

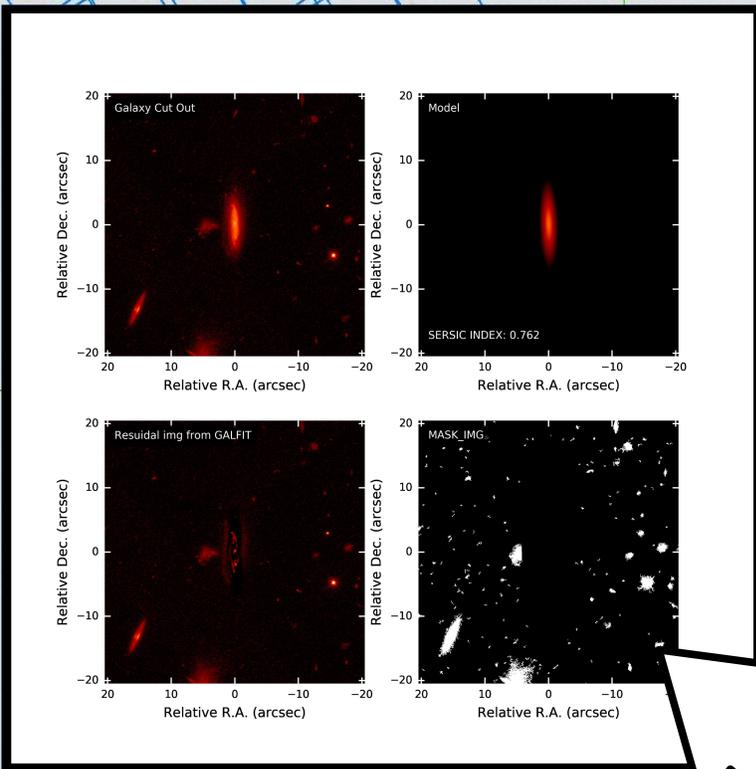


# Morphological analysis of OTELO survey galaxies

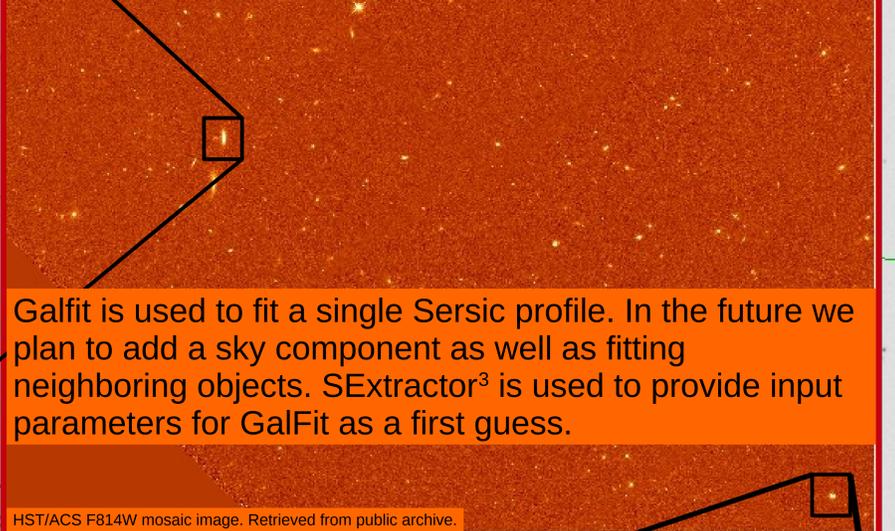
ULL

Universidad de La Laguna

**AUTHORS:** Nadolny, J. (email: jnadolny(at)iac.es) ; Bongiovanni, A.; Cepa, J.; Alfaro, J.; Castaneda, H.; Ederoclite, A.; Gallego, J.; Gonzalez, J.J.; Gonzalez-Serrano, J.I.; Perez-Garcia, A.M.; Perez Martinez, R.; Pintos Castro, I; Polednikova, J; Ramon-Perez, M.; Sanchez-Portal, M.

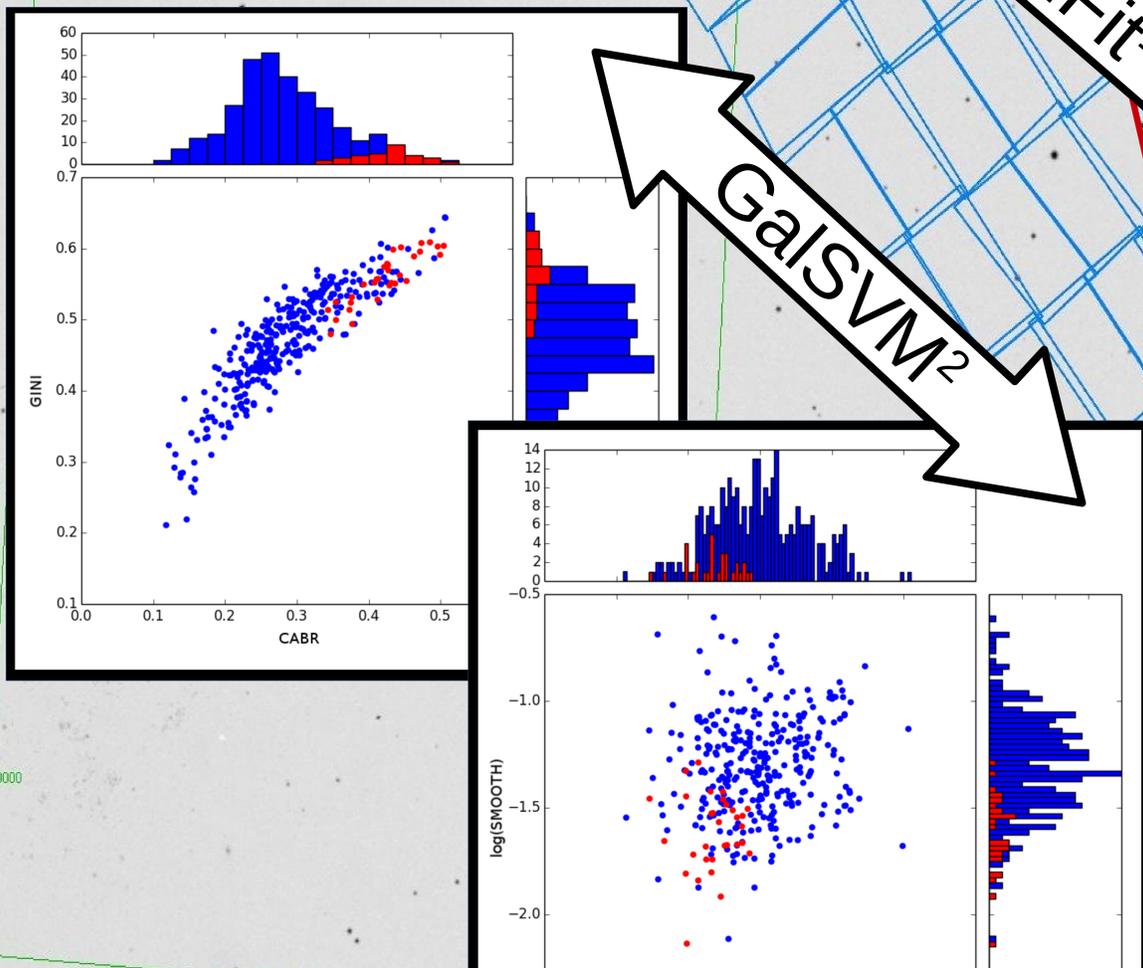


Explorations of a piece of EGS: 11k detections on the deep OSIRIS TF image. This HST I-band image (0.03"/px) is used as a first approx. to morphological analysis of ~4000 common objects. The brightest magnitude bins (up to HST mag <= 23) are already in the last phase of the analysis. GalSVM and GalFIT are used as the main tools for morphology fitting.



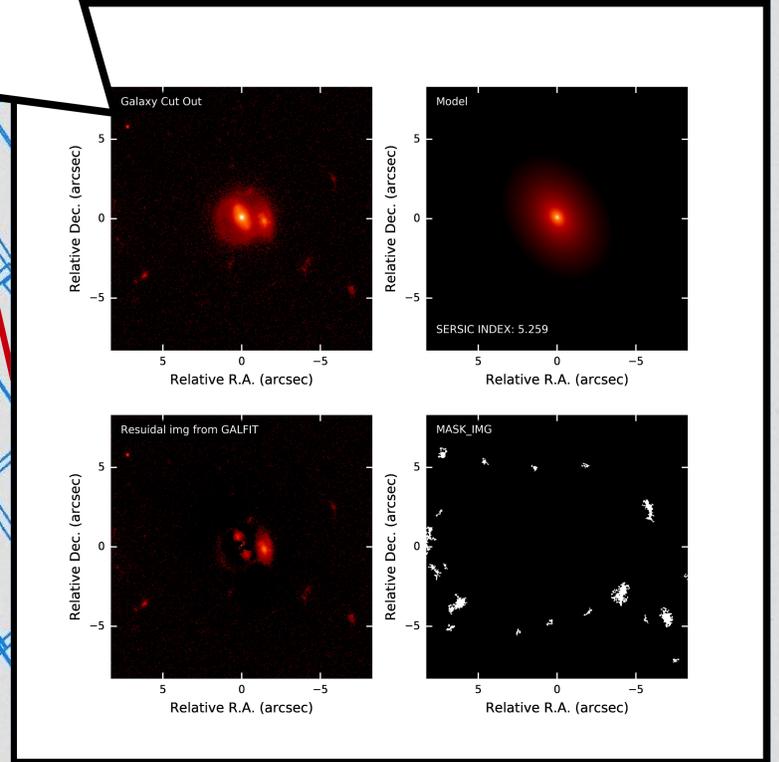
Galfit is used to fit a single Sersic profile. In the future we plan to add a sky component as well as fitting neighboring objects. SExtractor<sup>3</sup> is used to provide input parameters for GalFit as a first guess.

HST/ACS F814W mosaic image. Retrieved from public archive.



GalFit<sup>1</sup>

GalSVM<sup>2</sup>



Results of the analysis of the first 3 magnitude bins using galSVM (mag<sub>AB</sub> <= 23);  
 345 objects selected from a total of 567 in the 3 bins;  
 ~ 9% (31 objects) classified as early type (red points, PROBAV > 0.7);  
 ~91% (314 objects) classified as late type (blue points, PROBAV < 0.35);  
 Classification based on: Gini coefficient, M20, Assymetry, Concentration, Smoothness.

The lacking triangle. This gap in HST/ACS images will be filled with CHFT and OSIRIS images. The analysis is going to be the same as for HST/ACS image (SExtractor, Galfit, GalSVM)

OTELO FOV

REFERENCE:

- 1) Peng et al. 2002, Astronomical Journal (AJ), 124, 266
- 2) Huertas-Company et al. 2008,2009,2011 A&A
- 3) Bertin, E. & Arnouts, S. 1996, A&A Supplement 317, 393
- 4) Bckg image: AEGIS, <http://aegis.ucolick.org/>