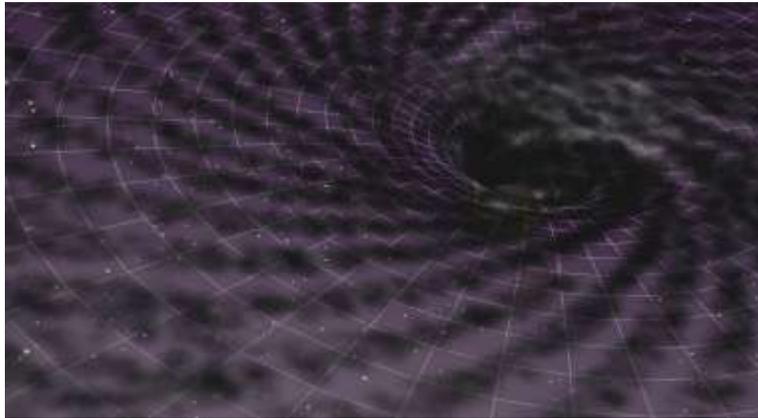


NEW PLAUSIBLE THEORY OF BLACK HOLES: GATEWAYS TO OTHER UNIVERSES



According to traditional physics, once you go far enough into a black hole, traditional physics simply ceases to be. Any meaningful equation breaks down into nonsense.

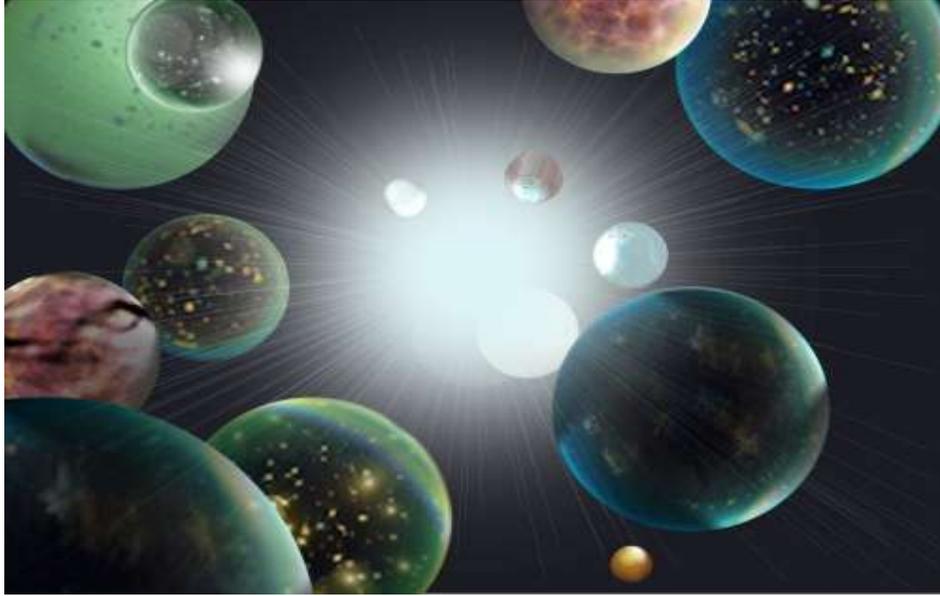
Einstein's theory of general relativity states that if a person were to fall into a black hole they'd be shredded to the atomic level by a process called spaghettification, described as being stretched into an infinitely long strand of matter and energy by infinitely strong gravity. This infinitely strong gravity is due to a singularity at the 'end' of the black hole, an infinitely dense area with zero volume. A singularity is also used to describe the Big Bang.

There is a problem though; conventional physics cannot describe what occurs at a singularity point, so talking about the beginning of time or the core of a black hole has always been one-pointed, but pointless. Then quantum mechanics appeared.

By using the theory of loop quantum gravity, a merger of quantum mechanics and general relativity which describes space-time as a web of indivisible chunks about 10^{-35} meters in size, physicists have come up with a practical way to describe what occurs at the singularity point; the singularity isn't there.

There is no singularity. Gravity still increases as you get pulled into the black hole, but eventually it decreases, and you come out the other end. Although theories have postulated this idea before, the problem was that the singularity could never be bypassed. This is incredibly revolutionary because modern day physics has always taken the idea of a singularity for granted. The universe had forever been filled with them; all of time and space began as a singularity.

You are probably wondering what this means for you and me, what relevance this all has. This opens the doors for even more science fiction to become science reality (consider: just about every piece of technology that exists today was written about as science fiction at one point).



According to the new theory, black holes are more likely doors to other universes, or incredibly distant areas of our own universe, or both. Even more amazingly, using loop quantum gravity theory, if you were to rewind the big bang you wouldn't be left with an infinitely dense point of mass and energy, you would cross a quantum bridge into another, older universe.

This also helps explain what happens to information that approaches a black hole. In a black hole with a singularity, the information would be lost forever as the black hole eventually evaporates after hundreds of trillions of years (give or take several hundred trillion years).

Source: <http://wondergressive.com/new-plausible-theory-of-black-holes/>