

STATUS OF THE CANARIAS INFRARED CAMERA EXPERIMENT (CIRCE) FOR THE GRAN TELESCOPIO CANARIAS

S. S. Eikenberry,¹ N. Lasso,² S. N. Raines,² M. Charcos,^{2,3} M. Edwards,^{2,4} A. Garner,² A. Marín-Franch,^{2,5} A. J. Cenarro,^{2,5} J. G. Bennett,² R. Frommeyer,² M. Herlevich,² P. Miller,² C. Murphey,² and C. Packham²

CIRCE is a near-infrared (1–2.5 μm) imager, polarimeter and low-resolution spectrograph intended as a visitor instrument for the Gran Telescopio Canarias.

It is being built largely by graduate students and postdocs, with help from the UF astronomy engineering group, and is funded by the University of Florida and the U.S. National Science Foundation. CIRCE is intended to help fill the gap in time between GTC first light and the arrival of EMIR, and will also provide the following scientific capabilities to complement EMIR after its arrival: high-resolution imaging, narrowband imaging, high-time-resolution photometry, imaging- and spectro-polarimetry, low-resolution spectroscopy (Figure 1). We review the status of CIRCE and future prospects. The CIRCE vacuum jacket and handling cart are complete and tested in the laboratory. The CIRCE optical system has been fabricated, aligned, and tested, resulting in seeing-limited image quality down to seeing of <0.3 -arcseconds FWHM. The main cryogenic mechanisms have been built and successfully tested under cryogenic conditions. We anticipate final integration of the system in early 2012, followed by system level testing. We expect CIRCE to be ready to ship to GTC in 2012.

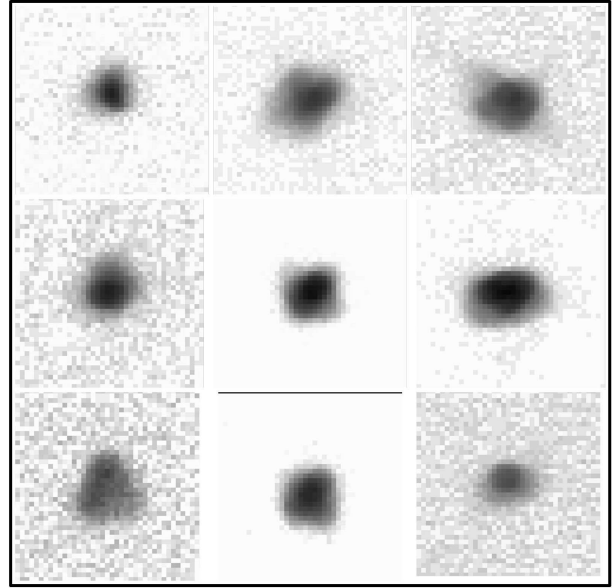


Fig. 1. Representative 0.20-arcsec pinhole images from across the CIRCE field of view (4 each from the field corners and edges, one from the center). Note that the CCD resolution here is ~ 3.2 times higher than actual CIRCE 0.1-arcsec pixels. Typical images have <0.25 -arcsec FWHM.

¹Department of Astronomy, University of Florida, Gainesville, FL 32611, USA (eikenberry@astro.ufl.edu).

²University of Florida, Gainesville, FL, USA 32611, USA.

³NASA Ames Research Center, USA.

⁴Gemini Observatory.

⁵CEFCA, Spain.