

Ray (Sunray) Tutorial

Rays are a popular effect for giving more atmospheric and spectacular form to a picture.

This tutorial will not take a close look at every smallest point, but describe rays with help of some example images and example settings.

First of all a picture A) with rays and B) without rays for comparison.

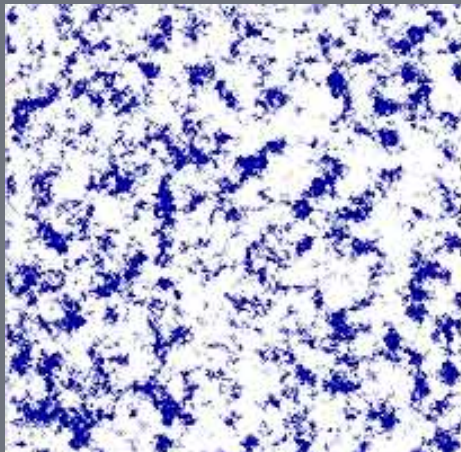


In picture B the rays appear much stronger and more intensiv, but where do these rays come from?

First we will look at the settings for the clouds. The clouds should not be too big and too flat in order to get a good covering of the sky.

1.Clouds

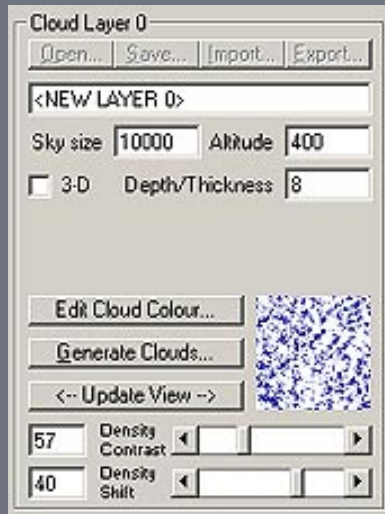
Example:



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For your assistance as well the clouds window:

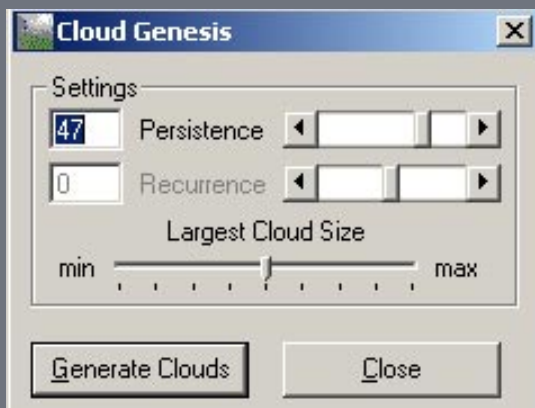


The skysize should have a good size, 10000 is a good value. The clouds should be placed high, 400 in this example.

Furthermore 3D-clouds should be activated. It also works (in this example) without, but with activated 3D-clouds you possibly might get better results.

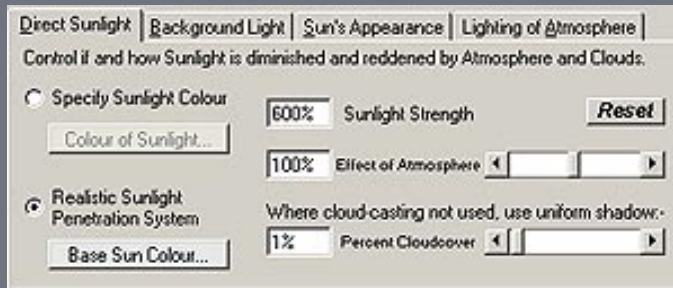
The "density shift" achieves more dense clouds which is an advantage for rays, as these only occur if they contrast with the clouds. Therefore the "density contrast" of the clouds should also be increased.

Small clouds with higher persistence should be generated in the dialogue "generate clouds".



2. the sun

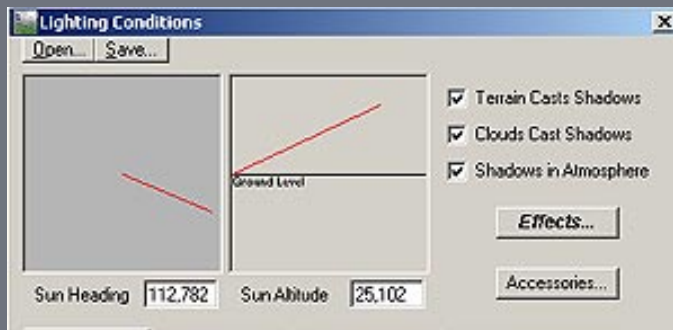
In the dialogue window for the sun only the intensity of the sun can be increased. In this example the sun strength is 600 %. Depending on the strength of the sun more developed or lighter rays can be achieved.



Important: following points in the sun dialogue have to be activated...

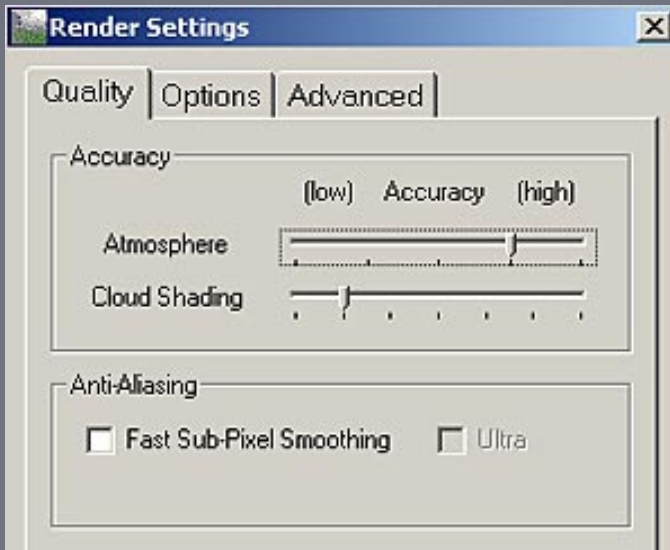
1. Clouds cast shadows u. 2. Multi Directional Shadow lightning 3. Realistic Sunlight Penetration System

Furthermore the "shadow lightness" should be reduced, so that the sun rays become more evident.



3. Render Settings

The slider for accuracy of the atmosphere in the "render settings" should be placed completely at the right or one step before the right. This will result in finer rays, but will also increase the render time a lot.



4. Tips

Following points as tips and also as help:

1. If rays make an impression in a picture depend on the terrain used and the point of view.
 2. The sun colour as well as the cloud colour also are of crucial importance for the optical mode of action.
 3. Increasing light fog often strengthen the sun rays.
 4. Do not despair if the sun rays do not appear where you want them. Often it is a matter of patience and playing with the clouds until the exactly the requested point is lighted.
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5. The settings as an overview

Here I again put all settings together that were used for the above image, with exsept of the clolour settings:

1. Clouds dialogue

- Largest cloud size: middle position
- Persistence: 47
- Sky Size: 10000
- Cloud Lightning Settings: 96%
- 3D: checked
- Altitude: 400
- Depht/Thickness: 8
- Density Contrast: 57
- Density Shift: 40

2. Sun dialogue

- Terrain cast Shadows: checked
- Clouds cast Shadows: checked
- Shadows in Atmosphere: checked
- Multi directional Shadow Lighting: checked
- Shadow lightness: 8.41
- Sunlight strength: 600%
- Effect of Atmosphere: 100%
- Cloudcover: 1%
- Realistic Sunlight Penetration System: checked

Last is only to say that the way the sun rays operate depends on the terrain, the surface and the colours.

P.S: A small example for "extrem sun rays"

.: to the example :.
