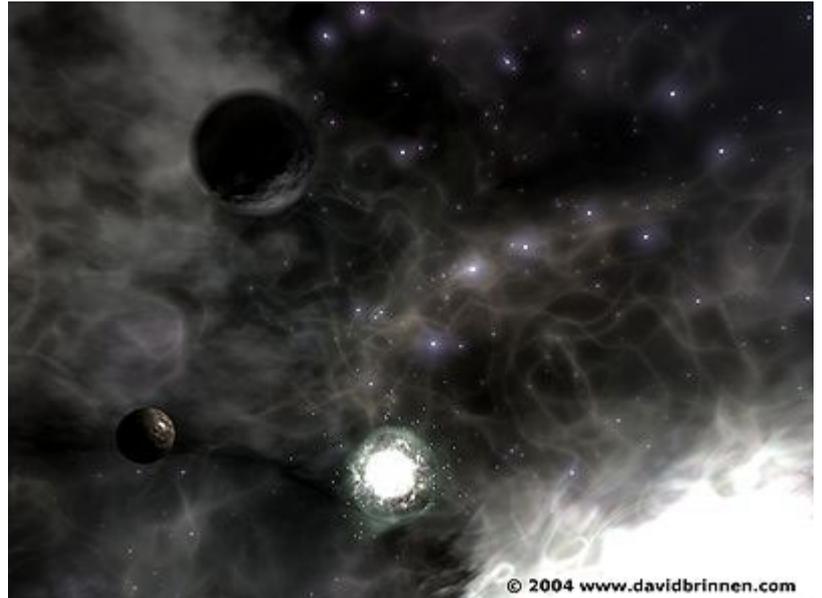# BRYCE 5 Mini Tutorial

How to Create Coloured Halos around Stars

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HTML Version
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«Darkcreation» by David Brinnen >

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Everything is «only» a question of the correct sky settings. Many adjustments can be performed from the icons on top of the screen. There are a few that can only be controlled from the Sky Lab, however.

All important items to adjust are marked with a tiny red arrow. Let's start from the left and progress to the right.

To the right, below the first icon, there is a small grey arrow. Click with the mouse on it and select «Custom Sky». Below the Sky & Fog icon, there are three fields than can be clicked on: Sun Glow Color, Sky Color and Horizon Color. Set all three of them to black. Below the following icon for the Shadows, there is only one colour control for the Ambient Color. Set it to black, too. The next icon is for the Fog Color and this one can be set to black as well.

Below the Haze icon, adjust the Haze Color. This will be the colour of the halo around the brighter stars. Here, I set it to red. The next three icons are for the clouds, which are switched off anyway.

Left below the sun joystick the Sun Color for the Normal Sky can be set. Black is a good start here, too. Now, click on the small cloud to open the Sky Lab.

In the Sky Lab, the adjustments for Sun & Moon are done first. All relevant parameters are marked with a small red arrow.

Switch on Celestial and select the Custom Field. When using Random Field, all stars have the same brightness. The Custom Field shows, in fact, part of the stars we see at night in the real heaven and the stars have different brightnesses. Set Intensity and Amount to maximum for a start.
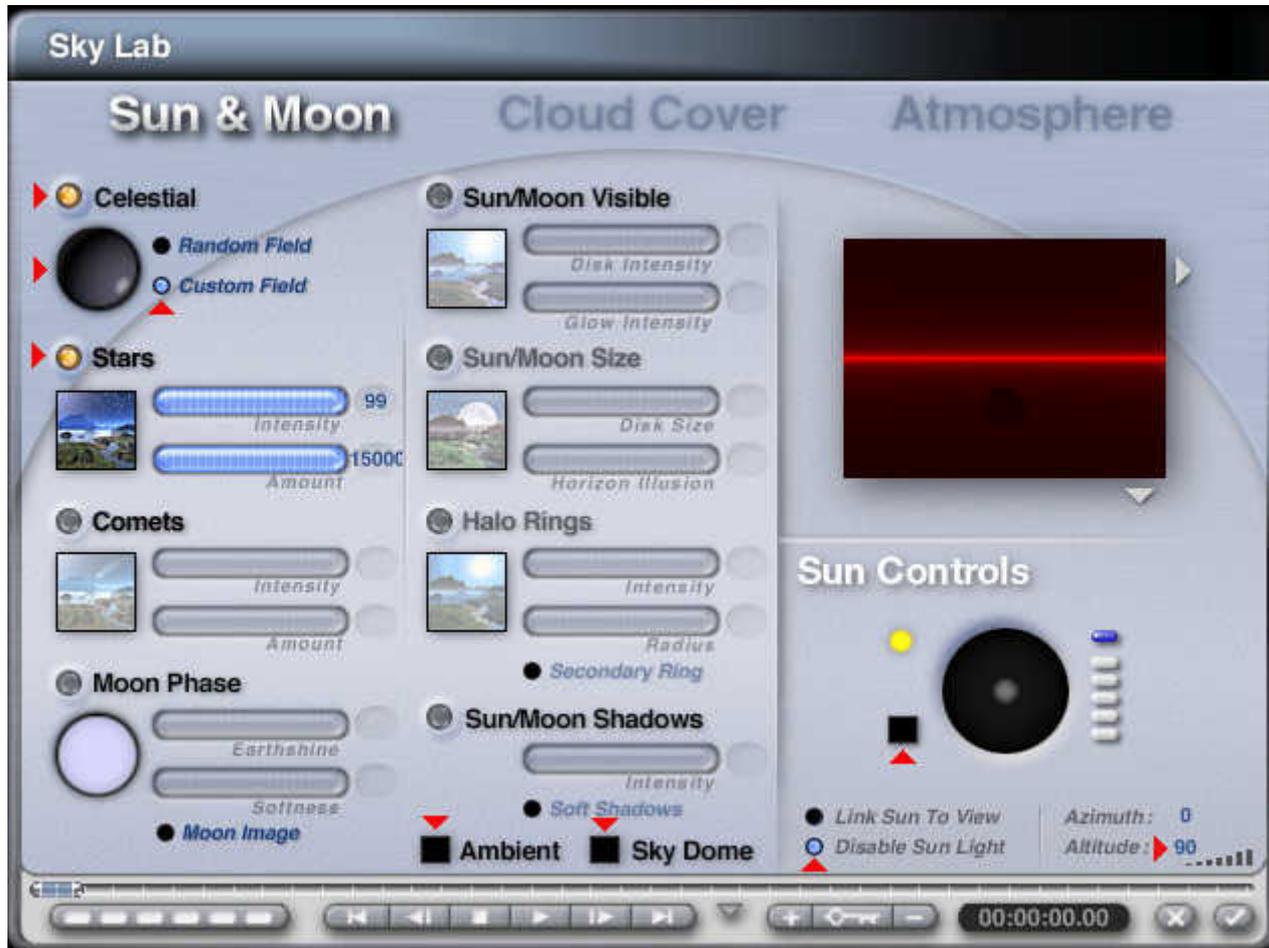
You can adjust the desired part of the starry sky with the joystick. If the large white dot is in the center and all camera angles are set to 0°, you see the «standard» sky, like on a star map, i.e. at spring at a rectascension of 6h (90°) and you look due north. If you move the sphere up, the starfield shifts more to the zenith, if you move it down, you are looking southwards. If you move the dot over the edge, a smaller bright point (the moon) appears and you have the sky as seen from the southern hemishere.

Make sure, Ambient and Sky Dome are black. Also, Disable Sun Light and set the Altitude (actually, the declination) of the sun to 90°.
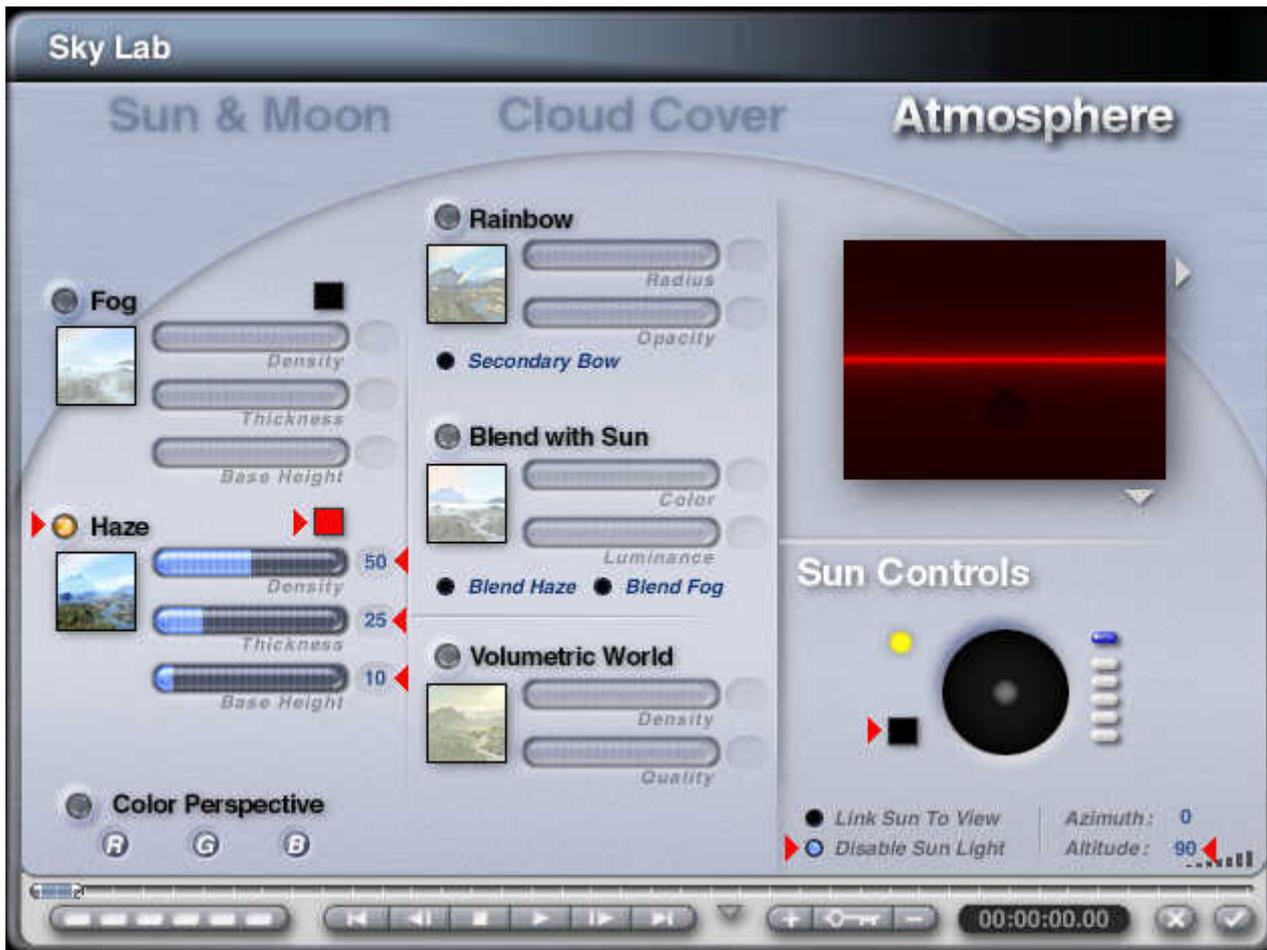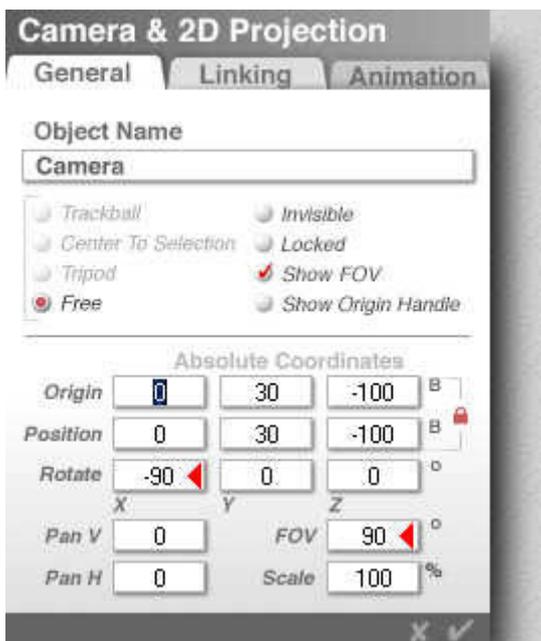
Select Cloud Cover in the Sky Lab.

All there is to do here is to switch all clouds off.

Finally, select in the Sky Lab the Atmosphere.

De-select everything except Haze. Chose your desired colour and set the Density to 50, the Thickness to 25 and the Base Height (which can be set only here) to 10.

On the right side, you are remembered how to the settings for the sun should be.

Set the camera as shown. With the Rotation of -90° in the X-axis the camera looks straight up to the zenith.

As the final thing in your preparation, delete the ground plane. We want to have the starry sky everywhere.

Select a generous size for your document, e.g. 1024 x 768 and start a test render. The following picture shows, what you can expect from those settings.
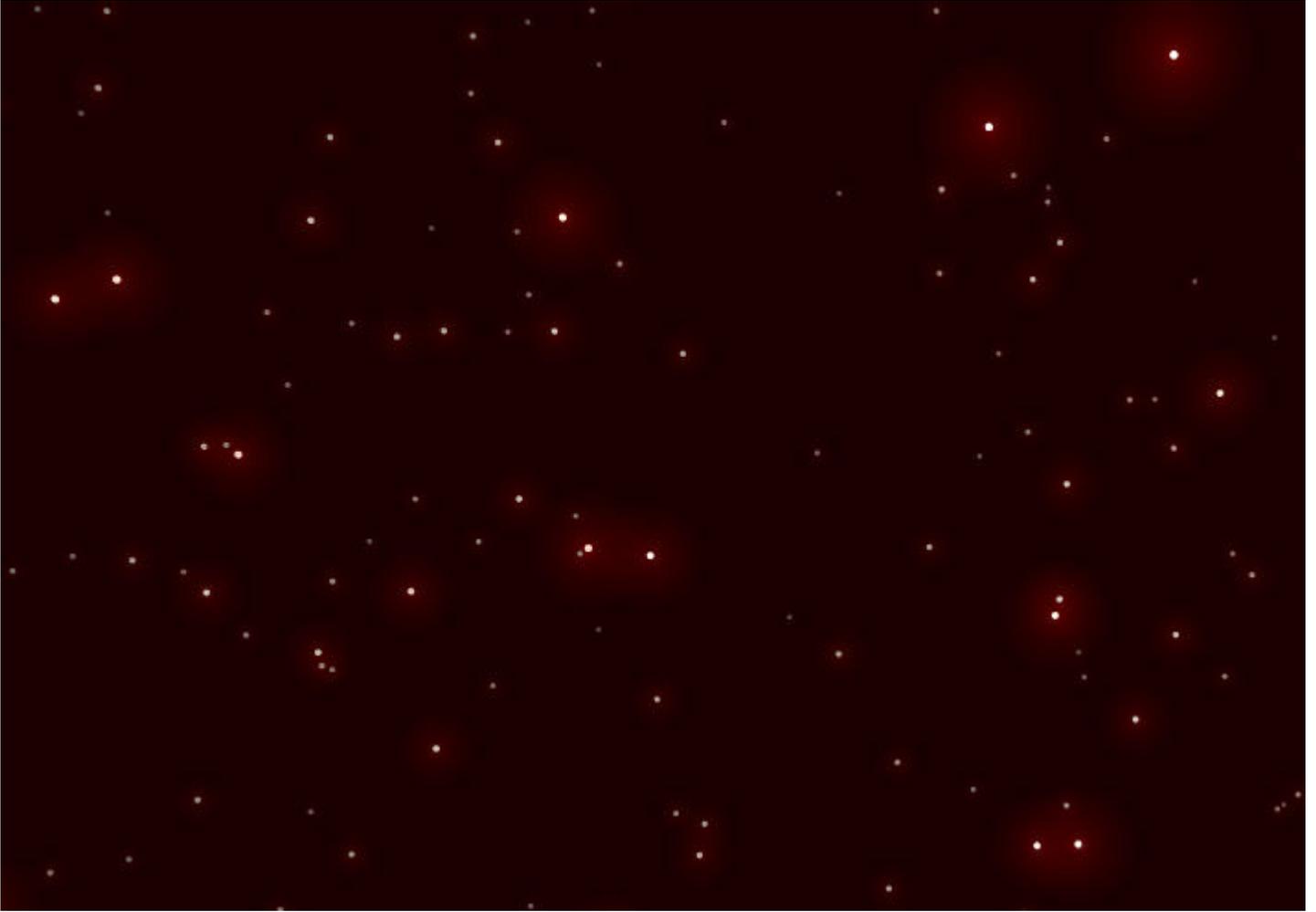
This is a part of a 1600 x 1200 render, done in seconds.

Fine Adjustments and Controlling the Halo

To adjust density and expansion of the halo, Haze Density and Haze Thickness have to be adjusted. That thought might have occurred to you already. Interestingly, the German version translates «Thickness» as «Height». Change those values carefully and watch what happens to the thumbnail at right in the Sky Lab. Even though you can't see any stars, you can draw some conclusions.

Move the X-axis of the camera down towards the horizon, for example from -90° to -45°. Because haze is used for the halo, the halo becomes more pronounced the nearer you get to the ground. When the camera is horizontal (0°), haze gets its greatest influence.

The more you move the camera angle from -90° to 0°, the more the value of the Base Height comes into play. This tutorial creates halos around bright stars reliably. How you want it for your project, you have to approach very carefully from here.

To Disable Sun Light might be a clever idea if you go for a black sky. However, a coloured sun outside the field of view but near to one edge produces beautiful colour effects that are worth to explore. Play with the sun's Azimuth and Altitude (which is actually the sun's declination or hight above the horizon).

Please be aware that the stars are displayed as very small objects in your Bryce artwork. The wider the FOV (field of view) is set, the larger you have to render your scene. Using a FOV of 120° and render this as 540 x 405 will utterly disappoint you.

Here, a starry sky with a halo around the stars was created according to this tutorial, except that blue haze was used. The sun was placed in the vicinity of the left edge. The bright, large halo around the sun is covered by a sphere used as a planet and a couple of DAZ spaceships (WASP) were put into the scene. The bright reflection on the planet was done with a lamp with square falloff.

And there you have a finished space scene, created within minutes.