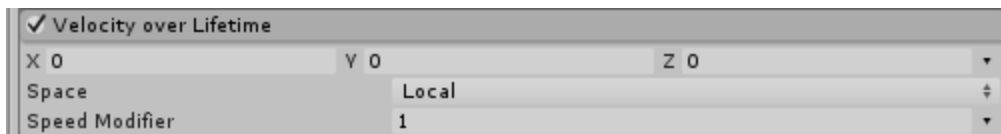


Particle System Improvements (2017.3)

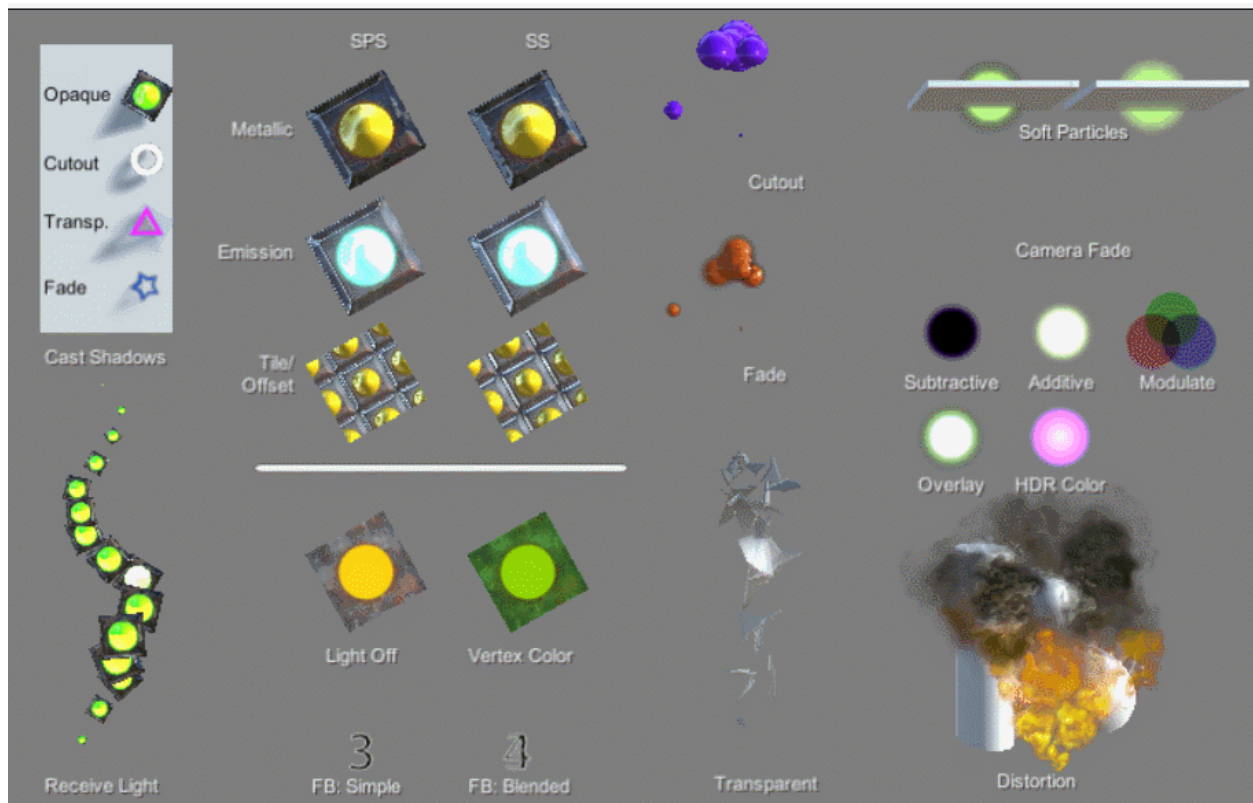
Speed Modifier

The Velocity over Lifetime module now contains a new curve, which allows particle speeds to be controlled over the duration of a particle's lifetime. This makes it possible to change the speed of particles without affecting the direction they are travelling in, and includes support for negative speeds, which is useful for creating gravity/vortex effects.



Standard Particle Shaders

We are releasing *surface* and *unlit* shaders for use with particles. They provide all the core particle functionality that you would expect, via a similar interface to our existing Standard Shader. It is now easy to configure blend modes, alpha testing thresholds, soft particle distances, and many more features. Support for blended flipbooks and distortion effects is also built in. The surface shader also makes it easy to support Normal Mapping and PBR lighting.





2. SPS_Metallic



Shader Particles/Standard Surface

Blending Options

Rendering Mode Fade

Main Options

Flip-Book Mode Simple

Two Sided ☒

Enable Soft Particles ☒

Near fade 0

Far fade 1

Enable Camera Fading ☒

Near fade 0

Far fade 1

Enable Distortion ☒

Strength 1

Blend 0.5

Maps

☒ Albedo   1

☒ Metallic Smoothness 1

☒ Normal Map 1

Emission ☒

☐ Color   0.384

Tiling X 1 Y 1

Offset X 0 Y 0

Advanced Options

Render Queue Transparent 3000

Required Vertex Streams

Position (POSITION.xyz)

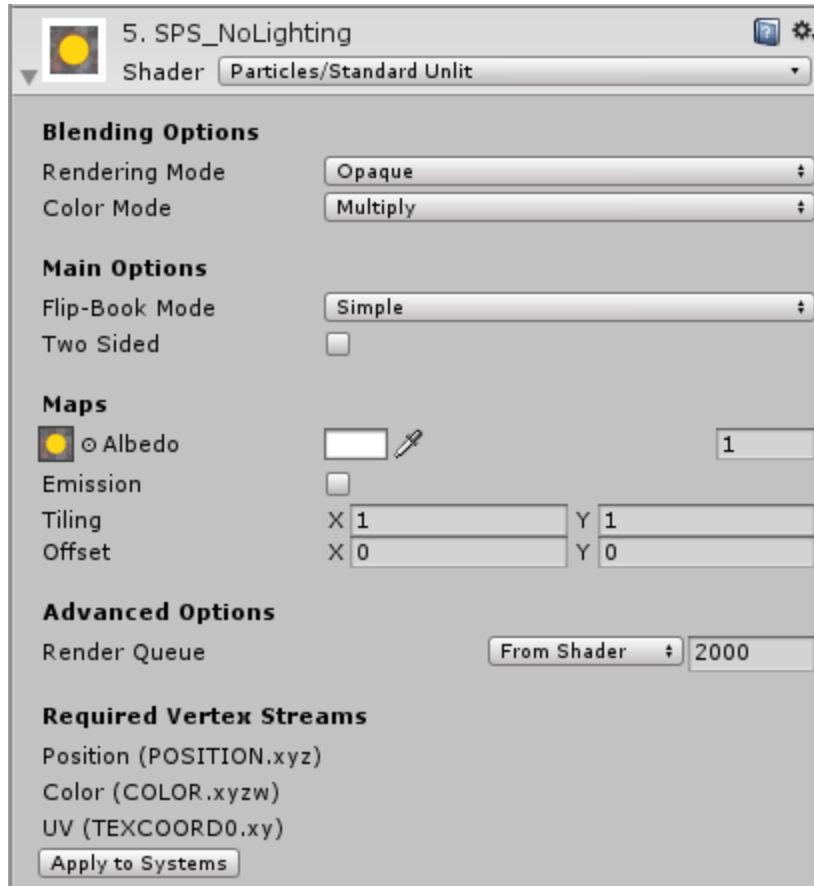
Normal (NORMAL.xyz)

Color (COLOR.xyzw)

UV (TEXCOORD0.xy)

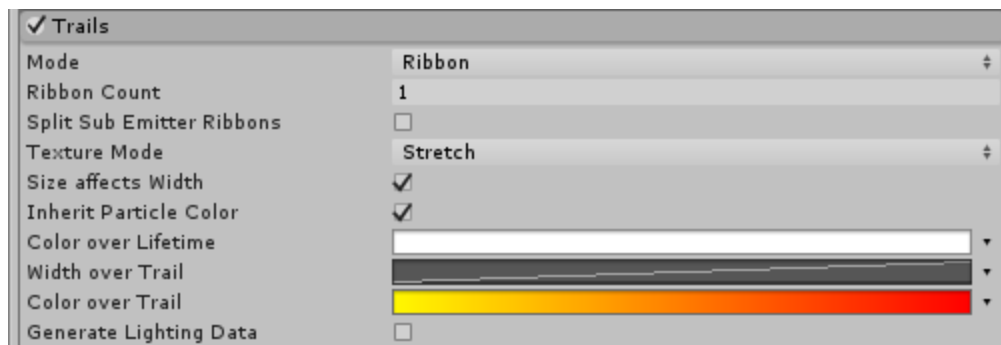
Tangent (TANGENT.xyzw)

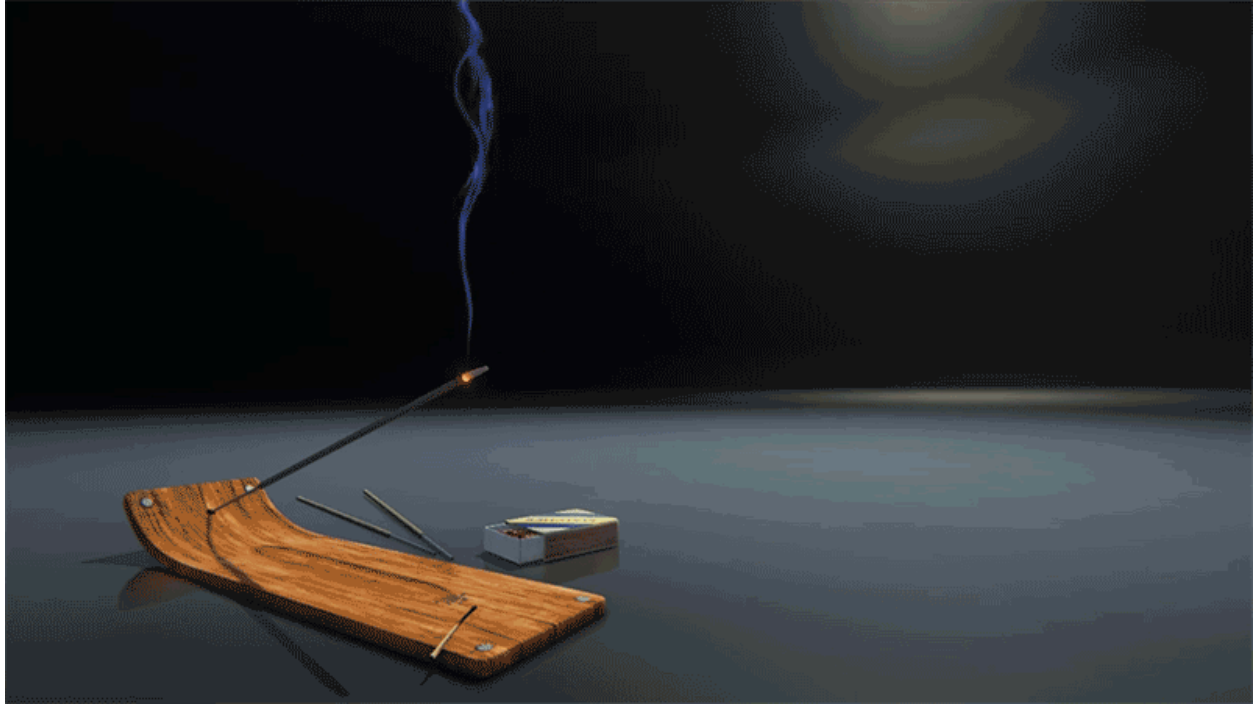
Apply to Systems



Ribbonized Particle Trails

There is a new mode option in the Trails Module, called Ribbon Mode, which allows particles to be connected based on their age, instead of each particle leaving trails behind it. Due to each point on the trail being represented by a particle, it is possible to use this mode to create animated trails, for example by using it in conjunction with the Noise Module.





Miscellaneous

When using meshes in the Shape Module, it is now possible to use meshes whose primitive type is Line or LineStrip. This makes it easy to spawn particles along lines, instead of only on the surface of a mesh.

Unity has added support for 32 bit meshes in Unity 2017.3, finally dropping the constraint for meshes to have 65536 or fewer vertices. This support has been fully integrated for Particle Systems, meaning you can spawn on the surface of these new large meshes, and render particle meshes with 32 bit indices too. The latter will likely have very high performance costs, but it is at least supported!

We've also made some improvements to the editor, to improve your workflow when authoring effects:

- We've moved the debug checkboxes from the Inspector, into the Scene View Overlay, making them more accessible (Resimulate and Show Bounds)
- There is a new dropdown in the Scene View Overlay called "Simulate Layers", which will preview all looping effects, rather than only the selected effects. Use the Layer Mask to decide which effects to preview
- The Scene View FX dropdown has a new option for rendering Particle Systems. This allows you to show/hide Particle Systems, as a way of decluttering your Scene View

