



OSIRIS Status Update and Future Plans

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Workshop MAAT@GTC

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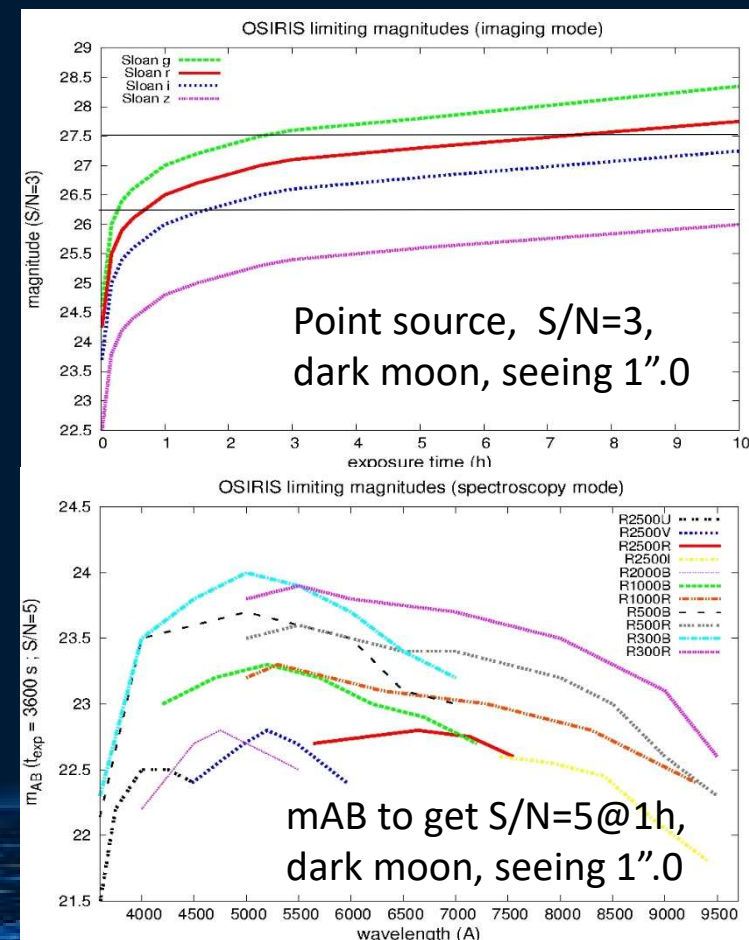




OSIRIS imager and multi-object spectrograph

Common-user instrument since 2009 (Nasmyth B).

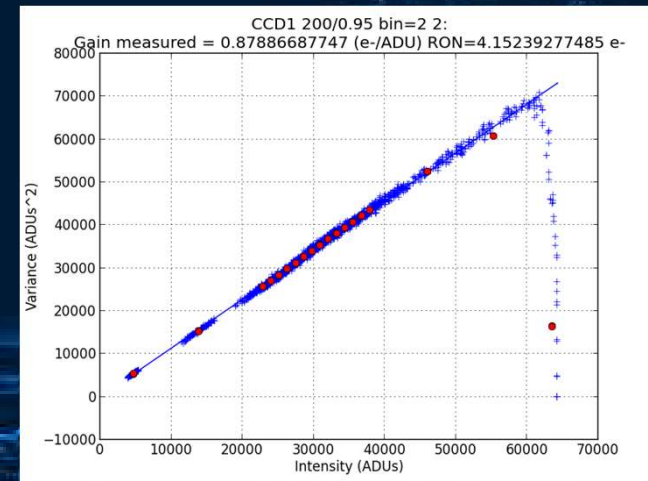
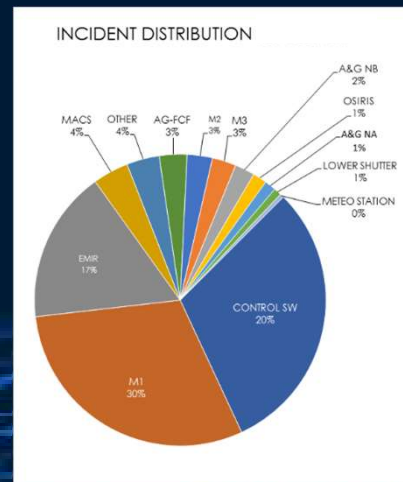
<i>Spectral Range</i>	0.36-1.00 μm
<i>Detector</i>	2 x Marconi 2k x 4k
<i>Plate Scale</i>	0.125 arcsec pix ⁻¹
<i>Field of view</i>	7.8 x 7.8 arcmin ²
<i>Imaging modes</i>	Broad-band Medium band Tunable Filters Fast photometry
<i>Spectroscopic modes</i>	long-slit mask MOS
<i>Spectral resolution</i>	300 to 2500



OSIRIS: Workhorse instrument for GTC



- In operations since 2009A.
- 12,000 h produced so far (80,0% of total data), yielding 486 papers (87% of total).
- Only two major stand-downs in 10 years (new cryostat installation and substitution of CCD controller cards), keep OSIRIS unavailable for a month each.
- Two unpredicted removals due to external incidences (A&G), with a perfect repositioning after that.

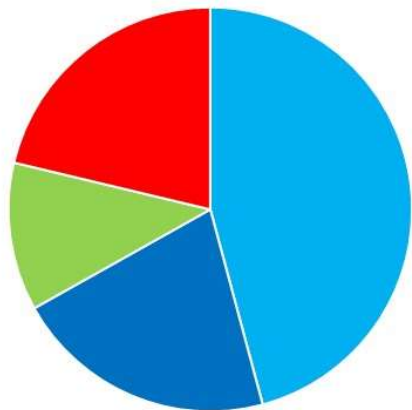




OSIRIS: Workhorse instrument for GTC

- Currently, OSIRIS is still **the most demanded instrument at GTC.**
- OSIRIS is also **an ideal instrument for observing transients (TOOs).**

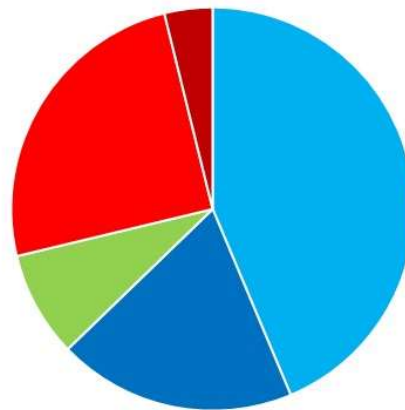
S18B TAC requested time



■ OSIRIS ■ MEGARA ■ HIPERCAM ■ EMIR

TOTAL = 1938 h

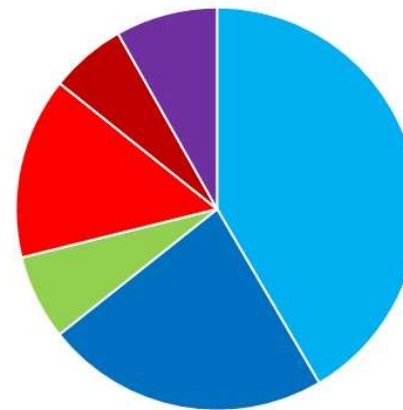
S19A TAC requested time



■ OSIRIS ■ MEGARA
■ HIPERCAM ■ EMIR
■ Canaricam

TOTAL = 1957.4 h

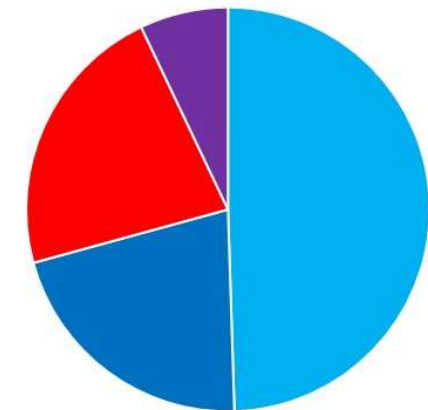
S19B TAC requested time



■ OSIRIS ■ MEGARA ■ HIPERCAM
■ EMIR ■ Canaricam ■ HORuS

TOTAL = 2425.6 h

S20A TAC requested time



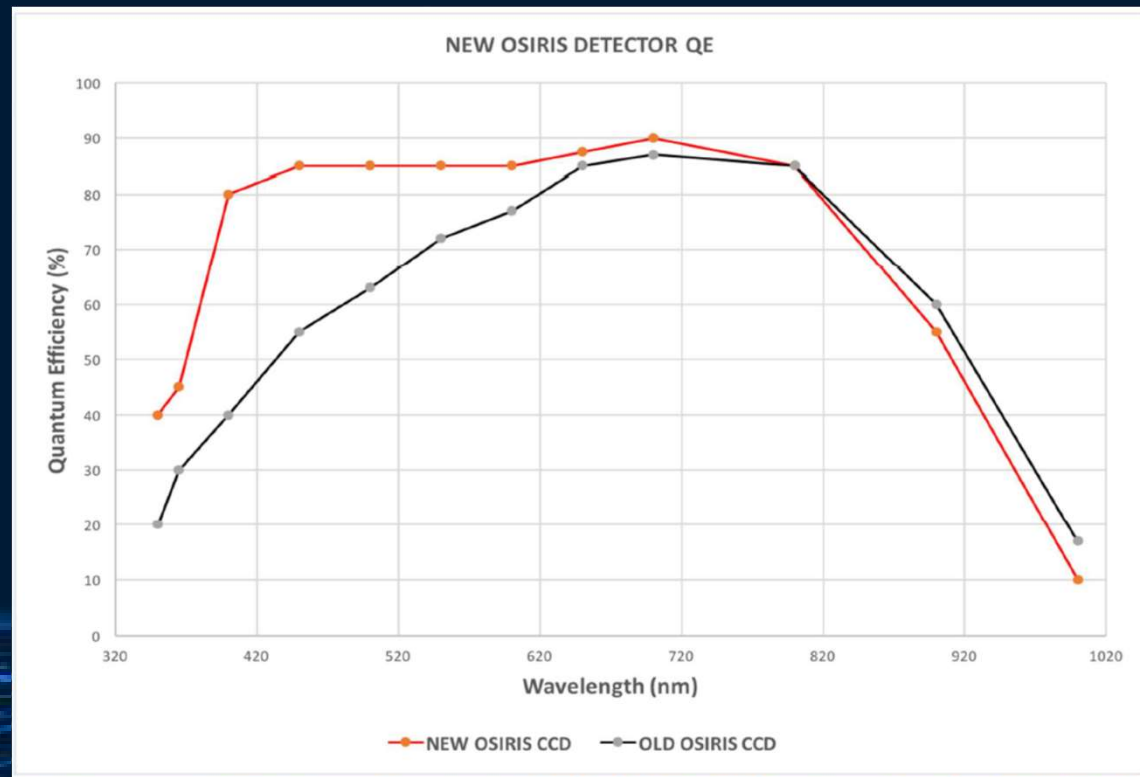
■ OSIRIS ■ MEGARA ■ EMIR ■ HORuS

TOTAL = 2070.7 h



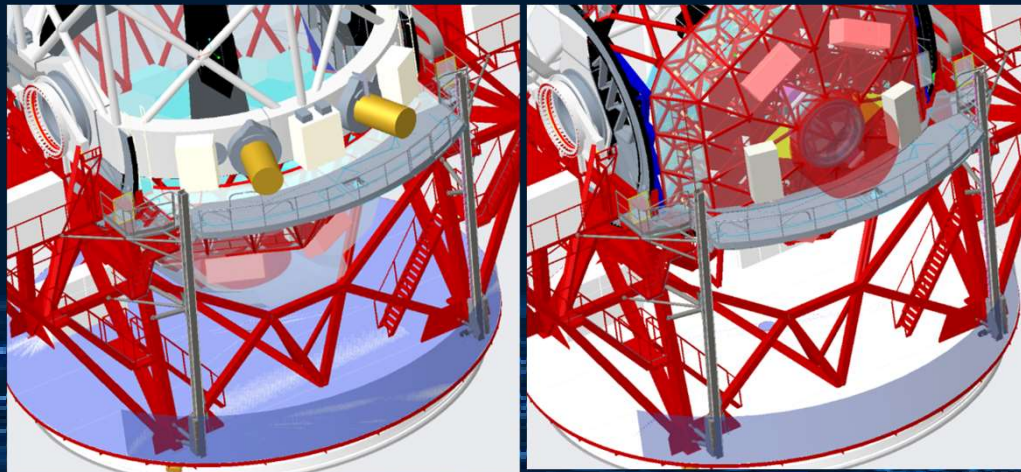
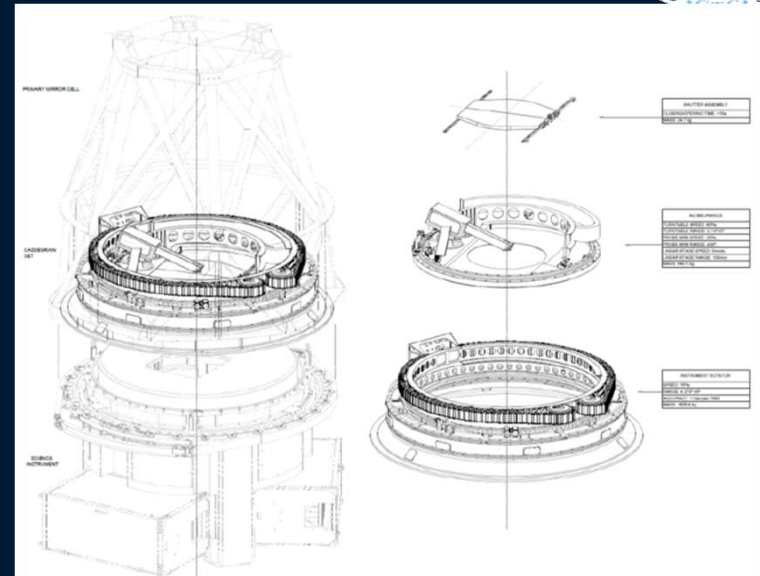
OSIRIS: Future plans (New detector)

- Funds approved for a new blue sensitive monolithic 4kx4k detector: E2V CCD231-84-1-E74
- Contract with Teledyne just signed. Estimated time about one year since ordering the detector (to be installed by the end of 2021). **OSIRIS commissioning at the Main Cassegrain will be done with the old detector/controller.**



OSIRIS: Future plans (OSIRIS at Main Cassegrain)

- OSIRIS will **be moved to Cassegrain focus in early 2021**, to leave room for GTC AO at Nasmyth B. A new **Maintenance Platform for Cass/FCass** is required.
- Some months before, the ICM will be dismantled to be moved to Cassegrain. **OSIRIS will be operated in a 'non-optimal way'**, but with no impact in the science observations thanks to its well proven stiffness!
- Main goal is **to have OSIRIS back into operations in 2021B** (probably with **imaging/longslit spectroscopy only**).





OSIRIS: Future plans summary (OSIRIS schedule)

- **New Focal Station** (Main Cassegrain) received at GTC in **January 2020**, expected to be operative by **October 2020**.
- **Maintenance platform** PDR already passed successfully, expected to be operative by **December 2020**.
- **OSIRIS** will be mounted **at the new focal station** by **January-February 2021** (It has been offered for S20B with a partial availability).
- **OSIRIS** is expected to be **back to night operations in 2021B** (probably by offering imaging/longslit spectroscopy only).
- **OSIRIS new detector** expected to be received by **mid-late 2021**, to be installed and commissioned at the instrument by the end of 2021 (**to be included in the routinely operations in 2022A**).