



Project Portfolio

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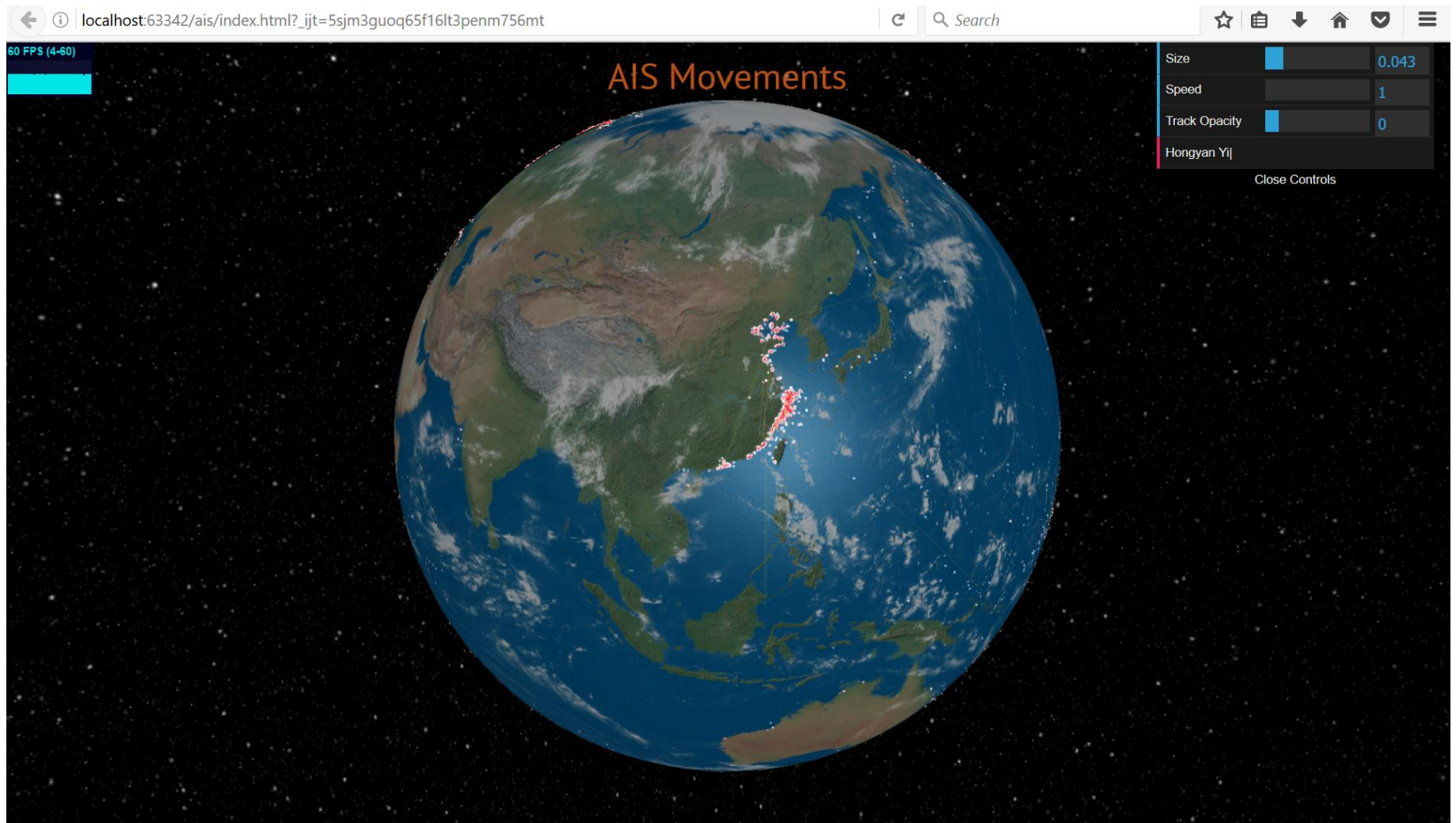
Overview

These are Graphics / GIS projects that I implemented for industry or research.

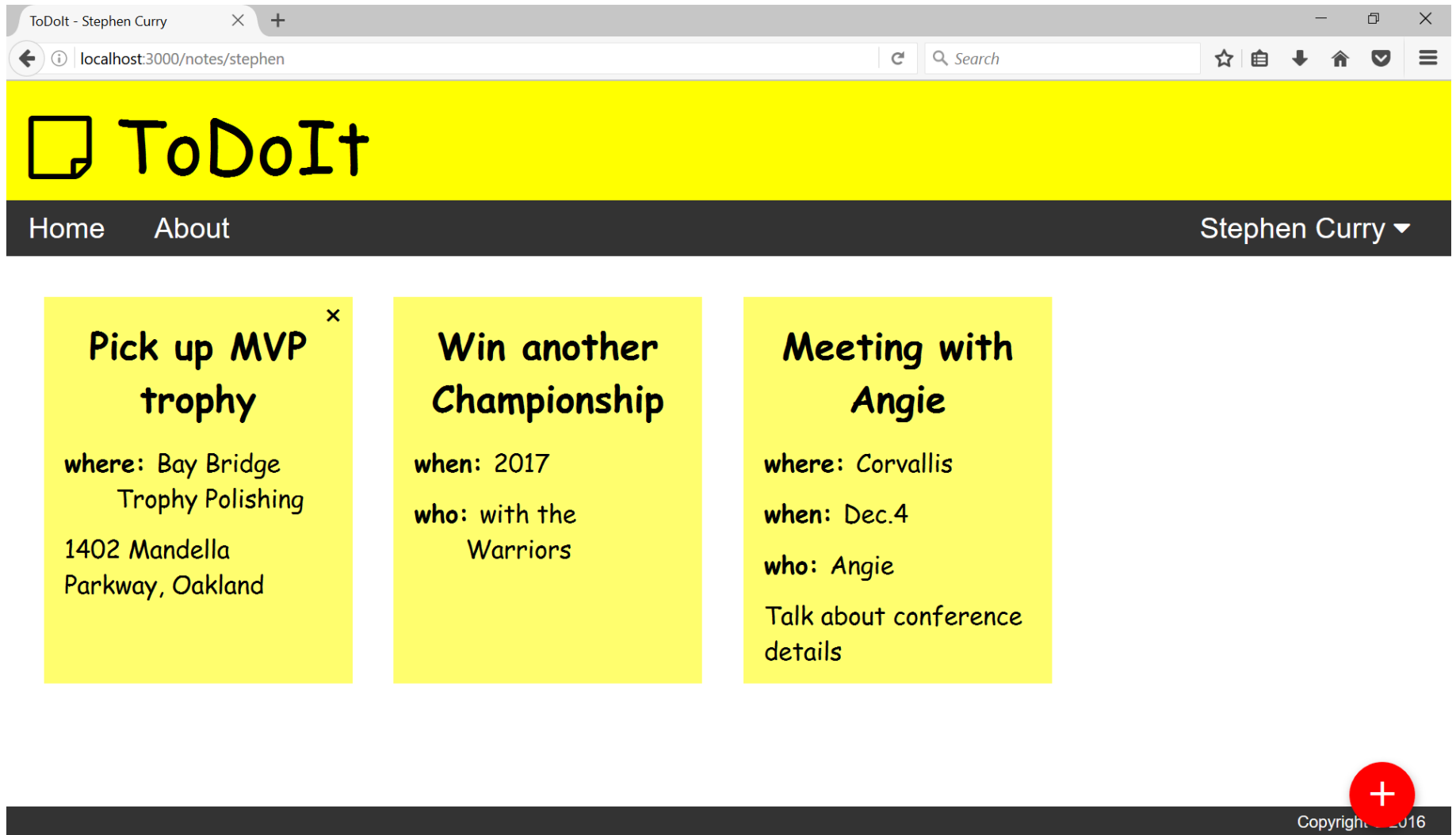
Specifications

C / C#.NET / JavaScript / HTML / CSS / OpenGL / WebGL / GLSL / RenderMan / OpenCL

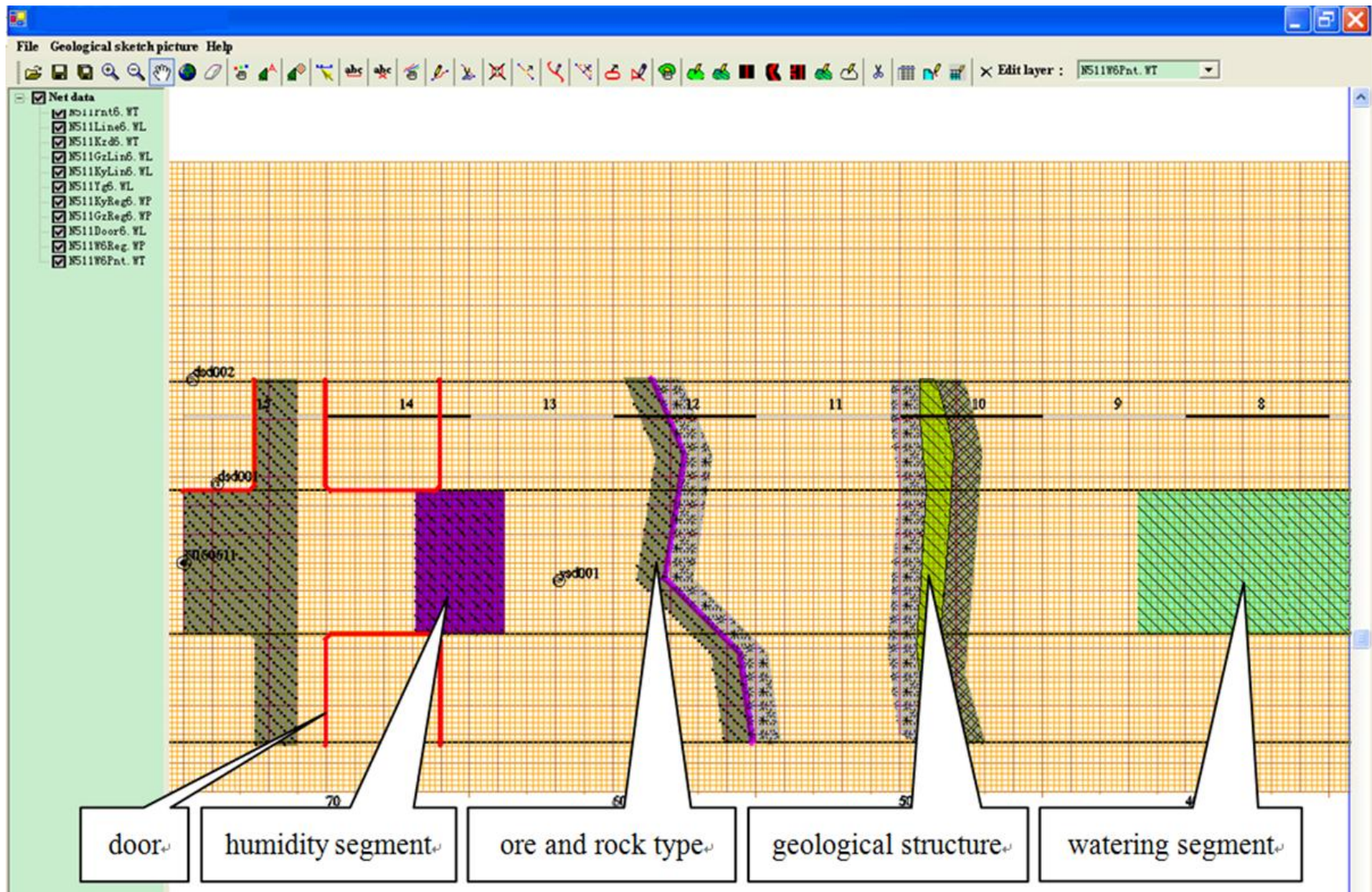
- Web applications: Visualized global ship movements on 3D Earth; Dynamic Website - add ToDo Note for different users.
- Implemented subsystems of Mining Map Making and Data Management System.
- Developed software to identify underground water on geological maps.
- Developed 2D/3D Graphics projects, covered Texture mapping, Animation, Lighting, Transparency, Point Cloud, Geometric Modeling, Cutting Plane, Isoline, Isosurface, Isovolume, Vector Cloud, Streamline, Probe Ribbon/Blob Trace, Hyperbolic Geometry Map, Noisy, ChromaDepth, Displacement/Bump Mapping, Magic Lens, Tessellated Bézier Patch.



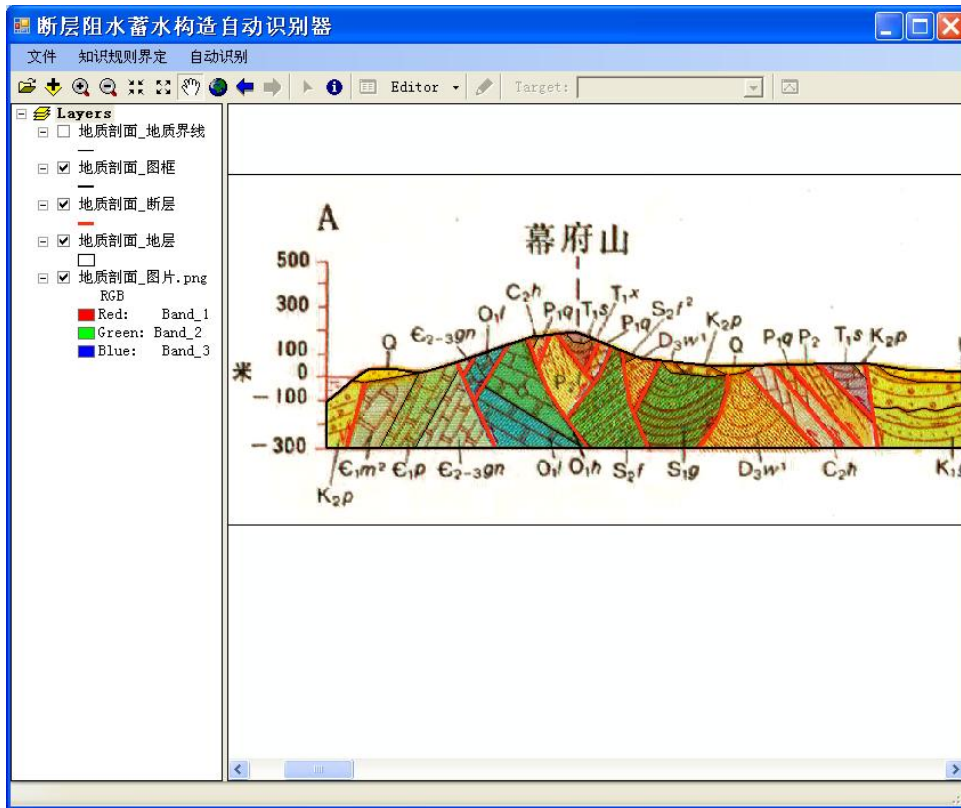
Web Mapping - Global Ship Movement Visualization



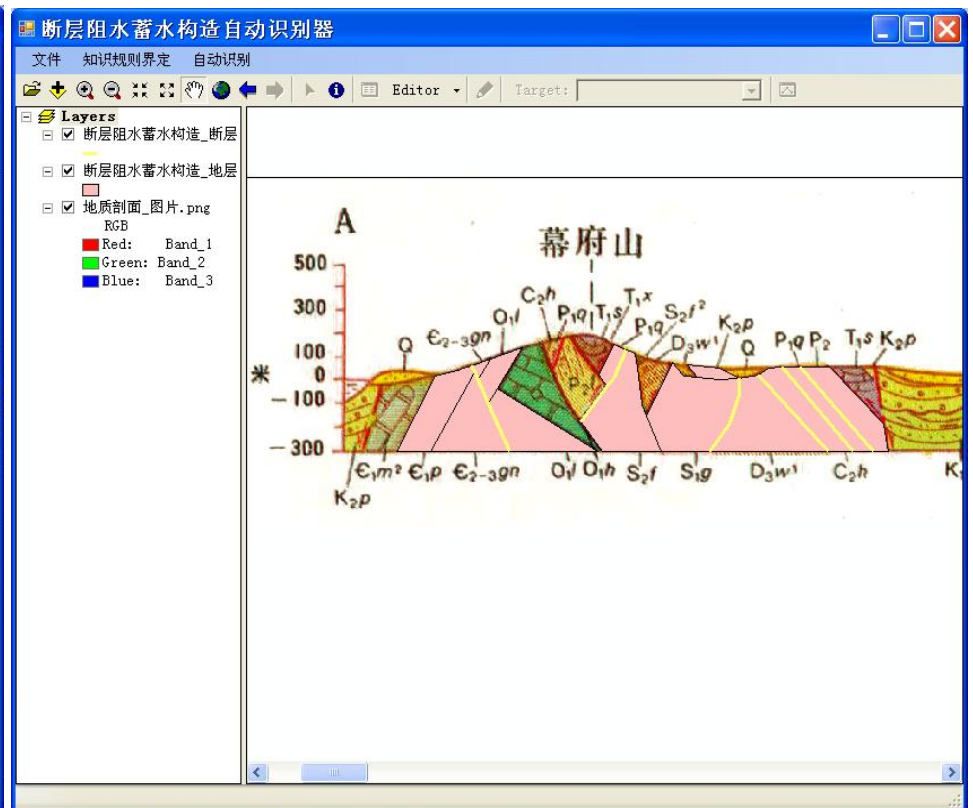
Dynamic Website - add ToDo Note for different users



C#.NET - MapGIS - Mining Map Making and Data Management System

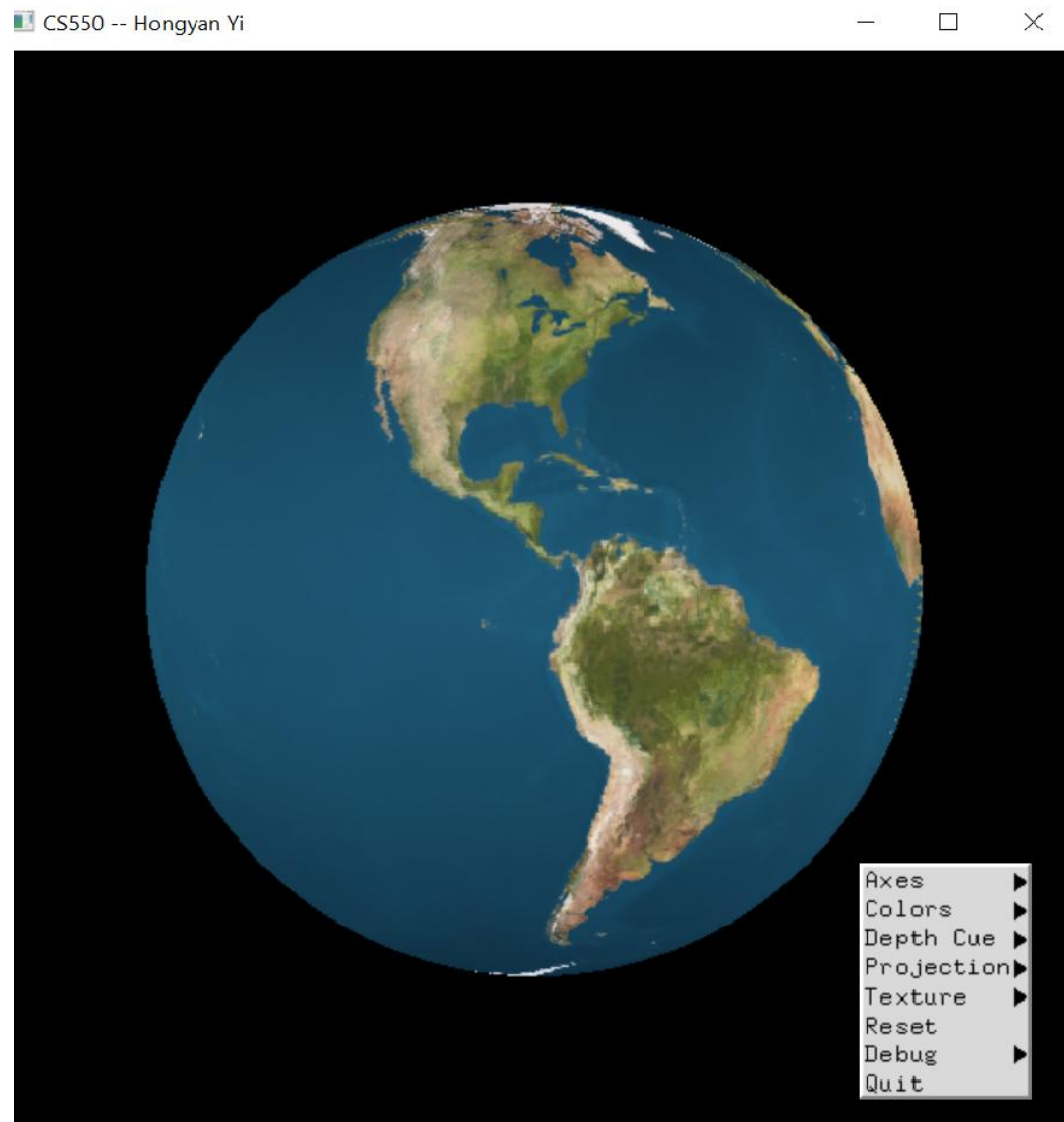


Before Identify

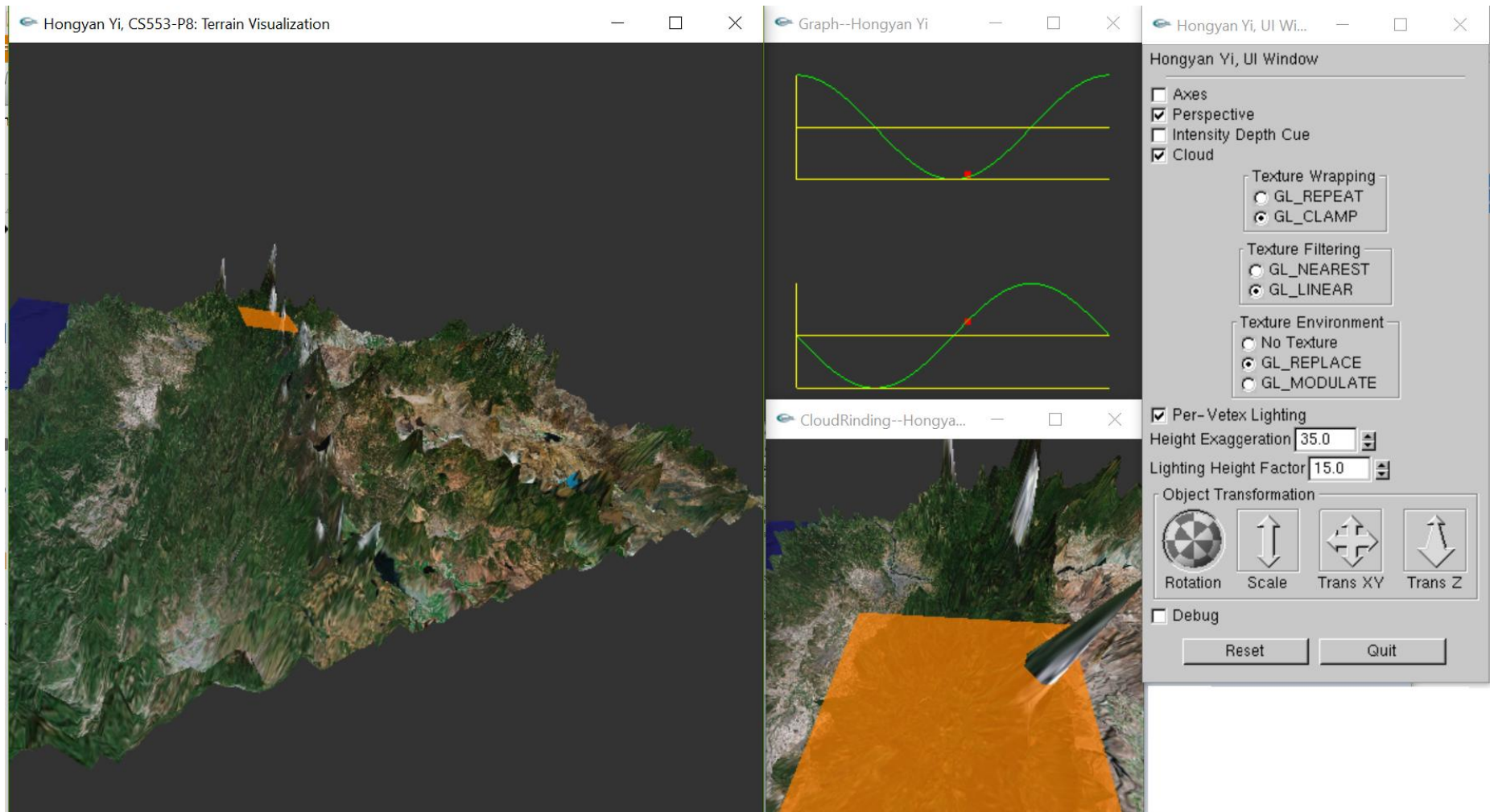


After Identify

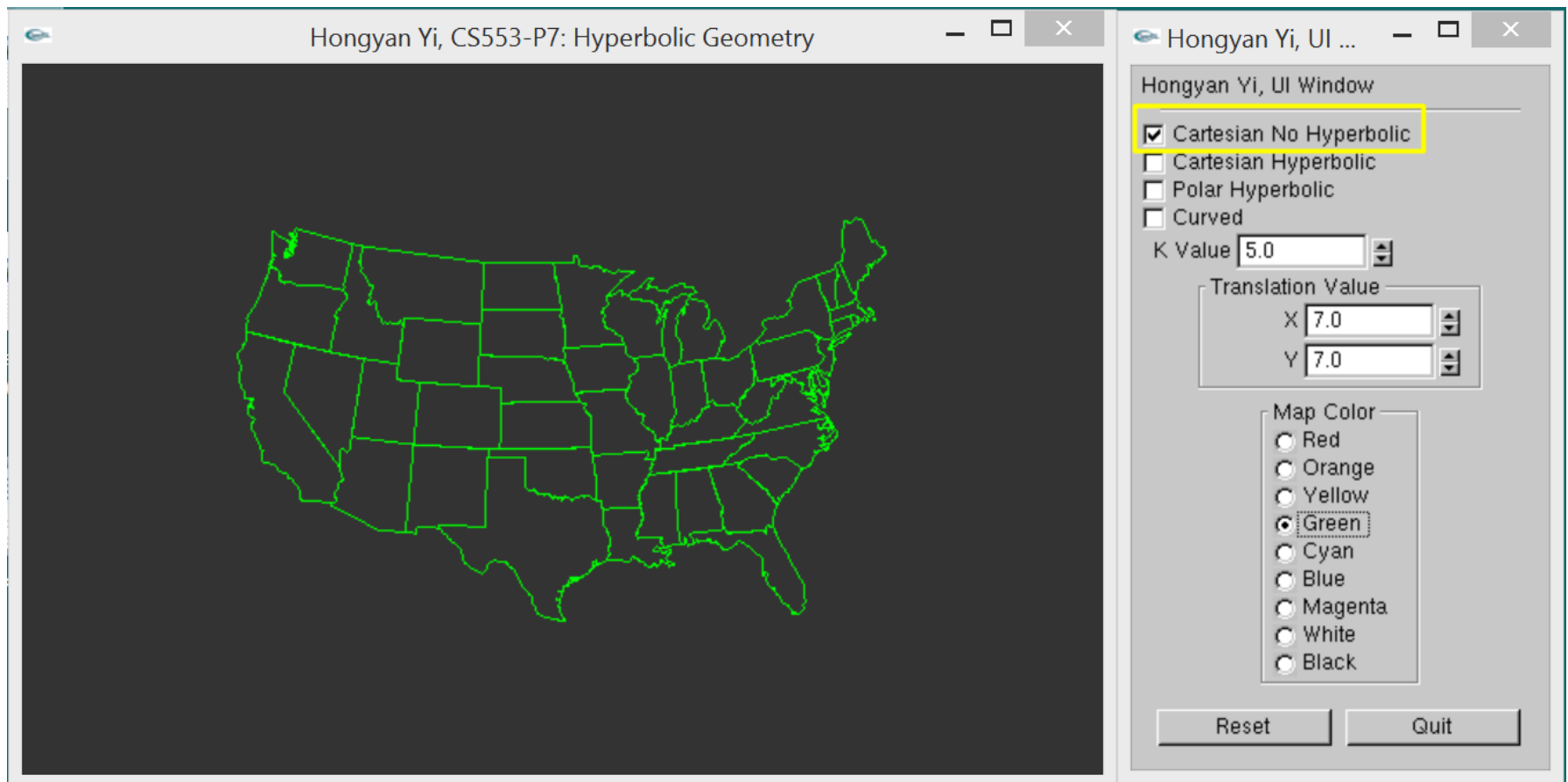
C#.NET - ArcEngine - Identify underground water on geological maps



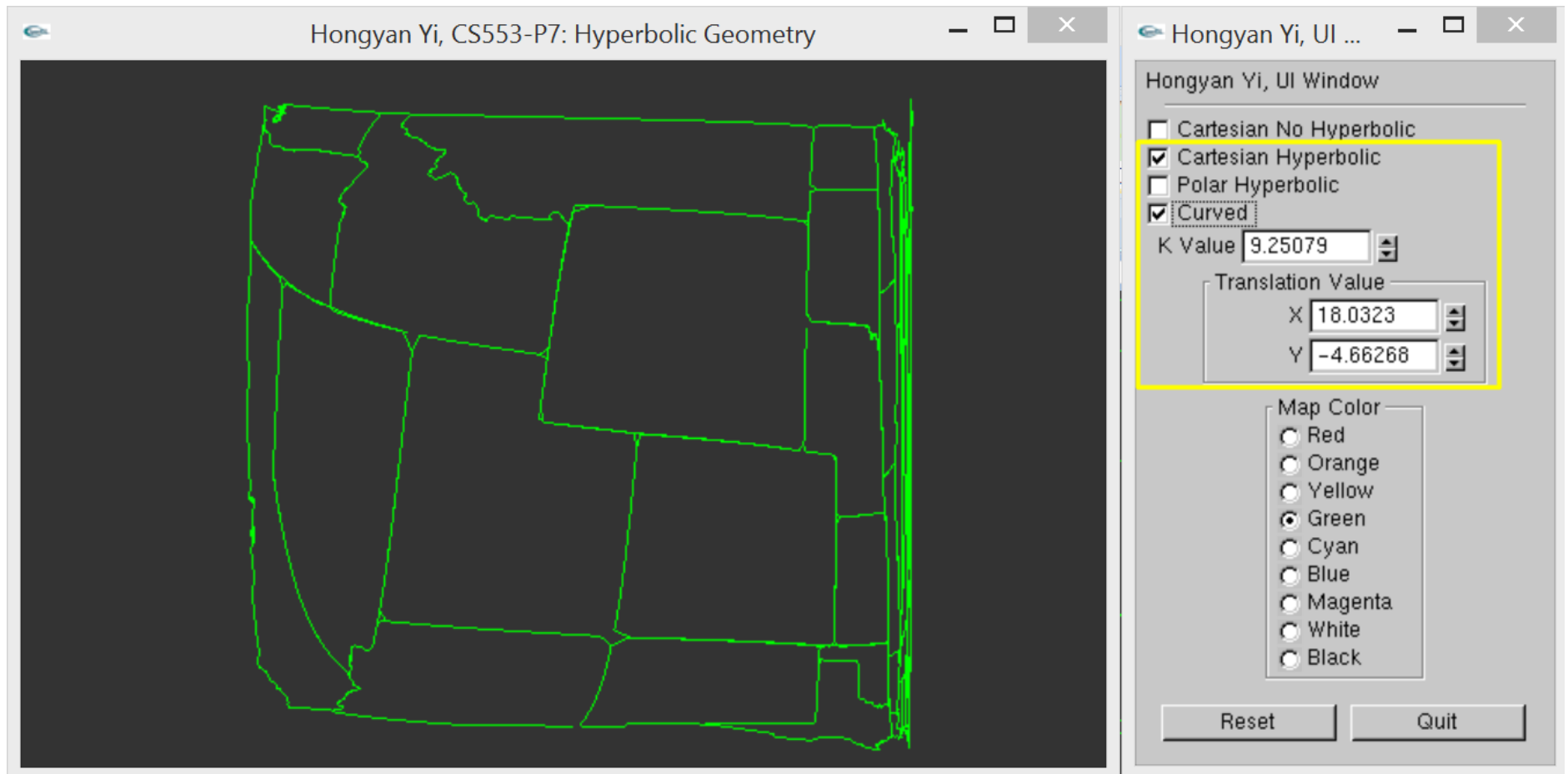
C - OpenGL - Texture mapping - Animation



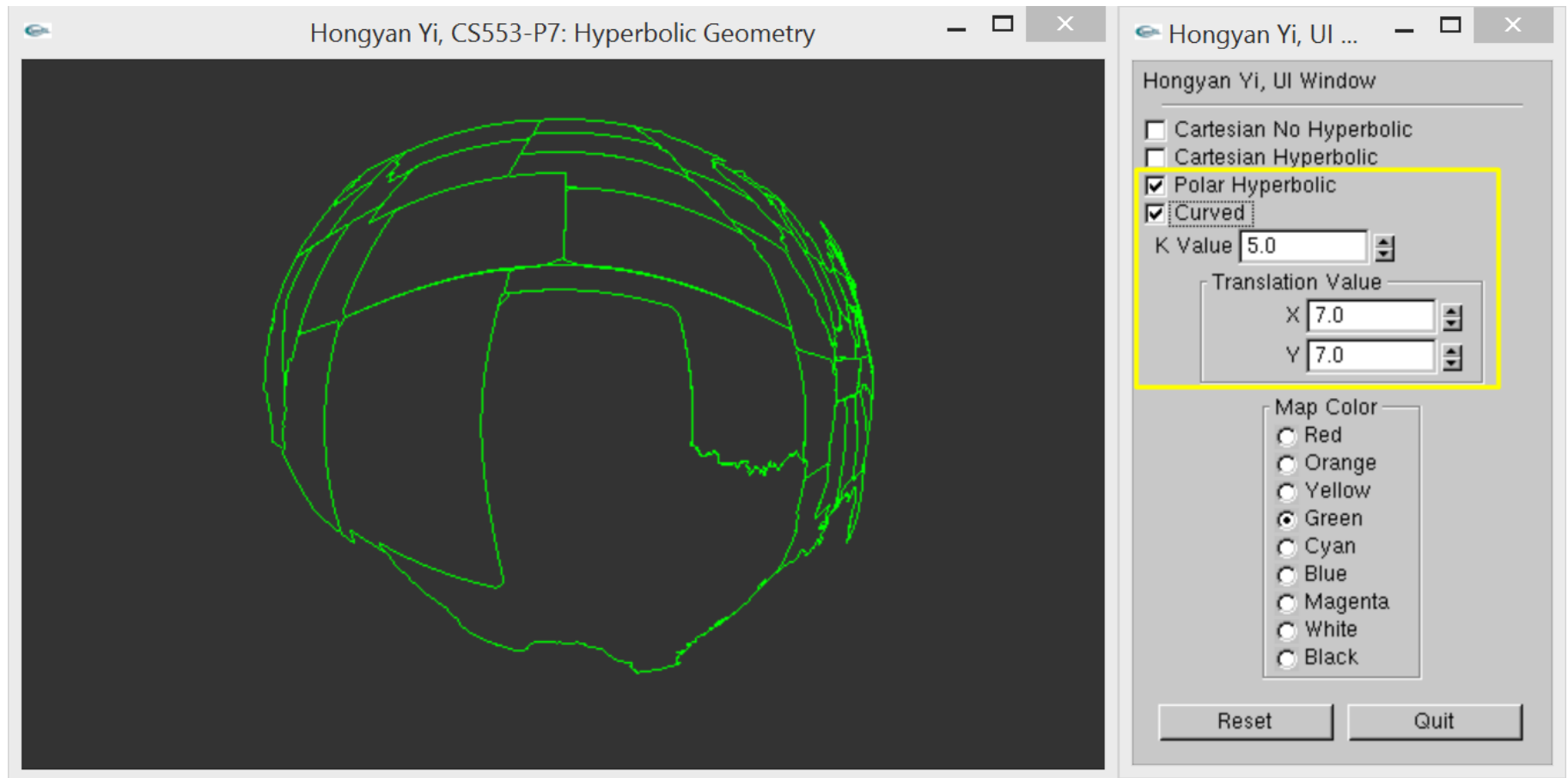
C - OpenGL - Terrain Visualization - Multiple View



C - OpenGL - Cartesian no hyperbolic



C - OpenGL - Curved Cartesian Hyperbolic



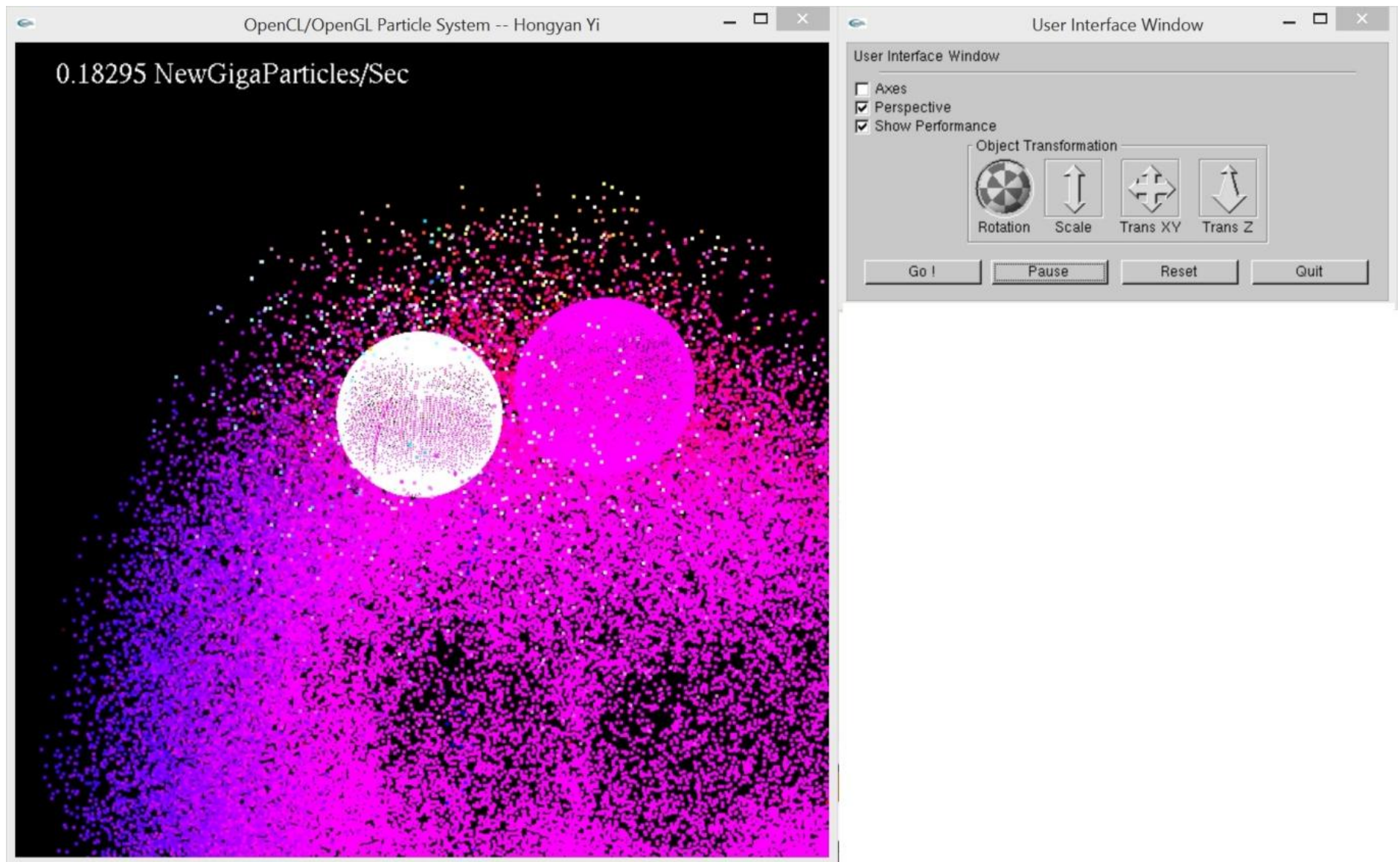
C - OpenGL - Curved Polar Hyperbolic



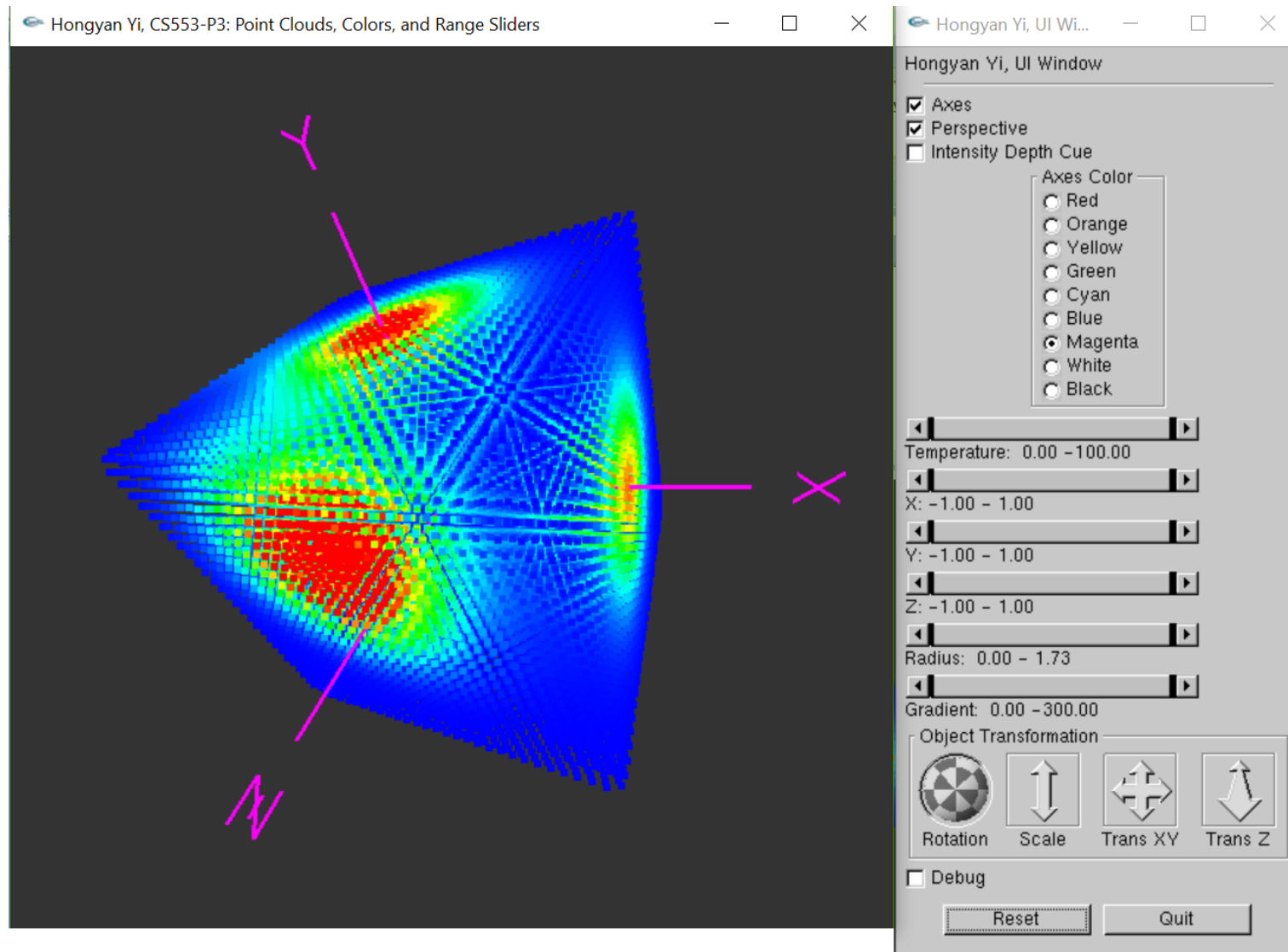
C - OpenGL - Romantic Birthday Night Video - Texture Mapping, Bézier curve, Lighting



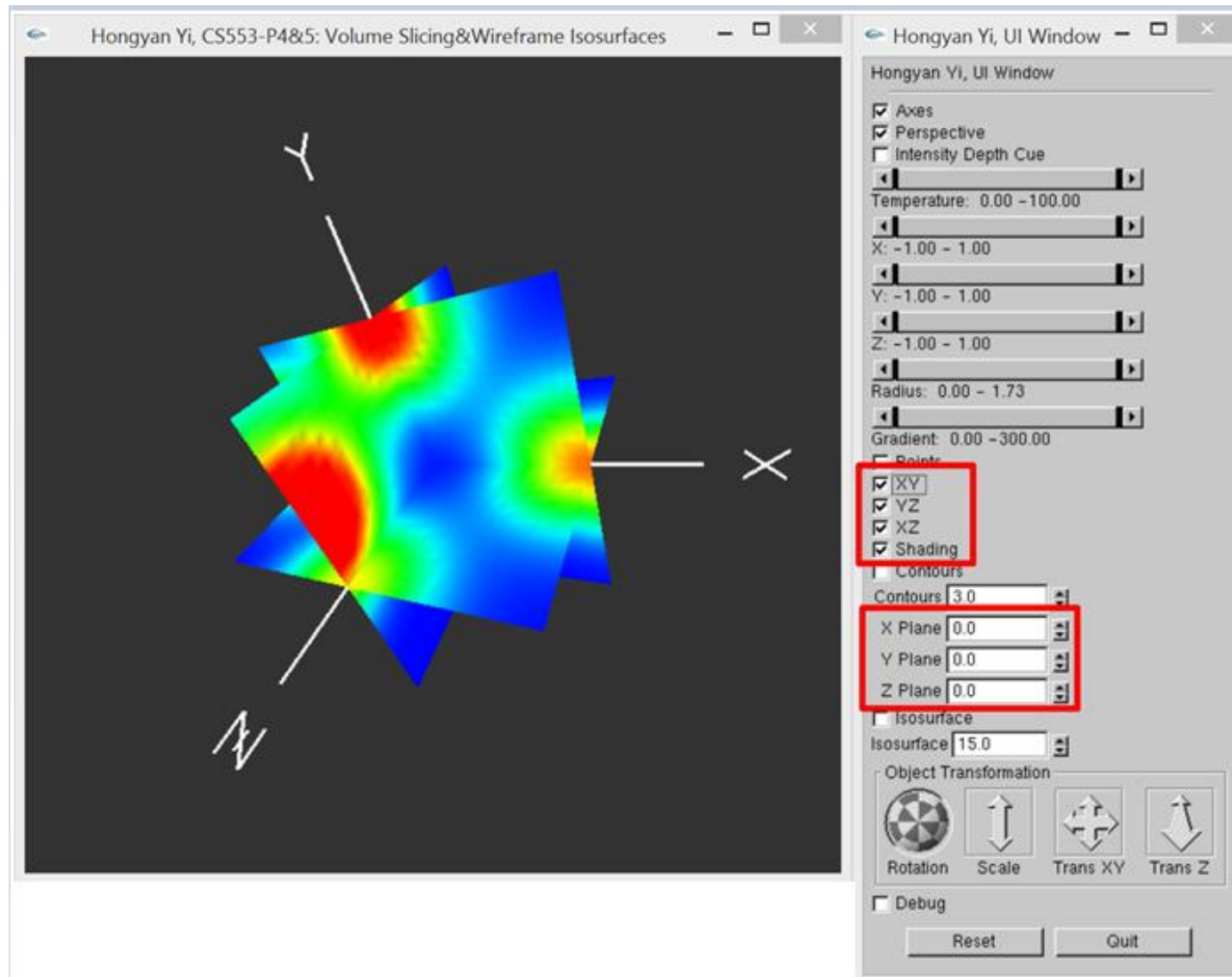
C - OpenGL - Helicopter Animation - Multiple view



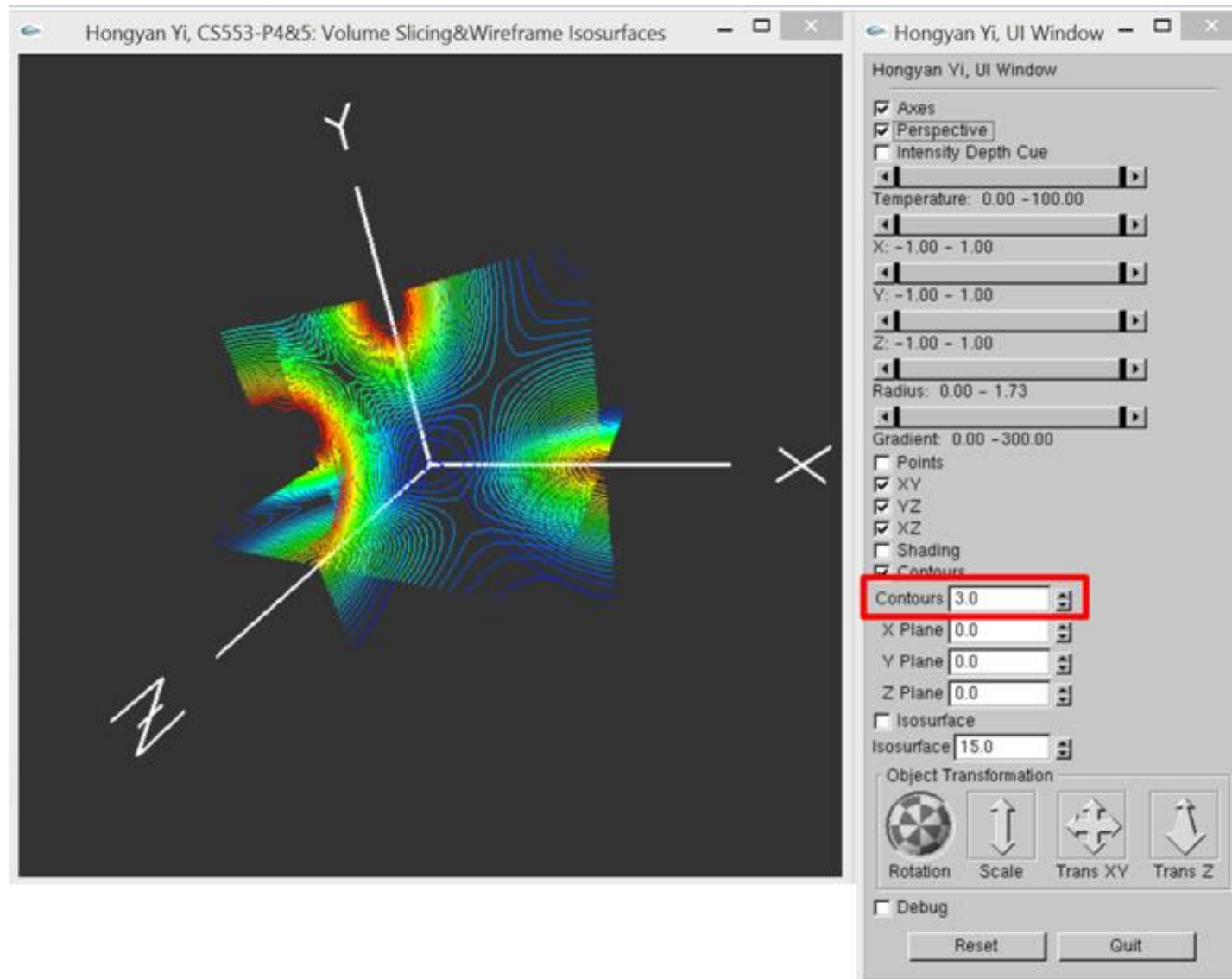
OpenCL / C - OpenGL Particle System



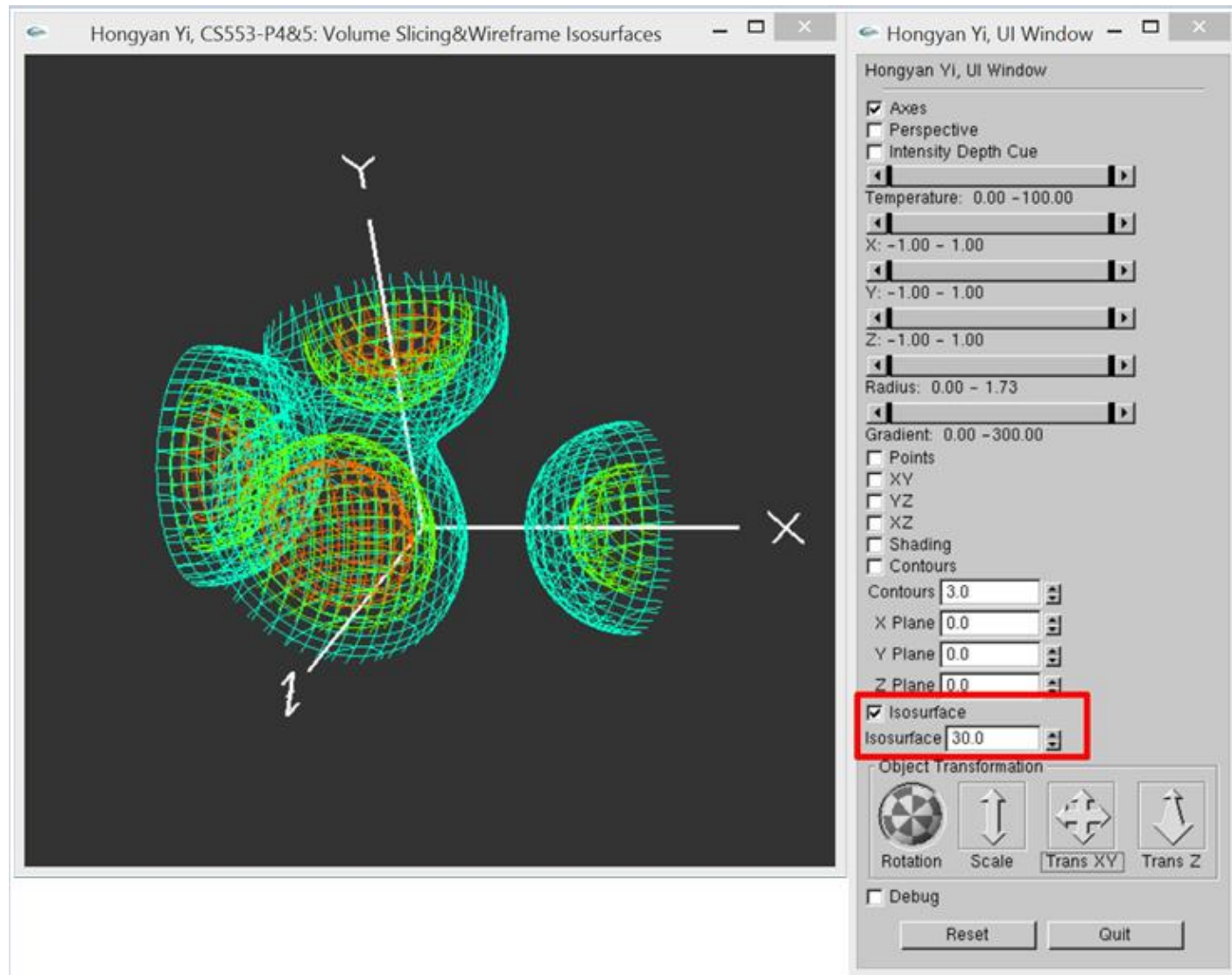
C - OpenGL - Point Cloud



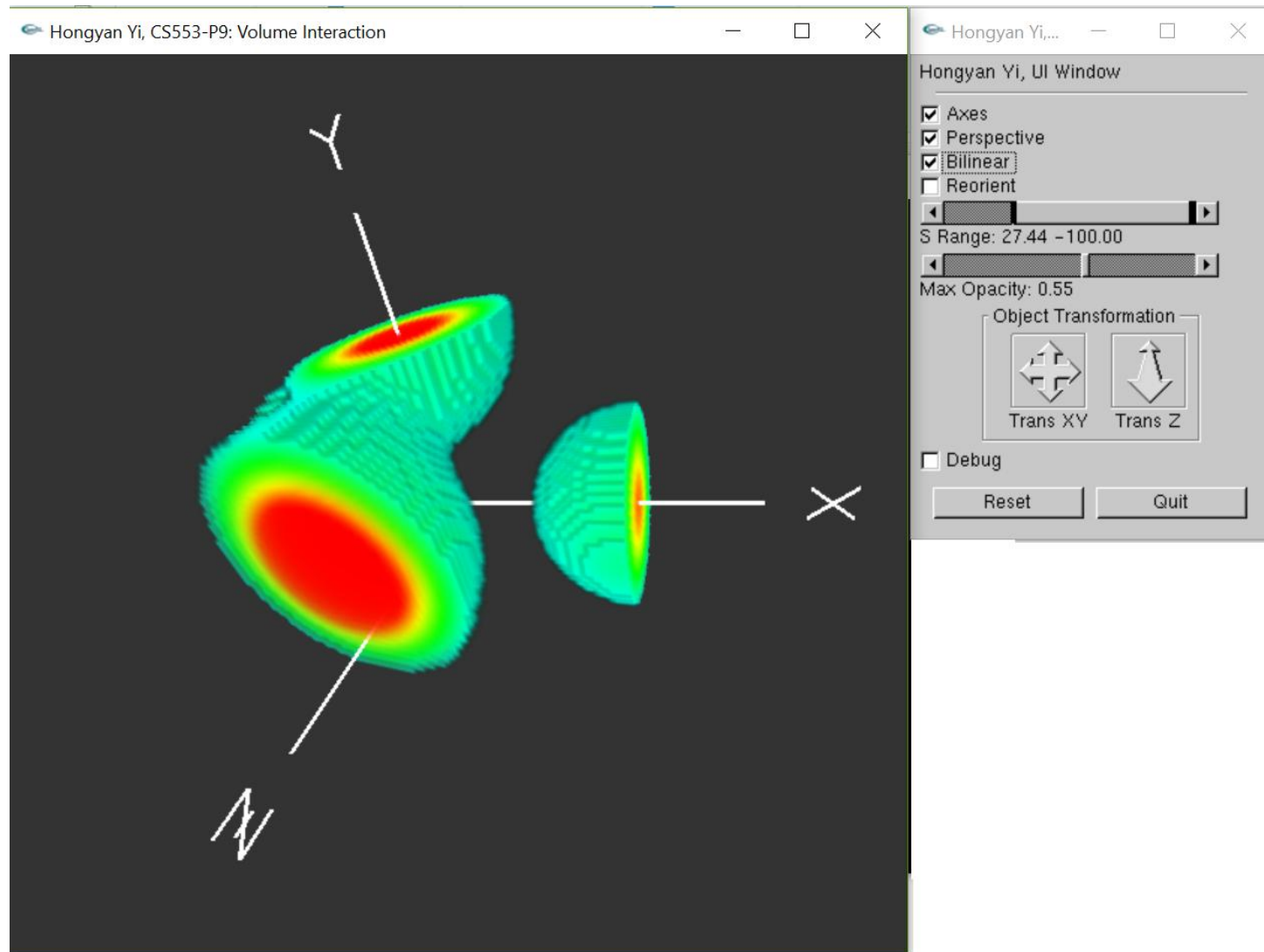
C - OpenGL - Cutting plane



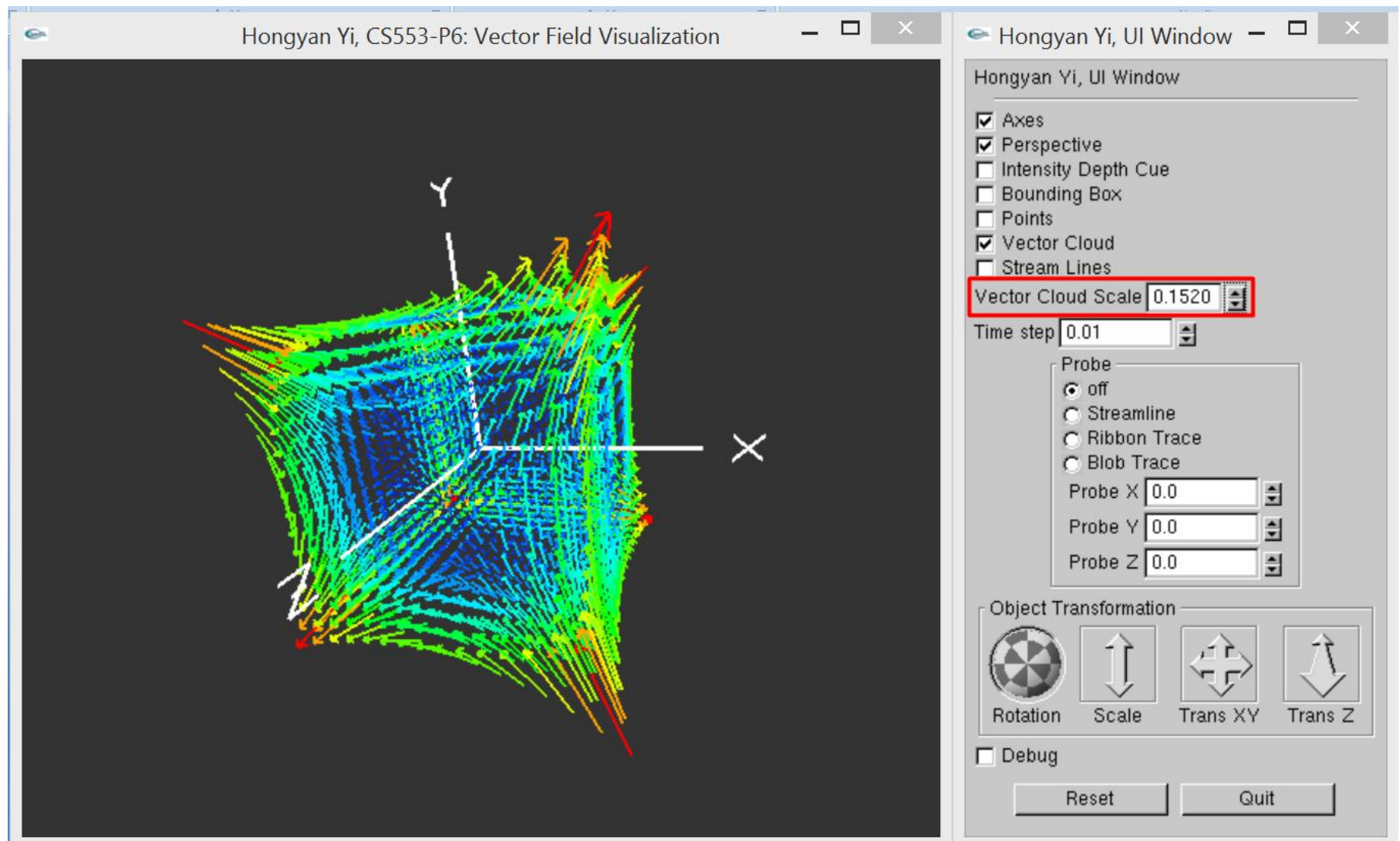
C - OpenGL - Isoline - Contour line



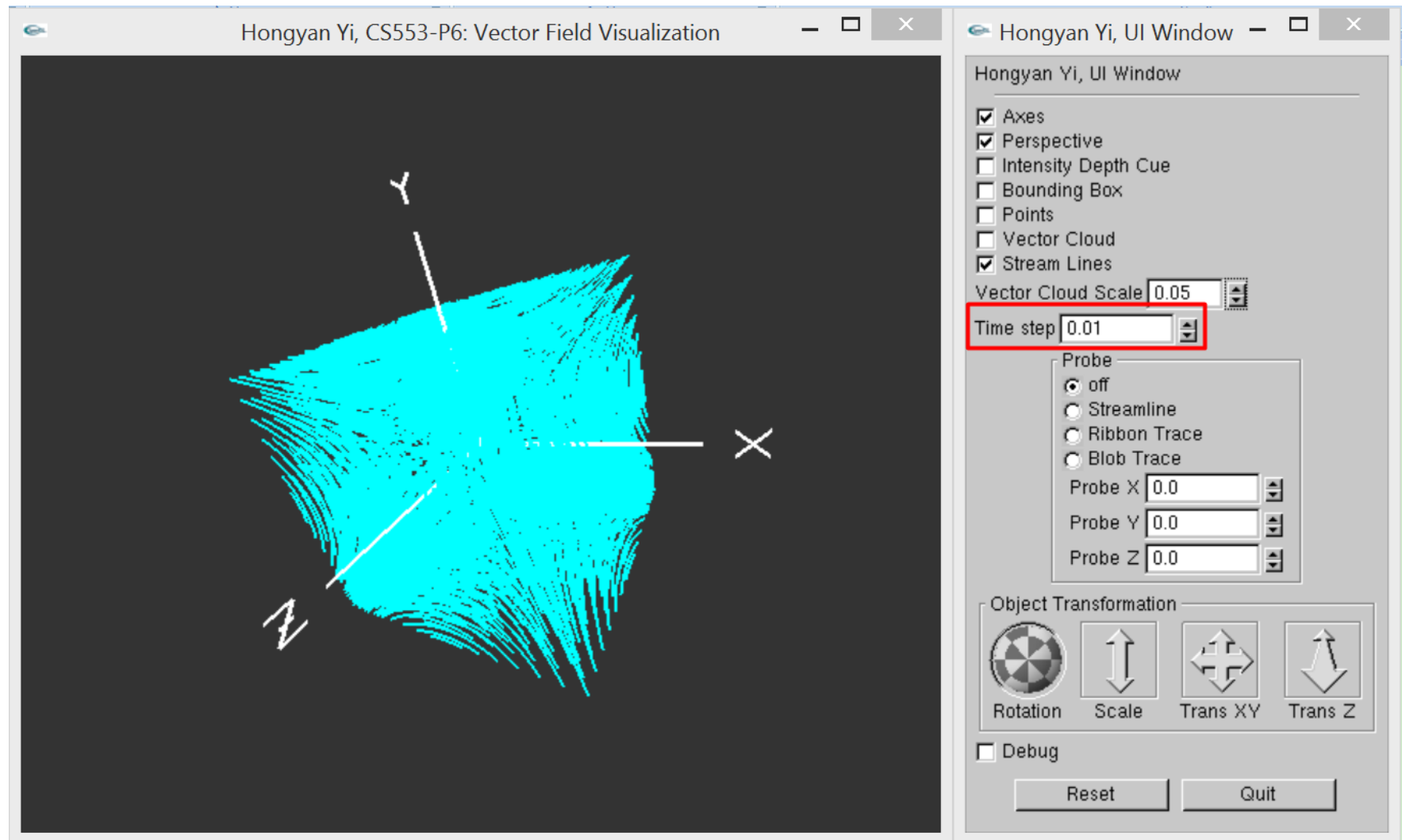
C - OpenGL - Isosurface



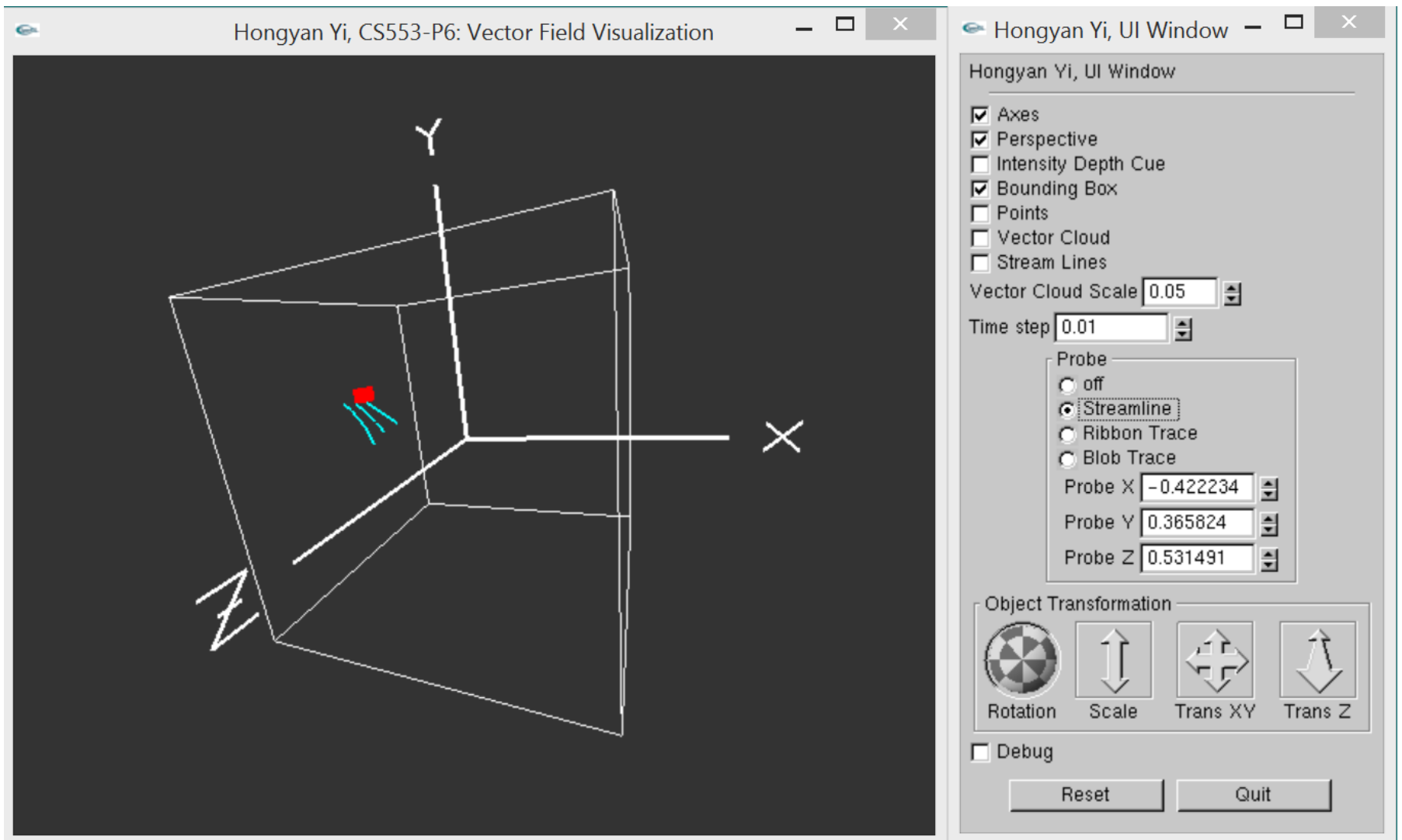
C - OpenGL - Isovolume



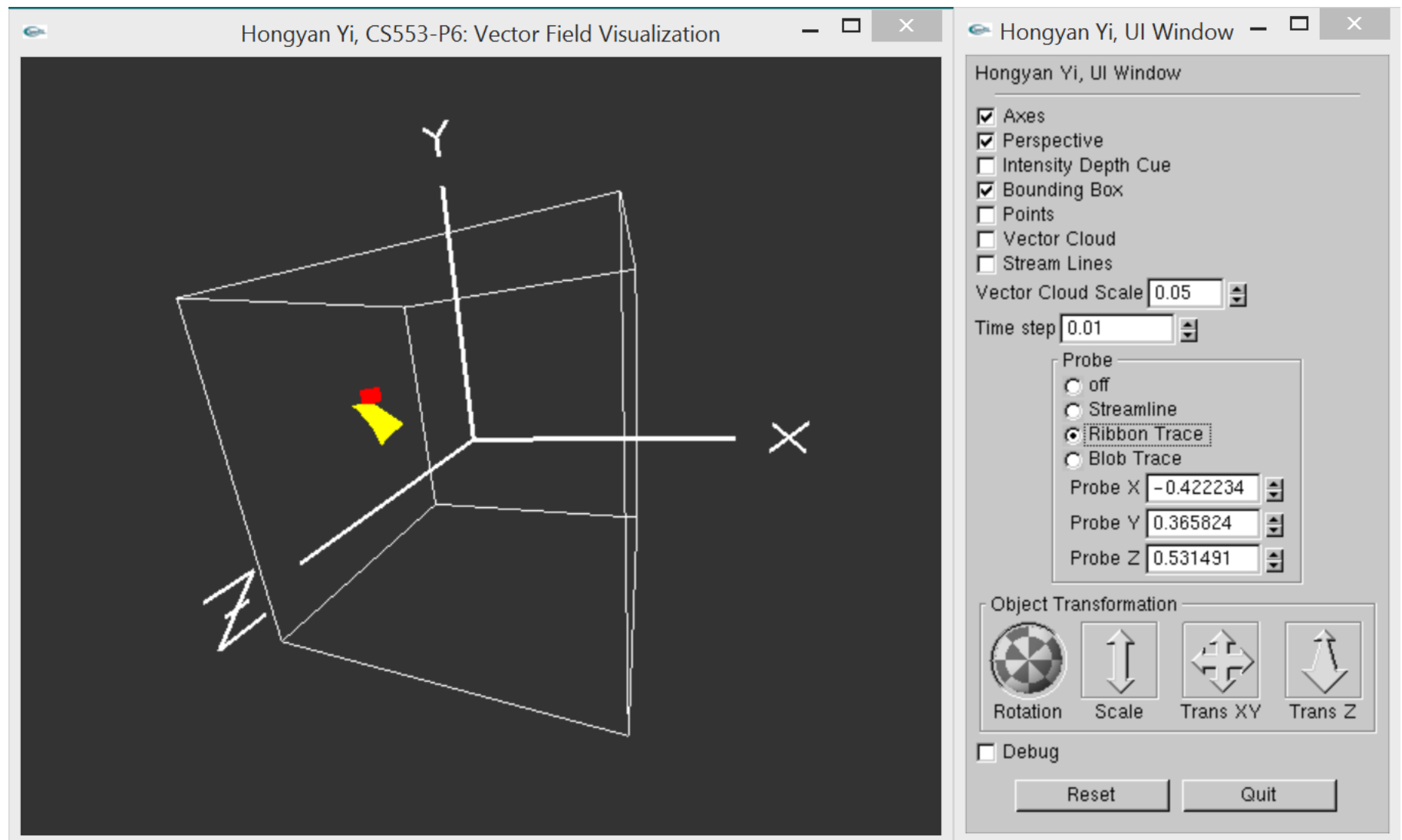
C - OpenGL - Vector Cloud



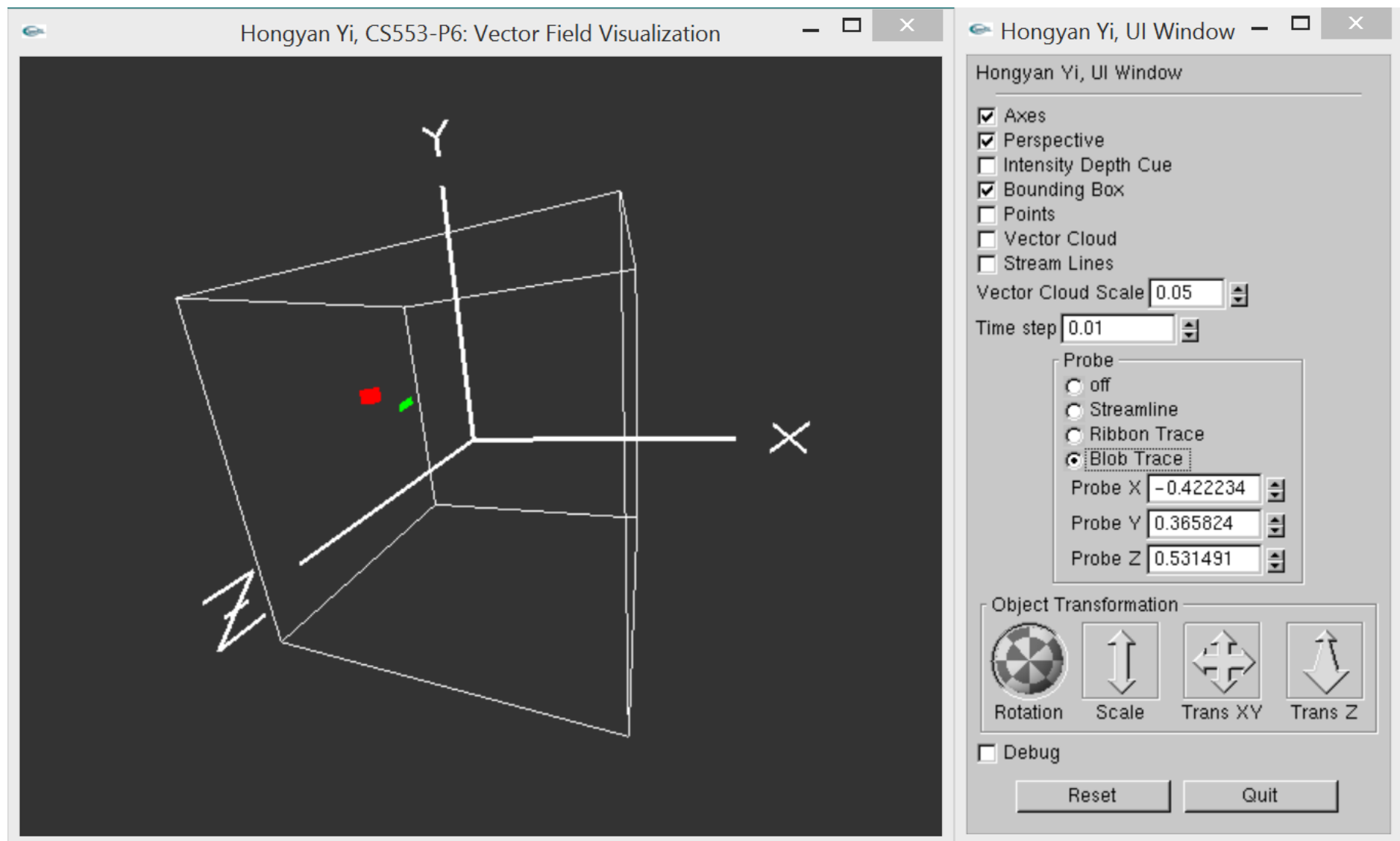
C - OpenGL - Static Stream Lines



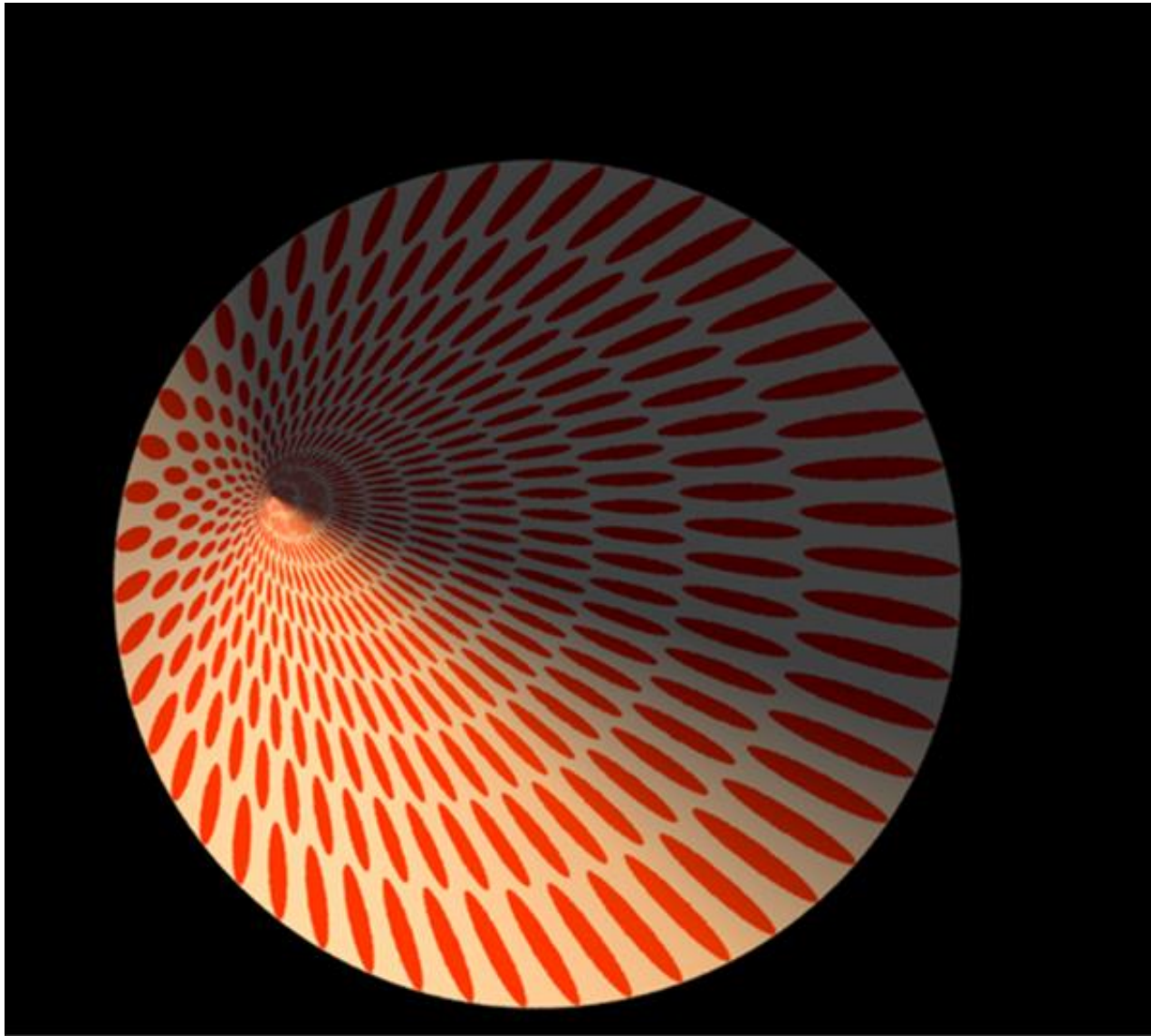
C - OpenGL - Probe Streamline



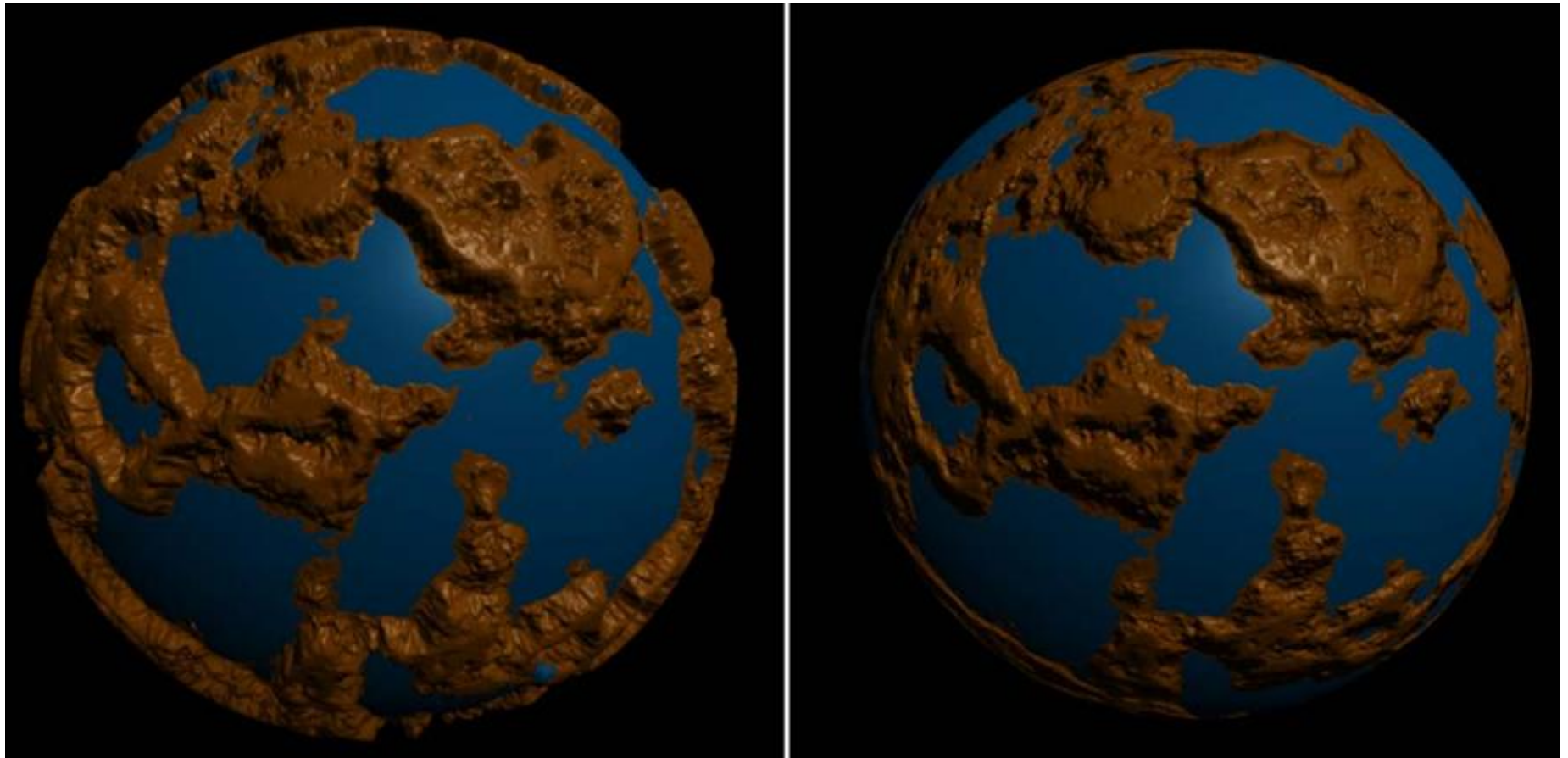
C - OpenGL - Probe Ribbon Trace



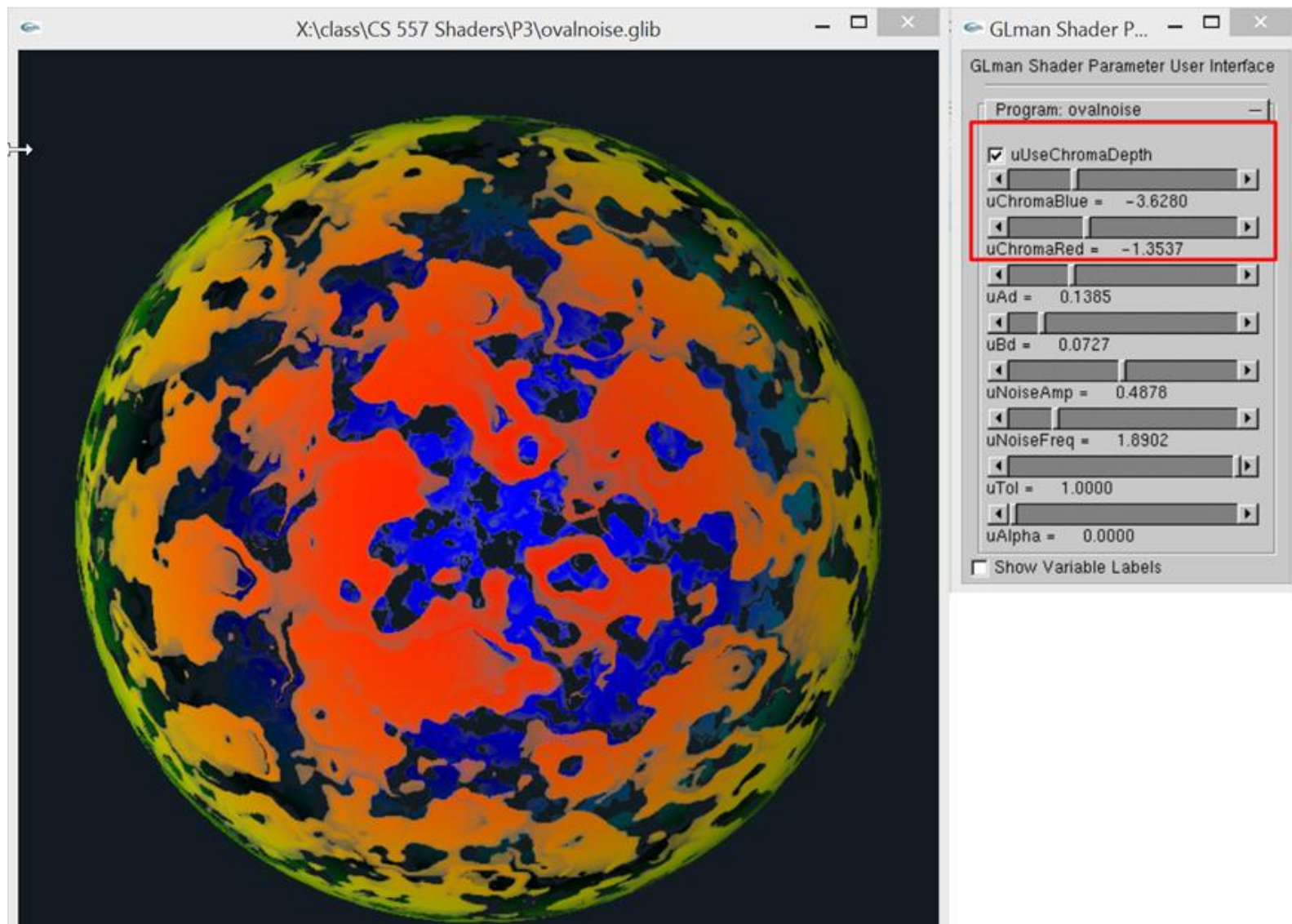
C - OpenGL - Probe Blob Trace



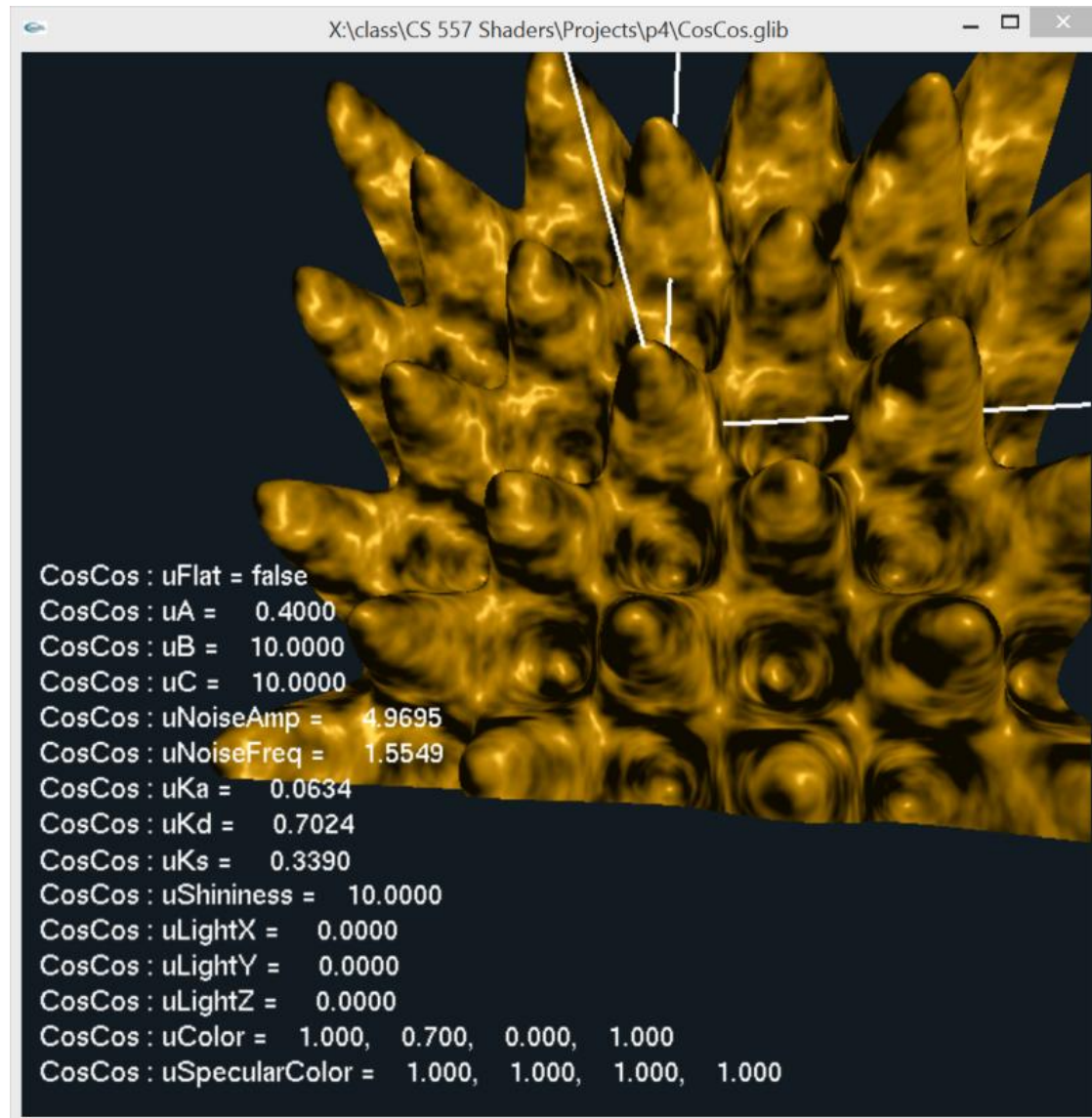
RenderMan - Elliptical Dots



RenderMan - Displacement Mapping VS Bump Mapping



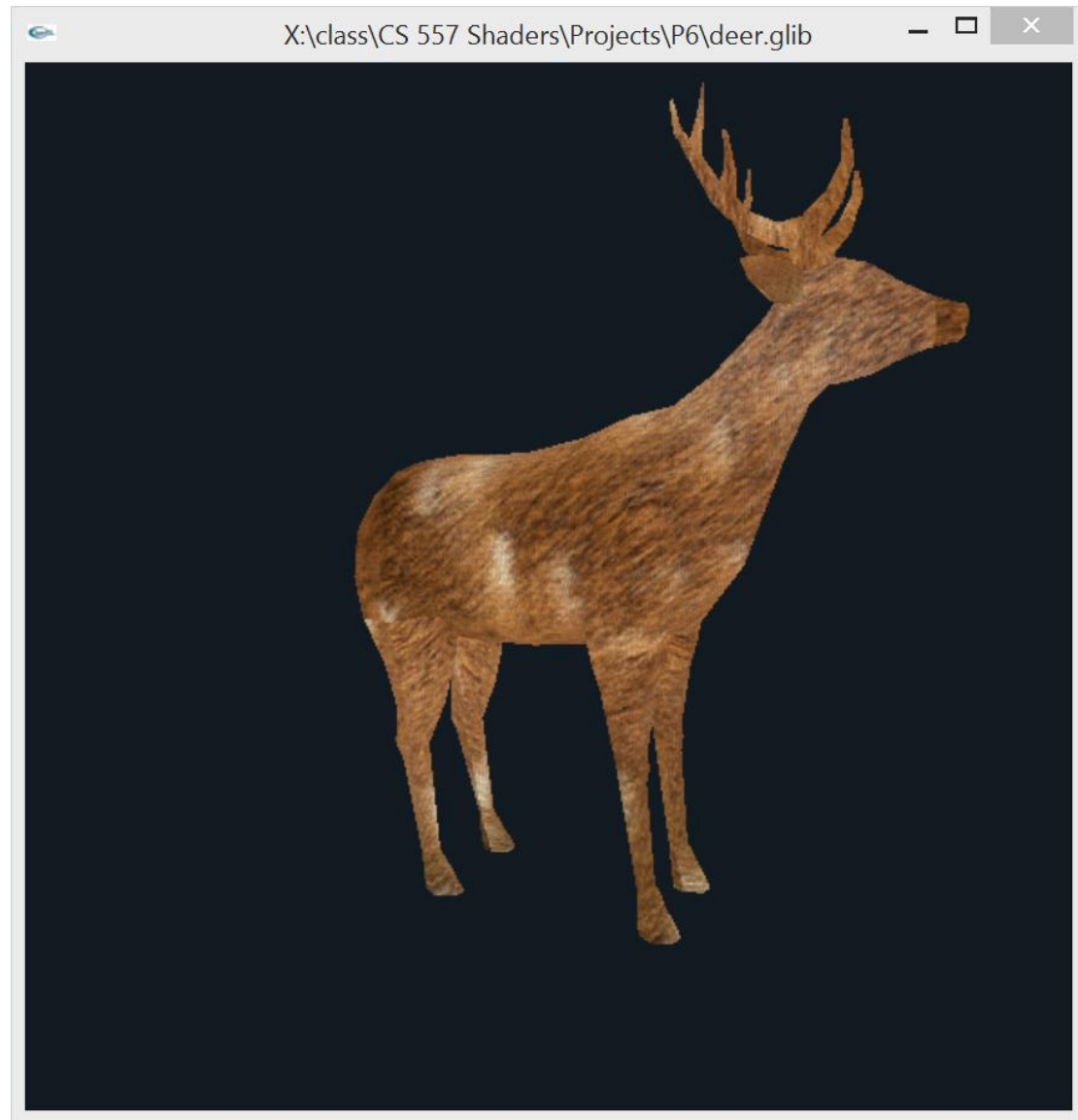
GLSL - ChromaDepth



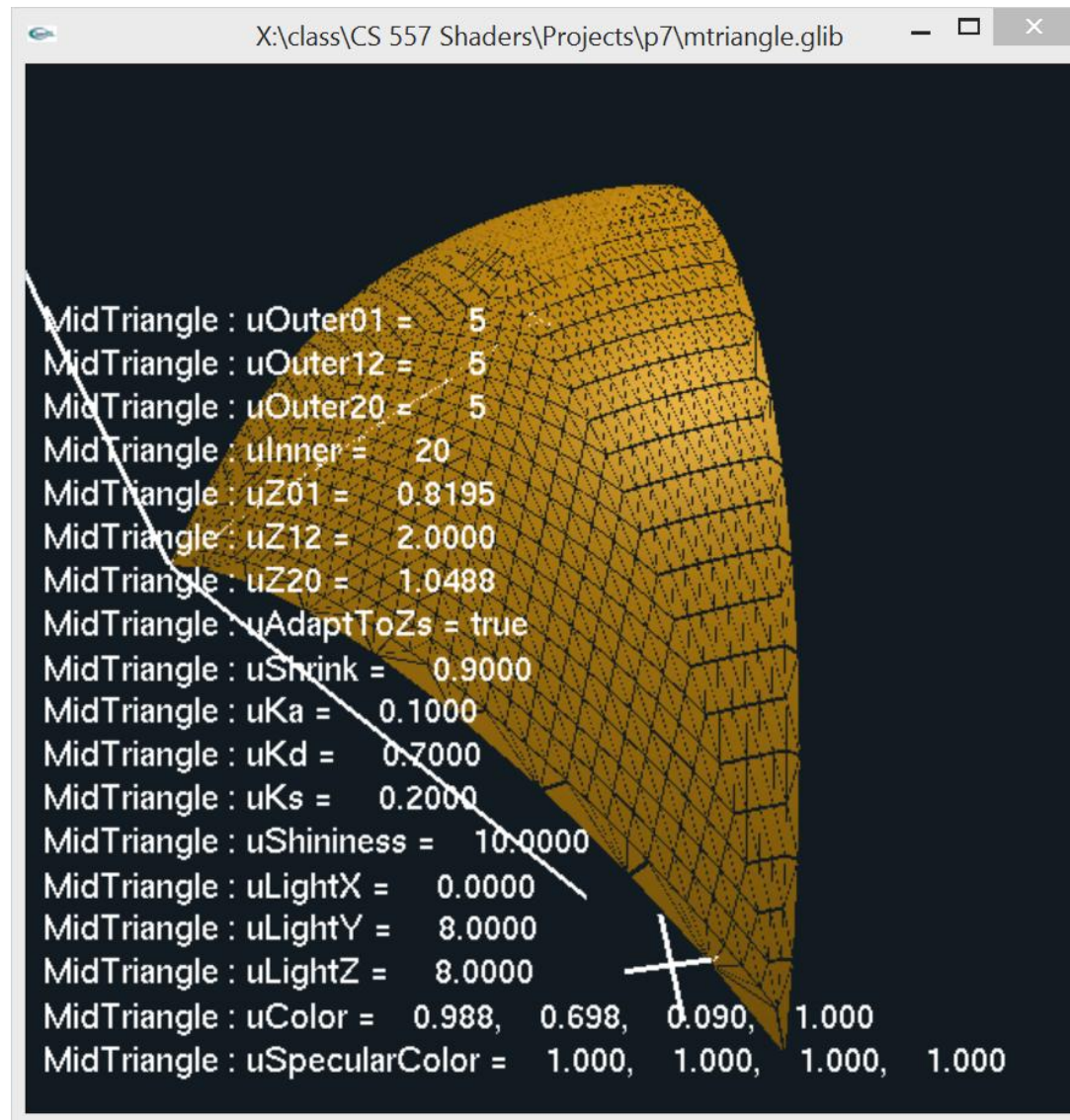
GLSL - Displacement & Bump Mapping, Lighting



GLSL - Magic Lens



GLSL - Texture Mapping - Deers



GLSL - Tessellated Bézier Patch