

## Kerbal Space Program - Bug #27208

### Orbital drift compensation affects vehicles close of surface.

02/01/2021 08:21 PM - jukkamuhonen@hotmail.com

<b>Status:</b>	New	<b>Start date:</b>	02/01/2021
<b>Severity:</b>	Low	<b>% Done:</b>	0%
<b>Assignee:</b>			
<b>Category:</b>	Physics		
<b>Target version:</b>			
<b>Version:</b>	1.11.1	<b>Language:</b>	English (US)
<b>Platform:</b>	Windows	<b>Mod Related:</b>	No
<b>Expansion:</b>	Core Game		

#### Description

Related to bug <https://bugs.kerbalspaceprogram.com/issues/27205> which i tried to figure out i saw that switching orbital drift setting is affecting low orbit and landed vessels too, no matter is there atmosphere or not, if vehicle jumps, as it constantly does with no reason, orbital drift comes move vehicle to west or east.

This could be easily fixed by checking flying height of active vessel.

#### History

##### #1 - 02/01/2021 10:21 PM - Anth12

So you turned it off and your base stopped moving?

##### #2 - 02/01/2021 11:58 PM - jukkamuhonen@hotmail.com

Anth12 yes. I confirmed movement stop with coordinates. On landing legs bases still moves, so landing legs are not supposed to that job. Either land base on structural parts or wheels locked on and motors and steering disabled. Landing base on wheels fixes another bug which causes base to jump 15mm to some direction If you press drive forward or drive backward Button. But it is probably still better to land on structural parts/Fuel tanks etc.. almost zero movement. Put accelerometer or multiple on your base, it gives good look of small shake on your base too, but not that accurate method than which i used.

Orbital drift on movement was over 4mm/second at kerbin, orbital drift it went to zero after base settled gravity ease. Orbital drift on movement is constant, no matter which part you land on.

This was something i accidentally figured out. When i created script with KOS to hear any shake ship has, script was meant to assist adjusting wheel springs and dampers. Then i found that every vessel is actually constantly shaking (generating black energy from empty) and disabling orbital drift seemed to help with that.

##### #3 - 02/02/2021 01:07 AM - jukkamuhonen@hotmail.com

You can replicate this with: probe core, put large fuel tank beneath it.

Launch vessel on runway or set it to minmus surface coordinates -22.22.6.

Then compare coordinate movement.

##### #4 - 02/02/2021 11:09 AM - Anth12

I will do some testing.

##### #5 - 02/02/2021 12:44 PM - jukkamuhonen@hotmail.com

Please inform me if you can get this bug replicated. This bugs me out a lot now, today it looks like vessel is actually moving around pod, then pod jumps to vessel at where it originally was. So it might be something else than orbital drift. My scripted speedometer of mm/s of vessel showed relation with orbital drift yesterday but i lost scrip after did clean install. Problem is still there after clean install.

But speed difference with and without orbital drift was so clear and did switch settings multiple times so i did see relation, bug it might be bad luck too.

##### #6 - 02/02/2021 08:03 PM - Anth12

Sorry, Inconclusive.

It is changing, but I don't see any major difference in movement when its on verses when its off

##### #7 - 02/02/2021 10:58 PM - jukkamuhonen@hotmail.com

[jukkamuhonen@hotmail.com](mailto:jukkamuhonen@hotmail.com) wrote:

Anth12 wrote:

Sorry, Inconclusive.

It is changing, but I don't see any major difference in movement when its on verses when its off

- investigating lot of time for this problem before i can actually play it, have to know how stuff works before making unstable bases again. My save games gets ruined every time so now i want to play game with clear experience.

-Yes it seems its nothing to do with orbital drift. -It's more like vehicle setup.

-Some parts makes slide when rigid body core stays still, after while core snaps into that vehicle back to its orientation and we got movement.

-Minute ago i did put decouplers and wheels on that tank, decoupled them and after that, when reloaded scene they standed perfectly still. But later they started moving again, feels pretty random. -Now i have two ships sitting near each other, they are not identical but nearly, other sits perfectly 0.0000mm/s still while other moves around 2.2mm/s. Then i did set it as active vessel and it started moving.

-Right now only player controlled ship is moving, other stays still. Ships are about 210meters apart.

- It seems now that player control indeed has affect how ships slides. Control point of player gets that snappy movement problem of core and it causes ship to slide, idle vessel doesn't do that.

- If you put that tank on top of pod instead of bottom, movement is much slower 0.002mm/s

**#8 - 02/02/2021 11:43 PM - jukkamuhonen@hotmail.com**

- File Screenshot (42).png added

This setup doesn't move at all.

**#9 - 02/02/2021 11:48 PM - jukkamuhonen@hotmail.com**

- File Screenshot (43).png added

#### Files

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Screenshot (42).png	1.04 MB	02/02/2021	jukkamuhonen@hotmail.com
Screenshot (43).png	1.32 MB	02/02/2021	jukkamuhonen@hotmail.com