Implications of the Candidate Dark Matter Decay Line at 3.5 keV

Two independent groups have detected an unidentified X-ray line at 3.5 keV that is consistent with the dark matter density in the field of view of the observations toward the Perseus Cluster, stacked X-ray clusters, Andromeda, and the Milky Way Galactic Center. Dr. Abazajian will discuss the sterile neutrino dark matter decay interpretation of the 3.5KeV line, including its production mechanisms and its potentially alleviating effects on persistent problems in the structure in the Local Group of Galaxies.