

Survey On-The Black Hole

V.Mani Prashanth

Abstract:- It is a hole in the space which does not appear to our naked eye. The Black Hole was created by a bombarding the atoms, when the planets are going to death then it causes a explosion and forming of Black Hole. The Black Hole will have a spread that can absorb the light also. We cannot estimate the speed of the Black Hole. Because of so much speed we can pass throughout some millions of light years away, then we can pass some other galaxy. Here, if we can pass through the Black Hole first ,the hole absorb into it may be so fast, by passing into it slowly heat will increase. At final stage a lava like material which cannot be damaged by lava heat flow,then we can pass through the black hole and a millions of light years away. But ,it is not possible to get such a material from the earth. But ,we can prepare a rocket which can pass with a light speed but present technology i.e.,2017 it may not possible. It is an estimate that 2020-2030 we can prepare a rocket which is going to move with a light speed.

Introduction:

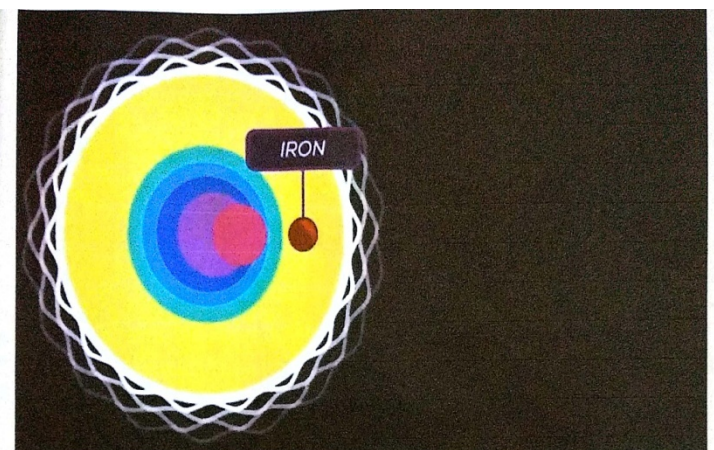
The stars are in creadible massive collection of hydrogen atoms when they are collapsed with their own gravity, then the formation of Black Hole occurs ,inucher fusion crushes hydrogen atoms into helium we can see the tremendous amount of energy and they form a radiation caution that against the gravity.

In Black Hole there are two particles.They are:

- 1.Radiation-inside
- 2.Gravity-inside

As shown in below figure

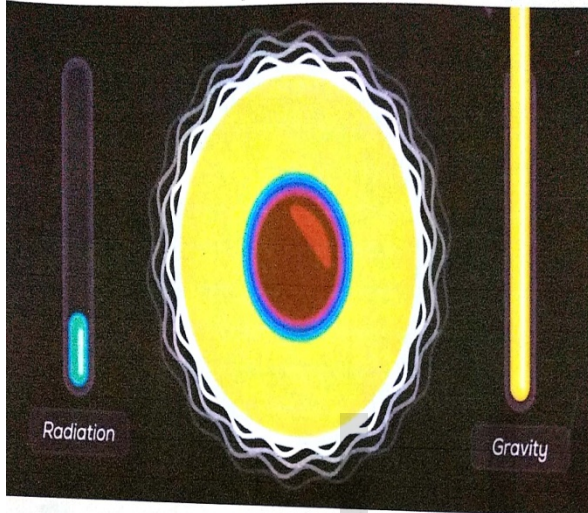
1. It is maintaining a delicate panel between the two forces.
2. In middle of the Black Hole the positive heat and pressure at the core allow them to fuse heavier up to the reach iron.



In the above picture we can see all the gases and particles are in the Black Hole, all

gases will generate some energy but iron did not built up any energy. Iron built up the centre of the star and increases the gravity of the star and the balance between the radiation and gravity is suddenly broken. Then the core collapses with end fraction of seconds the star impulse.

That you can see in the picture clearly



This massive creates a heavier element in the reverse are created as star dies in a supernurve explosion. This produces eighter a neutron star. If the star is massive enough entire massive of the core is collapsed into a Black Hole. If we looked at the Black Hole it should avantresed. The Black sphere is reflecting nothing. So,we can't see the Black Hole.

- 1.They are three types of black holes
Super massive blackhole
Miniature blackhole
Stellar blackhole
Super massive blackhole



Depending upon their mass the black holes are should ne call with a certain name

- 1.A super massive blackhole it is simply a byproduct of galaxies formation These super massive blackhole are continuesly grows with there ownlocation gasesjunkpraticles and gascloudsetcc..
2. The stellar blackhole are formed by collapesing the massive star
3. And the Miniature blackhole are possible to form after the big bang
Its mass is smaller than our sun

The biggest black hole that we seen is
S50014+81

It is 40billion times the massive of our sun
The black holes are generally located at the heart of the galaxy

1.The black holes destroy earth or not

Here The earth will not fall in to a black hole because no blackholes are near to our solar system I. E milkey way And Our star sun I never become a blackholebecause the sun is not a big enough star to become a black hole So we are sure that we never fall in to a blackhole.

2.White holes

It may exist or not HereThe white hole which is other end of the blackholeAccording to stefinhocking the other end if the black hole there is a existence of the white hole Which is reflecting the particles here in the white holes we cannot pass through It means if once we enter in to a black hole that we cannot come back through itSimply the white hole means something which probably cannot exist in the real universe.



3.Speed of a black hole

What is the speed of an blackhole The speed of the super massive blackhole is near to the speed of the light A super massive blackhole called NG1365 is spinning at an extreme speed of 85% of the speed of light In other way 670million miles per hours .

4.The first blackhole

It was positivity detected cyg X-1 tom bolton astronomer who was the observed blackhole if we want to observe the blackhole we have to observe the surroundings of the blackhole for the indirect indications the blackhole its heats up and emitting a radiation the evdieence we see that the fast rotation around the blackhole.

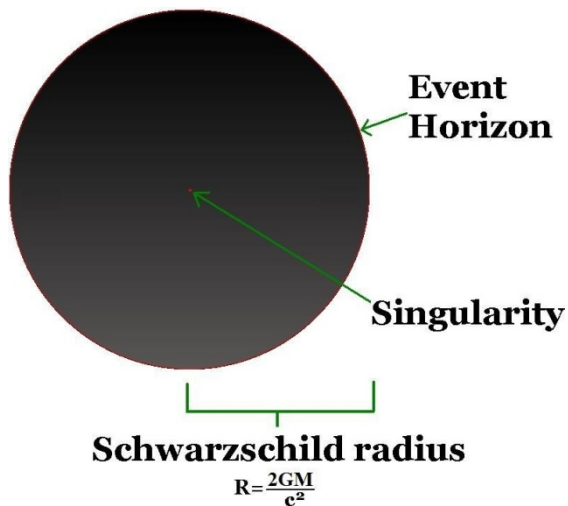
5.size of the black hole

The size of the super massive blackhole is 0.01-400AU

The size of the stellar black holes is 30km
The size of the inter mediate blackhole is 103 km \approx REarth

6.Event horizon

It is the point where no light can escape from this .The non rotating blackhole has only a center and a surface. Here the black is surrounded by an event horizon which is the sphere from which light cannot escape



The distance between the blackhole and its event horizon is schwarzschild radius

Where $R_{sch} = \frac{2GM}{c^2}$

The center of the blackhole is point of infinite density and zero volume called a singularity

Falling into blackhole

Signal sent from the freely falling observer would be time dilated and red shifted once inside the ever horizon, no communication with the universe outside the event horizon is possible but incoming signals from external world can enter. A black hole of mass M has exactly the same gravitational field as an ordinary mass M at large distance.



A rotation of a black hole has a ergo sphere around the outside of the event horizon in the ergo sphere space and times themselves are dragged along the rotation of the black hole

Here we can see if a man passes through the black hole who is the body sucked in side



WARM HOLE:

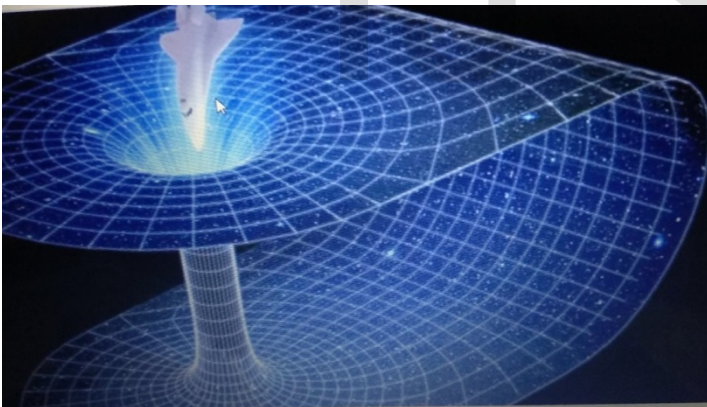
As like whiteholes some of them believe whatever the materials falls on the blackhole may reappear somewhere in the universe through the warmhole.

- The warmhole is allowed by Einstein's theory of general relativity in which

the spacetime curvature connects the two distant locations



- Some solution to the general relativity field equations have suggested that wormholes could also be created to connect different times.
- Here we don't know that whether it is possible for wormhole to actually exist and, if so what properties they would actually possess.



If there is an existence of any wormholes if we can able to pass away from that means we can see many more wonders of the universe and many more earth like planets.

presently a large number of researches and studies are being happening on the blackholes if there is any possibility to pass through a blackhole there may be a chance of having an like planets and many more galaxies.

CONCLUSION

V.Mani Prashanth

Student , ECE, II year

ECE department

Sathyabama Institute of Science & Technology