Making a Planetary Ring

This tutorial will teach you how to make a planetary ring, like the one around Saturn.

Step 1 - Make Your Planet

This step is optional, but I recommend you first make a planet to put the ring around by following the **Making a Terrestrial Planet** or **Making a Gas Giant** tutorials.

Step 2 - Add a Ring

Right click your planet GameObject in the Hierarchy window (or just right click if you don't have one), and select **Space Graphics Toolkit → Ring**, you should now see a Ring GameObject with the SgtRing component attached.

Step 3 - Set up the Ring

At the bottom of the SgtRing component in the inspector window, you will see the **Add Mesh** button, clicking this will add the **SgtRingMesh** component.

You should now see a ring in your Scene or Game window. Feel free to adjust the **Radius Min/Max** values of this new component to adjust the visual size until it looks good.

Next, you need to set the **Main Tex** setting to a texture of your ring. This should be a transparent texture.

NOTE: If your ring texture doesn't have transparency, then you can add the **SgtRingMainTexFilter** component, which will generate a transparent **Main Tex** for you based on a normal RGB ring texture. This is very useful if you need to make a transparent ring from space pictures of rings (e.g. Saturn) that don't have transparency.

Step 4 - Done!

You should now have a basic ring.

Optional Step - Adding Lighting

To add lighting to your ring, first enable the **Lit** setting, and then click the **Add LightingTex** button.

Next, you need to let the ring know which lights you want to use. To do this, add the **SgtLight** component to your main scene light (By default this will be the **Directional Light** GameObject).

NOTE: Adding lighting means the nearest shadow will also be received by the ring.

Optional Step - Casting Shadows

If you want this ring to cast shadows using the SGT shadow system (e.g. so it can cast on planets), then add the **SgtShadowRing** component to the same GameObject as the SgtRing component.

To make the shadows look correct the **Radius Min/Max** values should be similar to the **SgtRingMesh** component's **Radius Min/Max** settings.