27 décembre 2018 fixant la liste et le périmètre des sites d'observation astronomique exceptionnels en application de l'article R. 583-4 du code de l'environnement')*
- The **first aim** of TJMS is to **train younger generations** in astronomy, through sharing highly technical skills, implicating them in the workflow needed in order to obtain high quality scientific results
- Amateurs (individuals or clubs) can access this special « Télescope de Mission » for **demanding observations**, even for short missions (down to one night)
- Volunteers permanently maintain and upgrade the instruments
- TJMS is a **600mm** (23") primary mirror telescope, with a **Newtonian** setup as well as a (Laurent) **Cassegrain** focusing attachment
- Various (CMOS & CCD) **cameras** and time-keeping systems are available on-site (QHY174M-GPS, SBIG STT8300+ASA x0,9+GPS BU 353, AUDINE + ETHERNAUDE) but personal ones can be adapted too. Many different postprocessing techniques (Prism, Muniwin, Tangra…) are used and regular comparisons/discussions held between participants

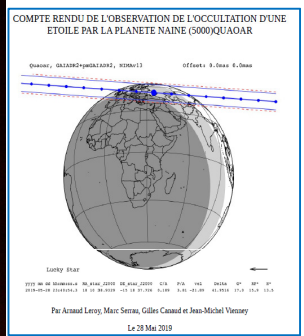


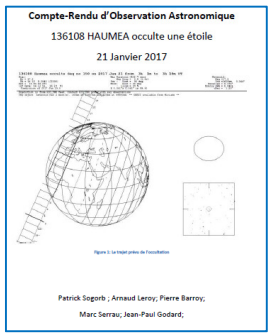


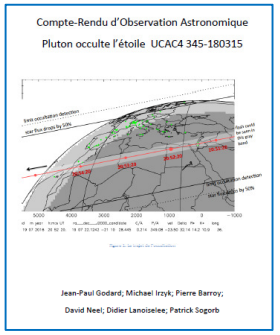
In the occultation area, noticeable recent missions at TJMS have been:

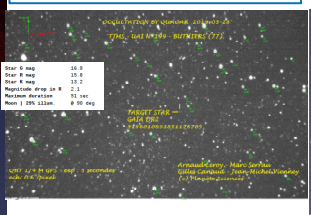
- **occultation by TransNeptunian Object QUAOAR** (28/05/2019)
- **occultation by TNO HAUMEA** (21/01/2017)
- **occultation by PLUTO of UCAC4 345-180315** (19/07/2016)

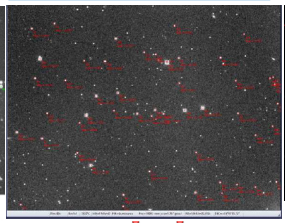


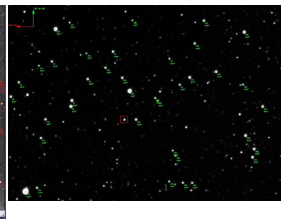


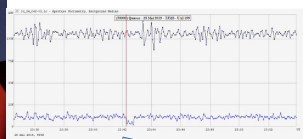


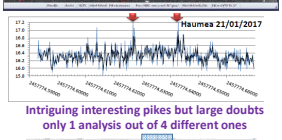




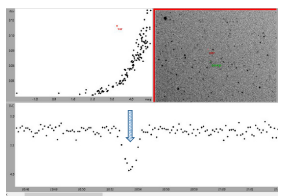


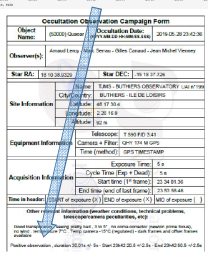


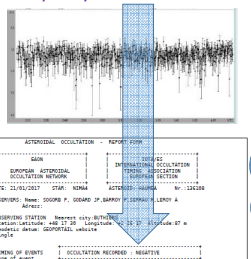




Intriguing interesting pikes but large doubts
only 1 analysis out of 4 different ones







+
many others activities including
Asteroid discoveries such as
(125592) Buthiers or **(125718) Jemasalomon**
Asteroid tracking (light curves/rotation curves), **PHEMUs**, **PHESATs**
Exoplanet Transit tracking, Spectroscopy
Computing & Electronics ...

Pluto's lower atmosphere and pressure evolut ion from ground-based stellar occultations,
Mezza, Sicardy *et al* 1988-2016, Astronomy & Astrophysics, March 2019

More info: https://www.planete-sciences.org/astro/centre-d-astronomie/presentation