

**INAOE**

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Ref: DG/227/2020**Dear Prof. Francisco Prada:**

This letter is to express the interest of the Instituto de Astrofísica, Óptica y Electrónica (INAOE) in the MAAT (Mirror-slicer Array for Astronomical Transients) project at the 10.4-m GTC telescope.

We realize the project goals match our expertise and research interests and it would provide the GTC community an instrument of unique capabilities. According to the White Paper of MAAT@GTC, it will be proposed as a visitor module to perform Integral Field Spectroscopy using the OSIRIS spectrograph on the GTC telescope, over a seeing-limited field of view 14.20"x10", with a slice width of 0.303", and a low/moderate resolving power ($R=600$ up to 4100) in the broad wavelength range 360-1000 nm.

The instrument development and construction of MAAT@GTC and its further scientific exploitation are of special interest for many groups of our department of Astrophysics and the Direction of Research and Technological Development of the INAOE. Strong lensing studies, the determination of global cosmological parameters, nebulae abundances, dubbed kilonovae, the identification of EM-GW counterparts, and brown dwarfs and planetary system studies, are just some of the science topics that can be addressed with MAAT@GTC and that coincide with the scientific interests of our community. Many of these researches are currently limited by the availability of adequate spectroscopic facilities, especially on large aperture telescopes. The unlimited possibilities of MAAT@GTC would significantly contribute to the development of these programs.

We will seek ways to provide synergy with current and upcoming facilities, such as the Large Millimeter Telescope Alfonso Serrano, the James Webb Space Telescope (JWST), and the Observatorio del Roque de los Muchachos on La Palma.

The scientific research of MAAT@GTC is very broad, with a presumably major impact on Astronomy and Cosmology. The INAOE would be pleased to collaborate with the Instituto de Astrofísica de Andalucía (IAA-CSIC) and its partners on this initiative.

Sincerely,

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