

Kerbal Space Program - Bug #5540

Deployable radiators sun-tracking doesn't affect solar radiation flux

10/13/2015 03:10 PM - Snark

Status:	Closed	Start date:	10/13/2015
Severity:	Normal	% Done:	100%
Assignee:			
Category:	Physics		
Target version:			
Version:	1.0.4	Language:	English (US)
Platform:	Any	Mod Related:	No
Expansion:			

Description

Detailed discussion in KSP forum here:

<http://forum.kerbalspaceprogram.com/threads/136297-Unintuitive-behavior-of-active-radiator-panels>

KSP 1.0 added deployable active radiators which auto-rotate to keep themselves oriented edge-on to the sun. This is supposedly to make them better at radiating, i.e. they avoid absorbing solar heat that way.

I've discovered that this auto-rotation doesn't actually do anything. I've verified this for the small, medium, and large panels. If you look at their thermal behavior (e.g. by enabling detailed thermal info via the debug menu, and watching the "Rad Flux"), it becomes clear that the auto-rotated position of the panels is irrelevant to solar flux. As far as heat flux is concerned, they always act as if they're in their original deployed position (before rotating), regardless of how they visually appear on the ship.

This becomes a very big issue for ships that fly really close to the sun, when they need good radiators to avoid exploding from solar heat: it becomes very important to keep radiators angled edge-on to the sun at all times. Supposedly the player shouldn't have to worry about that (since the radiators appear to keep themselves automatically edge-on); but because of this bug, the player has to adjust the orientation of the **ship** and ignore what his eyes are telling him. It makes the difference between a ship that handles the environment just fine, and one that gradually heats up and explodes.

Please see the forum thread linked above for a detailed discussion, including several illustrative screenshots.

History

#1 - 10/13/2015 07:26 PM - hermes47

- Severity changed from High to Normal

#2 - 11/16/2015 09:16 AM - sal_vager

- Status changed from New to Resolved

- % Done changed from 0 to 100

This is fixed in 1.0.5

#3 - 07/17/2016 09:20 AM - TriggerAu

- Status changed from Resolved to Closed