

## Kerbal Space Program - Bug #18308

### Asteroid collision does not match up with visual appearance

04/01/2018 07:12 PM - Hexicube

<b>Status:</b>	Duplicate	<b>Start date:</b>	04/01/2018
<b>Severity:</b>	Low	<b>% Done:</b>	100%
<b>Assignee:</b>			
<b>Category:</b>	Physics		
<b>Target version:</b>			
<b>Version:</b>	1.4.2	<b>Language:</b>	English (US)
<b>Platform:</b>	Windows	<b>Mod Related:</b>	No
<b>Expansion:</b>	Core Game		

#### Description

This is a long-standing bug, and I'm surprised to see it's still an issue in the latest version.

As far as I can tell, every single asteroid suffers from this issue. The collision is usually within the visual appearance (you appear to clip through partially before actually hitting it) but sometimes slightly protrudes outside the visible model, and the problem is more pronounced on larger asteroids (proportional to size, problem becomes extreme if mods increase the size).

I typically play modded, but for the sake of demonstrating the problem, the following images were taken on a fully stock 1.4.2 steam installation without the DLC using default difficulty options, with cheats enabled.

Class A, appears normal: <https://i.imgur.com/fQ3slD4.png>

Class C, attached to thin air: <https://i.imgur.com/UXFW3mX.png>

Class E, visibly clips: <https://i.imgur.com/JLVkxHB.png>

Note that, whilst the problem appears to be acceptable on the shown class E, that is not nearly as bad as it can get. I've had multiple cases where I go as far as 3m into a class E before actually hitting it.

Class E, clips massively, modded install: <https://i.imgur.com/nNQyVPe.png>

The claw was highlighted to demonstrate just how far the craft clipped. This is a particularly large asteroid, somewhere around 15-20 times as long as the craft I used, but you can also see that the amount of clipping was actually enough to fully conceal the claw as well as half the pod.

The root cause will likely lie within the ProceduralAsteroid class, namely the CreatePAsteroid function. The two meshes are treated differently, but I can't determine in what way as dotPeek is having trouble understanding what's going on. I assume an attempt is being made to create convex colliders to keep unity happy (asteroid don't phase through planets, which are also concave).

#### History

##### #2 - 06/10/2019 11:58 PM - just\_jim

- Status changed from New to Duplicate

- % Done changed from 0 to 100

##### #3 - 06/11/2019 05:12 PM - Hexicube

I don't see any duplicate bug report after searching for "asteroid". Please link it or change the status back.