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**Resumen:**

OTELO (OSIRIS Tunable filter Emission Line Objects) is an emission-line object survey covering a spectral range between 9070-9280 Å in a window of reduced airglow emission. The first pointing of OTELO, in the Extended Groth Strip (EGS), consists of 36 tomographic slices sampling at 6 Å, obtained with the red tunable filter of OSIRIS at the Gran Telescopio de Canarias (GTC). OTELO is designed to detect and distinguish (e.g with a EW vs. [Nii]/H $\alpha$  diagram) active galactic nuclei, starburst galaxies or quasars, among others, using also auxiliary data available. The aim is to study galaxies evolution in a wide cosmic time-scale. The first analysis of 100% of the OTELO first pointing data shows a complete sample for an integrated flux of  $\geq 2 \times 10^{-18}$  erg cm $^{-2}$  s $^{-1}$  with a limiting flux of about  $1.8 \times 10^{-20}$  erg cm $^{-2}$  s $^{-1}$ . This makes OTELO the deepest catalog of emission line objects to date. The aim of the present contribution is to provide preliminary results of the morphology classification of a sample of the detected sources (+11k detections). We will use well-known astrophysical tools (SExtractor, GALFIT) in order to obtain the main parameters that describe the galaxy light distribution and shape – Sersic index, Gini coefficient, second momentum of light M20, concentration, asymmetry etc., which are expected to provide reliable quantitative morphology. To this end we will use the HST/ACS (F606W, F814W) and the Canada-France-Hawaii Telescope Legacy Survey (g', r', i', z') as complementary data.