

Abderahmen Zoghbi – Astronomy Speaker – 10/18/2017

Title: Decoding the X-ray Echoes of Black Holes.

Abstract:

X-ray reverberation has emerged as a powerful tool to probe black hole accretion at the scales of the black hole horizon. It relies on measuring the time delays between direct emission and its reflection off the surrounding dense material, caused by light-travel effects. These reverberation delays have been seen in a significant fraction of bright AGN, and they all imply a very compact corona. Combining these measurements with black hole coronal temperatures observed with NuSTAR, we are learning new details about the illusive corona and its properties. Here, I will discuss recent reverberation results and their implications on our understanding of the inner regions of accreting black holes.