

**Proposal Abstract:**

We propose to observe H I lines of 28 AGN-host dwarf galaxies, which exhibit [Fe X] coronal line emission detected with SDSS. It is widely believed that AGN feedback can regulate the gas content in massive galaxies leading to BH-host co-evolution in such sources. However, impact of AGN feedback on the gas properties of dwarf galaxies in the low-mass regime, particularly in comparison to that of stellar feedback, remains a topic of controversy. Due to their low masses and luminosities, AGN activity powered by Intermediate Mass Black Hole (IMBH;  $M_{\text{BH}} < 10^6 M_{\text{sun}}$ ) in dwarf galaxies can be easily submerged by stellar activity in traditional identifications. On the other hand, [Fe X] coronal line requiring extremely high ionizing energy can effectively exclude stellar contaminants, thus can be treated as a reliable AGN tracer especially in the low-mass population. The proposed observation enables measurements on the H I abundance, kinematic and dynamical information, and statistical analysis on the targets. Ultimately, we seek to gain a more comprehensive understanding of AGN feedback and its role in the BH-galaxy scaling relations in the low-mass domain.