The Asteroid Ring Component

This component allows you to create a very efficient animated asteroid ring with thousands of asteroids.

Note: Due to the performance optimizations you can't really interact with the asteroids (e.g. collide with them).

Ring

Asteroid Count

This allows you to set the amount of asteroids in the ring.

Seed

This allows you to set the random seed used when generating the asteroids

Distribution

This allows you to change the distribution pattern of your asteroid ring. See the image below for what they look like.
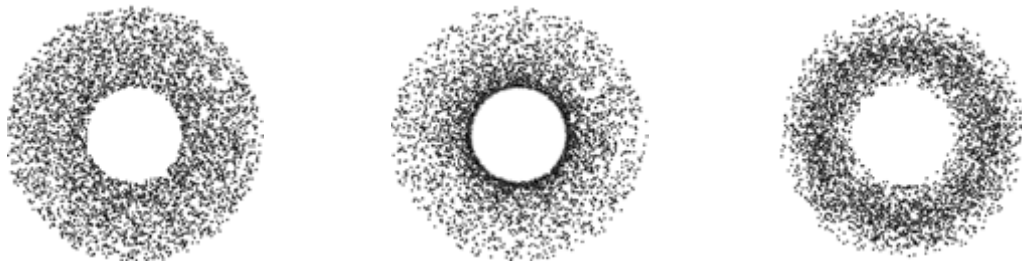
● Uniform

This distribution will place asteroids evenly around the surface of the ring.

● Exponential 2

This distribution will place more asteroids near the inside of the ring.

● Bates 2

This distribution will place more asteroids near the centre of the ring.

Radius

This field allows you to set the centre radius of the ring.

Width

This allows you to change the distance between the inner and outer edges of the ring.

Height

This allows you to change the vertical thickness of the asteroid ring.

Render Queue

This allows you to change the render queue used by the ring material. Consult the official Unity documentation if you're unsure what this means.

Light Source

If your scene already contains a light source, then this field will automatically be filled in. If not, then create an empty **GameObject** and attach the **Space Graphics Toolkit → Light Source** component.

Camera

If your scene contains a camera tagged with **MainCamera**, then this field will automatically be filled in. If not, then create one and either change its tag to **MainCamera**, or drag it into this field.

Auto Regen

If you tick this then the ring mesh will automatically be regenerated every time you make a modification to this component's settings. The regeneration will take place before the scene is rendered (in LateUpdate).

Regenerate

Note: This button is only visible if you've disabled **Auto Regen**.

If you press this button then your corona mesh will be regenerated.

Orbit Rate
Inner
This allows you to set the rate at which asteroids orbit at the inner edge of your ring.

Outer
This allows you to set the rate at which asteroids orbit at the outer edge of your ring.

Deviation
This allows you to change how much the orbit rate can be randomly offset by.

Asteroid
Radius Min
This allows you to set the minimum radius of all asteroids in the ring.

Radius Max
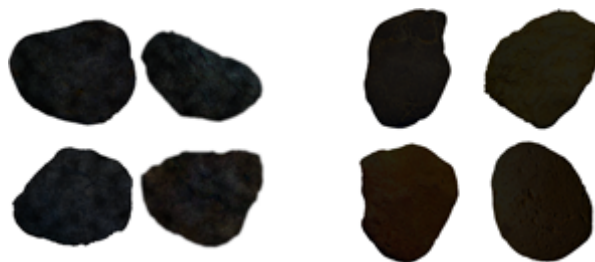This allows you to set the maximum radius of all asteroids in the ring.

Texture
Day
This allows you to set the texture applied to the light side of the asteroids. You can open the select texture window by pressing the ☉ button. Then if you type in **'Asteroid Ring Day'** into the search box, you'll see a list of suitable prepackaged textures.
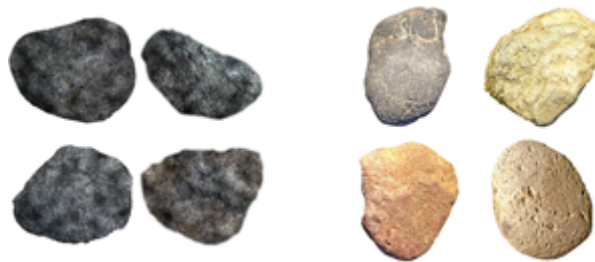

Night
This allows you to set the texture applied to the dark side of the asteroids. You can open the select texture window by pressing the ☉ button. Then if you type in **'Asteroid Ring Night'** into the search box, you'll see a list of suitable prepackaged textures.

Height
This allows you to set the texture used to give your asteroids depth. You can open the select texture window by pressing the ☉ button. Then if you type in **'Asteroid Ring Height'** into the search box, you'll see a list of suitable prepackaged textures.
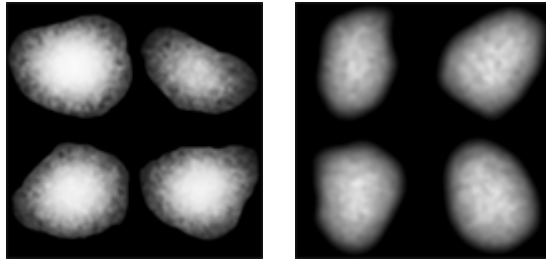
Tiles

If your asteroid texture is a tilesheet of multiple asteroids then you should set these.

X

This allows you to set the amount of columns in your asteroid tilesheet textures.

Y

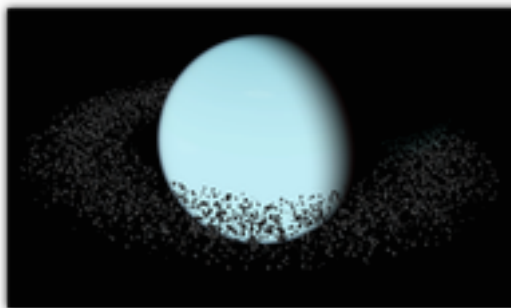This allows you to set the amount of rows in your star tilesheet texture.

Spin

If you tick this then all the asteroids in your asteroid ring will spin (roll) as they orbit.

Rate Max

This allows you to set the maximum rate at which asteroids can spin.

Shadow

If you tick this then a dynamic shadow will be cast on your ring from a planet or gas giant.

Auto Update

If this is ticked then the **Shadow → Radius** field will automatically be filled in from either a **Planet** or **Gas Giant** component.

Note: For this to work, your GameObject must have a **Planet** or **Gas Giant** component attached, if not then untick this and manually update it.

Radius

Note: This field can only be manually modified if Shadow → Auto Update is disabled.

This field allows you to change the radius of the sphere casting a shadow on the ring.

Width

This field allows you to change the penumbra (soft-shadow region) width.

Umbra Colour

This field allows you to change the colour of the umbra (inner solid-shadow region).

Penumbra Colour

This field allows you to change the colour of the penumbra (outer, soft-shadow region).