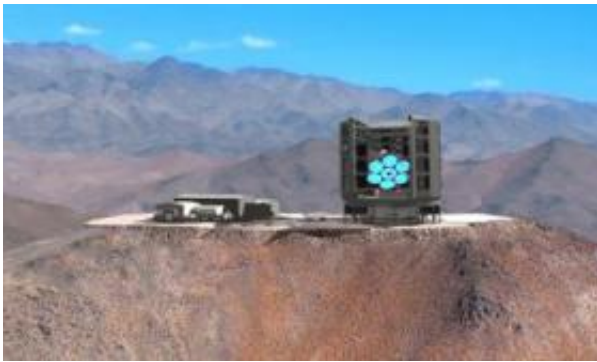


Nine institutions officially sign agreement for 25-meter Giant Magellan Telescope

February 6 2009



This artist's rendering shows the Giant Magellan Telescope and support facilities at Las Campanas Observatory, Chile, high in the Andes Mountains. Credit: Todd Mason/Mason Productions

The Giant Magellan Telescope (GMT) Corporation is pleased to announce that nine astronomical research organizations from three continents have signed the Founders' Agreement to construct and operate the 25-meter Giant Magellan Telescope at Las Campanas Observatory in the Andes Mountains of Chile. In the United States the participating institutions are the Carnegie Institution for Science, Harvard University, the Smithsonian Institution, Texas A& M University, the University of Arizona, and the University of Texas at Austin. The two Australian members of the Founders group are the Australian National University and Astronomy Australia Limited. Most recently, the South Korean government has approved participation in the GMT project, with the

Korean Astronomy and Space Science Institute as the representative of the Korean astronomical community.

GMT Corporation Board Chairperson and Carnegie Observatories Director, Wendy Freedman noted that "the Founders' Agreement establishes the framework for the construction and operation of the telescope. The Founders group represents an extraordinary team of institutions each of which has made important contributions to the development of the most advanced telescopes and instrumentation over the last 100 years. The GMT continues this remarkable legacy."

Added Charles Alcock, Director of the Center for Astrophysics representing Harvard University and the Smithsonian Institution, "We are very pleased to be joining this project, which will allow us to remain at the forefront of astronomical discovery in the 21st century."

With its seven co-mounted 8.4-meter primary segments and adaptive secondary system, the GMT will provide unique capabilities in optical and infrared astronomy. It will open new windows onto the Universe and help answer questions that cannot be answered with existing facilities. The GMT will teach us about the nature of dark matter and dark energy, the origin of the first stars and first galaxies, the mysteries of star and planet formation, galaxy evolution, and black hole growth. The GMT will also play a key role in the detection and imaging of planets around nearby stars.

Scheduled for completion around 2019, the GMT will have the resolving power of a single 24.5-meter (80-foot) primary mirror. Each of the primary mirror segments weighs 20 tons, and the telescope enclosure has a height of about 200 feet. The project is aiming to complete the detailed design for this telescope over the next two years. Fundraising for the project is ongoing. A total of \$130 million out of approximately \$700 million needed has been raised to date. Construction will begin in

2012.

The signing of the Founders Agreement accompanies two other project milestones. The first of GMT's six "off-axis" honeycomb mirrors, cast in 2005, has just been generated to its almost-final surface at the University of Arizona Mirror Lab, and polishing and testing will be completed in early 2010. "Completion of this off-axis mirror retires one of the largest technical challenges of the project," said Mirror Lab Director, Roger Angel. The GMT Project has also recently reached another milestone in choosing to build the GMT at Las Campanas Observatory, overlooking the Atacama Desert in the Chilean Andes. Las Campanas is owned and operated by the Carnegie Institution. "In both the mirror technology and the site, the GMT project is building on the superb heritage demonstrated by the two very successful 6.5-meter Magellan telescopes that have been in operation at Las Campanas since 2000," according to Matt Johns, GMT Project Manager.

"The science opportunities for this telescope are extraordinary," observes astronomer and GMT Acting Director Patrick McCarthy. "It will shed light not only upon the nature of the Universe but also on the fundamental laws of physics that govern its evolution. As such, it seems especially fitting that this international Founders' Agreement should have been signed in the International Year of Astronomy and the 400th anniversary of the first astronomical use of a telescope by Galileo."

Source: Carnegie Institution

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