

Re: Black Holes in the Big Rip

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On Sep 24, 7:20 pm, OwlHoot <ravensd...@xxxxxxxxxxxxxxxx> wrote:

If the expansion of the Universe is accelerating, as recent observations indicate, and this continues, then eventually space will be expanding at faster than light speed in a vacuum (the so-called "Big Rip").

Faster relative to what?

Check out http://en.wikipedia.org/wiki/Big_Rip.

It suggests all structures would be ripped apart. I couldn't understand the wikipedia article, so I've tried an attempt at explanation here:

A galaxy in a region of space expanding at the speed of light relative to us will disappear because in the next second dark energy expansion will take it beyond our ken. Eventually every galaxy will go that way, then every star, then everything!

Idle speculation:

From the viewpoint of a black hole, the only things in the universe would be the singularity, the event horizon, whatever is between the singularity and event horizon. The event horizon would be ripped off the black hole at each moment of expansion to be replaced by another event horizon. The black hole is losing energy to the expanding universe so, by conservation of energy, it must cool down and keep on cooling. Would it keep on cooling for ever, getting exponentially closer to absolute zero but never reaching it?

What about from the viewpoint of ..er... a point in empty space? It would be all empty space until (at a distant time in the future) a vacuum fluctuation initiates another big bang?

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