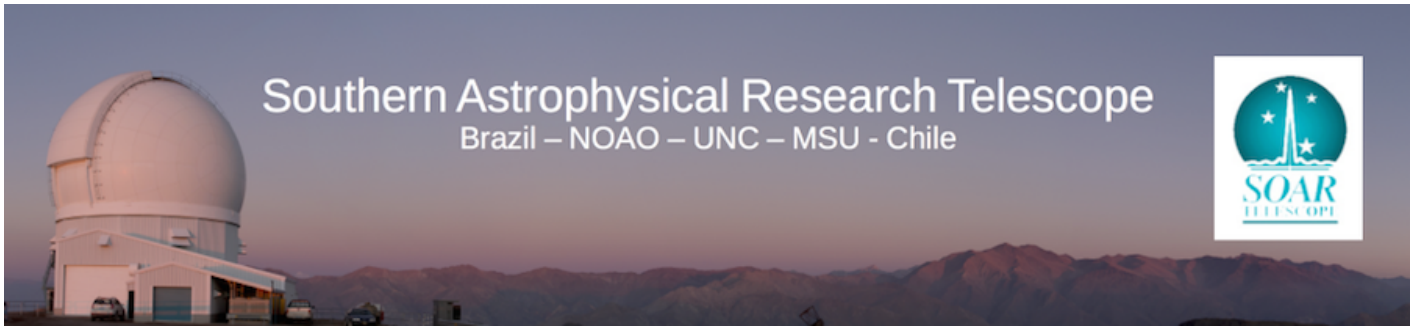
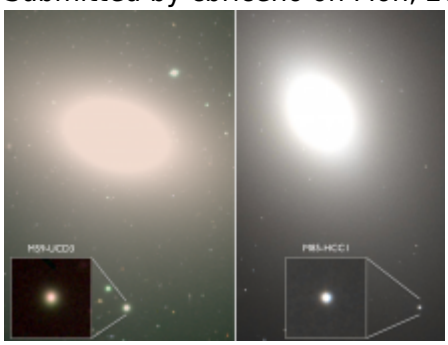


Published on *SOAR* (http://www.ctio.noirlab.edu/soar)

SOAR observations key to identifying the densest galaxies known

Submitted by cbriceno on Mon, 2015-07-27 22:56

 [1]

Two undergraduates at San José State University have discovered two galaxies that are the densest known. Similar to ordinary globular star clusters but a hundred to a thousand times brighter, the new systems have properties intermediate in size and luminosity between galaxies and star clusters.

The study, led by undergraduates Michael Sandoval and Richard Vo, used imaging data from the Sloan Digital Sky Survey, the Subaru Teles cope, and Hubble Space Telescope, and **spectroscopy from the Goodman Spectrograph on the Southern Astrophysical Research Telescope (SOAR)** [2]. The SOAR spectrum allowed the authors to show that M59-UCD3 is associated with a larger host galaxy, M59, and to measure the age and elemental abundances of the galaxy's stars.

(Click here for the full NOAO Press Release). [3]

Reference: "Hiding in plain sight: record-breaking compact stellar systems in the Sloan Digital Sky Survey," Michael A. Sandoval, Richard P. Vo, Aaron J. Romanowsky et al. 2015, *Astrophysical Journal Letters*, 808, L32. (Preprint: http://arxiv.org/abs/1506.08828 [4])

(Click here to go to the SOAR News Archive) [5]

Links
[1] http://www.ctio.noirlab.edu/soar/sites/default/files/field/image/HCC_PR1.png
[2] http://www.ctio.noirlab.edu/soar/content/goodman-high-throughput-spectrograph
[3] http://www.noao.edu/news/2015/pr1504.php
[4] http://arxiv.org/abs/1506.08828
[5] http://www.ctio.noirlab.edu/soar/news