

GRAM Public Lecture

“Supermassive Black Holes in Active Galaxies”

Dr Misty Bentz (Georgia State University)

**Friday October 26 2012 at 8pm in the Biology Lecture Hall
Room 1119 Biology Building (#202 on Campus map)**

Black holes are often depicted in science fiction as voracious cosmic monsters, gobbling up every poor star or asteroid that has the bad luck to wander too near. But black holes are also a reality of science fact.

In particular, supermassive black holes, with masses that are a million to a billion times larger than that of the Sun, inhabit the centers of most galaxies including our own Milky Way.



Evidence for supermassive black holes comes from a variety of observations at different wavelengths in the electromagnetic spectrum, including radio waves, x rays, and visible light. But the acceptance of black holes as reality has only taken place in the last 20 years with advances in technology that have allowed us to measure their masses. All techniques to measure the masses of black holes rely on detecting the gravitational force of the invisible black hole on luminous matter (such as stars or glowing gas). In the case of the Milky Way, an object with a mass that is 4 million times that of the Sun is packed into a region of space smaller than the Solar System. The only object known to science that is capable of containing this much matter in such a small region is a black hole.

Join me as I take you on a tour of black hole observations throughout the Universe!