Green as being in a transfer orbit

The Urth list — 1 messages, 1 voices, 29 Mar 2002

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Michael Andre-Driussi — 29 Mar 2002, 03:56

Further possibilities flowing from the notion of Green being in an outer orbit relative to Blue.

A six year planetary orbit in our solar system would be somewhere in the region of our asteroid belt.

What we are looking for would be a "cometary" orbit, and since I just mentioned the asteroid belt, there are two groups of "earth crossing" asteroids (Apollo and Amor) which do something like that. But we don't want Green to "cross" Blue (like a comet or an AA asteroid), rather we want it to come awful close and then back off. Oscillate.

This sounds exactly like a transfer orbit. A Hohmann Orbit.

Using a permanent habitat on a non-stop Earth/Mars Hohmann Orbit, the habitat (like Skylab, or an asteroid: any non-ship nudged into the orbit) would cycle between planets, 2 years one way. Which means it would be 4 years before the habitat returned to Earth. Note that this is "unpowered" drift--no titanic spacedrives needed, once the orbit is established.

That looks incredibly close compared to what we've been looking at before!

The HO =does= require the presence of another planet in the Breen system, taking the place of Mars in the example above. It should be a terrestrial planet, like Mars, rather than a Jovian (? maybe I'm too fretful of it being captured by the greater gravity of a jovian?). If terrestrial, it might have such low albedo as to be nearly invisible to the naked eye (hmmm, I'll have to think on that). It should be further away from the primary star than Mars is, so that a one-way transfer will last 3 years, and thus a 6 year lapse between Blue/Green encounters.

Hohmann Orbit to Jupiter is 2.7 years one way. Hey now! So close to what we are looking for that it is stupifying!

Granted, if Green wanders out past the orbit of Jupiter to planet "Zeus" it is going outside of the habitability zone and should suffer a ragnarok-like winter. But only for the time it is out there! Is there suggestion in the text about seasons of any kind on Green?

But that is all just another issue. The question of Green's orbit may be solved.

=mantis=