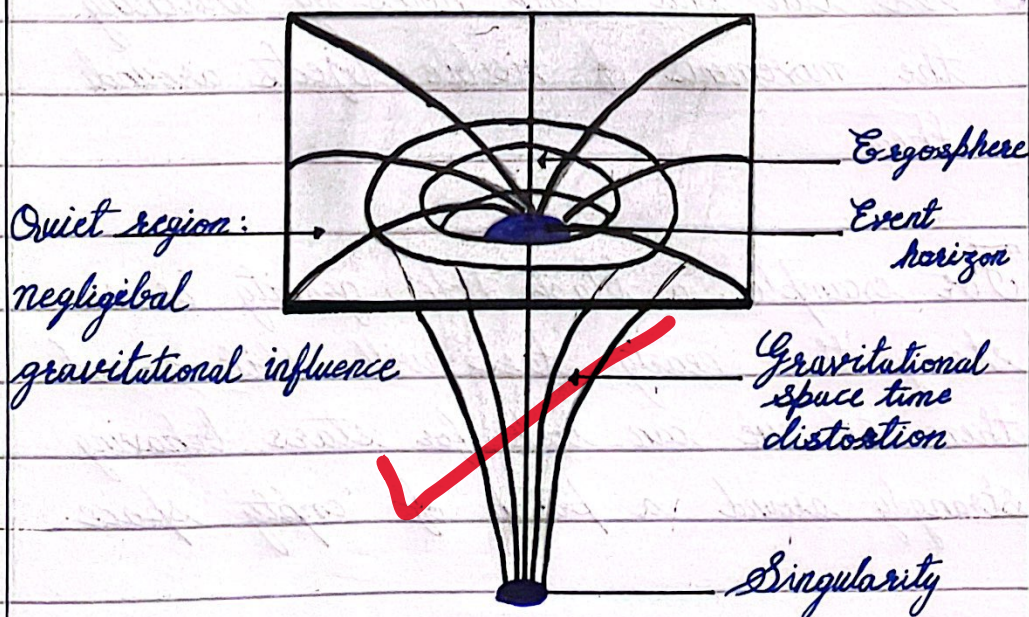


Q. What is 'Black Hole'? How black hole are formed and discovered?

1. Black Hole

i. Definition: They are massive object or region in space that is so dense that within a certain radius, its gravitational field does not let anything escape from it, not even light.

ii. Characteristic: A black hole's surface, called its event horizon, defines the boundary where the velocity needed to escape exceeds the speed of light, which is the speed limit of the cosmos.



iii Formation: Black holes are formed when a high density objects like large stars collapse. It is said that one star's end is a black hole's beginning. Hence most black holes are formed from the remnants of a large star that dies in a supernova explosion.

iv Discovery: Black holes themselves are invisible because they emit virtually no light and so cannot be seen directly so they are detectable by following method:

- 1 By looking for the stuff that's falling in
- 2 By detecting the gravitational ripples in space-time when they collide.
- 3 We can find black holes by watching the movements of visible objects around them.

For example, a black hole's gravity is so strong that nearby stars will orbit around them, so we can look for stars behaving strangely around a patch of 'empty' space.

good answer, structure and paper presentation.