The OTELO Survey

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OTELO: OSIRIS Tunable Emission Line Object Survey

Tomography with the tunable filters
Some hints about OTELO

Field of view: Extended Groth Strip + Lockman Hole
(2 pointings covering 50 arcmin² each)

Wavelength range: 9070 - 9280 Å (NIR)
→ window in the airglow emission

Spectral resolution: to distinguish [NIII] (6583 Å) from Hα (6563 Å) (R≈700)
→ 2D low resolution spectroscopy

Scientific goal: detect all the objects with emission lines in the field and produce the biggest and deeper catalogue of emitting objects
Status of the OTELO survey

1st pointing

- Reduced and analysed data (37%)
- Reduced data (60%)
- Observed data (100% completed a few days ago!!)

λ

9280  9202  9154  9070 Å
Preliminary results

14% of the objects in the field are emitters

Limiting flux: $1.27 \times 10^{-18}$ erg/cm$^2$/s (3$\sigma$)

Complete at: $5 \times 10^{-18}$ erg/cm$^2$/s (3$\sigma$)

Number of detected objects vs. flux
Future work

- Finish the reduction of the data, identify the emission lines, extract the fluxes and EWs...
- Expand the catalogue with data from other surveys at different $\lambda$: Herschel (PACS), Spitzer, AEGIS...

Thesis goal:

→ Identify and separate Active Galactic Nuclei (AGN) from Star-forming Galaxies (SfG)

→ Study in detail the AGN population
Thank You