

Re: My claim on Omega's defn

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examachine@gmail.com wrote:

- > *Consider this like the correct conception of a black-hole. The*
- > *event-horizon does not exist, it is only approximated, you can only*
- > *get this close to such physical limits. (Maybe this was a grossly*
- > *inappropriate way of making the analogy. Please correct my silly*
- > *errors)*

I don't think this is a good analogy. The singularity at the event horizon in (e.g.) Schwarzschild coordinates is just a coordinate singularity. If you choose a better coordinate system, you can talk about points exactly on the event horizon without any difficulty. Nothing of physical interest actually happens at the event horizon; it's just like any other region of spacetime.

A better analogy is the big bang singularity. The closer you get to the big bang, the more you learn about physics (or the more you know, the closer you can get), and it's conceivable that getting within 10^{-n} seconds of the big bang might require knowledge of, say, $\Theta(n)$ fundamental physical constants, making the big bang itself forever unreachable.

But nobody believes that the GR version of the big bang singularity really exists. It's more plausible that in the process of getting there we'll discover new physics which implies that there's no there there. I don't know that there's any equivalent of this for Chaitin's Omega. Could the mathematical facts encoded in the approximations to Omega possibly refute the existence of the limit? I doubt it.

— Ben