

Nowadays it has been realized that both possibilities take an important part in the evolution of galaxies. Indeed, there is increasingly strong observational evidence suggesting that nuclear activity and star formation are likely to be physically connected. However, to investigate whether there is a cause-effect relationship between these two phenomena, we have to investigate the properties of galaxies, the masses of which are in the critical range where starburst activity and AGN activity are more likely to be found (Rafanelli et al. 2011). In this project, we propose to operate the newly upgraded 1.22m telescope in Asiago to start a monitoring campaign of a list of such objects selected also on the basis of their high energy emission (X and gamma rays). Variable high energy emission, indeed, is considered as an effective track of AGN related processes. Our idea is to exploit the Asiago observatory as an optical facility to perform observations of objects, which are studied at high energies, too. Taking advantage from multiple frequency observations, it is our aim to improve the current understanding of nuclear activity in galaxies, investigating the dynamics of AGN central engines, as well as the properties of galaxies where ongoing star formation is probably overlapping with nuclear activity.

VALIDITY OF THE VIRIALIZATION APPROXIMATION OF THE BROAD LINES IN AGNS

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The broad lines of AGNs are used to measure the mass of black hole, supposed to be in their center. Here we are going to check validity of virilization approximation of broad lines in AGNs. We measured widths of broad lines at 1/10, 1/5, 1/2 and 3/4 of the maximal intensity, and plot their ratios as a function of full width at maximal intensity. Using this plots we will be able to conclude how much is emitting gas gravitationally bounded.