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About SOAR



^[1]The Southern Astrophysical Research (SOAR) Telescope is a 4.1 meter aperture telescope designed to work from the atmospheric cut-off in the blue (320 nm) to the near infrared, with excellent optical image quality, fast slewing and with a suite of up to nine instruments mounted ready for use. SOAR has been

designed to produce the sharpest images possible with any ground-based telescope.

It was funded by a a partnership between <u>NSF's National Optical-Infrared Astronomy Research Laboratory</u> (<u>NSF's NOIRLab</u> [2]; formerly the U.S. National Optical Astronomy Observatory - NOAO), on behalf of the U.S. <u>National Science Foundation</u> [3], the <u>Ministério da Ciencia, Tecnologia e Inovaçoes</u> [4] (MCTI) of the Federal Republic of Brazil, the <u>University of North Carolina at Chapel Hill</u> [5] (UNC), and <u>Michigan State</u> <u>University</u> [6] (MSU). The SOAR telescope is <u>situated on Cerro Pachón</u> [7] - IV Region - Chile, at an altitude of 2,700 meters (8,775 feet) above sea level, only ~400m from the <u>Gemini South Observatory</u>. [8] Our <u>offices</u> [9] are located in the <u>AURA</u> [10]/<u>CTIO</u> [11] compound, in the city of La Serena, Chile.

The telescope uses active optics on its primary and secondary mirrors to attain an image quality of ~0.5 arcsec at 0.8 μ m under good seeing conditions. With the SOAR Adaptive Optics Module (SAM) commissioned in 2013, SOAR has achieved images as good as 0.25 arcsec FWHM at 0.8 μ m over a field of view of 3x3 arcmin, a resolution which approaches the image quality of HST. For more information on the technical specifications of the telescope, see this page [12]

SOAR is among the foremost research facilities available to astronomers in the southern hemisphere, producing the best image quality at wavelengths from optical to near-infrared, and at the same time offering both imaging and spectroscopic capabilities. Because of this

SOAR is now routinely delivering exciting and high impact science to the astronomy community worldwide.

If you are an astronomer or scientist interested in using SOAR, <u>click on this link</u> [13] to find out about the instruments and observing modes available.

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