

vampires make bootstrap lift off

The Whorl list — 3 messages, 3 voices, 05 Sep 2000

<https://urth.darkrealm.vip/thread/whorl/1012>

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Michael Andre-Driussi — 05 Sep 2000, 12:48

wombat wrote:

We know the inhumi can fly on Blue. If the inhumi can spread themselves thin enough to drift down in the atmosphere of Blue, then they don't need heat shielding. Our space vehicles need serious heat shielding because on re-entry they are basically falling through atmosphere, not flying or gliding.

One engineer I know described the Space Shuttle's reentry as being "as graceful as a falling brick". Compare this to the flight of a low-orbit airplane like the U-2--the U-2 didn't have much in the way of heat shielding, because its descent was controlled flight.

I agree that the problem of launch from Green is by far the more puzzling, unless the inhumi can somehow teleport (because of residual Neighbor blood making distance less certain?).

Yay, we are on the same thought here: I was meaning to mention the limited teleport option. Limited to once in a while, spawning-run, short jaunts from atmosphere to Lagrange Point. (Trick here is to avoid vampires having teleport on demand capability, which does not seem supported by the texts: although it would give another infusion to alga's heresy that "Pike's ghost" in the manteon really was Q himself; since the "aquastor" dissolve could then be a teleportation effect.) Then they "fly" across the distance, exposed to vacuum, and do the long glide in. (I hadn't even thought to tie-in the Neighbors, with their clear and obvious astral/teleport powers [Horn into Silk]; nevermind the seeming teleport-link between Horn/Silk and an inhuma for all of his "astral projection" jaunts.)

I was going to prep it by saying, "Look, when the undines of Urth say they can swim through space and/or the corridors of time, we don't spend any time working out the escape velocity, etc., because (while at first we think they are speaking metaphorically and later, when we see that it is real . . .) we see it as technology so advanced that it is magic to us. Some form of teleportation (through space) and/or time travel (itself magic). We don't argue about the possibly implied differences between `walking' the corridors and `swimming' the corridors."

FWIW digression: The time-travel in Severian's narrative seems to have elements of pseudo-momentum or pseudo-inertia involved: when the power stops, the traveler doesn't necessarily stop immediately. Hence in URTN when Sev was leaving the deluge by `running' back into the far past, he reached the endpoint (light of the white hole reaching Urth) and was catapulted (a hundred years?) beyond, presumably by the pseudo-velocity of his `running.'

Then I was going to say, "So while I'm toying with this in a light-hearted fashion, I'm not really too concerned, myself, with the mechanics of it. Not to criticize anybody who is pondering it more seriously."

(Then again, wombat: don't wings and lifting bodies have an atmospheric limit? That is, they

have no value in a vacuum, and as the object comes into the gravity well it picks up some speed before the atmosphere is sufficiently thick enough to provide the lift? I guess I'm saying there's enough atmosphere for re-entry friction, but not enough for lift, until the object gets to a certain critical level which is relatively deep into the gravity well: but I'm just wondering around.)

=mantis=

*This is WHORL, for discussion of Gene Wolfe's Book of the Long Sun.

Alastair Reynolds — 06 Sep 2000, 07:19 · follows Michael Andre-Driussi

Michael Andre-Driussi wrote:

(Then again, wombat: don't wings and lifting bodies have an atmospheric limit? That is, they have no value in a vacuum, and as the object comes into the gravity well it picks up some speed before the atmosphere is sufficiently thick enough to provide the lift? I guess I'm saying there's enough atmosphere for re-entry friction, but not enough for lift, until the object gets to a certain critical level which is relatively deep into the gravity well: but I'm just wondering around.)

=mantis=

No; you're right, Mantis - if the inhumani "fall" from the lagrange point between Green and Blue, then they're essentially going to hit Blue's atmosphere with speed on the order of escape velocity. The only thing they can modify, assuming they don't have a way to slow down in vacuum (stolen PM modules from the Trivigaunti fliers?) is their angle at which they brush the atmosphere. And even with the optimum approach angle (not too steep so that they burn up, or too shallow so that they bounce off), there'll still be an enormous amount of friction. Somehow or other the kinetic energy they've accumulated during their fall has to be converted to heat, and the only variable is whether this happens slowly, in a controlled way (like a space shuttle re-entry) or in a quick burn-up. Barbecued inhumani, anyone?

Re: the orbital mechanics of Green/Blue - wasn't the best explanation, as worked out by someone here, that they're analogous to our moon and its small satellite partner Cruithne? It was pointed out that this had been written up (in Nature I think) early enough for Wolfe to have incorporated it into the series. Or was there some fatal flaw in that idea?

AI

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Kevin J. Maroney — 06 Sep 2000, 12:18 · follows Alastair Reynolds

At 09:19 AM 9/6/00 +0200, Alastair wrote:

No; you're right, Mantis - if the inhumani "fall" from the lagrange point between Green and Blue, then they're essentially going to hit Blue's atmosphere with speed on the order of escape velocity.

Agreed. I've been assuming that they don't fall from that distance. There are three basic possibilities, as I see it:

The inhumani move from planet to planet via traditional ballistics, which requires them to reach some high percentage of escape velocity from Green and absorb that kinetic energy at Blue;

The inhumani are under some sort of controlled flight for the entire trip from Green to Blue and

vice versa, but with an unknown mechanism; or

That they teleport most of the distance via some gift from the Neighbors and only fly within the atmospheres of the two planets.

I'm actually most inclined to believe the third. I have a suspicion that the Neighbors evolved on Blue, the inhumans on Green, and they only came into contact with each other after the Neighbors tried to conquer Green, relatively recently. The Neighbors do not perceive distance the way humans do. The inhumans gained a great deal from the Neighbors, as Horn has; the evidence in Green is that some of that difference can be communicated to humans and almost certainly to inhumans as well.

This scenario also helps explain how Quetzal and his kindred came on to the Whorl despite its tremendous distance from Green.

I don't think that the inhumans can teleport at will. Fava's surprise at Incanto's ability demonstrates that. But I think they might be able to slip from place to place.

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