APR20-2020-020186

Abstract for an Invited Paper
for the APR20 Meeting of
the American Physical Society

Uncovering The Physics of Active Galactic Nuclei Feedback With High Resolution X-Ray Spectroscopy

ANNA OGORZALEK, NASA GSFC

Active galactic nuclei (AGN) significantly impact the evolution of their host galaxies, as they can prevent star formation by either expelling large fractions of gas with wide-angle outflows, or heating up the halo gas with jets. However, how the AGN energy is transferred to the galaxy remains unknown. The X-ray band is key to answering this question, as the gas immediately impacted by the black hole reaches high, X-ray emitting temperatures. In this talk, I will present my doctoral research on new applications of modern statistical techniques to high resolution X-ray spectra of nearby AGN in Seyferts, elliptical galaxies, and galaxy clusters. Here, using Bayesian approaches allows us to place competitive constraints on gas kinematics and thermodynamics, and gain new insights into the physical processes behind AGN feedback.