

Ana AFONSO

Optical Counterparts of ICRF2: Gaia beacons

The forthcoming Gaia (ESA) mission is expected to provide an astrometric catalogue containing at least 500 000 extragalactic sources. The catalogue will be the basis of the Gaia Celestial Reference Frame (GCRF). The alignment between the future GCRF and the actual International Celestial Reference Frame (ICRF) will be based on a number of compact radio sources (Blazars) that have the most accurate positions in the sky to date. We have been studying the optical counterparts of the ICRF2 defining sources (and future ICRF2 extension, Bourda et al. 2011) using the Sloan Digital Sky Survey (SDSS) Data Release 9 (DR9) images, through 2D image decomposition performed with GALFIT (Peng et al. 2002). The detailed analysis of the images permits to pinpoint any extend component (host galaxy), which may be a source of error for centroid determination, if detected by Gaia. We further analyse the objects by asserting on their detectability through Gaia Instrument and Basic Image Simulator (Gibis).