

Environment textures

Env Sky

Simulates a planetary environment viewed from the surface of a planet.

Find this texture in the [Create bar](#).

Note

If the eye point or view drops below the floor, the Env Sky texture swatch turns red as a warning. If you render the scene, the floor appears red. To avoid this, make sure the eye point is always above the floor (the grid plane).

Environment Sky Attributes

Total Brightness

The overall brightness of the environment. The valid range is 0 to infinity. The slider range is 0 to 5. The default is 1.

Sun Attributes

Sun Brightness

The color and brightness of the sun. The default color Value is 0.5.

Halo Brightness

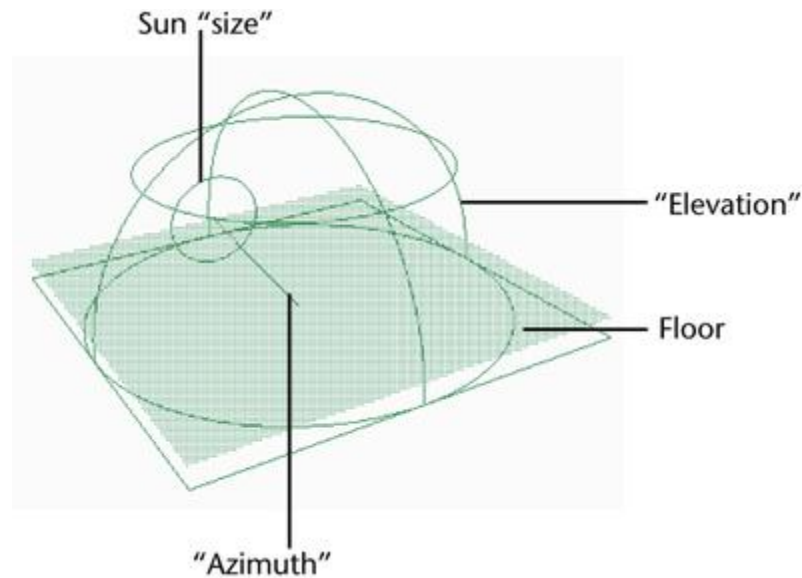
The color and brightness of the halo around the sun. The default color value is 0.1.

Interactively adjusting Sun attributes

The following attributes relate directly to the Sky's texture placement object. You can use the Maya transform tools, such as Scale and Rotate to place the manipulator, or use the Show Manipulator tool.

As you change the settings for Elevation, Azimuth, and Size attributes, notice how the various manipulators adjust in the View. IPR render to watch the texture change on the object.

The following indicates which manipulators correspond to which attribute.



Elevation

The angle (in degrees) of elevation of the sun relative to the floor. The valid range is -90 to 90. The slider range is 0 (sunrise/sunset) to 90 (midday). The default value is 45.

Azimuth

The angle (in degrees) of the sun in the sky about a vertical vector. The valid range is 0 to 360. The slider range is 0 to 360. The default value is 145.

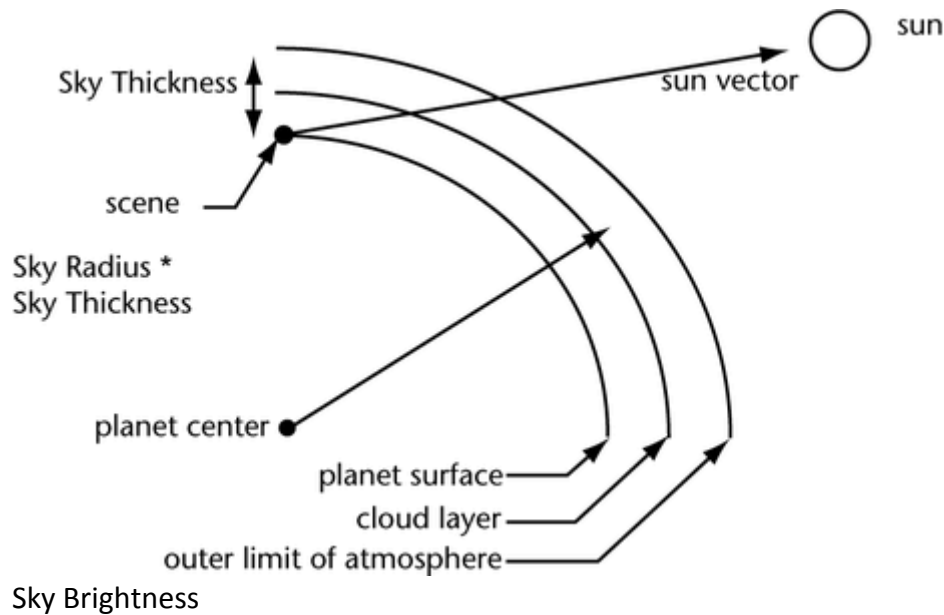
Size

The size (radius) of the sun. The valid range is 0 to 10000. The slider range is 0 to 20. The default value is 0.531

Blur

The size (radius) of the halo around the sun. The valid range is 0 to 1000. The slider range is 0 to 20. The default value is 1.

Atmospheric Settings



A scaling factor applied to the sky color. The default color Value is 0.5.

Air Density

The density of the air in the atmosphere. The denser the air, the more light is scattered.

Air density represents low and high altitudes. High altitude skies are almost black straight up and blue near the horizon (the Air Density value less than 1). Low altitude skies are blue straight up and white near the horizon (the Air Density value greater than 1). The slider range is 0 to 3. The default value is 1.

Dust Density

The density of dust in the atmosphere. The slider range is 0 to 3. The default value is 0.

Sky Thickness

The thickness of the atmosphere. The valid range is 0 to infinity. The slider range is 0 to 10000. The default value is 1000.

Sky Radius

The outer radius of the sky as a multiple of Sky Thickness.

Sky Thickness and Sky Radius values determine the planet radius, and planet radius influences the appearance of sunsets. A planet with a large radius results in very red (and very dark) sunsets (you can adjust Sky Brightness to compensate for sunsets that

are too dark). The valid range is 0 to infinity. The slider range is 0.01 to 300. The default value is 50.

For example, if Sky Thickness is 1000 and Sky Radius is 50, the outer radius of the sky is $1000 \times 50 = 50\,000$ units, and the radius of the planet is $(1000 \times 50) - (1000 \times 1) = 49\,000$ units.

Floor Attributes

Has Floor

Turns the floor on or off. If Has Floor is off, the environment below the horizon is a mirror image of the environment above the horizon.

Floor Color

The color of the floor. The default color value is 0.392.

Floor Altitude

The height of the floor relative to the grid plane. Floor Altitude has no effect if Has Floor is off. The slider range is -100 to 100. The default value is -10.

Cloud Attributes

Use Texture

Controls whether or not Env Sky pays attention to the Cloud Texture attribute. If you attach a Cloud or other fractal texture node to the Cloud Texture attribute, then you must turn on Use Texture to see the results.

Cloud Texture

The texture that determines cloud distribution in the sky. For example, the Fractal texture creates very realistic clouds. By default, there is no cloud texture map (and no clouds).

Cloud Brightness

The brightness and color of cloud illumination from ambient scattered light in the atmosphere. (The amount of ambient light depends on the Elevation value.) The default color Value is 0.5.

Sunset Brightness

The brightness and color of cloud illumination when the sun is below the horizon and the clouds are front lit (for example, when the sun's Elevation value is 0 and its Azimuth value is 180).

This is a very subtle effect and occurs only briefly in nature during a sunrise or sunset. The effect is more noticeable with high altitude clouds. The default color Value is 1.

Density

The density of individual clouds. The valid range is 0 to infinity. The slider range is 0 (no clouds) to 5 (heavy clouds). The default value is 1.

Threshold

A threshold value for the Cloud texture that controls how much of the sky is covered with cloud.

As the Threshold value increases, darker areas of the texture do not produce clouds. The valid range is 0 to infinity. The slider range is 0 (entire sky is cloudy) to 1 (no clouds). The default value is 0.5.

Power

The clouds are scaled and positioned by adjusting the Power value.

The cloud density is achieved by subtracting the Threshold from the pixel value clipping to 0, then multiplying the result with Density. To control the amount of de-focusing of the Cloud Texture, adjust the Blur value (under Sun Parameters). The valid range is 0 to infinity. The slider range is 0 to 1. The default value is 1.

Altitude

The height of the clouds.

The Altitude value does not greatly affect the position of the clouds. Instead, it determines how much the atmosphere obscures the clouds near the horizon. Low altitude clouds disappear into haze much more slowly than high altitude clouds. The valid/slider range is 0 to 1. The default value is 0.2.

Halo Size

The size (radius) of cloud illumination from direct back lighting by the sun (for example, when the sun's Azimuth value is 0).

Direct back lighting is most noticeable near the edges of thick clouds or through thin clouds. The valid range is 0 to infinity. The slider range is 0 to 50. The default value is 20.

Calculation Quality

The Calculation Quality attributes control the rendering speed of an Env Sky texture.

The calculations required for curved atmospheres reduce speed. The Calculation Quality attributes do not greatly affect the appearance of the sky, but do affect the speed at which the calculations are computed.

Sky Samples

The number of samples used above the cloud layer. Set the Sky Samples value to 1 for maximum speed. The valid range is 0 to 20. The slider range is 0 to 3. The default value is 5.

Floor Samples

The number of samples used by the atmosphere between the eye and the horizon.

Increasing the Floor Samples value increases the effect of the atmosphere along the floor. The valid range is 0 to 20. The slider range is 0 (no atmosphere between the eye and horizon) to 3. The default value is 1.

Cloud Samples

The number of samples used below the cloud layer. The valid range is 0 to 20. The slider range is 0 (clouds do not fade to mist at the horizon) to 3. The default value is 5.

Copied from:

http://download.autodesk.com/global/docs/maya2014/en_us/index.html?url=files/Shading_Nodes_About_environment_textures.htm,topicNumber=d30e659958



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