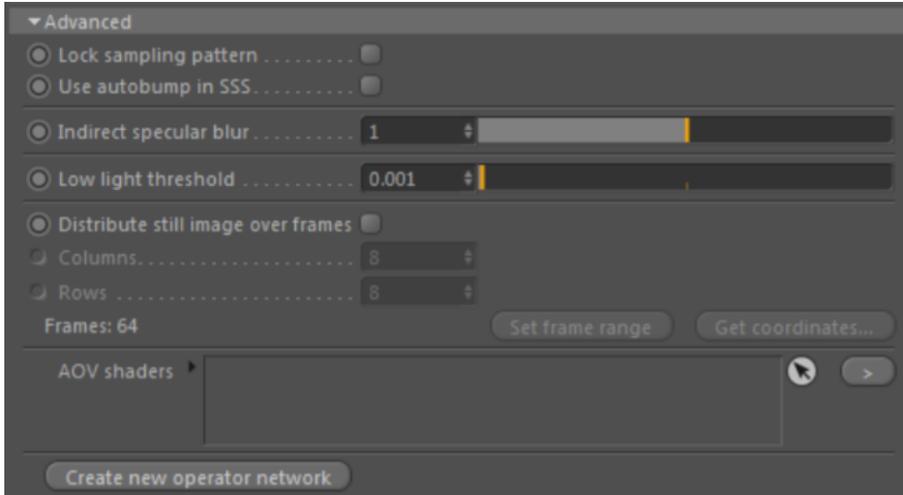


Advanced - settings



These settings provide control over some advanced settings of the renderer.

Lock Sampling Pattern

Locks the AA_seed so that the sampling noise won't change with the frame number (avoiding the film grain look).

Use Autobump in SSS

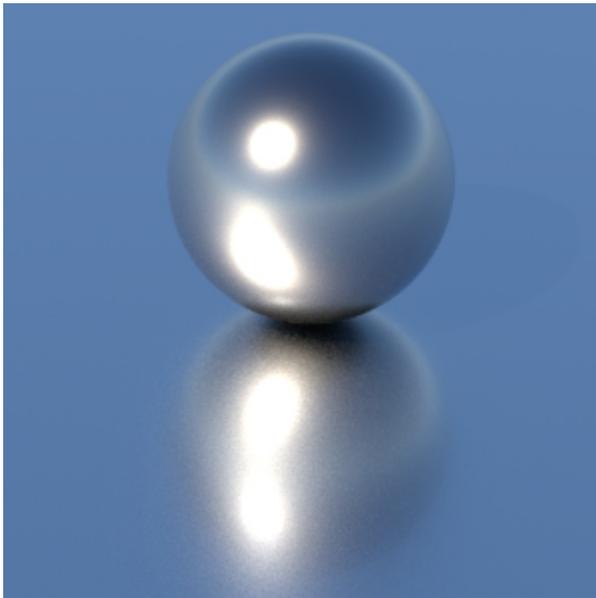
If enabled, *autobump* is visible in SSS. Enabling this option will take into account the effect that *displacement_autobump* has on the ray-traced BSSRDF's result. This helps capture the high-frequency details of the surface more accurately when using *autobump*.

Beware that enabling this option will triple shader evaluations with SSS, resulting in much longer render times.



Indirect Specular Blur

Sets indirect specular blurring to reduce caustic noise. Setting to zero gives the most accurate but also noisy renders, while higher values blur caustics to reduce noise.



1 (default)



5

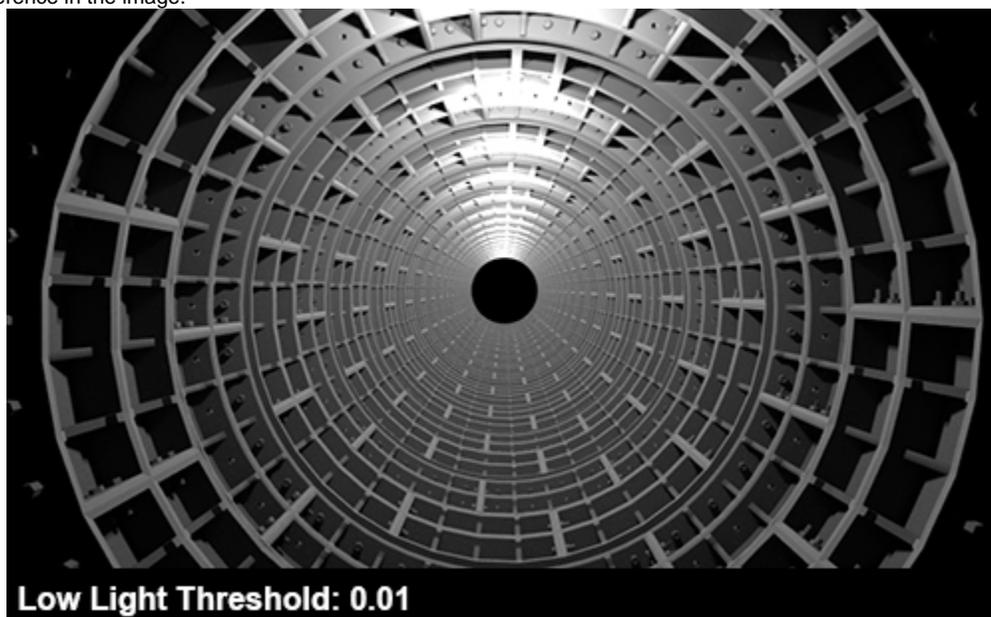
Low Light Threshold

Raising this value can speed up rendering by allowing Arnold to ignore tracing a shadow ray for light samples whose light contribution is below a certain value. The point of *Low Light Threshold* is to save casting shadow rays when Arnold knows that the error from not casting that ray is below a certain amount. This makes sense because below a certain threshold there will be no perceptible difference between shadowed and unshadowed areas.

Roughly, what is taken into account to discard a shadow ray is its maximum possible incoming irradiance, which is linearly related to the light's intensity and decreases with distance. The specific number will vary depending on your exposure and light intensity values, but the default value is reasonable for the default exposure/light intensity values. This will typically help more in scenes with lots of lights with a finite area of influence, like a cityscape for example. It will help much less with a single strong source of light.

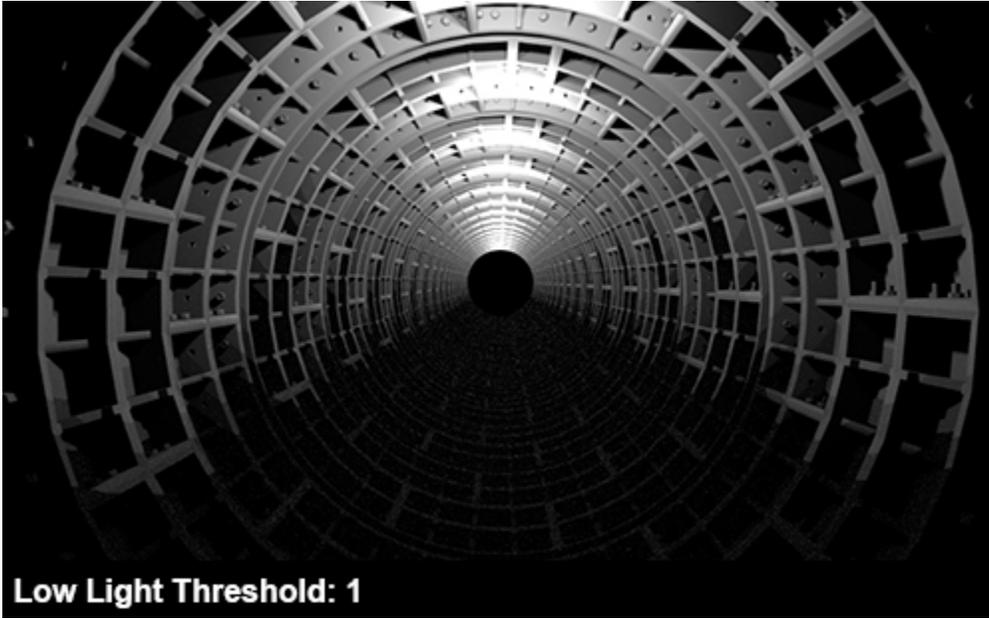
You should never be able to see the boundary when this optimization kicks in. If you can see it, you need to make the threshold lower. The aim is to prune shadow rays that don't contribute to the final image

In the example below, increasing the *Low Light Threshold* to 0.1 shows a good speedup in render time (in this case, more than twice as fast) with little noticeable difference in the image.

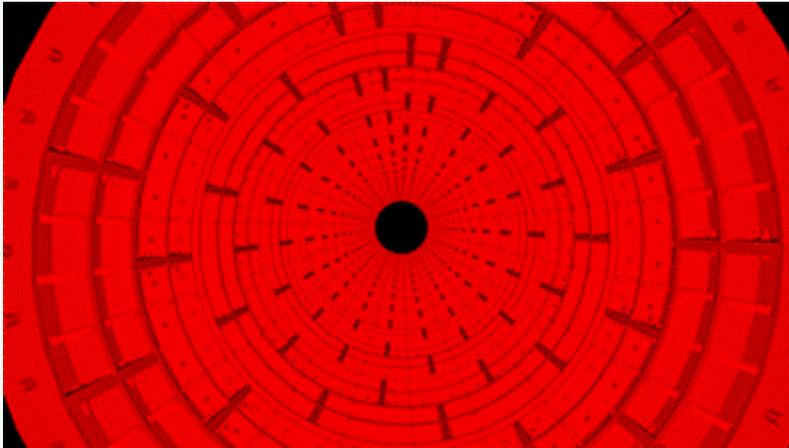


A slightly higher threshold can offer significant rendering speed increases without noticeably darkening the image (rollover image).

However, increasing the *Low Light Threshold* value too much can have an adverse effect on the lighting:



The Utility shader's *nlights* color mode can be used to see how many lights are influencing a shading point when adjusting the *Low Light Threshold*.



Low Light Threshold: 0 to 1. Red = all lights, blue = low values, black = no lights.

Distribute Still Image Over Frames

When enabled the render is split up over the specified number of frames, allowing you to render the slices in parallel. Then you can put the slices together via a script (e.g. in Photoshop).

Columns

Specifies the number of columns of the distribution. The number frames are the columns multiplied by the rows.

Rows

Specifies the number of rows of the distribution. The number frames are the columns multiplied by the rows.

Set frame range

Sets the frame and preview range of the scene according to the specified columns and rows. Also sets the *Frame range* to *All Frames* on the Output panel.

Get coordinates

Displays the coordinates of the slices, which can be used in a script to put them together.

AOV Shaders

A list of shaders that will be evaluated after the regular surface shader. With this, it's possible to add shaders to set specific AOVs without modifying the original shader tree. If an atmosphere or background shader is set, these global AOV shaders will also be run for atmosphere and background contexts. It is useful for instance in the [cryptomatte](#) workflow.

Create New Operator Network

Opens the Arnold [Operator](#) Network Editor.