Project Portfolio

Hongyan Yi

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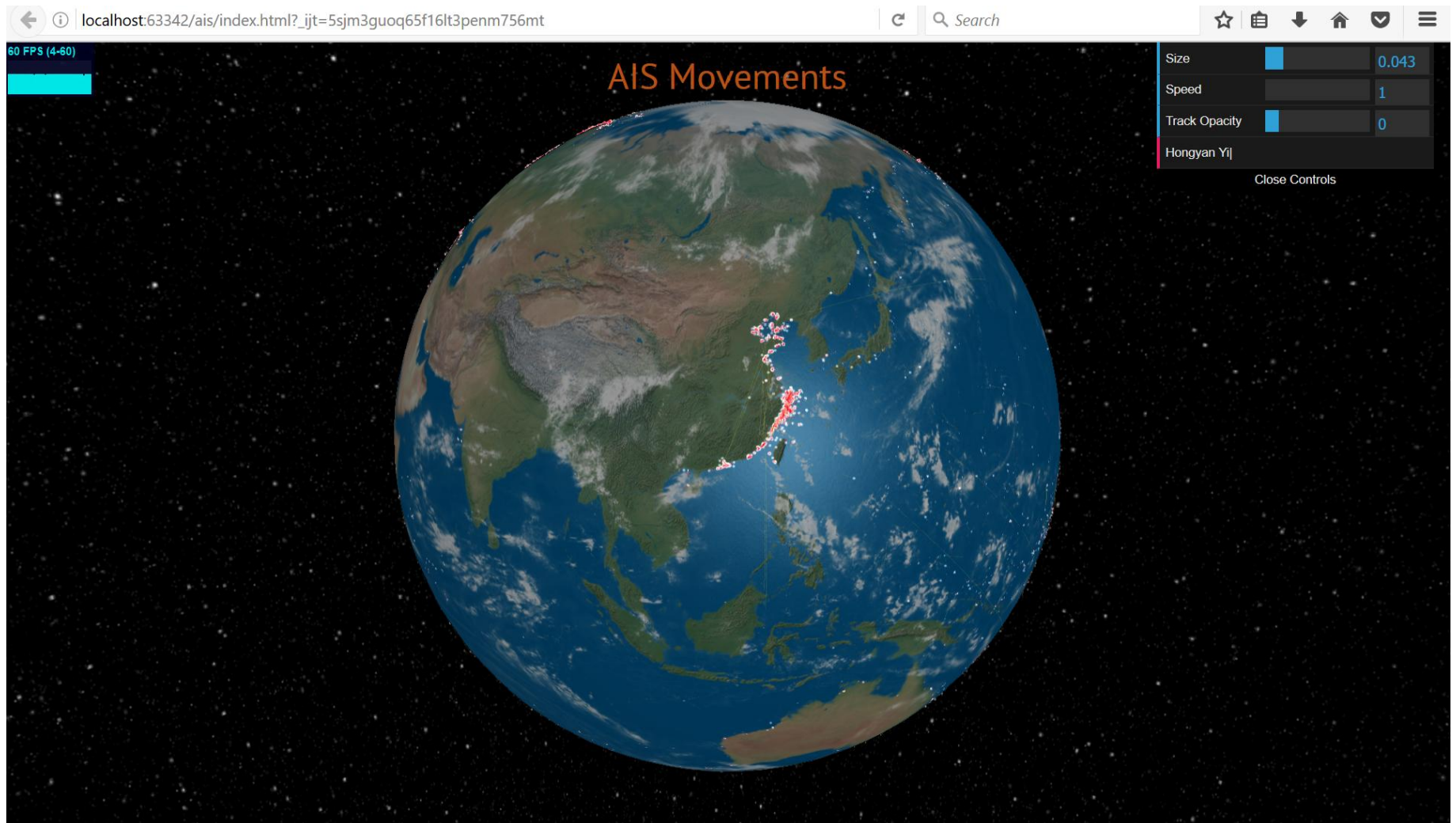
Overview

These are Data Visualization / Mapping projects that I implemented for industry or research.
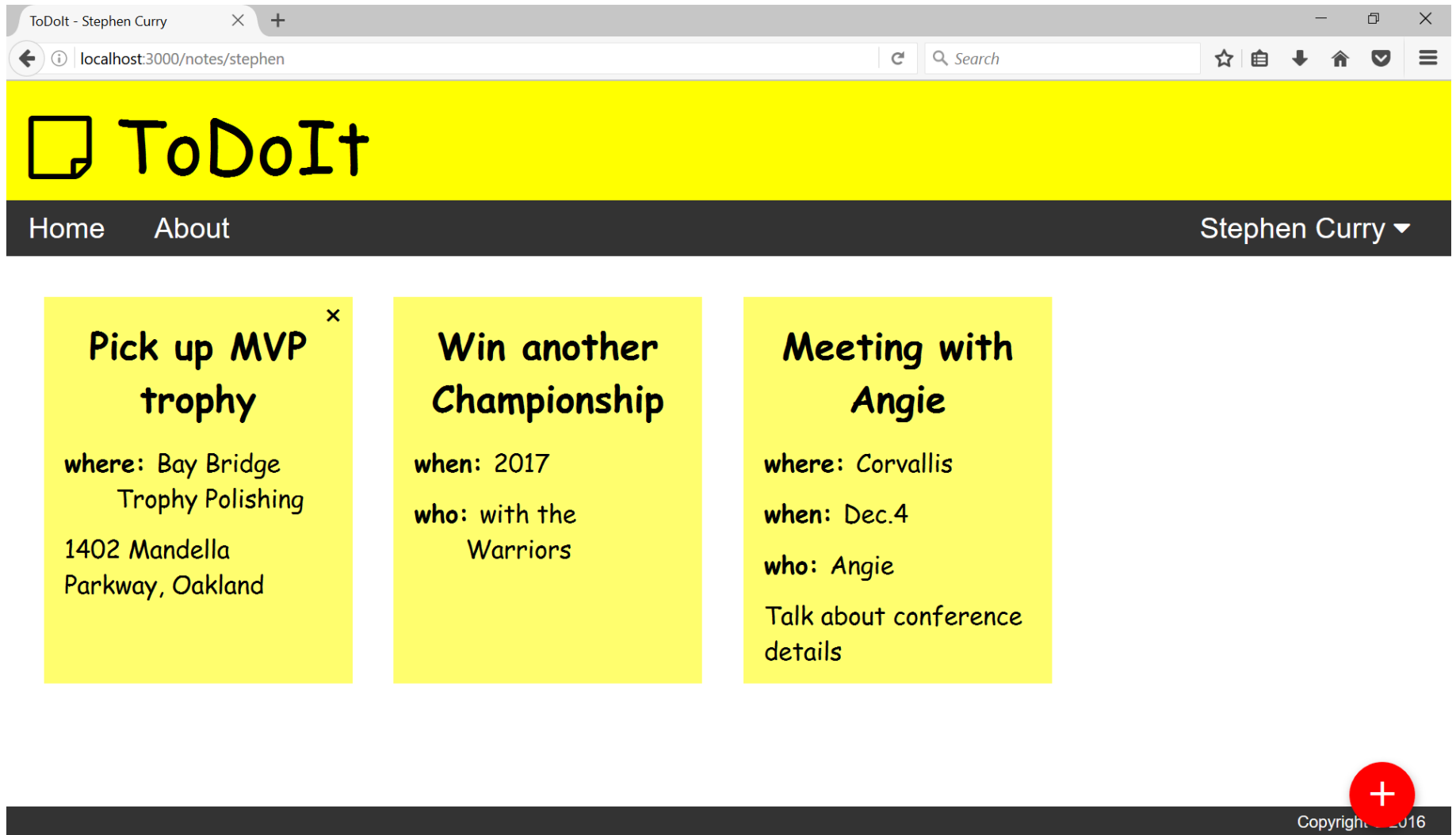
Specifications

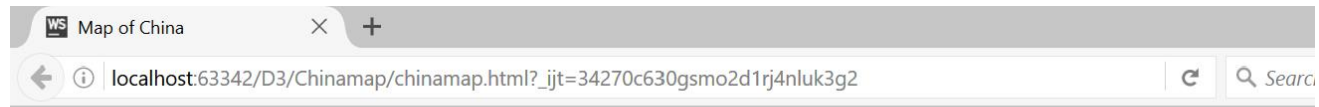**C / C#.NET / JavaScript / HTML / CSS / Three.js / D3.js / OpenGL / WebGL / GLSL / RenderMan / OpenCL**

• Web applications: Visualized global ship movements on 3D Earth; Dynamic Website; Map of China.

• Implemented subsystems of Mining Map Making and Data Management System.

• Developed software to identify underground water on geological maps.

• Developed 2D/3D Data Visualization projects: 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.
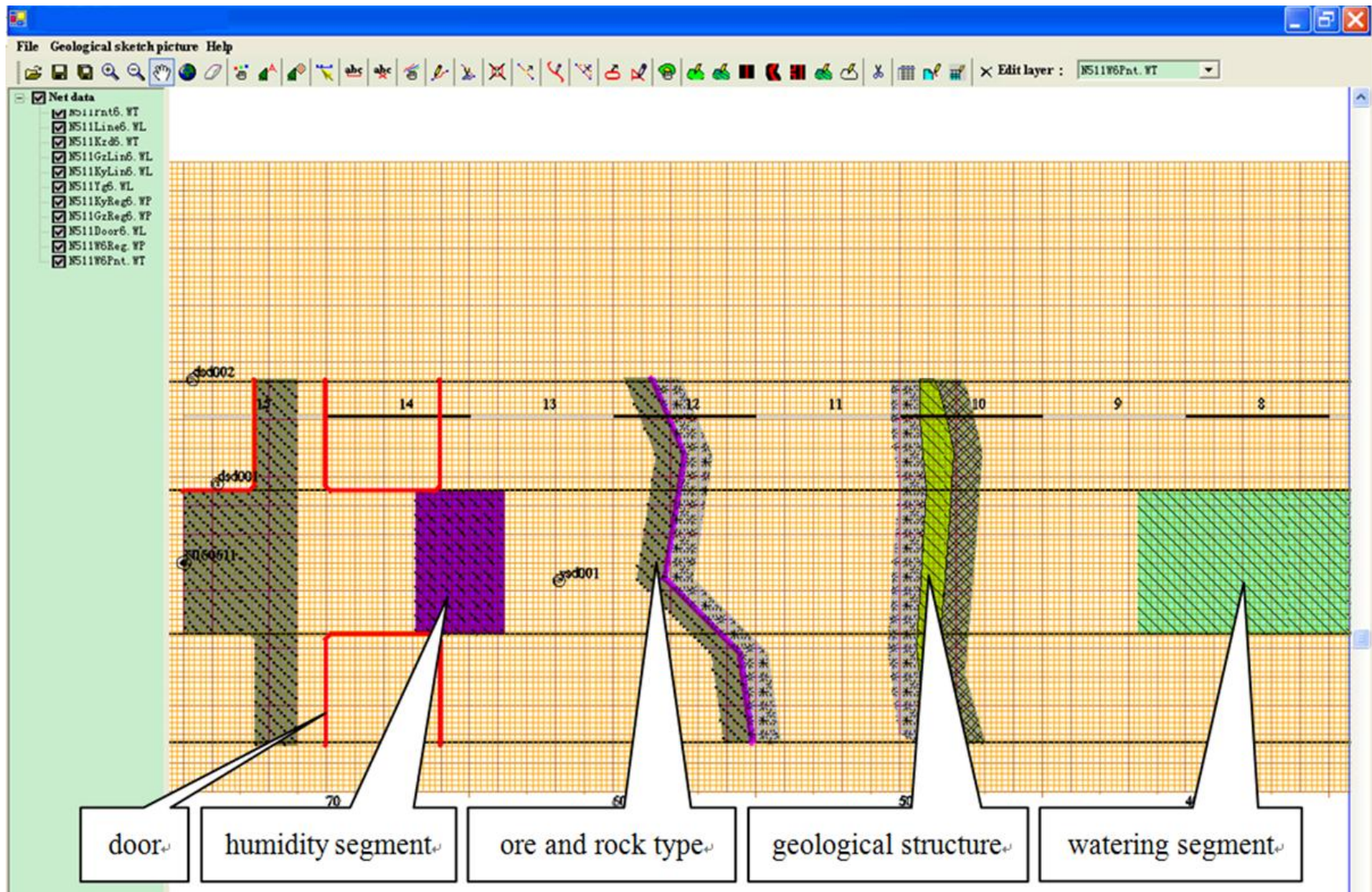
**JavaScript / CSS / HTML / Three.js --- Global Ship Movement Visualization**

ToDoIt - Stephen Curry

localhost:3000/notes/stephen

Search

ToDoIt

Home   About   Stephen Curry ▾

Pick up MVP trophy
×

where: Bay Bridge Trophy Polishing

1402 Mandella Parkway, Oakland

Win another Championship

when: 2017

who: with the Warriors

Meeting with Angie

where: Corvallis

when: Dec.4

who: Angie

Talk about conference details

+

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JavaScript / CSS / HTML / Node.js / Express / Handlebar --- Dynamic Website

2

D3.js / HTML / JSON --- Map of China

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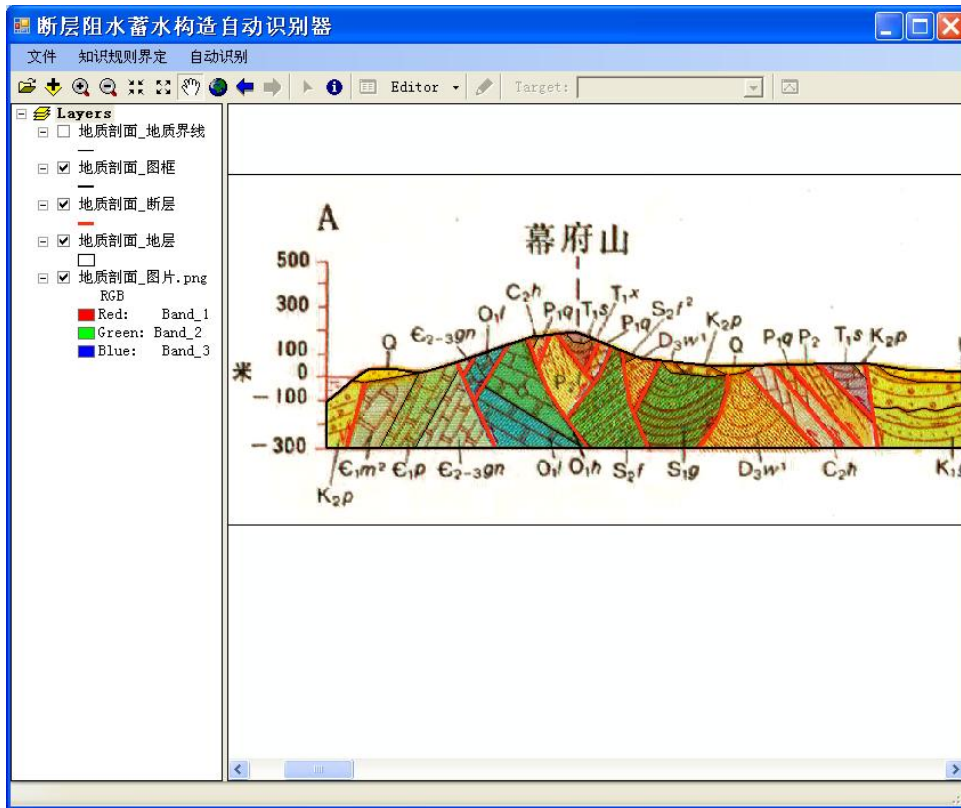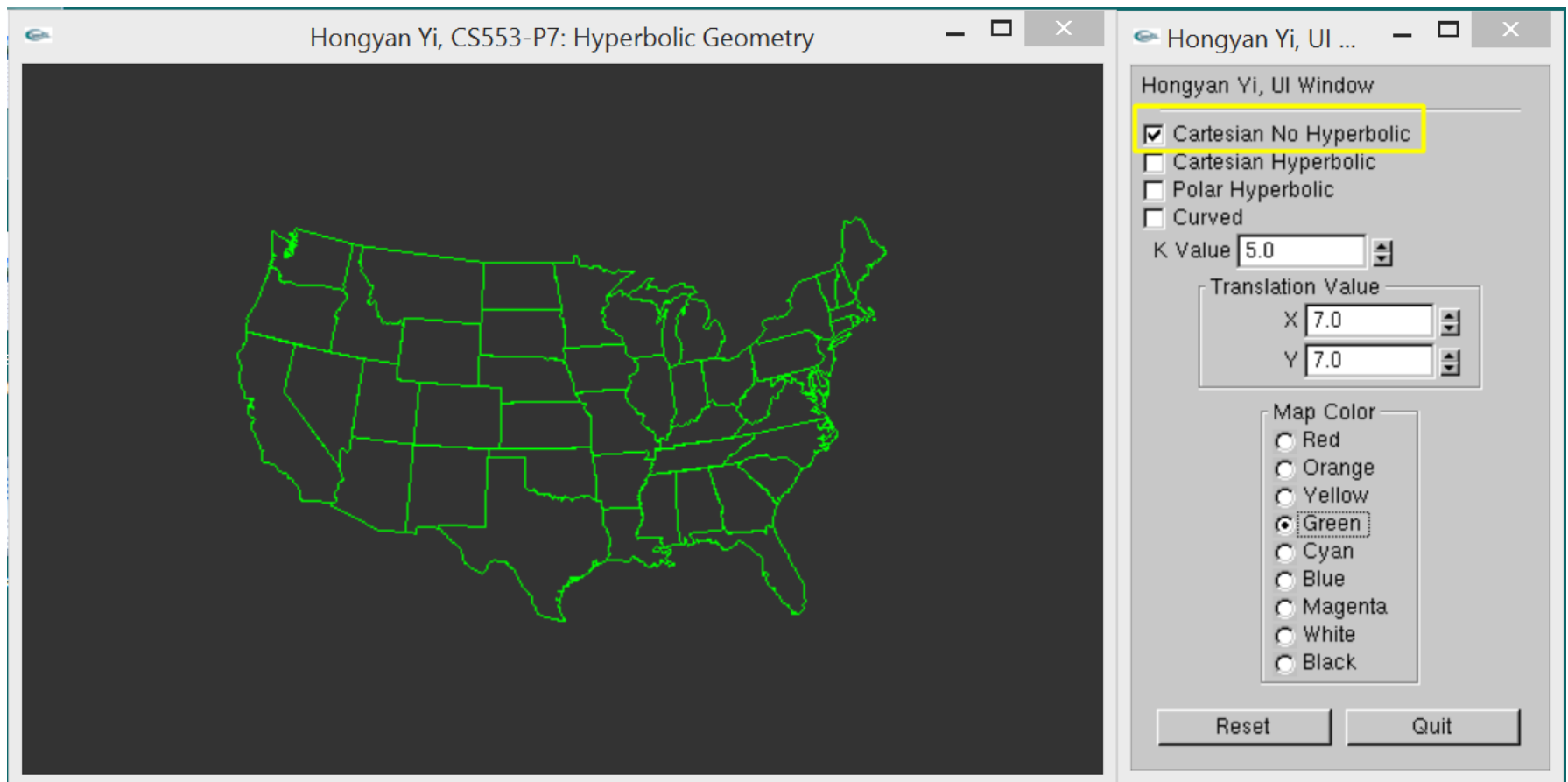
Before Identify
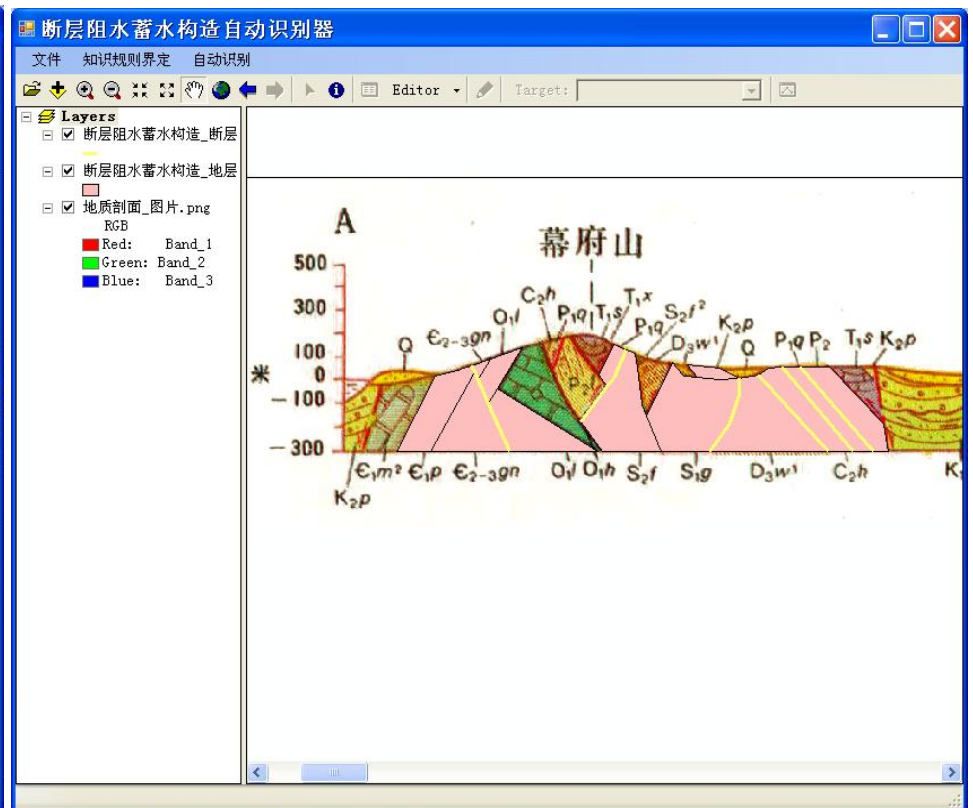
After Identify

C#.NET - ArcEngine - Identify underground water on geological maps
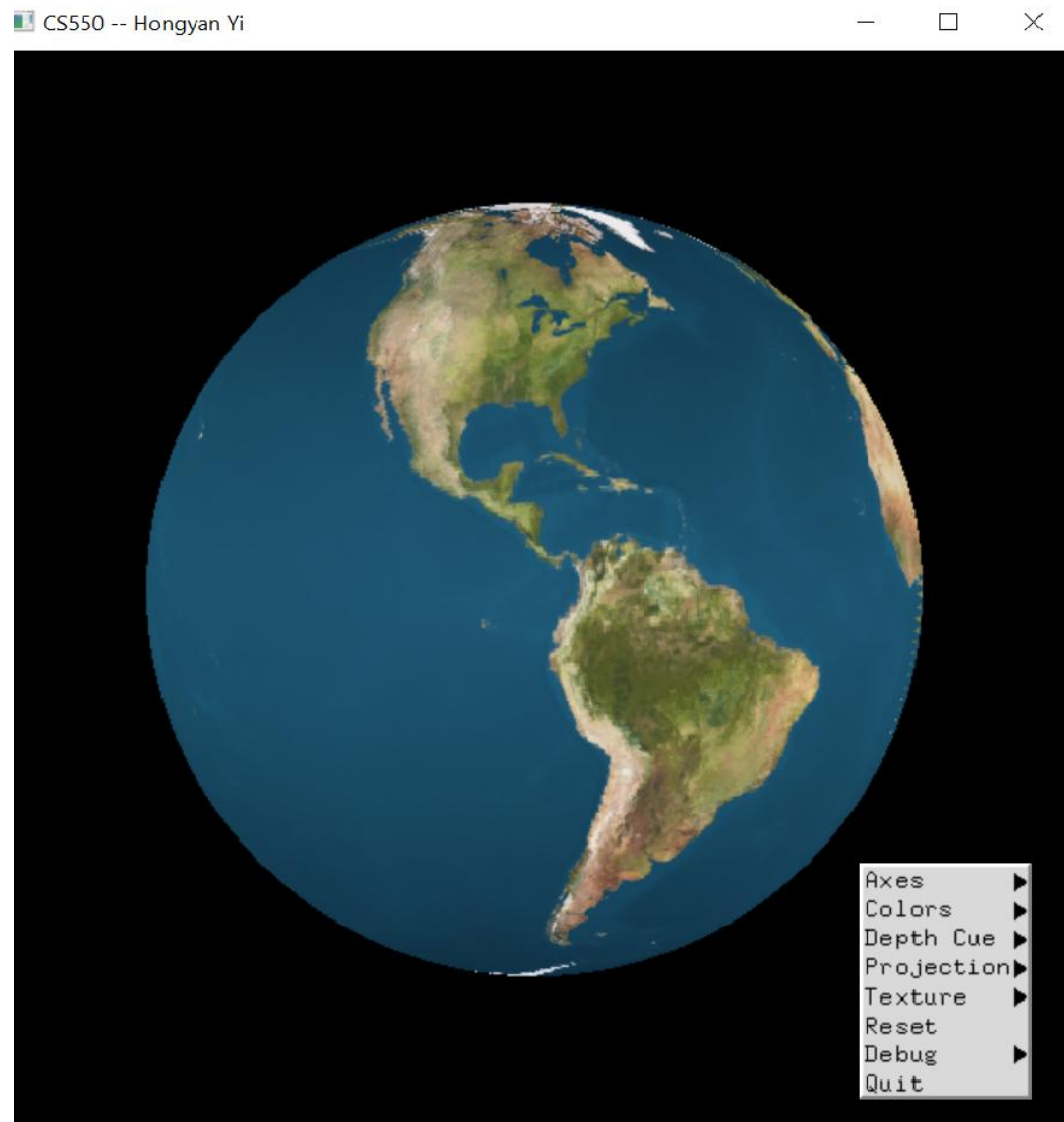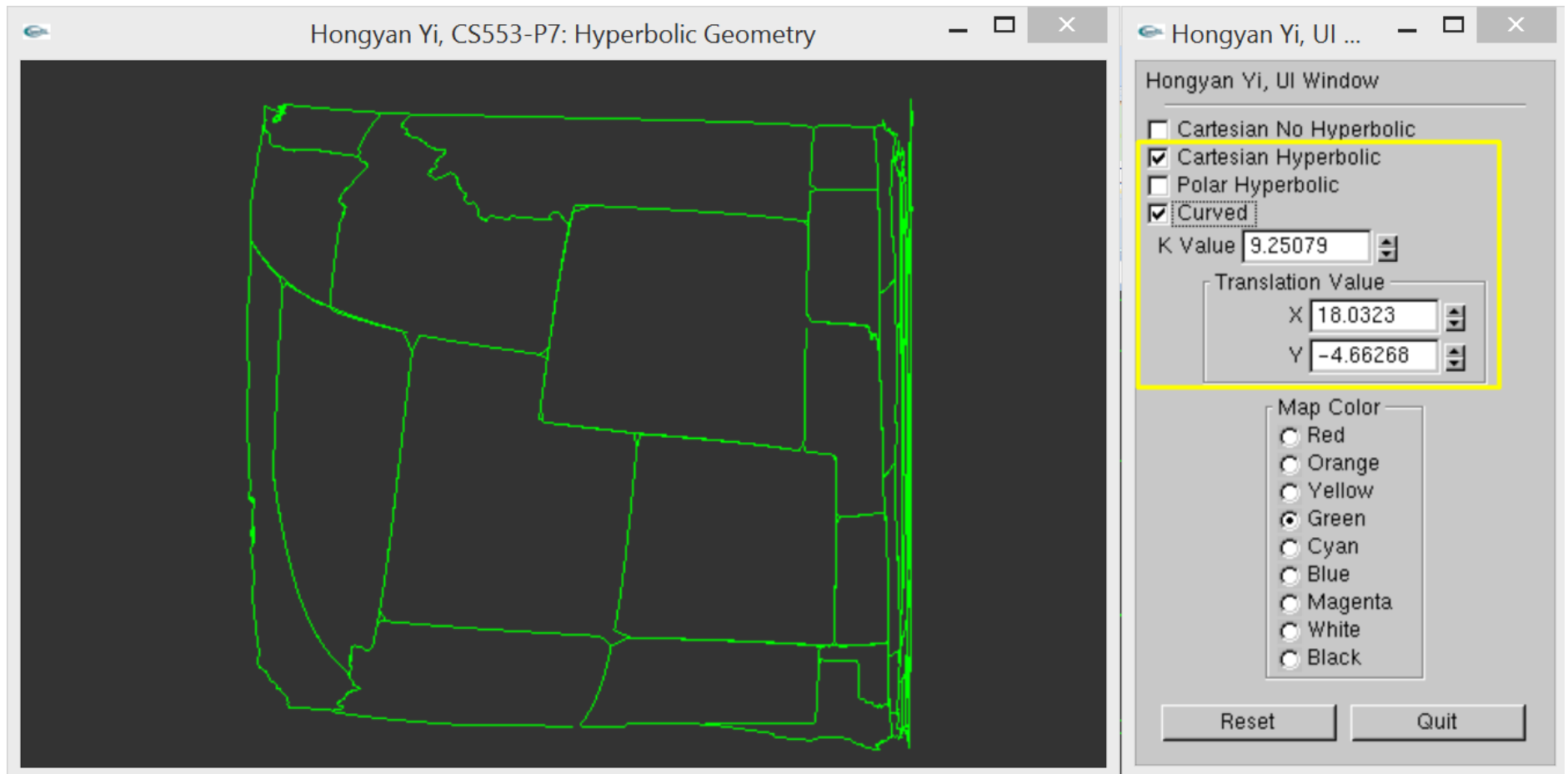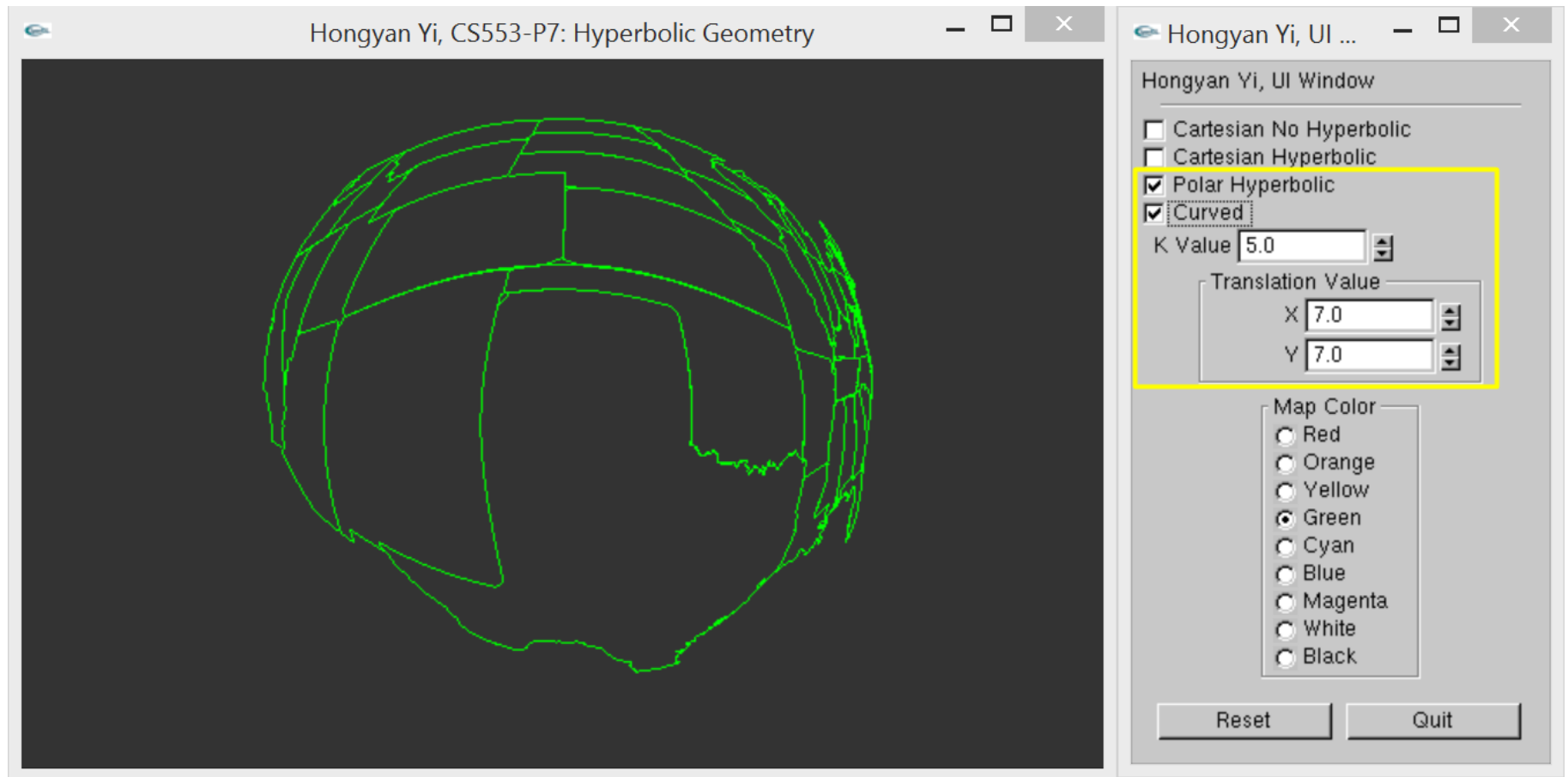
C - OpenGL - Texture mapping - Animation
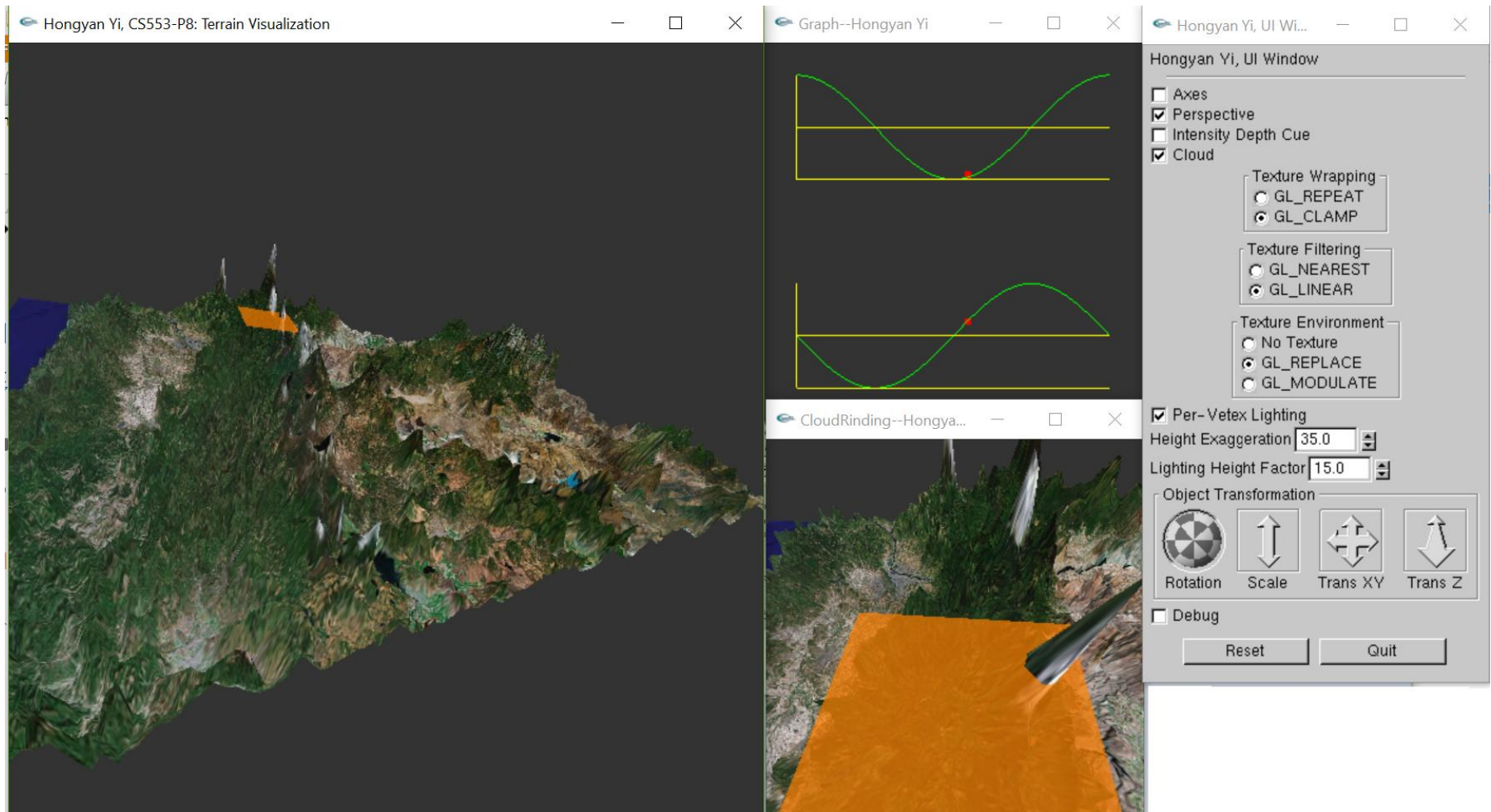
C - OpenGL - Terrain Visualization - Multiple View

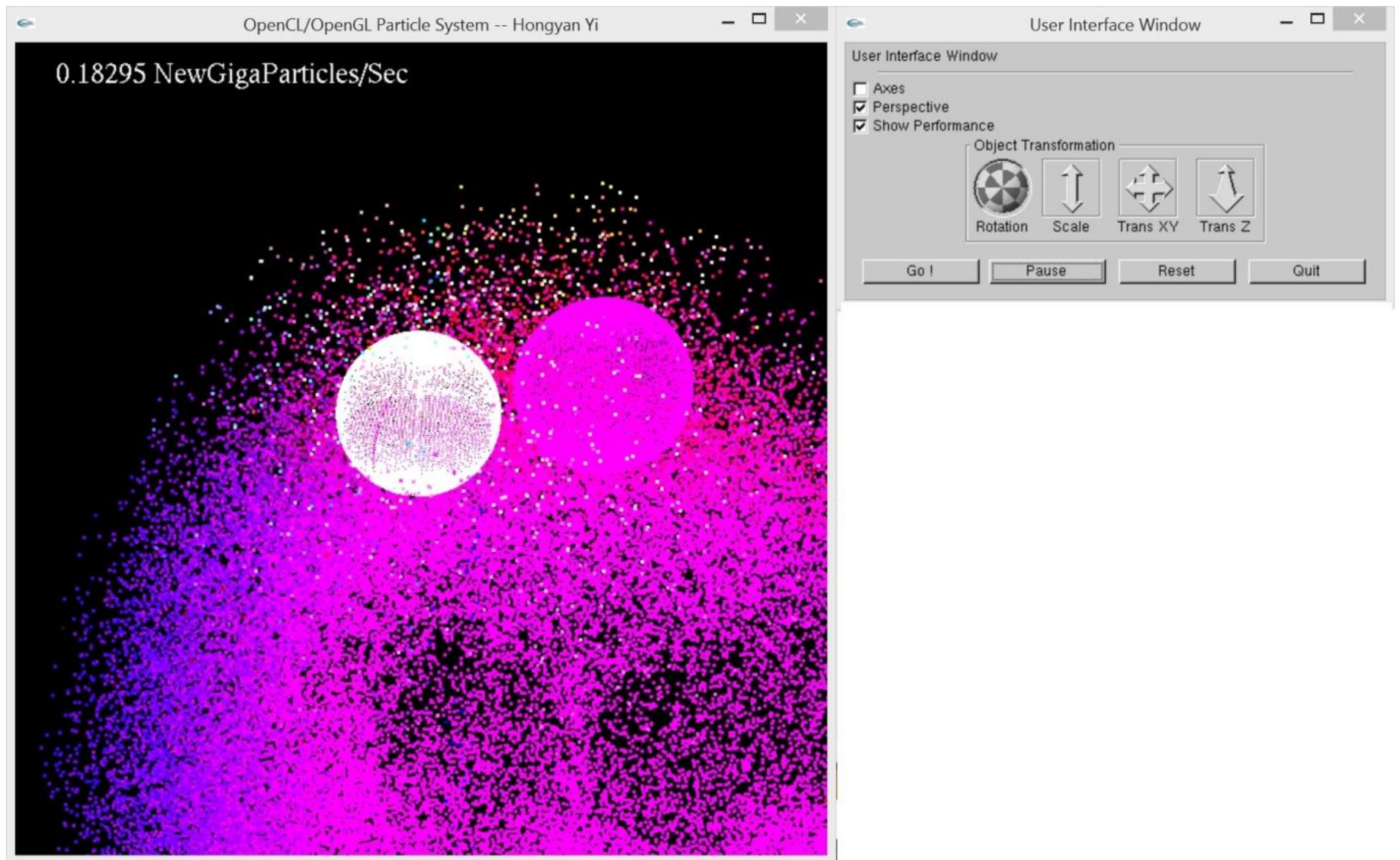**C - OpenGL - Cartesian no hyperbolic**

C - OpenGL - Curved Cartesian Hyperbolic
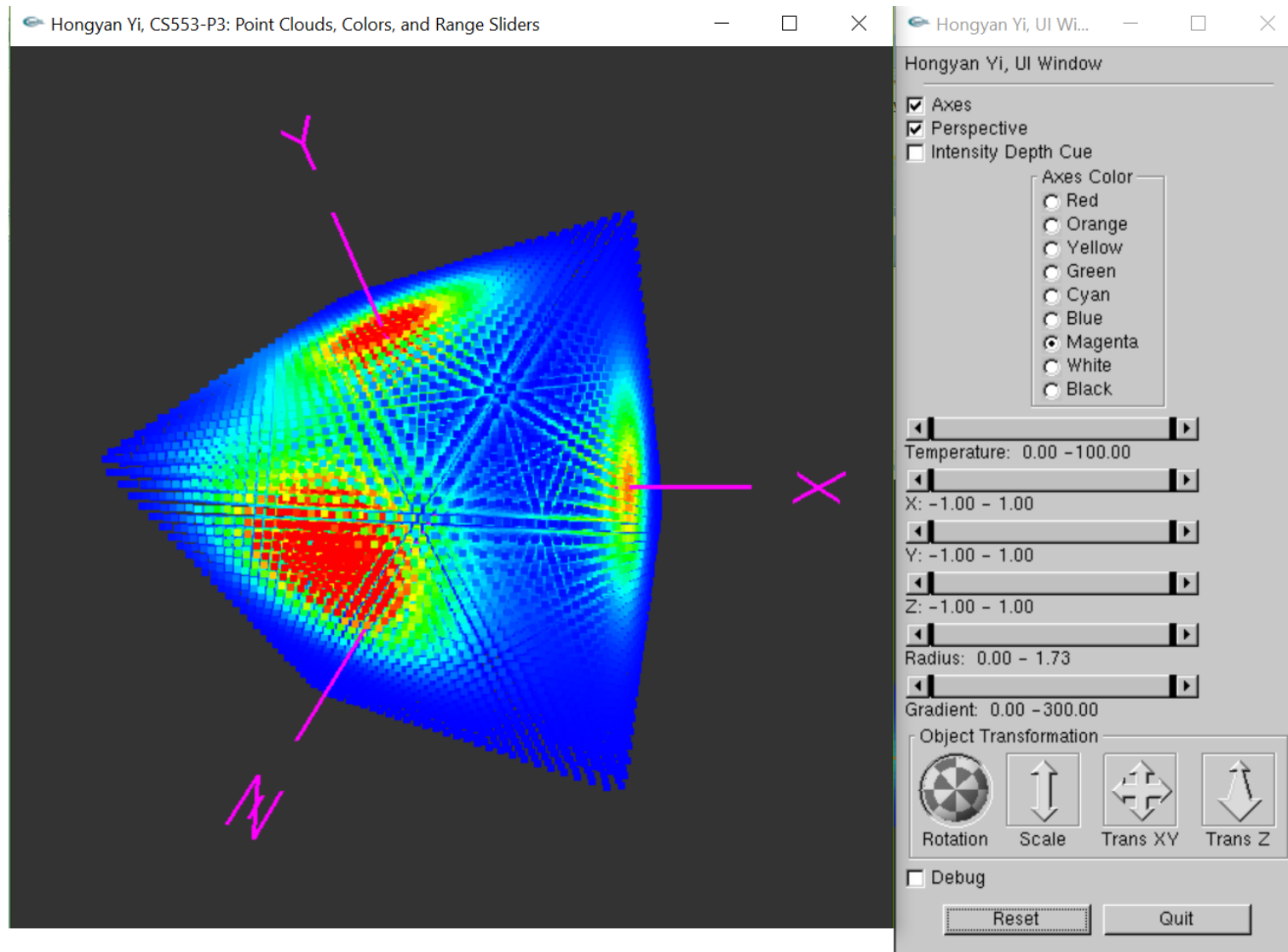
C - OpenGL - Curved Polar Hyperbolic

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

C - OpenGL - Helicopter Animation - Multiple view
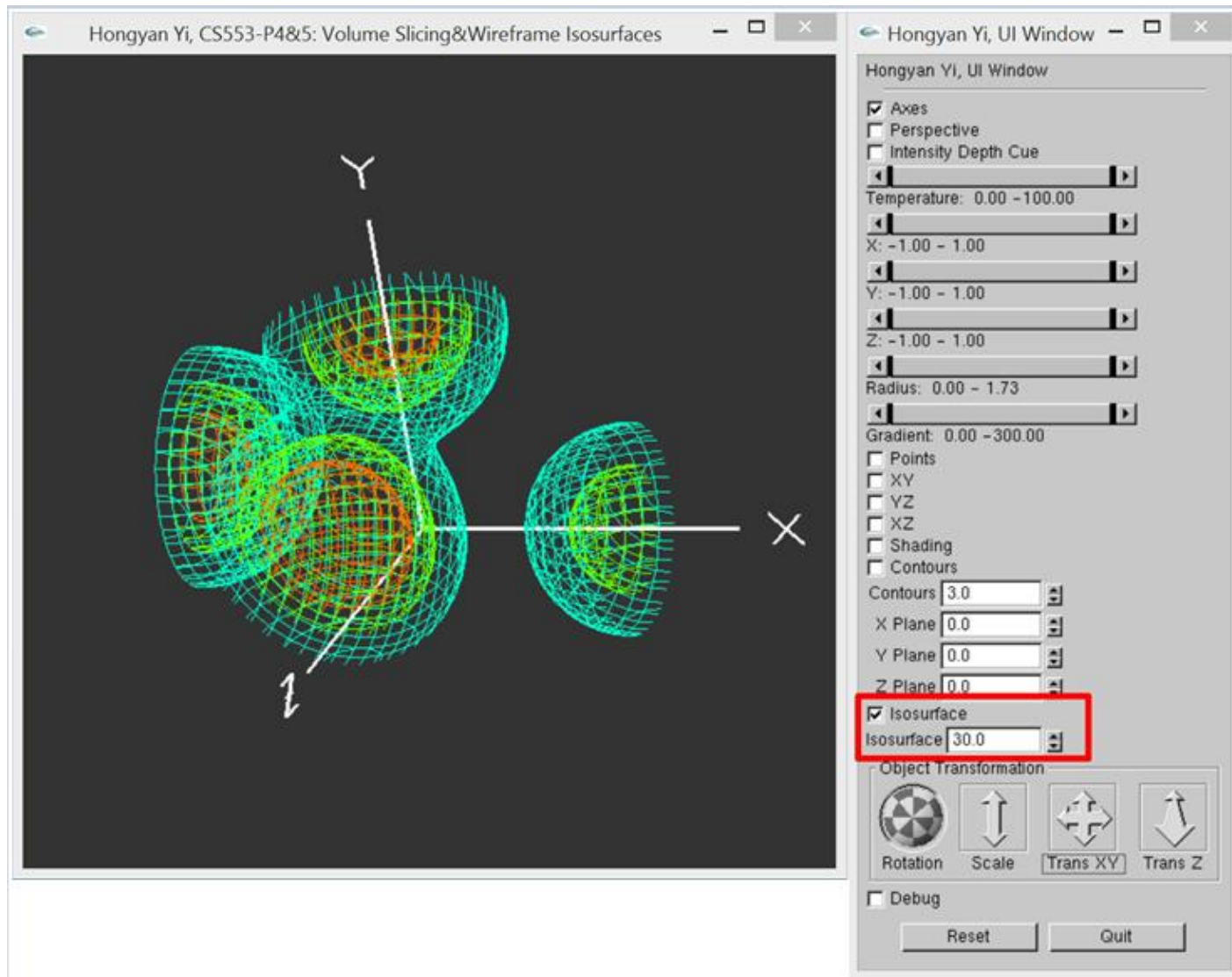
OpenCL / C - OpenGL Particle System

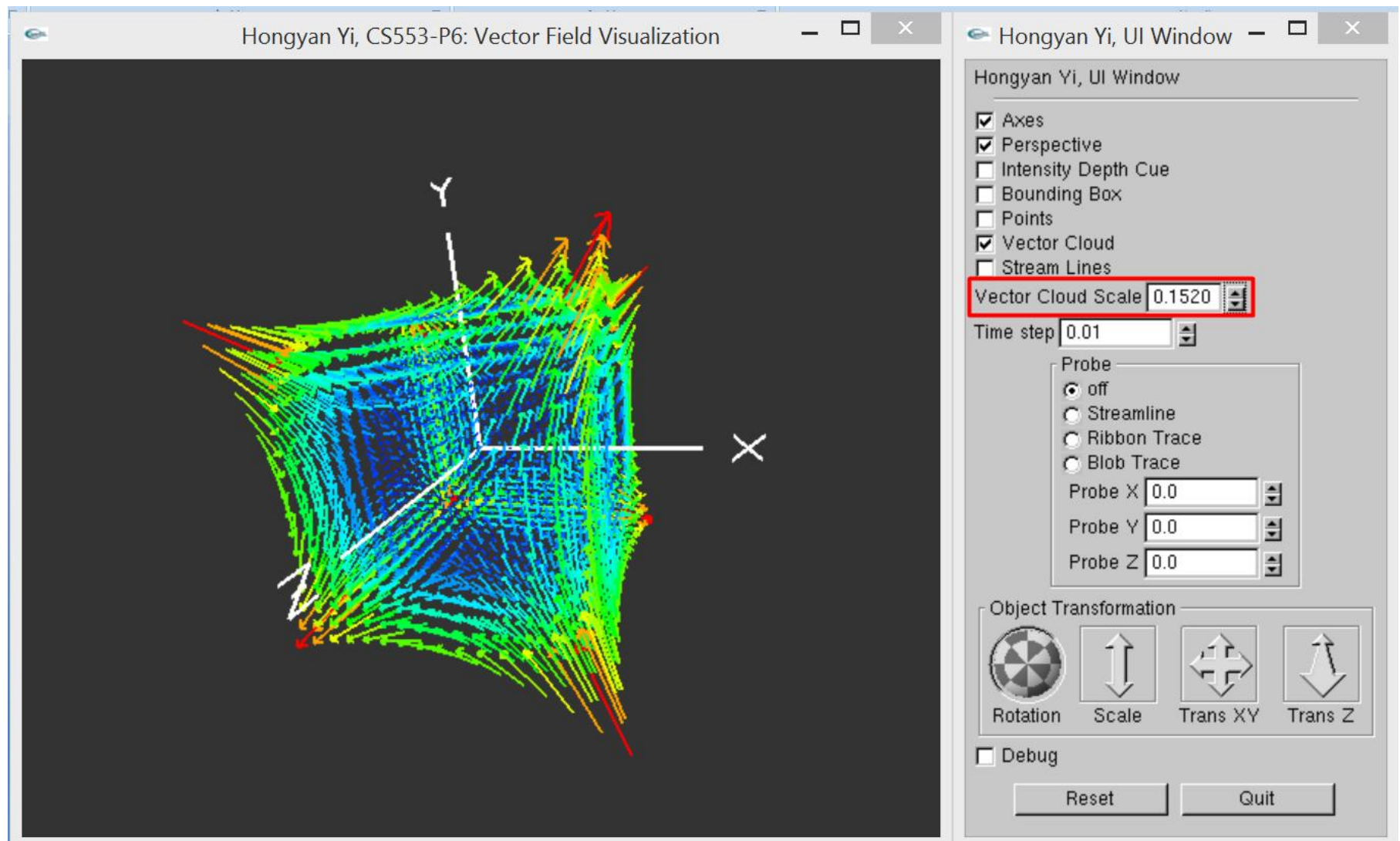**C - OpenGL - Point Cloud**
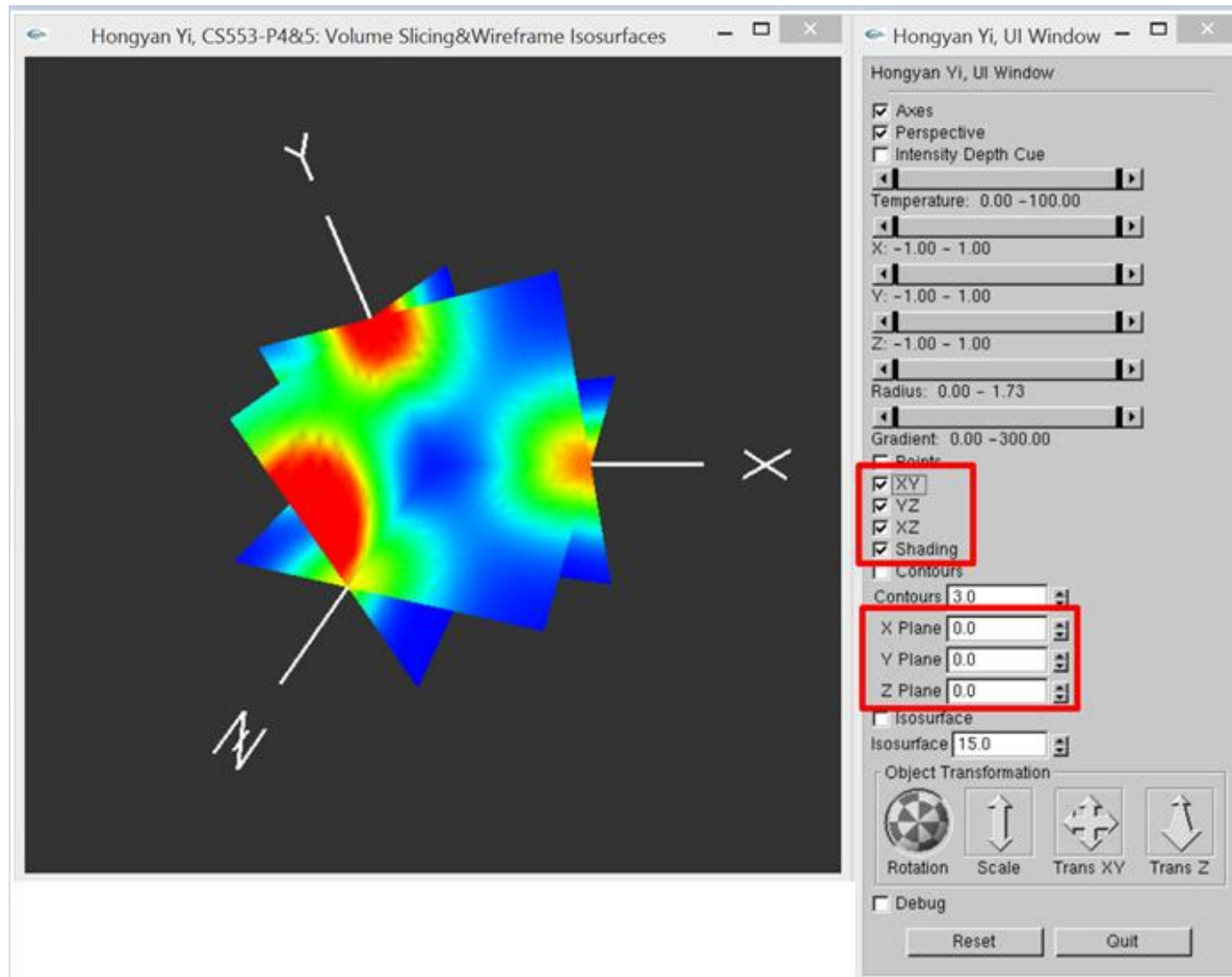
C - OpenGL - Cutting plane
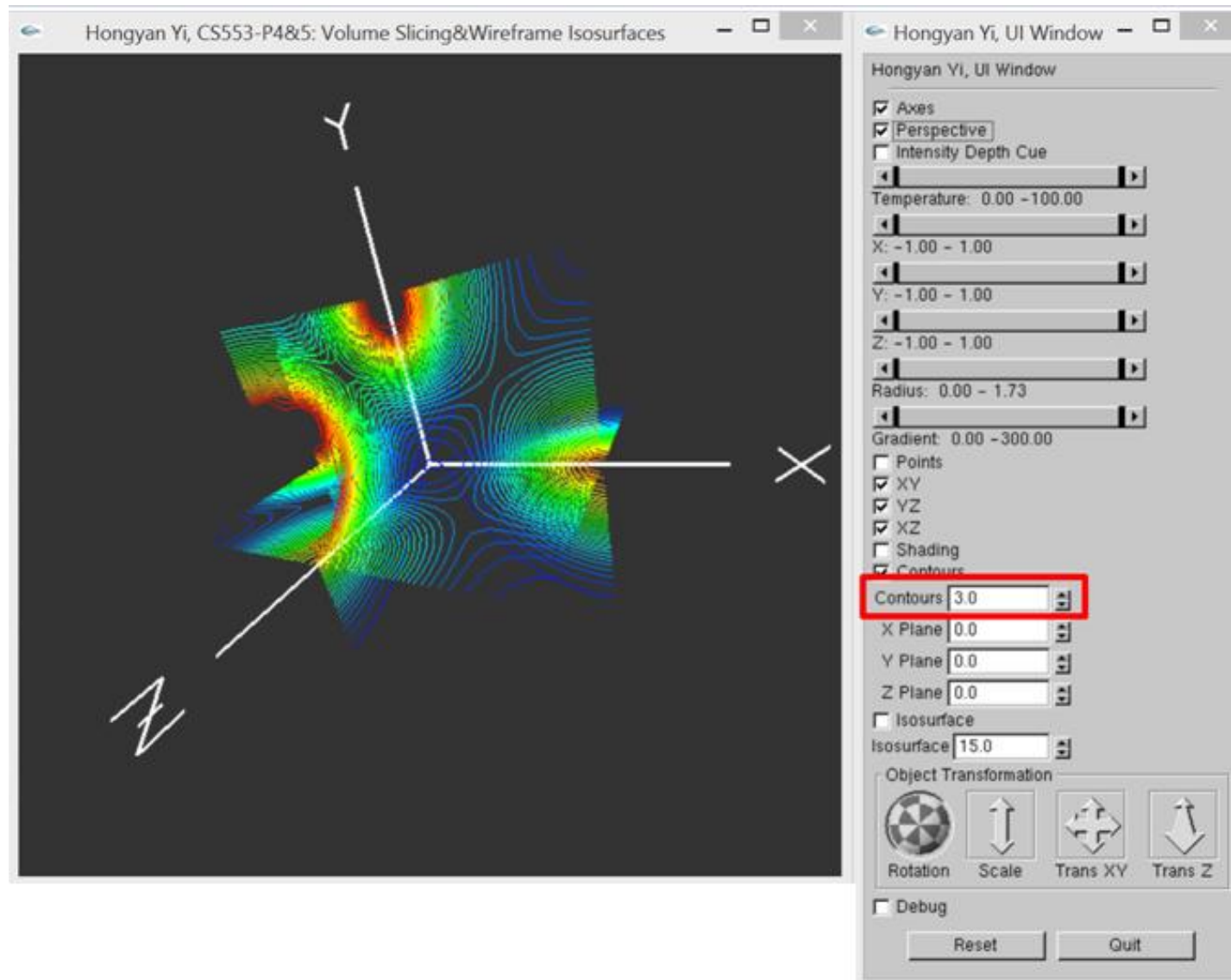
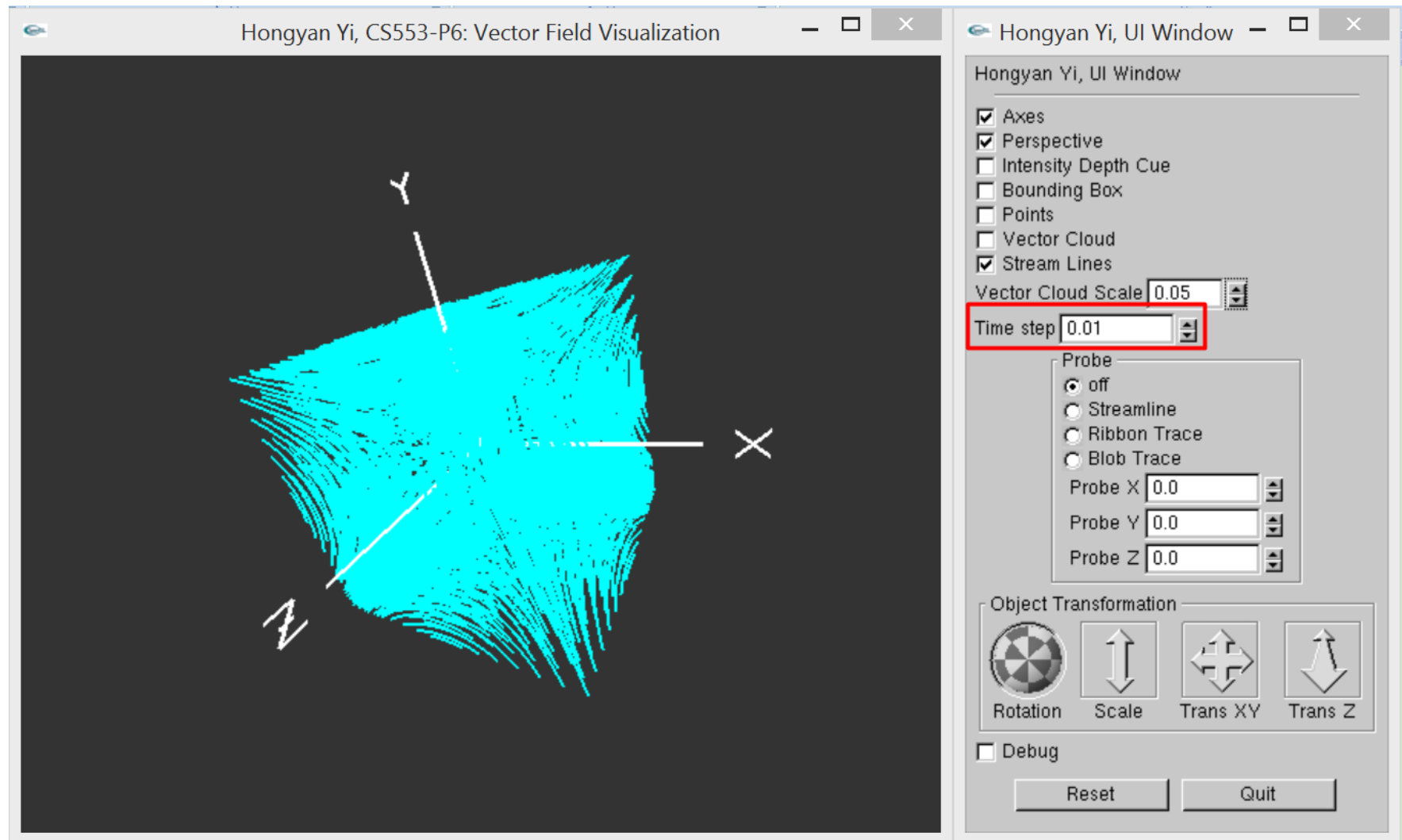**C - OpenGL - Isoline - Contour line**
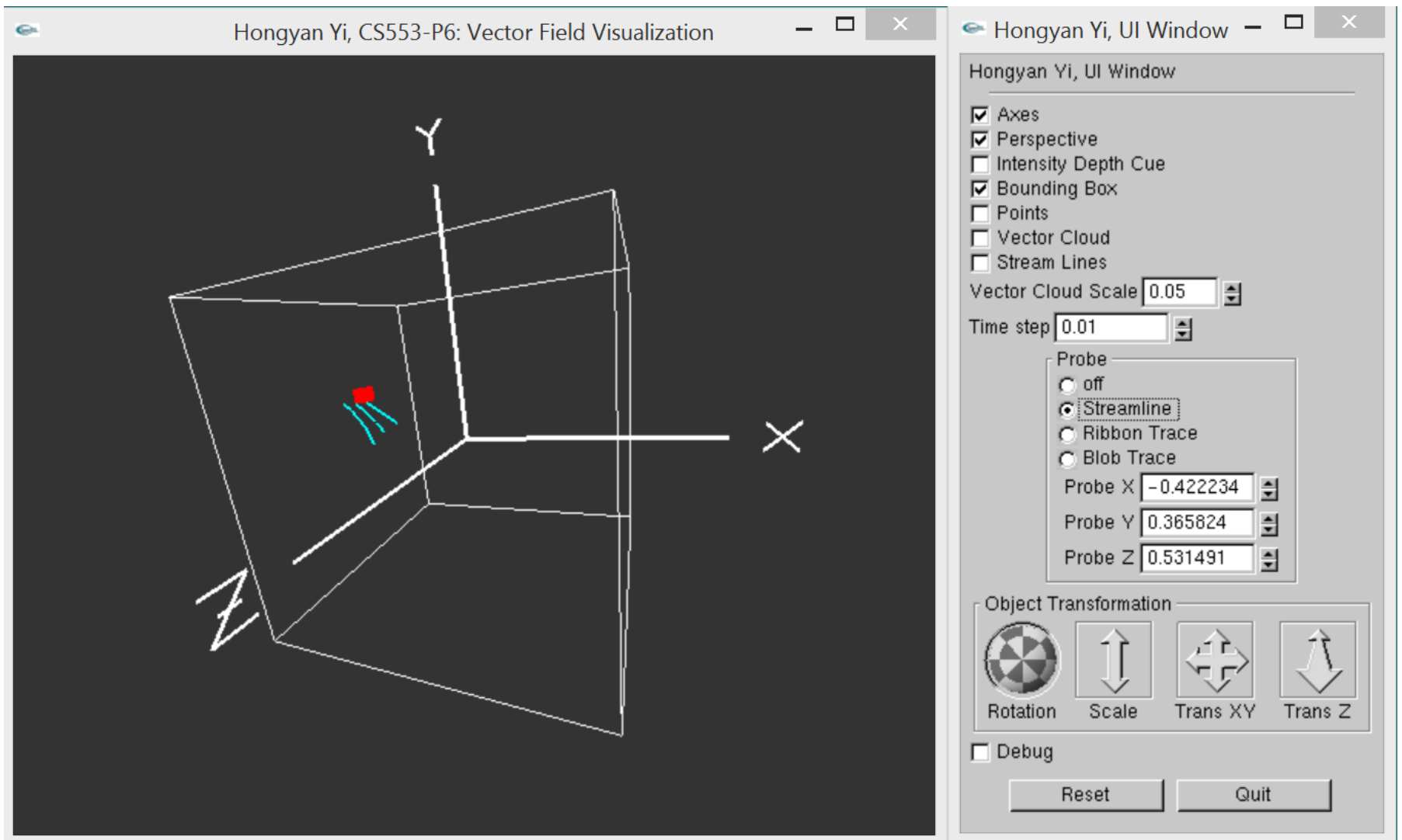
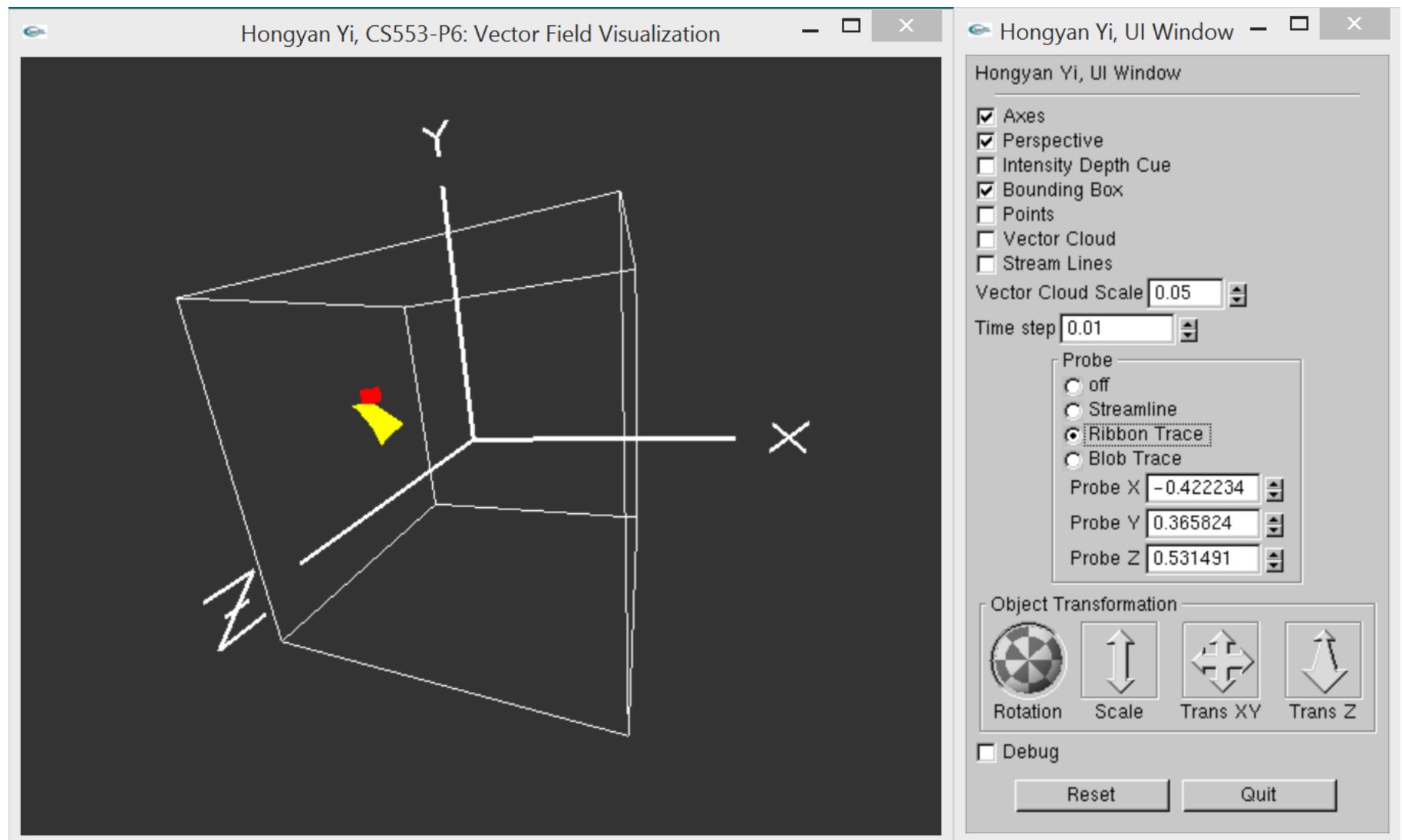**C - OpenGL - Isosurface**
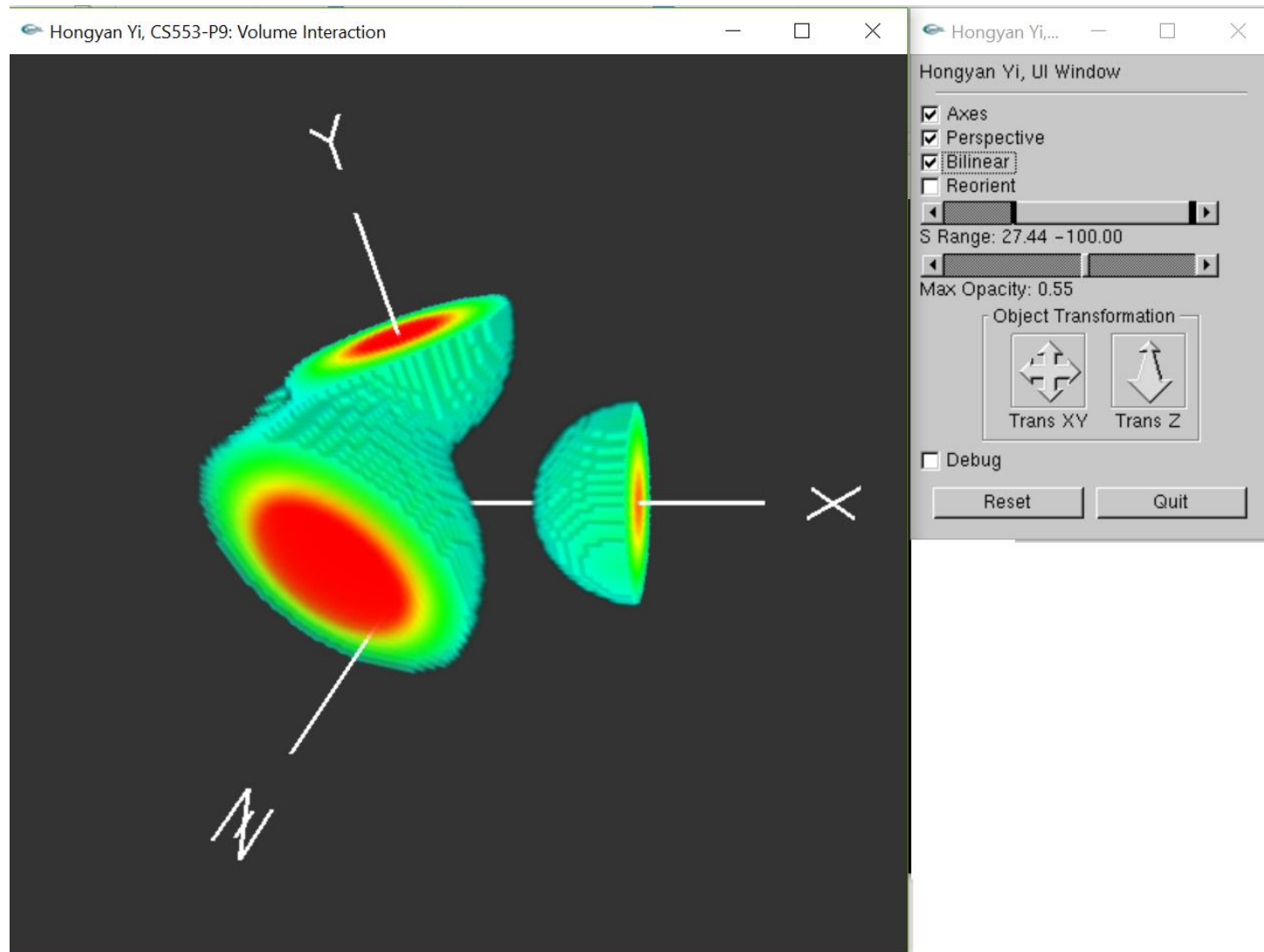
C - OpenGL - Isovolume

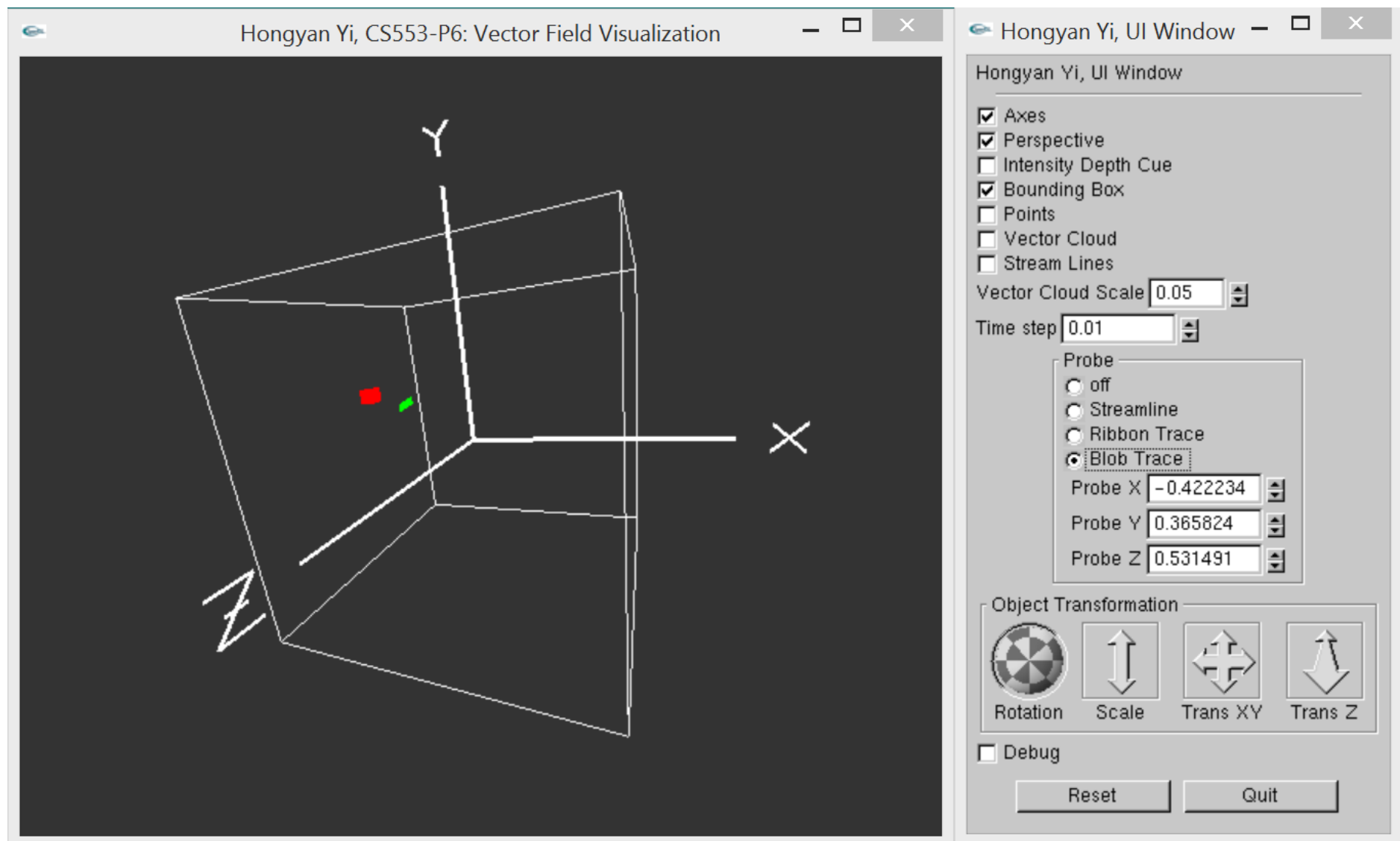**C - OpenGL - Vector Cloud**

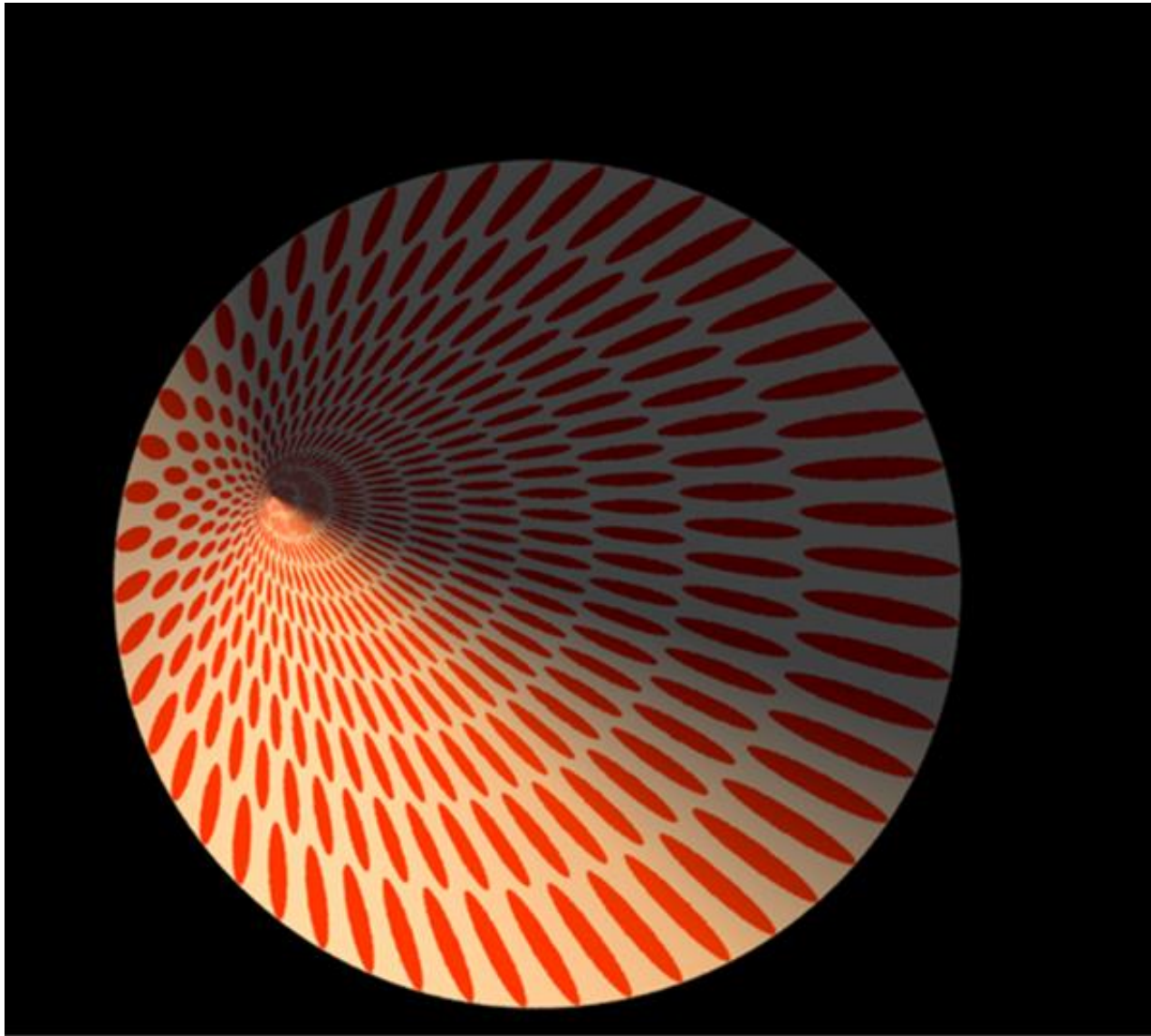**C - OpenGL - Static Stream Lines**
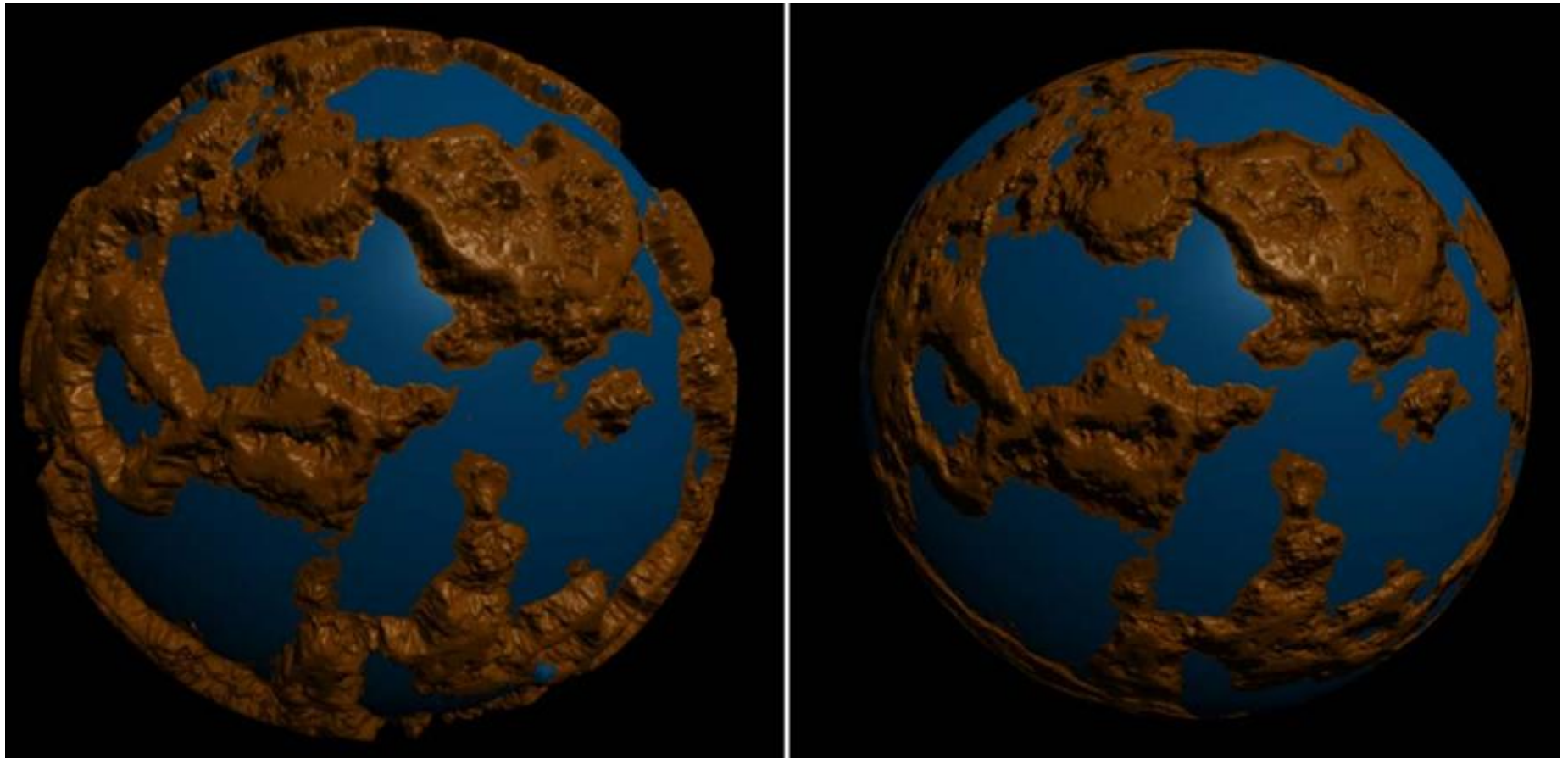
C - OpenGL - Probe Streamline

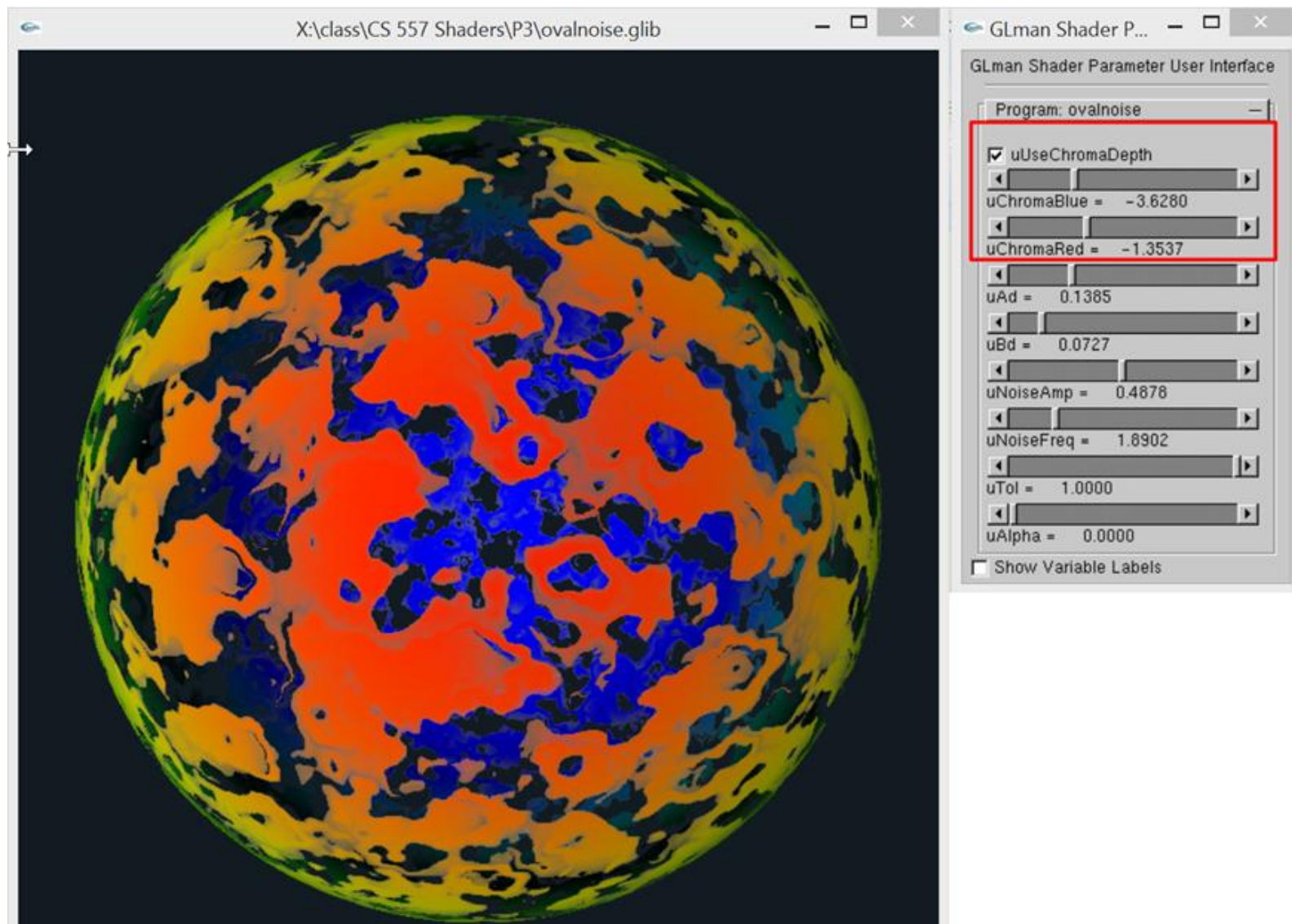**C - OpenGL - Probe Ribbon Trace**
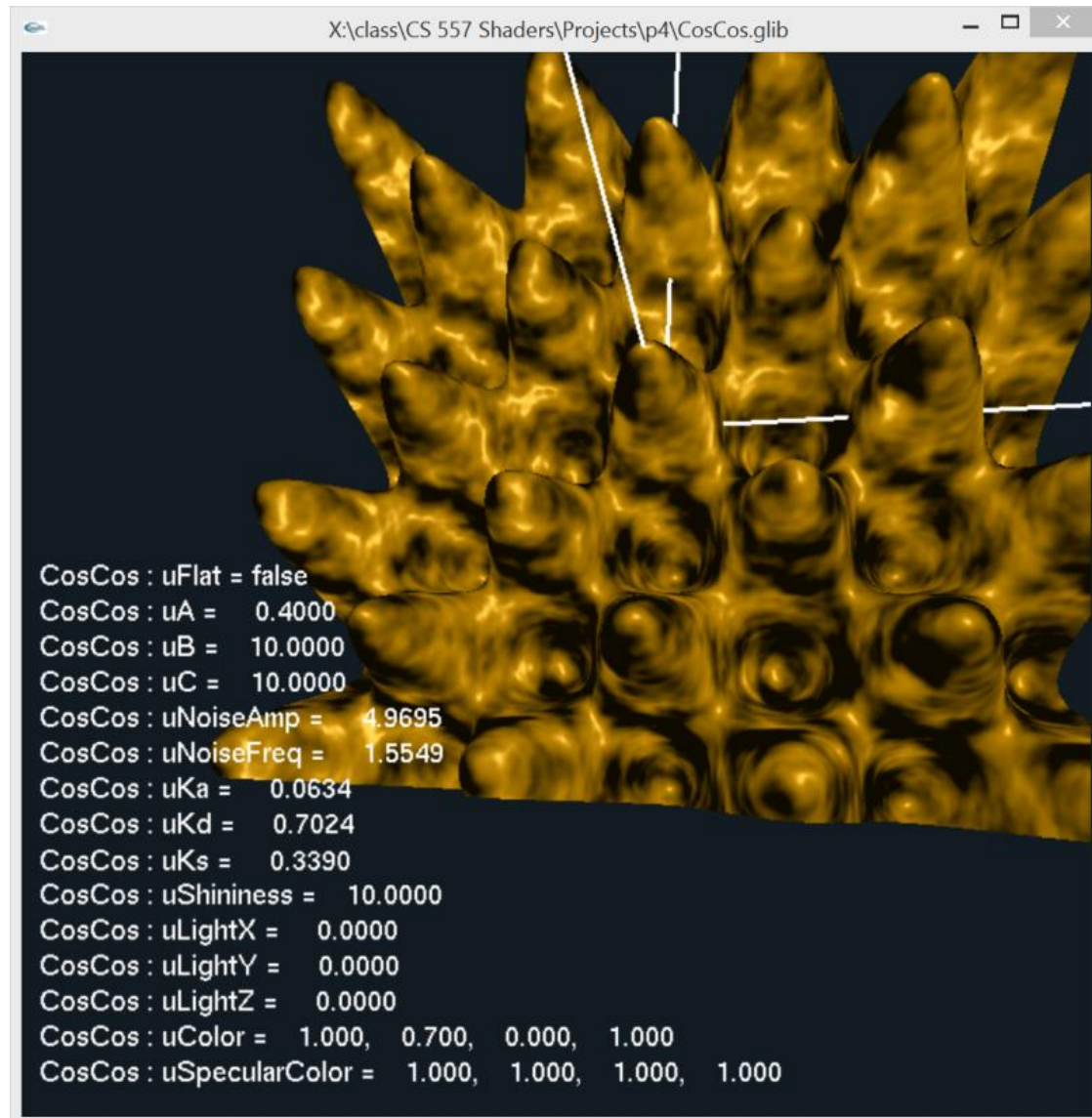
C - OpenGL - Probe Blob Trace

RenderMan - Elliptical Dots
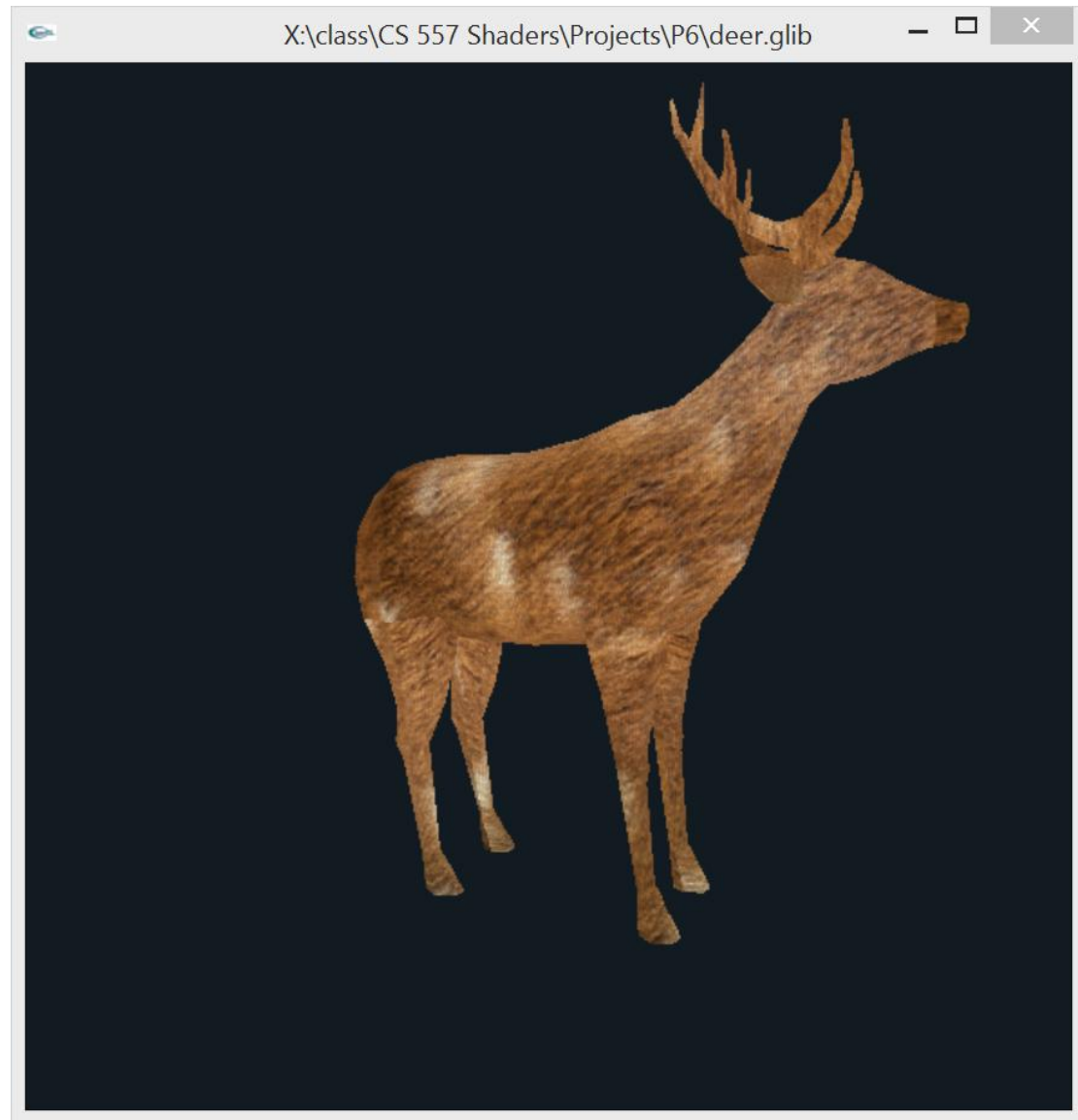
RenderMan - Displacement Mapping VS Bump Mapping
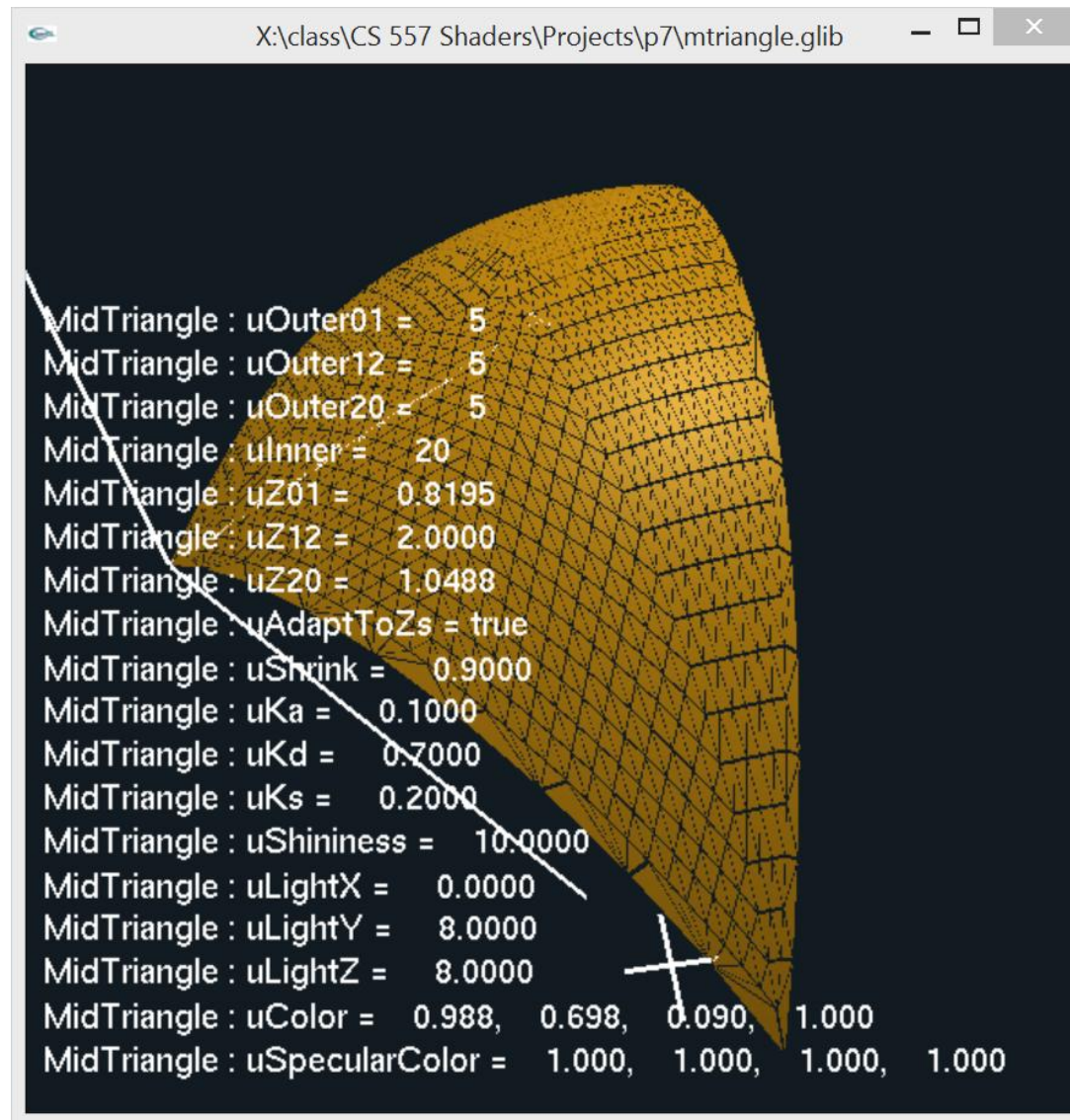
GLSL - ChromaDepth

GLSL - Displacement & Bump Mapping, Lighting

GLSL - Magic Lens

GLSL - Texture Mapping - Deers

GLSL - Tessellated Bézier Patch