Kerbal Space Program - Bug #28423

Planetary encounters are often wrong and disappear or appear when crossing the targets orbit.

08/10/2021 10:30 PM - dvader

Status:	New	**Start date:**	08/10/2021
Severity:	Low	**% Done:**	0%
Assignee:			
Category:	Gameplay		
Target version:			
Version:	1.12.2	**Language:**	English (US)
Platform:	Linux	**Mod Related:**	No
Expansion:	Breaking Ground, Core Game, Making History		

Description

Planetary encounters on disappear/appear after the target body orbit is crossed. The issue was recreated on a clean install in a new sandbox.

Example 1 (bug1.sfs) : The ship named "Tmp" has no projected intercept with Vall (bug1a.png). When using the maneuver tool, there should not be any intercepts for about 13 days/2 orbits. But, when the ship crosses Valls orbit, an encounter appears, just half an orbit later (bug1b.png).

Example 2 (bug2.sfs) : The ship named "Tmp" is on a trajectory to intercept Vall with a Pe of 123000 m (bug2a.png). When the ship crosses Valls orbit, the projected intercept disappears (bug2b.png). The ship then never enounters Vall.

History

#1 - 08/26/2021 07:43 AM - Krazy1

Dvader - These do look like bugs but just a suggestion to make it more clear what the problem is:

1. click "MET" by the clock to see the UT (instead of the time since ship launch)
2. click the purple button, lower left, to show the orbit values
3. right click the intercept to show time (enter, exit SOI or PE - doesn't really matter which one).

With all of those, we can tell how many orbits ahead the encounter is. Is it really 1/2 orbit ahead or is it 1.5, 2.5... etc. ahead. It would help answer: Is it not drawing the prior 1/2 orbit line for the case of multiple orbits to intercept, or is missing an encounter only 1/2 orbit away when it crosses Val's orbit? Probably different code to check for each case.

#2 - 08/26/2021 09:32 PM - dvader

- File bug1a.png added

- File bug1b.png added

- File bug2a.png added

- File bug2b.png added

- File bug2c.png added

- File bug2d.png added

- File bug2e.png added

Krazy1 wrote:

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Here are some new screenshots.

In bug1, Vall is just 1/2 orbit away (4 days, bug1b.png) but the intersect doesn't show until Valls orbit is crossed.

Bug2 is stranger though. The predicted intersect is actually 140 days away. There is also a "lone" blue Pe marker just to the left of Jool that seems to be from the next orbit (which is invisible). If I add a maneuver node, the indicated trajectory intersects Vall and continues along the purple path which is 140d away (bug2c.png). But, if I click +1 orbit, the correct brown dotted trajectory appears (but the Vall intercept in 140d is still there, bug2d.png). If I click +1 orbit a bunch of times to 140d, I do not get a Vall intercept on the maneuver node trajectory so I have two two different orbits with two different Pe's at almost the same time (and 0 m/s burn, bug2e.png). I hope the pictures make some sense.

#3 - 08/27/2021 05:12 AM - Krazy1

dvader wrote:

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Thanks - those are very clear now and bizarre. Bug2e looks like you have discovered large-scale quantum entanglement in KSP! I hope they fix these problems... Newtonian orbits are hard enough.

May be related to #25227

Files

Bug2.sfs	85.9 KB	08/10/2021	dvader
bug2b.png	1.55 MB	08/10/2021	dvader
bug2a.png	1.58 MB	08/10/2021	dvader
bug1b.png	1.53 MB	08/10/2021	dvader
bug1a.png	1.52 MB	08/10/2021	dvader
bug1.sfs	85.6 KB	08/10/2021	dvader
bug1b.png	1.56 MB	08/26/2021	dvader
bug1a.png	1.55 MB	08/26/2021	dvader
bug2a.png	1.54 MB	08/26/2021	dvader
bug2b.png	1.51 MB	08/26/2021	dvader
bug2c.png	1.65 MB	08/26/2021	dvader
bug2e.png	1.64 MB	08/26/2021	dvader
bug2d.png	1.65 MB	08/26/2021	dvader