Perseus Cluster

A new study of the Perseus galaxy cluster, shown in this image from Chandra has revealed a mysterious X-ray signal in the data. The signal is also seen in over 70 other galaxy clusters using XMM-Newton. This unidentified X-ray emission line—a spike of intensity centered on about 3.56 kiloelectron volts—requires further investigation to confirm both the signal’s existence and nature. One possibility is this signal is from the decay of sterile neutrinos, one proposed candidate to explain dark matter.

Credit: Chandra: NASA/CXC/SAO/E.Bulbul, et al.