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Dynamical measurements of supermassive black holes and nuclear star clusters with MAVIS

The evolution of galaxies is closely entwined with their nuclear properties and much attention has focused on the study of the central massive objects (CMOs) which can be constituted of either a supermassive black hole (SBH) or nuclear star cluster (NC). To definitely unveil the link between SBHs and NCs and their origin, it is necessary constraining their masses in a statistically adequate number of galaxies where they coexist, not in an independent way but using a single modeling, so as to obtain more reliable and secure results.
I will discuss on how the high resolution IFU in MAVIS will allow to determine dynamical measurements of the SBHs and NCs by modeling the ionized gas and/or stellar kinematics. The high resolution photometry will allow to perform accurate two-dimensional photometric decompositions of the galaxies nuclei, to detect the presence of NCs and analyze their structures.
Thanks to MAVIS@VLT it will be possible to definitely determine the low mass end of the SBH mass function and define the origin of CMOs and the transition between NCs and SBHs.

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