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MEGARA Early-Science results: Stellar dynamics in external galaxies.

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Abstract

We present the capabilities of the MEGARA instrument at GTC for studying stellar dynamics in external galaxies. The analysis carried out so far in this regard is based on data taken with MEGARA during the commissioning period with the LCB IFU between June and August 2017. We show results on stellar kinematics in the central regions of a number of nearby galaxies such as velocity, velocity dispersion, skewness (h3) and kurtosis (h4) maps, obtained with the pPXF code, including NGC 7025, M 32, etc. These results are helping to reveal the role of dynamical processes in the formation and evolution of galaxies, thanks to the unprecedented capabilities of MEGARA@GTC, mainly its combination of spaxel size (0.62 arcsec), FoV (12.5 arcsec x 11.3 arcsec), efficiency and spectral resolution (R=6,000-20,000). (See poster).

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