US Support for Chilean Astronomy

1969 LAS CAMPANAS OBSERVATORY
Owned by the Carnegie Observatories, a US-based private nonprofit foundation, houses several telescopes operated through a consortium with Harvard, MIT, and the universities of Arizona and Michigan, including the 2001 and 2003 Magellan Telescopes, costing $41.7 and $30.1 million.

1974 CERRO TOLOLO INTER-AMERICAN OBSERVATORY
Previously operated by the US National Optical Astronomy Observatory (NOAO) and now by the US National Science Foundation’s (NSF) National Optical-Infrared Astronomy Research Laboratory (NOIRLab) (annual cost of operation approximately $9 million).

2000 GEMINI SOUTH OBSERVATORY
Operated by AURA (a consortium of mostly US universities), NSF support-ed construction, including $9.3 million for the development of Chilean astronomy, and provides 70 percent of operating costs ($21 million for FY 2021).

2005 SOUTHERN ASTROPHYSICAL RESEARCH TELESCOPE
Paid for and operated by a consortium including AURA, NOIRLab, the University of North Carolina, Michigan State University, and Brazil’s science agency (cost of construction: $28 million).

2007 ATACAMA COSMOLOGY TELESCOPE
A collaboration of 3 US federal agencies, 2 private US and 2 international labs, 20 US and 8 international universities. Funded by the NSF at a total estimated cost of $100 million.

2011 ATACAMA LARGE MILLIMETER/SUBMILLIMETER ARRAY OBSERVATORY
A collaboration between the US National Radio Astronomy Observatory, the European Southern Observatory, and the National Astronomical Observatory of Japan, the US funded $500 million of the $1.4 billion cost of construction and has invested approximately $1 billion to date, including annual operational funding ($49 million for FY 2021).

2014 VERA C. RUBIN OBSERVATORY
(Under Construction)
Begun in 2014, funded by NSF, the US Department of Energy (DoE), and private donors. Total estimate of US government contribution is $626 million, with NSF providing $466 million. Will be operated by AURA at a projected annual cost of $37.2 million, with the majority provided by NSF and DoE.

2017 FRED YOUNG SUBMILLIMETER TELESCOPE
(Under Construction)
Begun in 2017, funded through an international collaboration between Cornell University, Canadian and German consortia, at an estimated cost of $110 million.

2021 GIANT MAGELLAN TELESCOPE
(Under Construction)
Begun in 2021 as a US-led partnership that includes 6 US universities, the Carnegie Observatories, and Smithsonian Institution, with institutions from Australia, Brazil, South Korea, and Israel. NSF has made initial investments of a proposed $800 million toward the estimated $2 billion cost of construction.

2021 VERANOS TELESCOPE
Begun in 2021 as a US-led partnership that includes 6 US universities, the Carnegie Observatories, and Smithsonian Institution, with institutions from Australia, Brazil, South Korea, and Israel. NSF has made initial investments of a proposed $800 million toward the estimated $2 billion cost of construction.

Assessing the Cumulative Effects of U.S. Engagement in Uruguay and Chile
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