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AGNIFS: NIFS survey of feeding and feedback processes in nearby Active Galaxies

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Summary of the project:

We have been awarded 82.5 hours (spread over 6 semesters: 2015A-2017B) to complete NIFS+ALTAIR observations in the J and K bands of the inner few hundred parsecs of a distance limited sample of 26 nearby Seyfert galaxies drawn from the Swift-BAT 60-month catalogue and selected to have 14-195 keV luminosities larger than $10^{41.5}$ erg/s, redshifts $z<0.015$ and being accessible to NIFS ($-30°<\delta<73°$). Our goal is to map the ionized and hot molecular gas distributions and kinematics, as well as the stellar population and kinematics in order to answer the following questions: (i) How much mass is available for accretion, what mechanisms bring gas to the environs of the SMBH and what are the mass inflow rates? (ii) How do outflows interact with the interstellar medium, what are the mass outflow rates and kinetic power? Can the outflows strip the ISM away from around the BH? (iii) What is the role of star formation in the process? Can we find signatures of recent star formation in the vicinity of the AGN -- a signature of co-evolution of the bulge and SMBH?

Report

The project was just recently approved and no data has been obtained yet.