

HowTo MicroMacroVerse

Create an HTTP server, where you can launch the application from. (Preferred: Atom.IO with LiveServer)

When launching from project root folder Select code and on the index.html “Start Project”.

The application starts with the animated view, which can be deactivated and reactivated by pressing the C-Key.

You can rotate the camera by pressing the left mouse button and move the mouse around.

With the 'W' and 'S' Key you can move your camera forwards and backwards respectively.

Relevant for all scenes

- All scenes have a skybox with 6 sides to show an environment.
- All scenes use a phong shader (generally set as root Node)

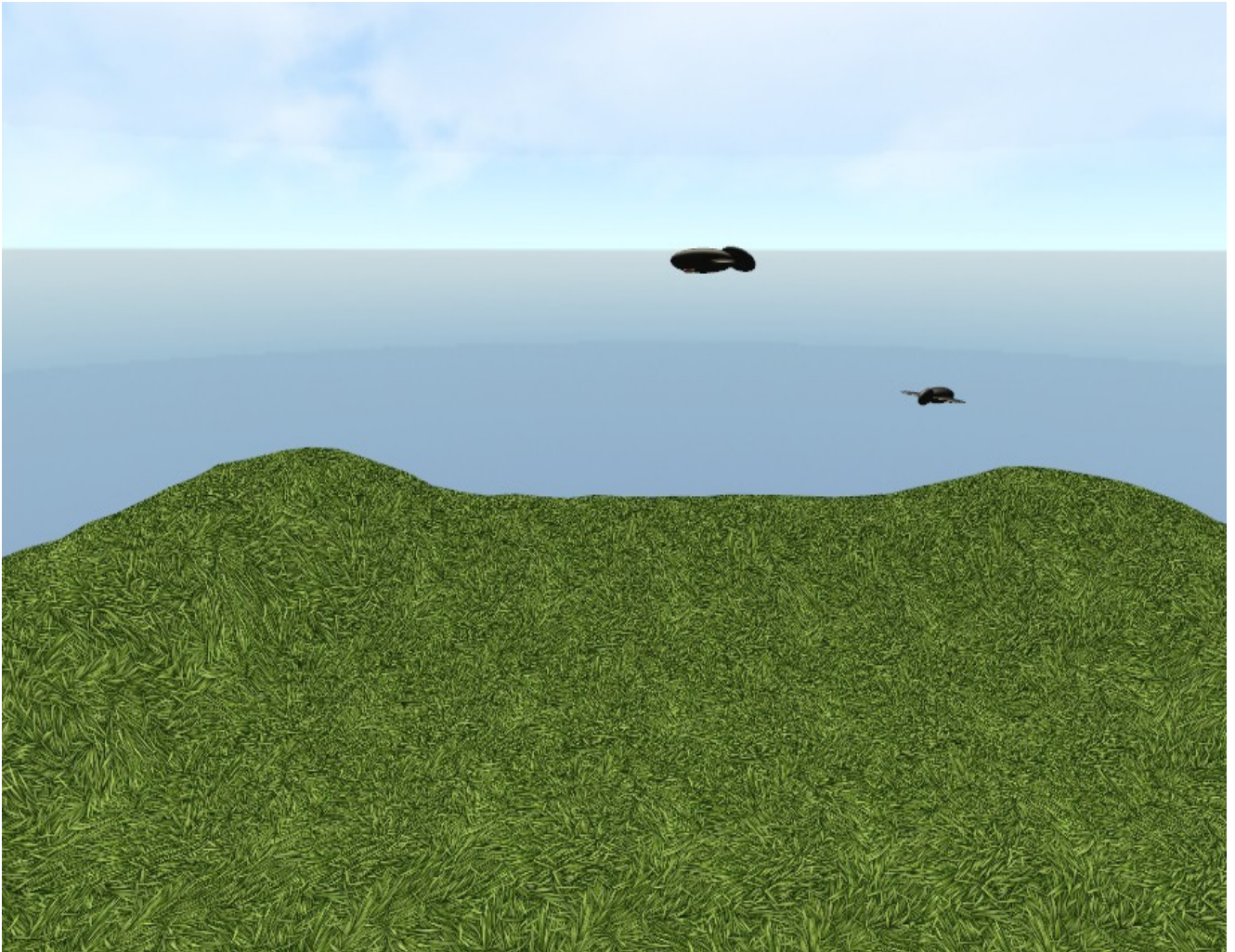
1. Scene Solarsystem



This scene shows a solar system with planets rotating around the sun. The light source in this scene is the sun and the lighting is applied to all planets.

Aside from that every object here has a texture and a skybox is also present.

2. Scene Earth with Birds

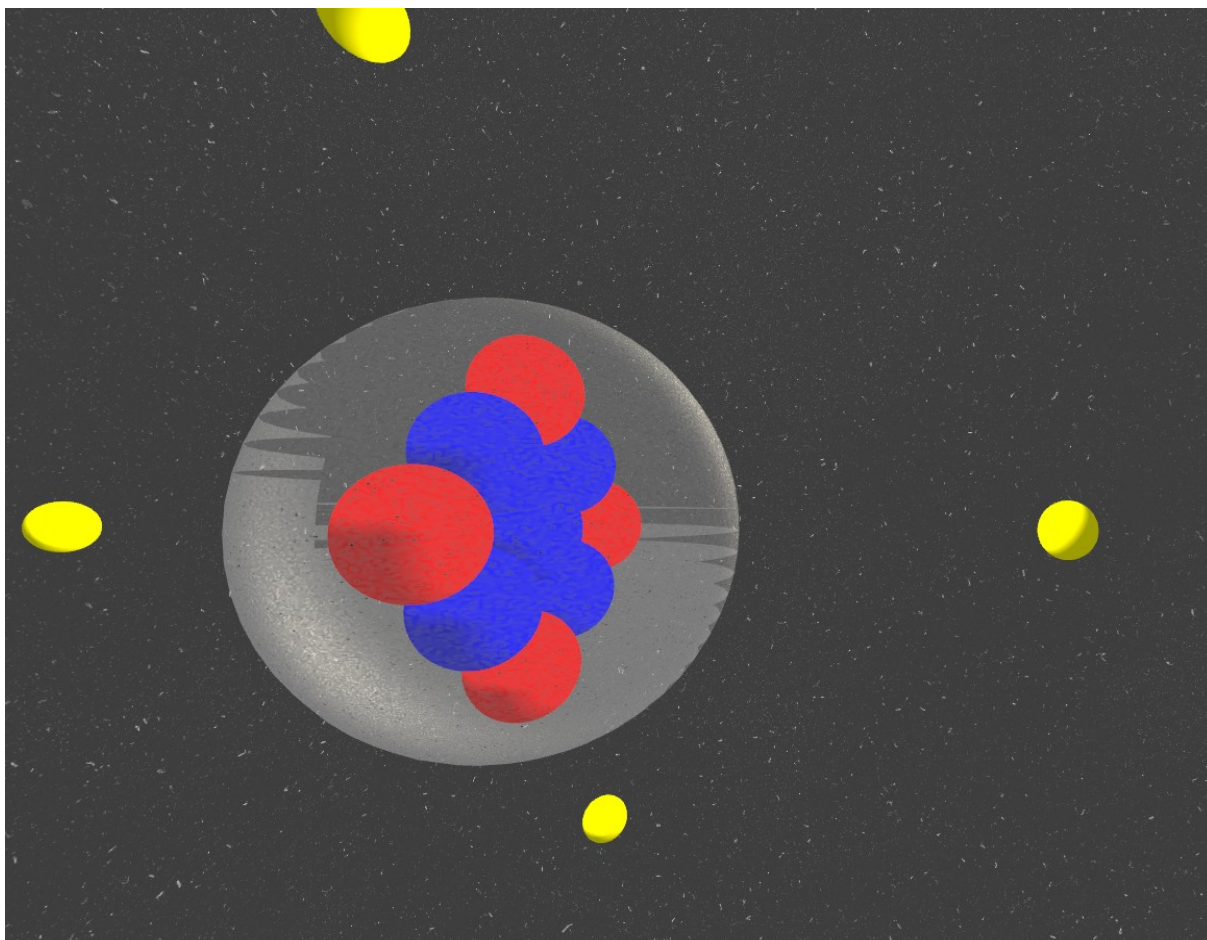


Now a surface of an earth-like planet is shown. There are also three birds flying around. For the surface is made up of a grid of vertices, which are transformed by our heightmap shader in a way that the surface has hills.

Special Effect

- Heightmap

1. Scene Atom



The last scene is detailed look on one beryllium atom. Electrons rotating around the nucleus . Inside the nucleus are protons (red) and neutrons (blue). For coloring the atom particles, we use a special shader that uses a static color and phong shading. For the nucleus we use a texture that is semitransparent.