

25 June 2020

To whomever it may concern.

Dear Prof. Prada,

This letter is to express the interest of the DARK at the Niels Bohr Institute, Copenhagen, in the MAAT project at GTC.

The research lines in astrophysics and cosmology at DARK match with all the main scientific objectives proposed by the MAAT collaboration, which includes two scientists affiliated with our institution as ones of the most active proposers for MAAT. MAAT@GTC is devised as a Visitor IFS-mode that will allow the OSIRIS spectrograph at the 10.4 m GTC the capability to perform Integral-Field Spectroscopy over a seeing-limited field of view $14.20'' \times 10''$ with a slice width of $0.303''$, and will provide broad spectral coverage with low / moderate resolution ($R=600$ up to 4100) in the $360 - 1000$ nm spectral range.

The DARK is strongly interested in the MAAT project that will permit to push forward our knowledge in many fields, thanks to the IFS capabilities coupled with the currently largest telescope in the world. At DARK there are several world-wide experts in the physics and the environments of galaxies at intermediate redshift, in the physics of all flavours of supernovae (including lensed SNe) and their use as probes for the expansion history of the Universe as well as for the study of the physics underlying Kilonovae emission. All the DARK research groups will benefit of the use of MAAT, and the possibility of using such an amazing instrument will enter immediately into all the scientific collaborations we are involved in, including the Young Supernova Experiment (YSE), the THESEUS satellite as well as the incoming JWST. All the above science projects are currently limited by the availability of optimal spectroscopic resources, especially on large aperture telescopes and at northern latitudes. MAAT at GTC would fill in an important missing component in our programs.

For all the above reasons, the DARK is pleased to support with the Instituto de Astrofísica de Andalucía (CSIC) and its partners on the MAAT project. If a mutual agreement can be reached, DARK would be eager to contribute to the project, and seek funds for it.

Yours sincerely,
Prof Steen Hansen

Prof Jens Hjorth