

How Big the fountain

The Urth list — 2 messages, 2 voices, 05 Apr 1999

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m.driussi — 05 Apr 1999, 17:11

In my reading, the possible paradox would be whether or not the white fountain exists, not "if it exists then why can't it be seen from Urth."

Because it can be seen from Urth. It just isn't as impressive as a full moon or a hot air balloon.

IF the white fountain is a "white hole" that is roughly equal in mass to the black hole eating at the heart of the old Sun, AND IF the black hole is a mini-black hole as would fit the description of effects in the text, THEN the white hole would have a small diameter.

"How far can you see the light from a motorcycle's headlight?"

A black hole with the mass of Jupiter would have a diameter of 560 centimeters; one with the mass of Earth would have a diameter of 1.6 centimeters.

"It depends on how far away the motorcycle is, and if it is moving then it will become more visible as it gets closer."

Severian is gone from Urth for 40 years. If the fountain is traveling at .5 c for 40 years (ignoring deceleration times) then it has crossed 20 light years; it was 20 light years away when he left. If it is traveling faster, it has covered a greater distance (up to around 40 light years); if it is traveling slower, it has covered a shorter distance. In any event: it is within 40 light years of Urth.

"There are literally thousands of stars within the Local Bubble alone that outshine our star. To illustrate the point, we have marked on Map C an obscure star in Puppis called HD 44594, which is just too faint to be seen by the naked eye. HD 44594 is in fact the twin of the Sun--the nearest match to our star that astronomers have been able to pin down. Just as we do not rate HD 44594 highly, someone in this star's planetary system--if it has one--would regard our Sun as a totally insignificant star, invisible without a telescope, even though it lies only 80 light years away" (Henbest & Couper, THE GUIDE TO THE GALAXY, p. 185).

The "solar twin" (with a diameter like that of the Sun) cannot be seen without a telescope, yet it is only 80 light years away.

"The German astronomer Wilhelm Gliese has made a detailed study of the nearest stars to the Sun. Within 16 light years of the Sun--the region where we =probably= have a complete inventory, even of the faintest stars . . . " [emphasis mine] (ibid.).

Even in the 20th century, with advanced optical telescopes and radio telescopes, etc., our knowledge of our stellar neighborhood is limited to 16 or 20 light years. Beyond 20 light years things get progressively more fuzzy, spotty. It is much easier to see the big stars--our nearest solar twin is out there, lost to naked eye at 80 light years.

=mantis=

Roy C. Lackey — 06 Apr 1999, 02:09 · follows m.driussi

On Mon, 5 Apr 99 17:11:00 GMT mantis wrote:

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All true. But Sev, at least, can see his "star", his "white fountain" as far back in time as when Typhon and Ymar were alive. See the last line of chapter XXXV, _Urth_:

"Before we walked into the darkness beneath the trees, I looked up and beheld myself through their frost-blighted leaves."

This implies that Sev's "star" should have been visible to the naked eye for however many millennia had passed between Typhon's reign and Sev's, presumably getting brighter, to some degree, all the while. That's why I said what I did about time-travel paradoxes; they're unavoidable. Not to mention why the "fountain" should have been one of the three emblems on Sev's mausoleum, ancient when Sev was just a boy.

This only serves to show that the Physics can not be reconciled with the Fiction. For time-travel stories it just comes with the territory. In a similar vein, someone(s) tried to deduce the dimensions of the Whorl from distances given in the text and the laws of physics as applied to the motions of "floaters" and such. IIRC, they couldn't be reconciled either. Nor, IMO, should Wolfe be criticized for it; he made the Whorl exactly as large as it needed to be to hold his story, and no smaller.

Roy