

Kerbal Space Program - Bug #22022

Burn-indicator delta-V and post-maneuver orbit drifting

04/27/2019 07:57 AM - Anonymous

Status:	New	Start date:	04/27/2019
Severity:	Low	% Done:	0%
Assignee:			
Category:	Controls and UI		
Target version:			
Version:	1.7.0	Language:	English (US)
Platform:	Windows	Mod Related:	No
Expansion:	Core Game		
Description			
When a maneuver node is set some years in the future, the displayed orbit and displayed delta-V alongside the nav-ball change.			
New sandbox game. Set-Orbit a craft into LKO.			
1) Set a maneuver node for the first transfer window to Duna (save attached)			
The displayed delta-V changes only very slightly, about 0.1m/s in a minute.			
2) Set a maneuver node for the next transfer window to Duna 12 years in the future (save attached)			
The displayed delta-V increases in spurts, about 1m/s every couple of seconds, and the encounter is lost.			
The type-in values in the new maneuver-adjust panel do not change, so can sometimes be used to recover the encounter.			
However, the state of the maneuver seems to change behind the scenes between input on the new maneuver gizmo, so if you have an encounter and one click to prograde loses it, a reversing click to retrograde does not recover the encounter.			
In an earlier savefile, now in year 60, maneuvers less than 1 year in the future show the severe drift, so it may have to do with absolute time since epoch of the maneuver.			
Set-Orbit into solar orbit with SMA the same as Kerbin's, set a maneuver node to encounter Duna, even 30 years in future, and the orbit and displayed delta-V look very stable.			

History

#1 - 04/29/2019 07:05 AM - Anonymous

- Subject changed from maneuver-node delta-V and post-maneuver orbit drifting to Burn-indicator delta-V and post-maneuver orbit drifting

Version 1.6.1 shows similar behavior (savefile pending a retest with no mods).

The drift seems to be an problem in the computation KSP does to show how much of the burn is complete; even aero-braking is counted reasonably well. Rotating a ship with a with reaction wheels changes its indicated burn-time. Physics-on time warp in the save-file 'dunaTransferYear12' changes the indicated burn time by factors of 2, and these are roughly reversed when time-warp stops.

When the craft is in low orbit, under 100km around Kerbin (probably the rotating reference frame mentioned in [#5234](#)) the burn-time drifts significantly (>20% >100m/s).

Going to high orbit before setting maneuvers is a nice workaround.

Files

DunaTransferYear1.sfs	58.2 KB	04/27/2019	Anonymous
dunaTransferYear12.sfs	60.1 KB	04/27/2019	Anonymous
fromSolarOrbitYear22.sfs	60.3 KB	04/27/2019	Anonymous