Intermediate Mass Black Holes in the Nuclei of Dwarf Galaxies

Two independent studies have found evidence for black holes in the nuclei of dwarf galaxies.

The black holes detected in these studies have estimated masses ranging from 13,000 to 730,000 solar masses, and are located in galaxies having masses between 66 million and 3 billion solar masses.

These black holes have masses intermediate between black holes with masses of a few to a few dozen solar masses, and supermassive black holes with masses as great as billions of Suns.

The study of the numbers and masses of intermediate mass black holes should provide crucial insight into whether supermassive black holes are formed through direct collapse of a massive gas cloud, or the gradual buildup through the merger of many stellar mass black holes.

Distance estimates: Ranging from 410 million to 11.0 billion light years

Credit: NASA/CXC/ICE/M.Mezcua et al.

Instrument: ACIS