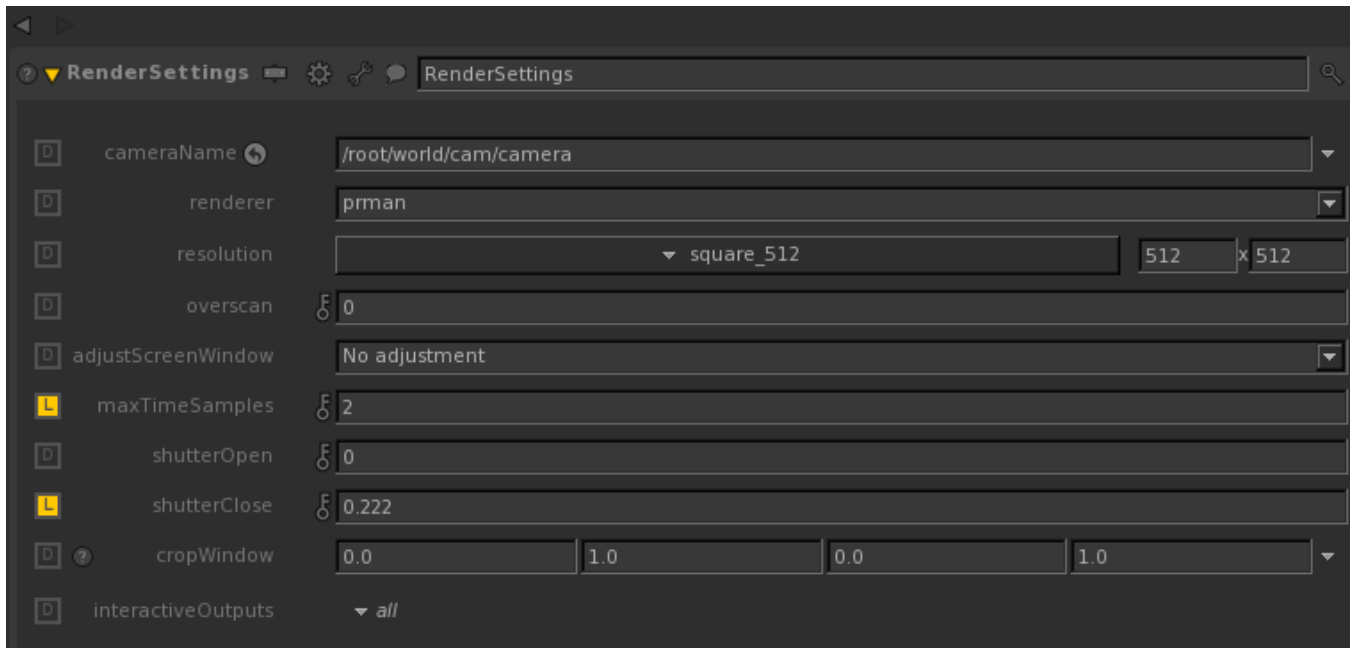


Motion Blur in Katana

Motion blur is enabled when RenderSettings' *maxTimeSamples* is greater than 1. A value of 1 implies no motion blur.



The *maxTimeSamples* parameter is used for two cases:

- For nodes that support multi-sampling such as CameraCreate and PrimitiveCreate - *maxTimeSamples* is the number of time samples for the motion block (MotionBegin/MotionEnd).
- For plugin such as Alembic_In - *maxTimeSamples* is used only as a switch to turn on/off motion blur. Changing it does not modify the number of time samples for the motion block.
To modify the number of time samples for the alembic cache, for example, in Maya's Alembic Exporter, turn on *Frame relative sample* and set its Low and High values.

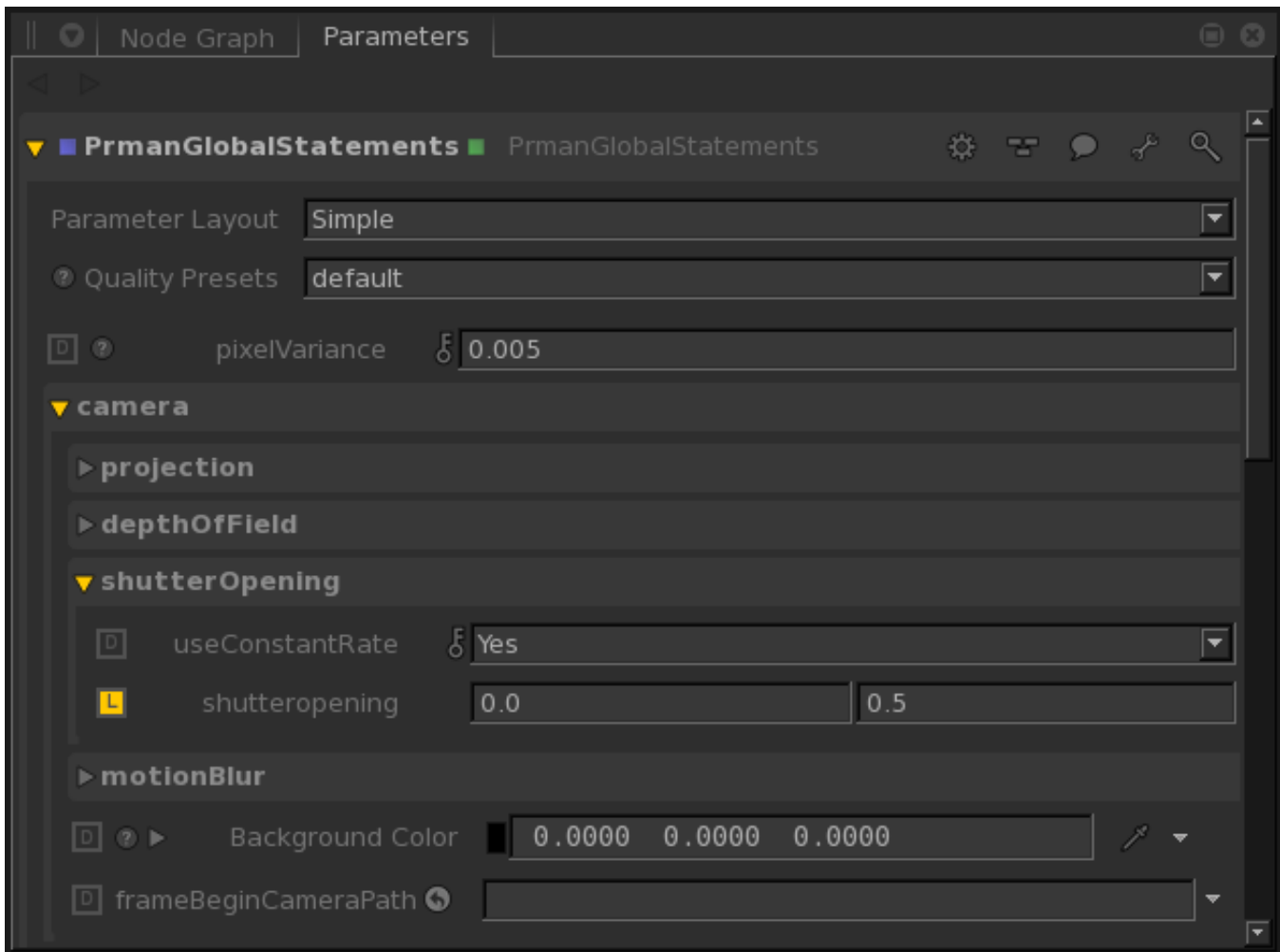
Shutter Open/Close

The *shutterOpen* and *shutterClose* parameters in RenderSettings set the min and max time at which the shutter opens and closes. Open (min) should be less than Close (max). If min is equal to max, there is no motion blur. Moving objects will blur while the camera shutter is open.

Camera Shutter Opening

The *shutteropening* parameter in PrmanGlobalStatements provides control over the speed with which the shutter opens and closes. Its two arguments, *a* and *b*, are fractions of the shutter interval specified by *shutterOpen* and *shutterClose*. Over the first part of the shutter interval, from 0 to *a*, the shutter gradually admits more light; from *a* to *b* it is fully open; and from *b* to 1 it gradually closes. The rate of opening and closing is constant.

Switch the *useConstantRate* parameter to "No" to enable a non-constant rate of opening and closing. This adds eight more arguments, *c1*, *c2*, *d1*, *d2*, *e1*, *e2*, *f1*, and *f2*. The two points (*c1*,*c2*) and (*d1*,*d2*) specify the rate of the shutter opening motion as control points of a bezier curve between (0,0) and (*a*,1). Likewise, (*e1*,*e2*) and (*f1*,*f2*) specify the shutter closing as a bezier curve between (*b*,1) and (1,0). More detail is available in the [Shutter](#) documentation.



Adjusting Samples

When there is a lot of motion blur, it is important to increase the number of *maxsamples* on the raytrace hider to see the details in the blur. Note that higher samples will take longer to render.

Limitations

Currently, Katana does not support multi-sampling for CameraCreate's camera attributes except for the camera transform. However, if the camera is via Alembic_In, camera field of view can be included for the motion blur. See [Camera Field Of View Motion Blur](#) for more information.