

Kerbal Space Program - Bug #2412

ModuleDecouple - forces added incorrectly.

04/23/2014 07:02 AM - swamp_ig

Status:	Closed	Start date:	04/23/2014
Severity:	Normal	% Done:	100%
Assignee:			
Category:	Physics		
Target version:			
Version:	0.23.5	Language:	English (US)
Platform:	Any	Mod Related:	No
Expansion:			
Description			
Hi.			
I've tracked down an issue in ModuleDecouple. In the method OnDecouple it seems to use:			
<pre>current.Rigidbody.AddForce(a * (-this.ejectionForce / (float)num), ForceMode.Force)</pre>			
This will just add an instantaneous force during a single physics frame, which is unfortunately of variable length. Because of this, if you have phys warp active you get much more force when you activate the decoupler.			
The fix would best be to add in a field:			
<pre>[KSPField] public float ejectionImpulse = 10f * 0.02f;</pre>			
You could just get rid of ejectionForce and modify the seven parts that use it, alternately modify OnStart to maintain backward compatibility:			
<pre>public override void OnStart(PartModule.StartState state) { if(ejectionForce != 10 && ejectionImpulse == 0.2f) ejectionImpulse = ejectionForce * 0.02f; // ... rest of the code</pre>			
Then just change the calls to AddForce:			
<pre>current.Rigidbody.AddForce(a * (-this.*ejectionImpulse* / (float)num), ForceMode.*Impulse*);</pre>			

History

#1 - 04/23/2014 07:03 AM - swamp_ig

Sorry about the **ejectionImpulse** there, was trying to bold preformatted code

#2 - 07/17/2016 09:25 AM - TriggerAu

- Status changed from New to Needs Clarification

#3 - 08/09/2016 10:39 AM - TriggerAu

- Status changed from Needs Clarification to Closed

- % Done changed from 0 to 100

Closing this report out for now. If you find it is still occuring in the latest version of KSP please open a new report (and this one can be linked to it.) For best results, the wiki contains really useful info for when creating a report <http://bugs.kerbalspaceprogram.com/projects/ksp/wiki>.

You can also ask questions about the bug cleanup in the forum here: <http://forum.kerbalspaceprogram.com/index.php?/topic/143980-time-to-clean-up-the-bug-tracker/> and tag @TriggerAu to get my attention