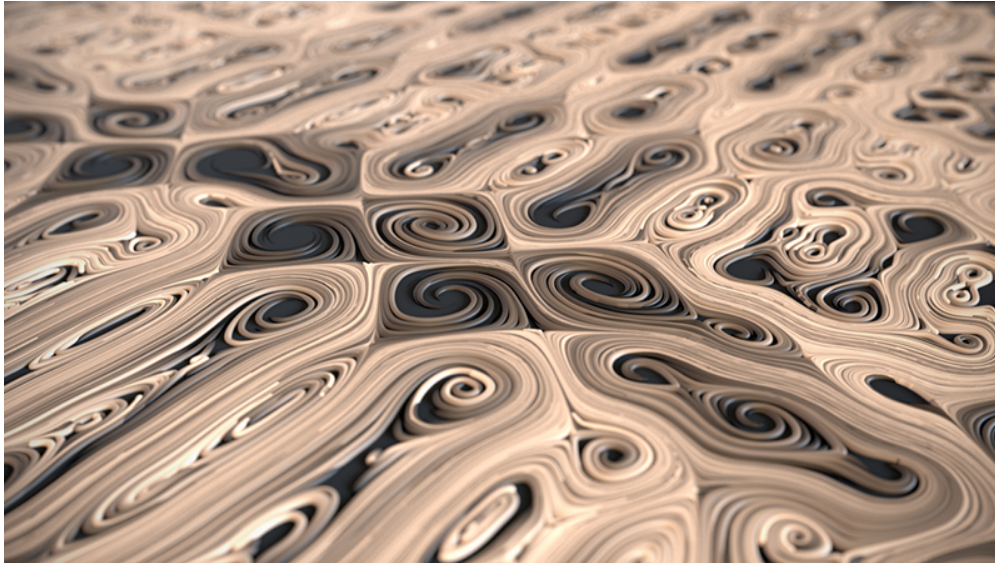
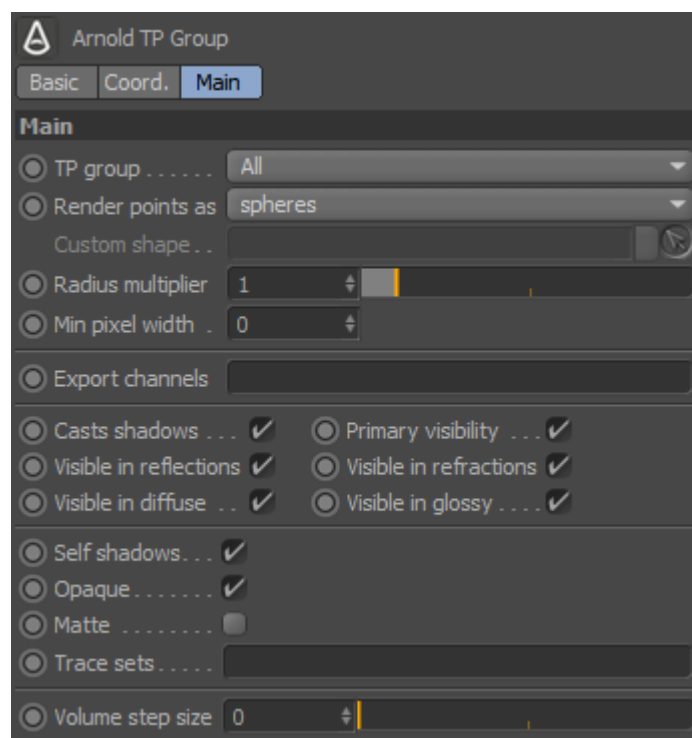


Thinking Particles



Thinking Particles rendered as hair splines using a Tracer object

You can render **Thinking Particles** with C4DtoA. However, you must first create an **Arnold TP Group** (*Plugins > C4DtoA > Arnold TP Group*) or a **Particle Geometry** object and select the particle group you wish to render.

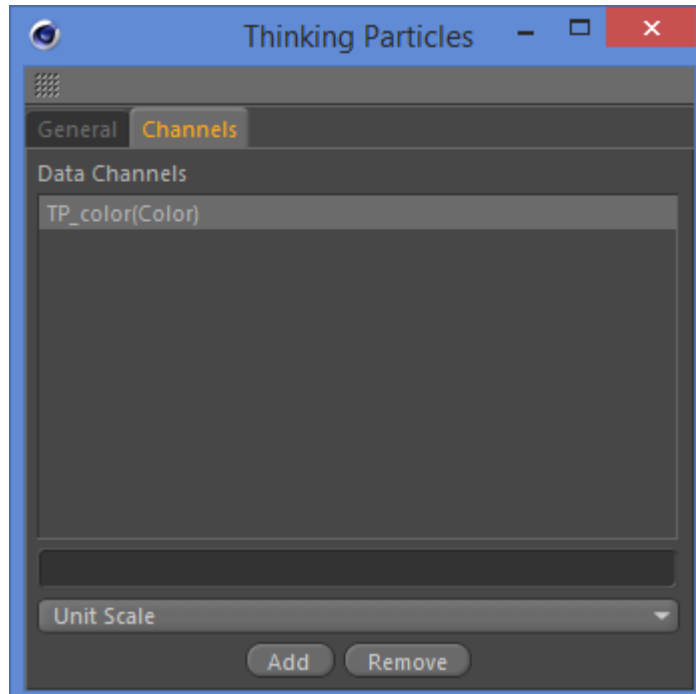


Export channels

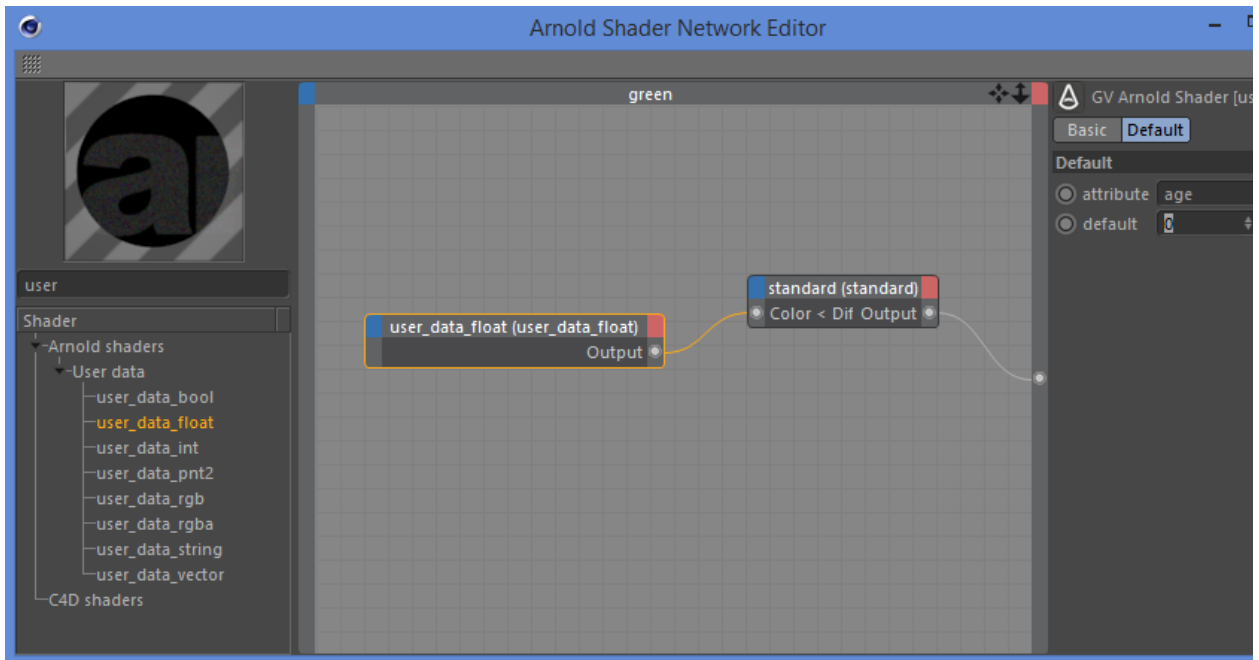
You can export channels of Thinking Particles as user parameters with this field. Define channel names separated with spaces. The following built-in channels are available:

- velocity (vector)
- age (float)
- mass (float)
- color (RGB)

You can also define any custom TP channels. To see the available custom channels click on **Simulate > Thinking Particles > Thinking Particles Settings...** and select the **Channels** tab. Channel name must be set without the type, so if you have a channel listed *TP_color(Color)* you have to set *TP_color* to the export field.

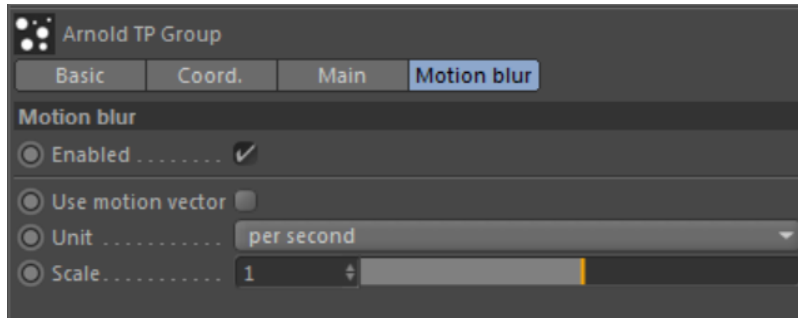


You can then use a `user_data` shader to read the exported channel. Use the channel name in the **attribute** field.



Motion blur

The **Motion blur** tab offers settings to use the velocity channel calculating the motion blur effect. It can be useful if the particles are not interpolated in sub-frame, e.g. they are loaded from an *Alembic* file.



You can enable/disable the vector motion blur, define the unit of the velocity channel (*per second* or *per frame*) and scale the motion blur effect (multiplier of the velocity values). The Thinking Particle group must have a velocity channel (named **Velocity**) otherwise the vector motion blur has no effect.