

Kerbal Space Program - Bug #5238

Low Heat Tolerance Asteroids

07/14/2015 03:55 AM - Tempist

Status: Closed	Start date: 07/14/2015
Severity: Low	% Done: 100%
Assignee:	
Category: Physics	
Target version:	
Version: 1.0.4	Language: English (US)
Platform: Win32	Mod Related: No
Expansion:	
Description	
As seen in the following forum thread E-Class Asteroids appear to have a low heat tolerance in Kerbin upper atmosphere. While the forum thread describes a puller, the craft I am using is a pusher.	
Screen shots of the Aerobraking maneuver with corresponding thermal gauges have are attached showing that even 63000m the asteroid begins to over heat. Granted the speed is in excess of 3200m/s but the Asteroid is approx 1550t. On previous runs the asteroid exploded when descending below 45000m while the attached craft remained thermally stable.	
Related issues:	
Related to Kerbal Space Program - Feedback #5939: Asteroid surface temp durin...	Needs Clarification 08/13/2015
Has duplicate Kerbal Space Program - Bug #5322: asteroid atmospheric heating bug	Duplicate 08/13/2015

History

#1 - 07/27/2015 05:58 PM - Squelch

- Platform Win32 added
- Platform deleted (Windows)

#2 - 08/15/2015 06:08 PM - Comwarrior69

As already filed in bug [#5238](#) (for which this is confirmation of the bug) asteroids heat up far too quickly. A 2200t class E asteroid was vaporised way too high up and way too easily... Class E's are planet killers, they are supposed to come in at interplanetary velocities and make it down to the ground.

This was discovered live on my stream and highlighted for this bug report. <http://www.twitch.tv/comwarrior69/v/10702451>

A temporary work around is to add the following lines to the potatoroid config,

```
thermalMassModifier = 500.0  
emissiveConstant = 1  
heatConductivity = 1
```

However, a more nifty fix is to use the ablator code to ablate the mass of the asteroid... Which is what would happen in real life.

#4 - 09/05/2015 07:07 PM - Squelch

- Has duplicate Bug #5322: asteroid atmospheric heating bug added

#5 - 11/17/2015 01:06 AM - Squelch

- Related to Feedback #5939: Asteroid surface temp during atmospheric re-entry too low added

#6 - 07/17/2016 09:38 AM - TriggerAu

- Status changed from New to Needs Clarification

#7 - 08/14/2016 07:32 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 occurring 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

Files

2015-07-13_00004.jpg	130 KB	07/14/2015	Tempist
2015-07-14_00002.jpg	97.2 KB	07/14/2015	Tempist
2015-07-14_00005.jpg	101 KB	07/14/2015	Tempist
2015-07-14_00009.jpg	127 KB	07/14/2015	Tempist
2015-07-14_00013.jpg	141 KB	07/14/2015	Tempist
2015-07-14_00017.jpg	128 KB	07/14/2015	Tempist
2015-07-14_00019.jpg	116 KB	07/14/2015	Tempist
Pre Aerobreaking.sfs	1.2 MB	07/14/2015	Tempist
Hi Temp 1.sfs	1.21 MB	07/14/2015	Tempist