

# More Lighting in OpenGL

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## 1 Administrivia

### Announcements

Collect exams.

### Assignment

Read Read 7.1–7.6.

Final project.

### From Last Time

Exam.

### Outline

1. Walk-through code.
2. Lab.

## Coming Up

Texture mapping.

## 2 Code Walk-Through

1. Lines 13–24: The experiments.
2. Lines 76–78: Disable all lighting to render the sphere representing the moving light as a 2-D object.
3. Lines 143–144: Disable and enable the fixed spotlight.
4. Lines 210–216: Specifying `GL_LIGHT1`'s position here, before the call to `gluLookAt()` results in the light being positioned in eye coordinates.
5. Line 227: `glLightModel*(pname, param)`:
  - (a) This call correctly computes specular reflections by correctly determining the viewer angle. Otherwise, the viewer is assumed to be at infinity and the view angle will be along the -z axis.
  - (b) Other `pnames`:
    - i. `GL_LIGHT_MODEL_AMBIENT`: Set global ambient parameters.
    - ii. `GL_LIGHT_MODEL_TWO_SIDE`: Set to `!0` to enable two-sided lighting using back material parameters.

Translucence?

For details, RTFM.

6. Lines 228–230: Note that lighting and individual lights are enabled separately.

## 3 Lab

Refer to source code.