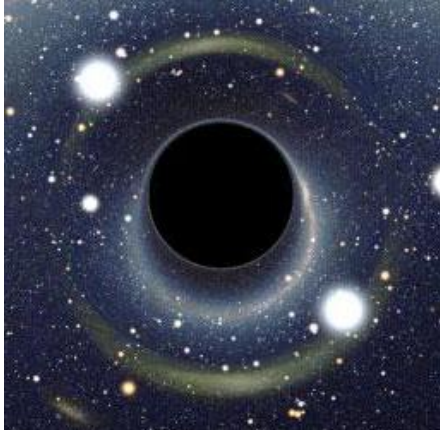


# The Moon as a Black Hole!



Suppose that a group of hostile aliens passed through our solar system and decided to convert our moon into a black hole!

A body with the mass of our moon (about 7 million trillion tons!) would be compressed into a black hole with a diameter of only 0.2 millimeters!

**Problem 1** – In the space below, draw a black disk 0.2 millimeters in diameter to represent the size of Black Hole Moon.

**Problem 2** - The Earth as a black hole would have a radius of 8.7 millimeters. In the space below, draw a circle the size of Black Hole Earth.

**Problem 3** - If the distance to the moon is 356,000 kilometers, how far from our Black Hole Earth would the new Black Hole Moon be located if its diameter were only 0.2 millimeters?

**Problem 1** - Moon black hole shown as the following dot .



**Problem 2** - Earth black hole shown above. It has a diameter of 17 millimeters, or about the same diameter as a dime.

**Problem 3** - Answer: It would still be 356,000 kilometers because this is NOT a scaled drawing of the black holes sizes, but an illustration of their actual sizes, so the distance between the black disks above would be 356,000 kilometers!