



Giant Magellan Telescope Organization
For Immediate Release
July 22, 2014

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São Paulo, Brazil to Join Giant Magellan Telescope Project

Pasadena, CA & São Paulo, Brazil – The São Paulo Research Foundation (FAPESP), Brazil, has taken a critical step towards joining the Giant Magellan Telescope (GMT) project. The GMT, an astronomical observatory of unprecedented scale, will allow astronomers to probe the formation of stars and galaxies shortly after the Big Bang, to measure the masses of black holes and to discover and characterize planets

around other stars. The giant telescope will be located at the Las Campanas Observatory, high in the Chilean Andes, and will begin scientific operations at the start of the next decade.

Dr. Carlos Henrique de Brito Cruz, Scientific Director of FAPESP stated that “the Executive Board of the Foundation has approved \$40M toward membership in the GMT project. Discussions between the Foundation and the Ministry of Science and Technology of Brazil are well advanced to share these costs and allow astronomers from all states of Brazil to have access to the telescope.” São Paulo Research Foundation – FAPESP – is an independent public foundation with the mission to foster research and the scientific and technological development of the State of São Paulo.

Dr. Wendy Freedman, Chair of the Board of Directors for the GMT Project, said “The GMT community enthusiastically welcomes our colleagues from Brazil, and looks forward to partnering with Brazilian astronomers, engineers, and industrial firms as we build the GMT.” Prof. Joao Steiner, an astronomer at the [Institute of Astronomy, Geophysics and Atmospheric Sciences of the University of São Paulo](#), said “Joining the GMT project will help ensure that Brazilian astronomers remain at the forefront of research for decades to come.”

The GMT will use seven of the largest optical mirrors ever made to form a single telescope 25.4m in diameter. Adaptive optics technology and powerful lasers will be used to measure and correct distortions induced by the Earth’s atmosphere to produce images of distant celestial objects with unprecedented clarity. More than one hundred engineers and scientists at the GMT offices and the partner institutions are engaged in the development of the telescope and its giant optics. The first of the seven 8.4m diameter off-axis primary mirrors has been completed at the University of Arizona’s Steward Observatory Mirror Lab; two others are being ground and polished while the glass for the fourth mirror will be melted in the lab’s furnace in March of next year. The GMT’s giant optics will allow it to make images in the infrared region of the spectrum that are ten times sharper than those from the Hubble Space Telescope.

Construction of the observatory’s on-site infrastructure is expected to commence in 2015 while the telescope mount and other systems will be delivered to the site in 2018. The GMT should begin scientific operations in 2021.

The GMT partner institutions are: Astronomy Australia Limited, The Australian National University, The Carnegie Institution for Science, Harvard University, the Korea Astronomy and Space Science Institute, the Smithsonian Institution, Texas A&M University, The University of Arizona, the University of Chicago, the University of Texas at Austin, and, most recently, the University of São Paulo.

The São Paulo Research Foundation, FAPESP

[FAPESP](#) is a public foundation, funded by the taxpayer in the State of São Paulo, with the mission to support research projects in higher education and research institutions, in all fields of knowledge. São Paulo has a population of forty million and generates 35% of Brazil's GNP. The constitution of the State establishes that 1% of all state taxes belong to the foundation and the government transfers these funds monthly. The stability of the funding and the autonomy of the foundation allow for an efficient management of the resources that has had a sizable impact: while São Paulo has 22% of the Brazilian population and 30% of the scientists with a doctorate in the country, the state is responsible for 52% of the country's scientific articles published in international journals.

The foundation works in close contact with the scientific community: all proposals are peer reviewed with the help of area panels composed of active researchers. Besides funding research in all fields, the foundation supports large research programs in Biodiversity, Bioenergy, Global Climate Change, and Neurosciences.

FAPESP's expenditures in 2013 were R\$ 1.085 billion (approximately US\$ 500 million). 37% of the expenditures supported fundamental research; 10% supported research infrastructure; and 53% supported application-oriented research, in many cases performed in Small Businesses or in joint research performed by academia and industry. The percentage invested in applied research has been growing in recent years, consistent with the foundation's mandate to foster the scientific and technological development in the State of São Paulo.

FAPESP maintains cooperation agreements with national and international research funding agencies, higher educational and research institutions and business enterprises. The [international cooperation](#) covers a broad range of countries and agencies.

FAPESP offers many programs to support foreign scientists willing to work in research institutions in the state of São Paulo, Brazil. These include [post-doctoral fellowships](#), [young investigator awards](#), and [visiting researcher grants](#).