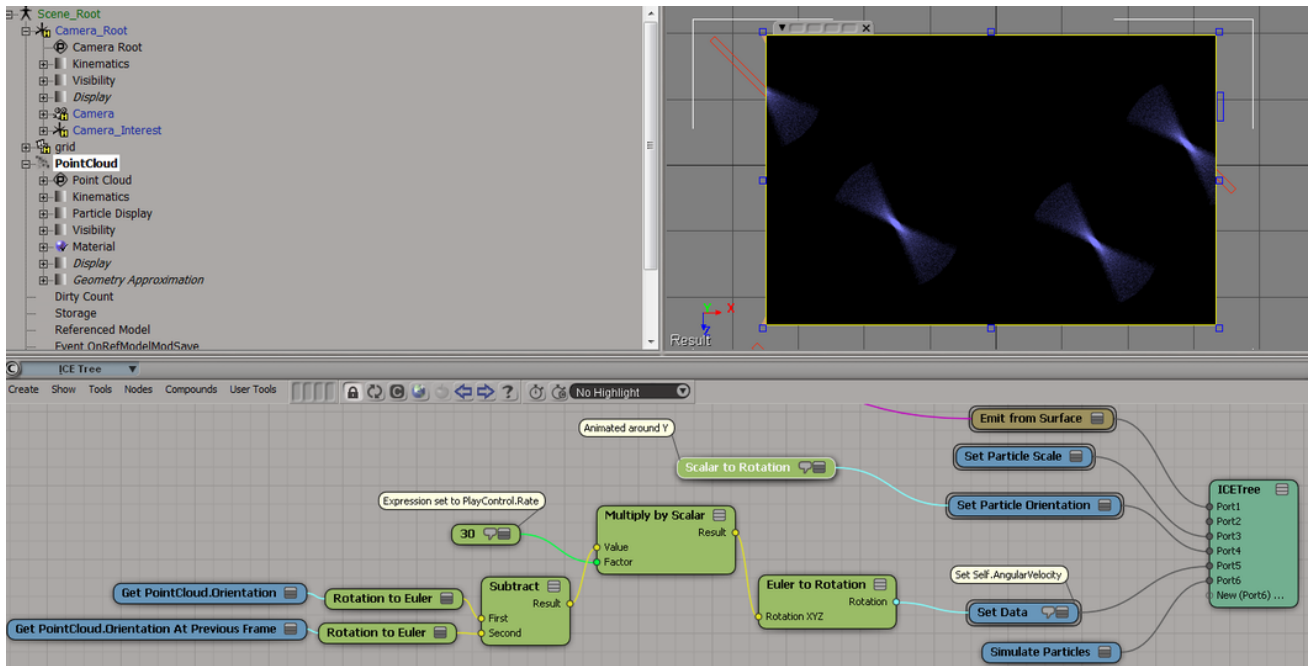


# ICE Motion Blur

To have motion blur on points or strands, SltoA uses the following attributes:

- PointVelocity for linear transformation motion blur.
- AngularVelocity for rotational motion blur. Note that this attribute does not come for free, you have to set it in the ice tree as shown in the snapshot: get the rotation, subtract it from the one at the previous frame, and multiply it by the frame rate. This way you have the angular velocity (radians per second). Finally, set this data as Self.AngularVelocity.
- StrandVelocity for linear deformation motion blur on strands.



For cases where sub-frame motion blur is needed, you must enable **Exact ICE** Blur in the rendering options. If enabled, SltoA does not require the velocity attributes to be defined for points and strands. Instead, the point cloud geometry is evaluated at all the motion blur times, so giving much better results. But there is a price to pay since it requires evaluating the geometry several times, which can be quite expensive. And, there are two limitations:

- The point cloud must be cached to disk with a number of subframes per frame at least equal to the number of deformation motion blur keys. See the [sub-frame motion blur](#) page for details.
- It does not work for point clouds with a varying number of points per frame (for instance, basic emissions). It will be automatically disabled, but you should do it yourself in advance to save time to the exporter.

These are the steps to follow to correctly cache a simulation on disk and read it back:

- Open Cache Manager (View->Animation>Cache Manager)
- Go to the Write Tab
- Add point cloud under Objects (use the Add Selection or Pick buttons)
- Hit the Write Cache button
- Go to the Read Tab
- Under Add to Cache List, select the cached data generated previously
- Under Apply to Objects, Add point cloud to the list
- Select the cached data under Cache List and point cloud under Apply to Objects
- Hit Apply All

 See the [rendering options](#) for details on tuning the motion blur settings.

