

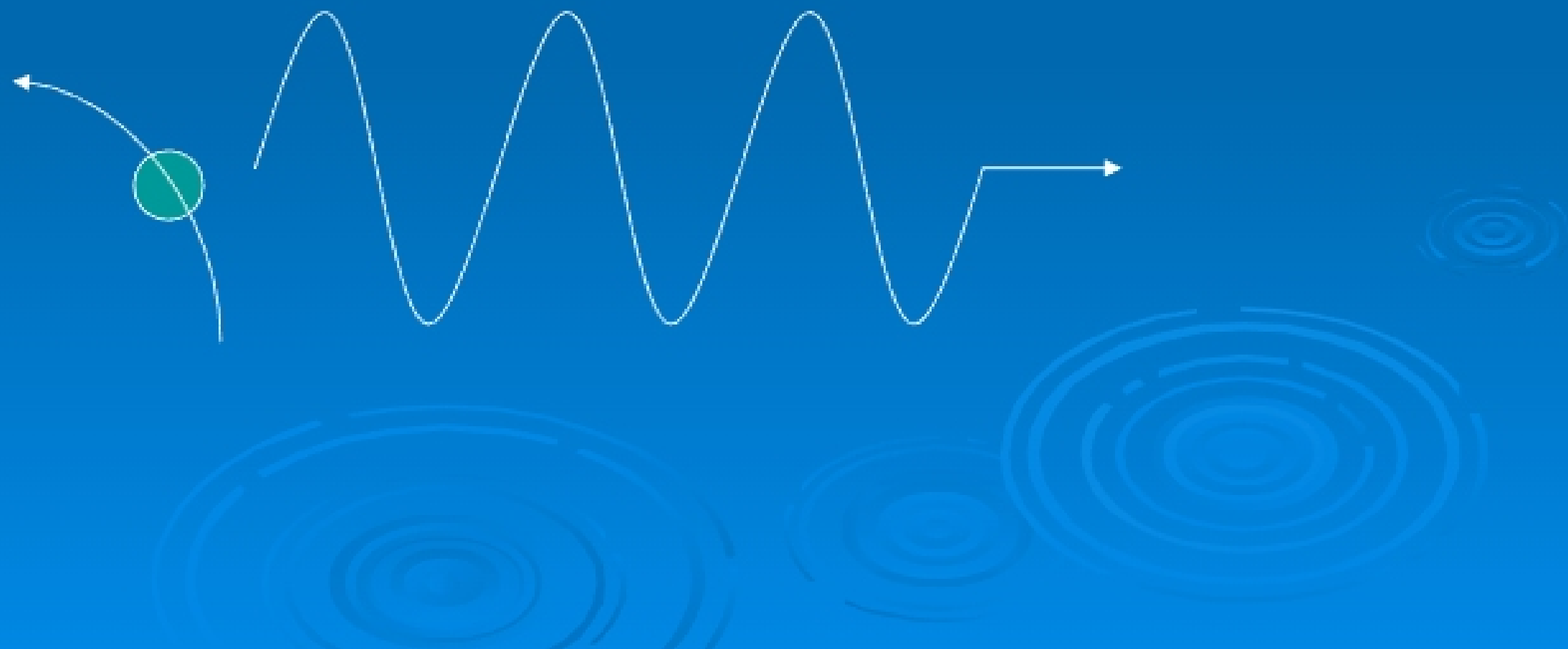
Black Holes - Observation

***How do you see something you
can't see ??????***

How do objects emit em waves?

When an charged object accelerates, it must change it's energy if the acceleration causes a change in speed.

If the acceleration of the charged object results in a loss of energy of the object, that energy will be released in the form of electromagnetic energy.



How do objects emit em waves?

Peculiar discovery of Einstein

Electromagnetic energy is not released in the form of an electromagnetic “wave” but rather is released in the form of an electromagnetic “particle” called a photon.

The energy of motion of this photon is not the usual kinetic energy, but the energy of the photon is given by

$$E = h f$$

Where h is called Planck's constant and f is the frequency of the EM wave.

$$h = 6.6 \times 10^{-34} \text{ J sec}$$

