

Green's diameter, angular and otherwise

The Urth list — 5 messages, 3 voices, 13 Mar 2002

<https://urth.darkrealm.vip/thread/urth/3033>

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Michael Andre-Driussi — 13 Mar 2002, 02:19

Another way to approach the Blue/Green conjunction is to determine the size of Green in the sky of Blue, from its "usual" size to its greatest size at closest approach.

For simplicity sake, let us assume that both Blue and Green have surface gravities of 1 g. More or less "twins" in separate orbits (and Green having an orbital eccentricity that carries it out to a close approach with Blue every x number of local years).

I was watching for details when I read before and I don't recall finding any, other than "baneful eye."

OTOH, we have the happy case of an eyewitness who also sees Lune (maybe?) and the Old Sun (definitely). The Old Sun (assumed before to have an angular diameter of around 0.83 degrees) is "swollen" to his eyes, but iirc he never says anything in comparison to Green's biggest size.

Using the Moon as a model.
ORBIT ANGULAR DIAMETER
MOON 240,000 0.52 degrees
LUNE 150,000 0.83 degrees
GREEN 105,000 1.18 degrees

So even a puny world like the Moon (diameter 2160 miles) would be more than twice the size of the Moon in our sky when located at a distance attributed to Green.

A twin planet would naturally be much bigger.

Based upon this, the Bluvian astronomer is quite likely to be waaaaay off in his estimate of the "closest approach" distance as being 35,000 leagues.

=mantis=

SIRIUS FICTION
booklets on Gene Wolfe, John Crowley
43 Lexicons left until OP!
<http://www.siriusfiction.com/>

Jerry Friedman — 13 Mar 2002, 16:50 · follows Michael Andre-Driussi

--- Michael Andre-Driussi <mantis at siriusfiction.com> wrote:
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size
of Green in the sky of Blue, from its "usual" size to its greatest size
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closest approach.

For simplicity sake, let us assume that both Blue and Green have surface gravities of 1 g. More or less "twins" in separate orbits (and Green having an orbital eccentricity that carries it out to a close approach with Blue every x number of local years).

I don't think the eccentricity has much to do with it. The two planets will come into conjunction every x number of local years. If Green's orbit is eccentric, then sometimes the distance at conjunction will be greater and sometimes less.

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How are you thinking the Bluvian astronomer would make his estimate?

I can't think of a method that would be thrown off by Green's large size. The only way I know of at the Green level of technology would be parallax, which doesn't depend on Green's angular size at all. (Though the parallax method would require a fair amount of work, notably measuring the distances between widely separated cities, as well as astronomical observations at conjunction, which is presumably the worst possible time. Seems unlikely during the first twenty years of settlement.)

Maybe Gagliardo used observations made from the lander and information from the monitors, who could at least have told him the cruising speed of the landers. Or maybe he's doing the same thing we're doing and guessing that the Short Sun is the same size and brightness as the Old Sun, which makes the radius of Blue's orbit the same as Urth's (if he knows it); then from the time between conjunctions he can get the radius of Green's orbit.

Anyway, the higher the true distance, the harder the problem of how the inhum cross.

Jerry Friedman

Dan'l Danehy-Oakes — 13 Mar 2002, 17:07 · follows Jerry Friedman

Mantis wrote:

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... for which I am frankly grateful, because it seems to me to drive the final nail into the "Blue = Urth" theory's coffin, based on past discussions herein.

Then Jerry F. asks:

How are you thinking the Bluvian astronomer would make his estimate?

I can't think of a method that would be thrown off by Green's large size.

I don't believe Mantis is referring to the Bluvian astronomer's "method" but simply to his result.

At one level, Mantis refers to the description of Green, seen from Blue, as a "baleful eye." A twin planet, or even the moon, seen at the distance of 105K miles, would be rather too large for an "eye" to be, at any rate, the most obvious metaphor.

More important: from present evidence, it appears that Green, Blue, and Urth have fairly similar surface gravity (the evidence is, admittedly, negative: there is no mention of a sensation of weighing more or less, no sense that thrown or swung objects behave differently, etc., and it is reasonable to suspect that something of the sort would be mentioned) -- indeed, all these seem to be fairly close to the accelerational "gravity" of the Whorl at "ground" level.

(BTW, the whole issue of the Fliers in a separate thread seems to miss the point that they rarely - never voluntarily? - come near "ground" level.)

This being the case, Green needs to be at least somewhat similar in mass to Urth. Such a mass passing within 105K miles of Blue would have effects not terribly dissimilar to the effect of the passing of the White Fountain on Urth. (And, of course, vice versa for Green.) The effects described for the conjunction do not come close: for example, the Narrator mentions extreme tides, but apparently they are not so extreme as to swamp a seaside town (New Viron) or to make a home near the shore of an oceanic island (Horn's hut) infeasible over a period of decades.

Anyway, the higher the true distance, the harder the problem of how the inhum cross.

True, but in any event the problem of how the inhum cross between Bleen and Grue is trivial next to the problem of how Remora (and, apparently, other inhum) achieved the crossing to the Whorl. If I recall correctly, a Neighbor mentions to Horn that they (the Neighbors) sent them (the inhum) - but does not describe how this was done.

Jerry Friedman — 14 Mar 2002, 22:02 · follows Dan'I Danehy-Oakes

--- Dan'I Danehy-Oakes <ddanehy at siebel.com> wrote:

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Using the Moon as a model.

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attributed to Green.

A twin planet would naturally be much bigger.

Based upon this, the Bluvian astronomer is quite likely to be waaaay off

in his estimate of the "closest approach" distance as being 35,000 leagues.

... for which I am frankly grateful, because it seems to me to drive the final nail into the "Blue = Urth" theory's coffin, based on past discussions herein.

Okay, how? I too would be relieved, but I don't see the connection.

Then Jerry F. asks:

How are you thinking the Bluvian astronomer would make his estimate?

I can't think of a method that would be thrown off by Green's large size.

I don't believe Mantis is referring to the Bluvian astronomer's "method" but simply to his result.

Ah, got it.

At one level, Mantis refers to the description of Green, seen from Blue,

as a "baleful eye." A twin planet, or even the moon, seen at the distance

of 105K miles, would be rather too large for an "eye" to be, at any rate,

the most obvious metaphor.

Au contraire, mon frere. Sundogs (mock suns, parhelia) have a good deal more than twice the angular diameter of the moon, and one person who talked to me about seeing one compared it repeatedly to God's eye looking at her, perhaps accusingly. Anyway, the 105K miles is the closest approach; most of the time Green looks much smaller. (Or was that "baleful" eye right at conjunction?)

More important: from present evidence, it appears that Green, Blue, and Urth have fairly similar surface gravity (the evidence is, admittedly, negative: there is no mention of a sensation of weighing more or less, no sense that thrown or swung objects behave differently, etc., and it is reasonable to suspect that _something_ of the sort would be mentioned)

-- indeed, all these seem to be fairly close to the accelerational "gravity" of the Whorl at "ground" level.

I think Marc just presented, not for the first time, cogent reasons to think that Green's gravity is less than the Earth's. I argued a couple of days ago that nonetheless Green's gravity should be much greater than the moon's, more or less for the reason you mention. I agree with you and him that there's no trace of any difference between Earth's gravity, Urth's, Blue's, and the _Whorl's_ "gravity".

(BTW, the whole issue of the Fliers in a separate thread seems to miss the point that they rarely - never voluntarily? - come near "ground" level.)

But they're capable of flying near ground level, at least for a little while. See Sciathan's discussion of his capture, if I remember it correctly.

This being the case, Green needs to be at least somewhat similar in mass to Urth. Such a mass passing within 105K miles of Blue would have effects not terribly dissimilar to the effect of the passing of the White Fountain on Urth. (And, of course, vice versa for Green.) The effects described for the conjunction do not come close: for example, the Narrator mentions extreme tides, but apparently they are not so extreme as to swamp a seaside town (New Viron) or to make a home near the shore of an oceanic island (Horn's hut) infeasible over a period of decades.

Anyway, the higher the true distance, the harder the problem of how the inhumini cross.

True, but in any event the problem of how the inhumini cross between Bleen and Groon

(or Bleen and Groon, for King Crimson fans)

is trivial next to the problem of how Remora (and, apparently, other inhumini) achieved the crossing to the Whorl. If I recall correctly, a Neighbor mentions to Horn that they (the Neighbors) sent them (the inhumini) - but does not describe how this was done.

I don't see that. It's one of the problems the Blue=Ushas theory is supposed to solve, and for those of us who don't believe that, there was plenty of space travel before Typhon. The problem of how inhumini got onto the _Whorl_ is no harder than the problem of how the avernians' and the alzabo's ancestors got to Urth.

On the other hand, I think you could make a good case that it's not much easier for the inhumini to cross 35,000 leagues of space than ten times that distance.

Jerry Friedman

Dan'l Danehy-Oakes — 14 Mar 2002, 22:27 · follows Jerry Friedman

Jerry F., responding to me...

... for which I am frankly grateful, because it seems to me to drive the final nail into the "Blue = Urth" theory's coffin, based on past discussions herein.

Okay, how? I too would be relieved, but I don't see the connection.

Well, maybe I was wrong from that perspective. I think the gravity issue does it, though...

A twin planet, or even the moon, seen at the distance of 105K miles, would be rather too large for an "eye" to be, at any rate, the most obvious metaphor.

Au contraire, mon frere. Sundogs (mock suns, parhelia) have a good deal more than twice the angular diameter of the moon, and one person who talked to me about seeing one compared it repeatedly to God's eye looking at her, perhaps accusingly.

I can weasel this a bit, by observing that the ring makes the sundog _look_ much more like an eye than a bright glowing round thing in the sky does, but I accept your basic point.

I think Marc just presented, not for the first time, cogent reasons to think that Green's gravity is less than the Earth's.

I disagree. I suggest that the "climbing with one arm while fighting with the other" bit is possible due to one or both of two things:

- 1) This happens when the Narr is astrally travelling, not physical present on Green; and
- 2) Dramatic/narrative convention; how many times have you seen this in the movies?

I argued a couple of days ago that nonetheless Green's gravity should be much greater than the moon's, more or less for the reason you mention. I agree with you and him that there's no trace of any difference between Earth's gravity, Urth's, Blue's, and the _Whorl's_ "gravity".

Nor do I see any real evidence that Green's is any different.

(BTW, the whole issue of the Fliers in a separate thread seems to miss the point that they rarely - never voluntarily? - come near "ground" level.)

But they're capable of flying near ground level, at least for a little while. See Sciathan's discussion of his capture, if I remember it correctly.

Maybe I'm wrong, but I seem to recall his saying it's much more difficult near the ground.

Anyway, the higher the true distance, the harder the problem of how the inhumini cross.

True, but in any event the problem of how the inhumini cross between Bleen and Grue

(or Blee and Groon, for King Crimson fans)

Well, I confess that I'm a 21st Century Schizoid Fan...

is trivial next to the problem of how Remora (and, apparently, other inhumini) achieved the crossing to the Whorl. If I recall correctly, a Neighbor mentions to Horn that they (the Neighbors) sent them (the inhumini) - but does not describe how this was done.

I don't see that. It's one of the problems the Blue=Ushas theory is supposed to solve, and for those of us who don't believe that, there was plenty of space travel before Typhon. The problem of how inhumini got onto the _Whorl_ is no harder than the problem of how the averns' and the alzabo's ancestors got to Urth.

That seems to be based on an assumption that they were on the _Whorl_ from the time it left Urth, and I see no basis for that claim whatever. The Neighbor's comment about sending the inhumini to the _Whorl_ seems to me to refer to a time after (probably just after) the _Whorl_'s arrival in the Glune system.

On the other hand, I think you could make a good case that it's not much easier for the inhumini to cross 35,000 leagues of space than ten times that distance.

Shrug. Possibly. And actually, the distance to the _Whorl_ can't be
too much greater than the distance between the two planets, since the
Whorl, which is certainly smaller than either of them, is plainly visible in the Bluvian night sky.