GIANT MAGELLAN TELESCOPE

The Giant Magellan • Telescope will be one member of the next generation of giant groundbased telescopes that promises to revolutionize our view and understanding of the universe.

SCIENCE GOALS

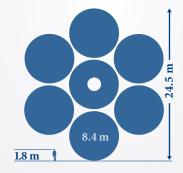
The Giant Magellan Telescope will have a resolving power 10 times greater than the Hubble Space Telescope. It will investigate: the origin and evolution of planetary systems, star formation, evolution of the chemical elements, black hole growth, dark matter and dark energy, formation and evolution of galaxies, first light and reionization.

LOCATION Las Campanas Observatory, Chile

ELEVATION 2,500 m

WAVELENGTH RANGE Optical to infrared

FIRST LIGHT TARGET DATE Late 2020s



Primary mirrors are being fabricated at the Richard F. Caris Mirror Lab at the University of Arizona

EFFECTIVE DIAMETER FOR DIFFRACTION 24.5 meters

EACH MIRROR DIAMETER 8.4 meters

INSTRUMENTS

ComCam

Commissioning Camera (PI: Jeffrey D. Crane, Carnegie)

G-CLEF Visible echelle speci

Visible echelle spectrograph (PI: Andrew Szentgyorgyi, SAO/Harvard)

GMACS

Visible multi-object spectrograph (PI: Dan Fabricant, SAO/Harvard)

GMTIFS

Near IR IFU and adaptive optics imager (PI: Rob Sharp, ANU)

GMTNIRS Infrared echelle spectrograph (PI: Dan Jaffe, UT Austin)

MANIFEST Facility fiber optics positioner (PI: Jon Lawrence, AAO)



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FOUNDER INSTITUTIONS

The GMTO Corporation is an international consortium of leading universities and scientific institutions:

Arizona State University • Astronomy Australia Ltd • Australian National University • Carnegie Institution for Science FAPESP – São Paulo Research Foundation • Harvard University • Korea Astronomy and Space Science Institute Smithsonian Institution • Texas A&M University • The University of Texas at Austin University of Arizona • University of Chicago • Weizmann Institute of Science

