

A REVIEW ON QUASARS

Prof.S.A.Wani¹, Om Milind Ranade², Altamash Makandar³, Muskan Mujawar⁴

¹Assistant Professor, Padmabhooshan Vasantraodada Patil Institute of Technology, Budhgaon

^{2,3,4}UG Students, Padmabhooshan Vasantraodada Patil Institute of Technology, Budhgaon

INTRODUCTION-

A quasar is a nucleus of active galaxy which emits high energy beams of light. It is a brightest object in the universe.

Quasars are different type of black holes. Astronomers and Scientist believe that quasar is a radio energy beam coming out of supermassive black hole. Quasar not only feed the black hole but also it is light producing structure. Visible and ultraviolet light come from the glowing disk of infalling material, while even hotter gas above the disk shines at X-ray energies.

LITERATURE REVIEW-

Quasars are the remarkably bright cores of active galaxies in the distant universe, they are an extreme form of what astronomers call "active galactic nuclei", or AGN for short.

An active galaxy is one in which the central supermassive black hole is consuming large amounts of matter. The infall of matter into the black hole is so great that all the material can't enter the black hole at the same time and so it forms a queue as a spiraling accretion disk.

It's a bit of a contradiction to call a black hole luminous; black holes themselves are, of course, black. In fact, almost every large galaxy hosts a black hole with the mass of millions to billions of Suns, and many of these black holes lurk in the dark. Our Milky Way's behemoth weighs in at 4.3 million solar masses, but its starvation diet mutes all but faint flashes and flickers. We know it's there, though, from the orbits of stars around it. Other dormant black holes occasionally shred an infalling star, making their presence known by the flare of radiation that ensues.

Quasars provided our first view of objects in the Universe at redshifts greater than 0.5 and within two years of their discovery the first object, 3 C 9, at a redshift greater than 2. Quasars offered great potential as cosmological probes because of their high luminosities and large redshifts. Schmidt noted in the late 1960s that the fraction of high-redshift quasars in his samples was unusually high. Upon analyzing their distribution in space, he showed that the quasar population was significantly nonuniform and increased significantly with redshift

Quasar emit huge amount of energy in different types of waves. They are X-ray, radio waves, gamma rays, ultraviolet rays, visible light. Astronomers believe that quasar is present where black hole is present in that galaxy. Quasar is very bright, that they brought energy from other stars. They can be more bright than sun.

Most of tehe scientist believe that they are present at centre of galaxy called galactic centre and the supermassive black hole present at centre provides it fuel. Quasar are powered by gravitational assertion onto supermassive black holes. Supermassive black holes are mostly present at centres of galaxies.

Quasar is short form of quasi-stellar radio source. Firstly the big name 'quasi-stellar radio source' is used but for convenience 'quasar' is used. An extreme redshift could imply great distance and velocity but could also be due to extreme mass or perhaps some other unknown laws of nature. Extreme velocity and distance would also imply immense power output, which lacked explanation. The small sizes were confirmed by interferometry and by observing the speed with which the quasar as a whole varied in output, and by their

inability to be seen in even the most powerful visible-light telescopes as anything more than faint starlike points of light. But if they were small and far away in space, their power output would have to be immense and difficult to explain. Equally, if they were very small and much closer to this galaxy, it would be easy to explain their apparent power output, but less easy to explain their redshifts and lack of detectable movement against the background of the universe.

TYPES OF QUASAR

1. Radio loud Quasar :- They are 10 percent of overall population of quasars and are source of strong source of radio waves.
2. Radio Quiet Quasar :- They have lack of powerful jets. Weak in emission of radio waves.
3. Broad absorption Quasar :- They are mainly present in blue shift. They are in absorption spectrum.

A grouping of quasars may be found in the galaxy. When two quasars are very close to each other as they can be seen from earth they are called double quasars. As the quasars are very bright in space they are used as a reference point.

Quasars are found at the centre of active galaxy and are the most bright and light emitting object. We cannot say them an object, they are found at supermassive black holes. They use the dust particles, gas clouds, density and light absorbed by black hole as their fuel. In many cases it is confirmed that the quasars are made by assertion of materials into supermassive black holes.

CONCLUSION

The conclusion is that the Quasars are the brights thing in space and they are made from supermassive black hole. They emit radio waves mainly and found at the galactic nucleus of active galaxy and which is a supermassive black hole.

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