

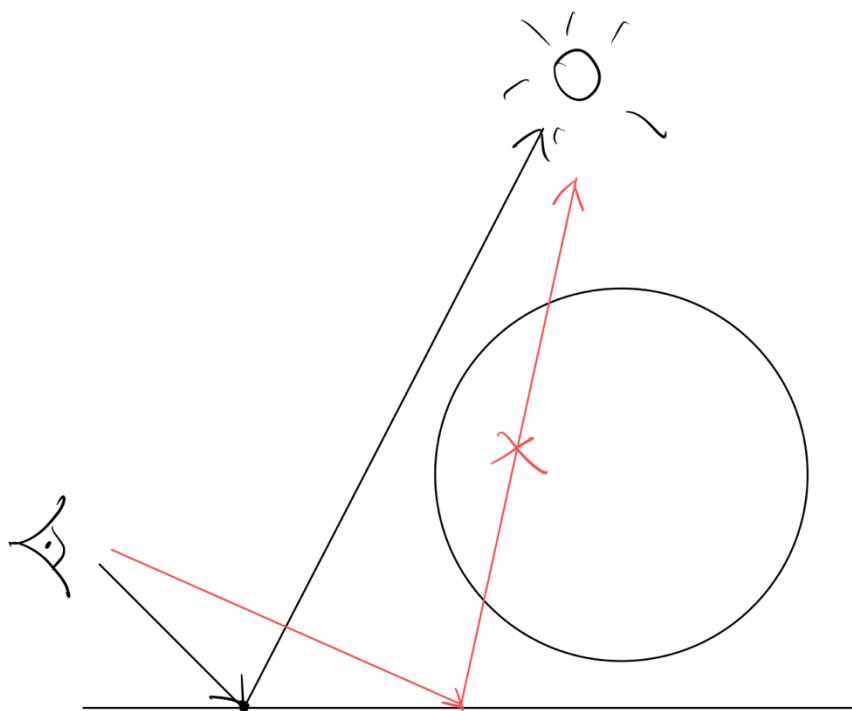
# **USI Autumn Semester**

## **Project Presentations**

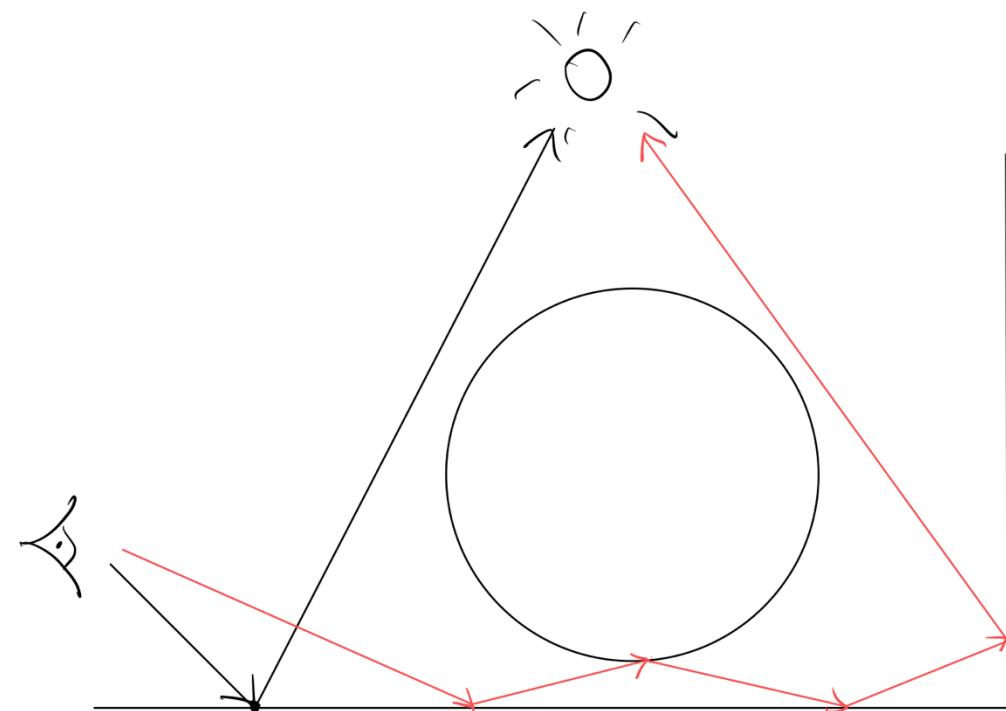
### **-- Computer Graphics**

Zhengtao Gao

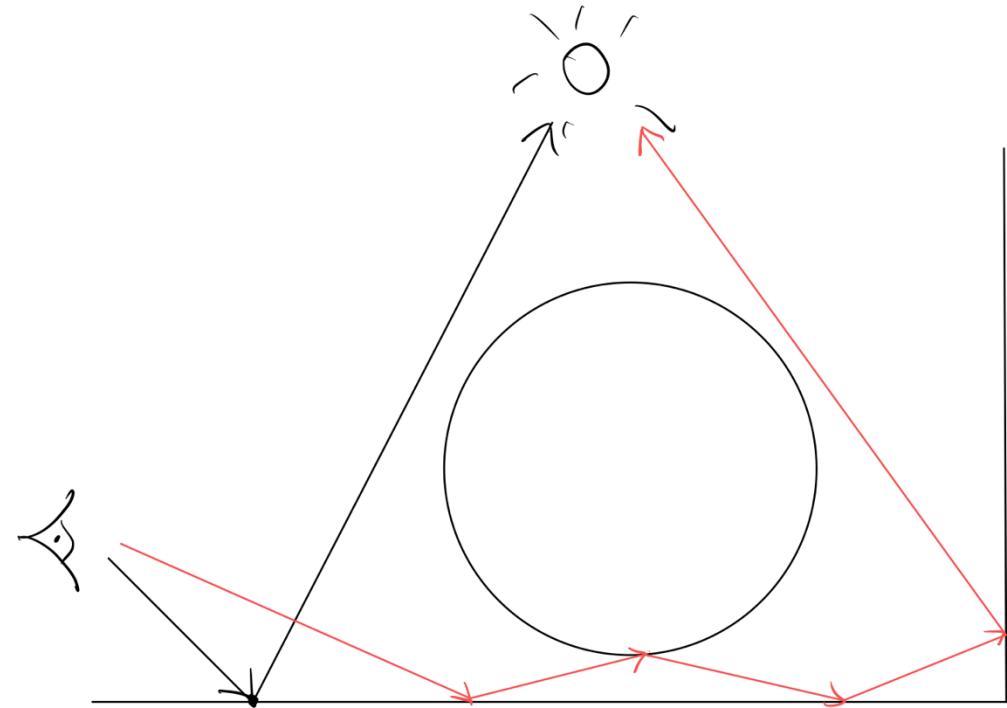
# Local Illumination vs Global Illumination



Phong's Model

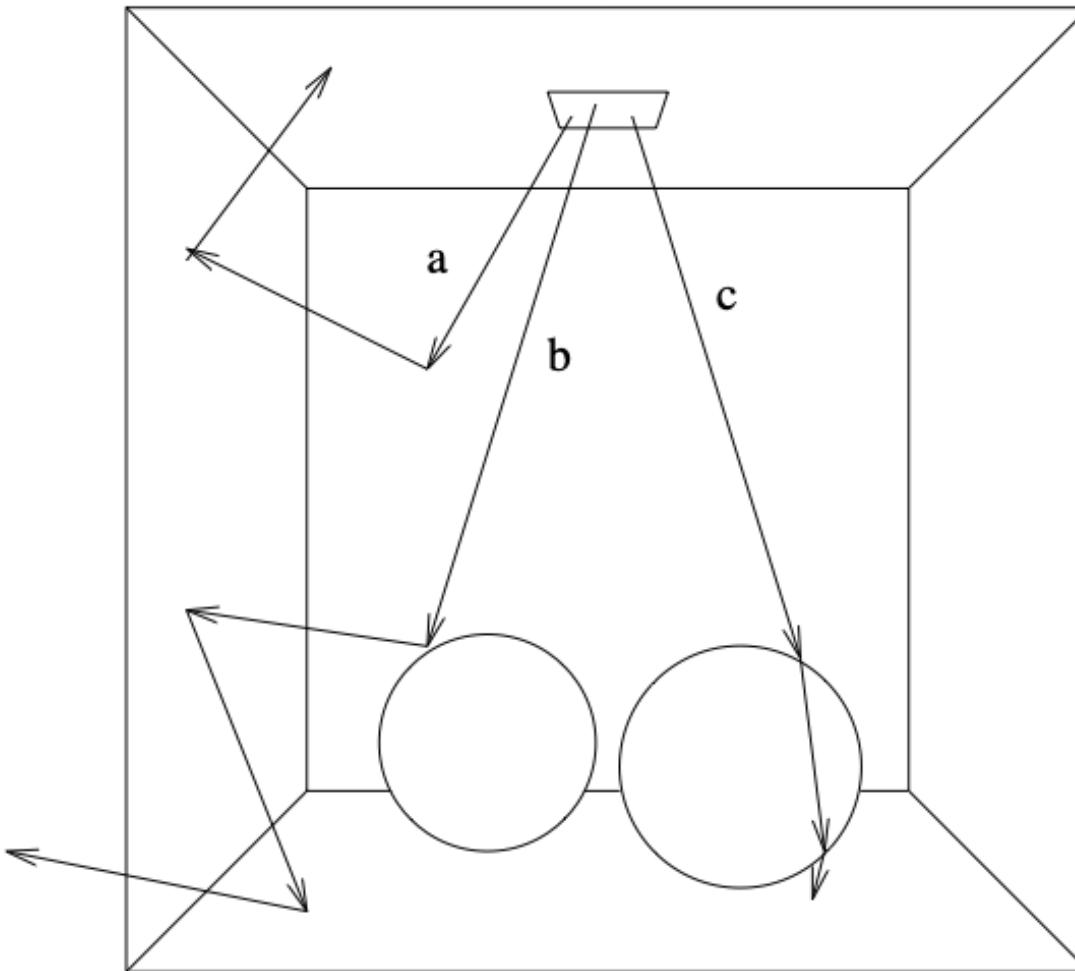


# Local Illumination vs Global Illumination



# Photon Mapping as an extension

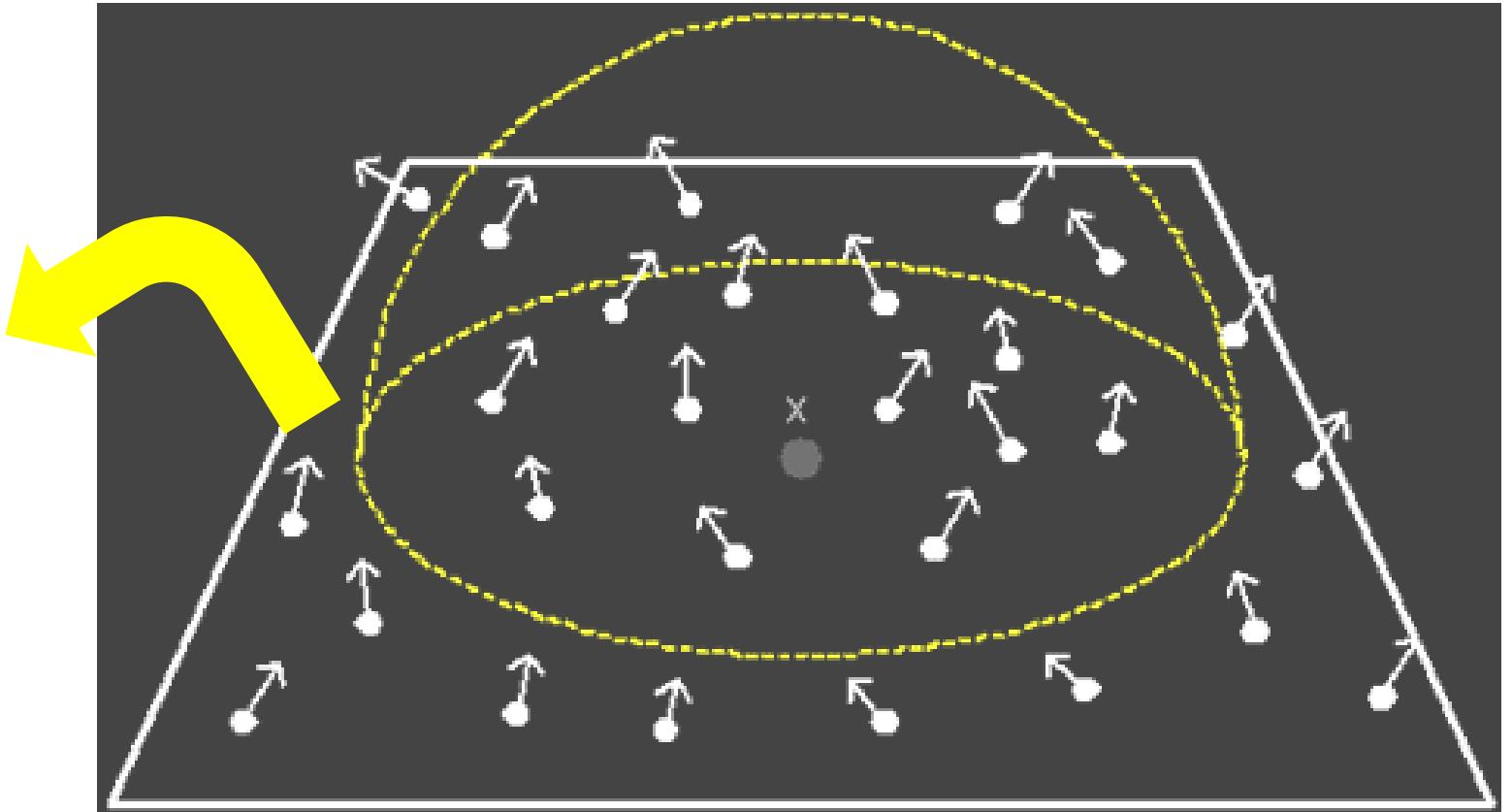
- Emit Photons
- Trace Photons
- Store Photons



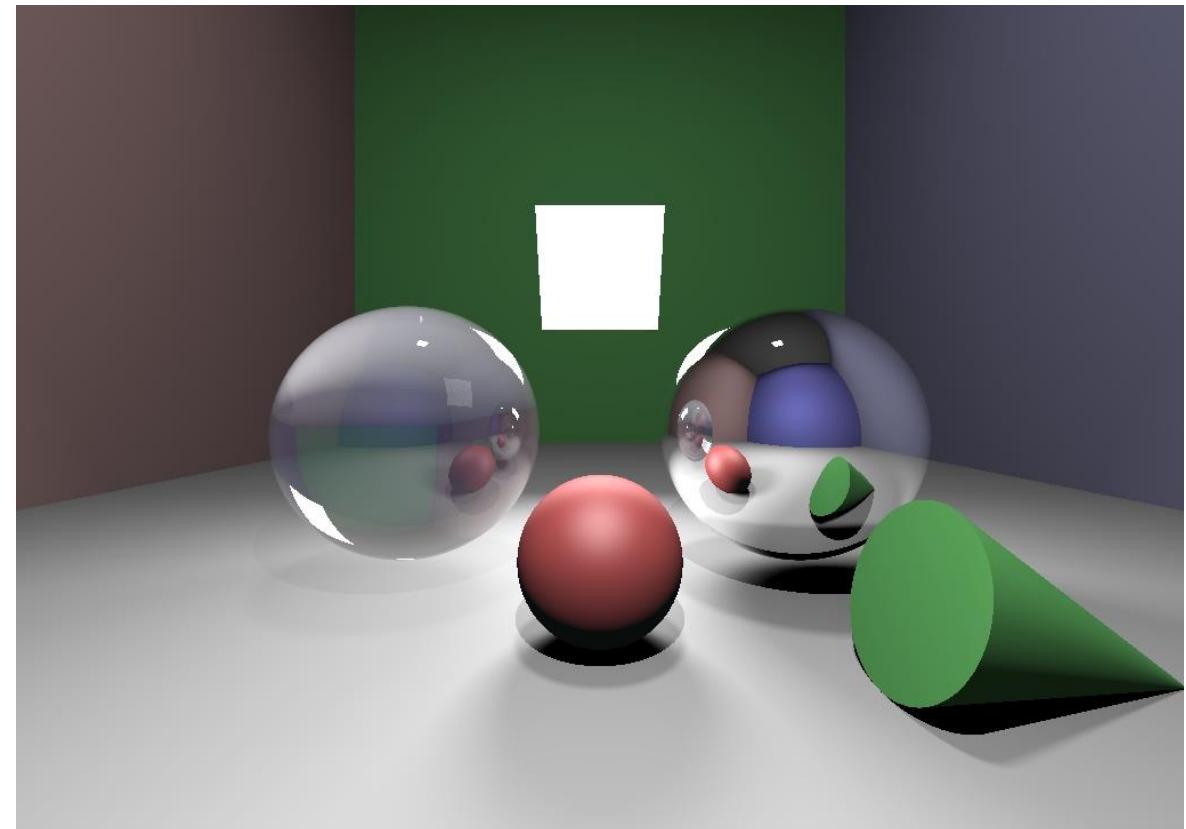
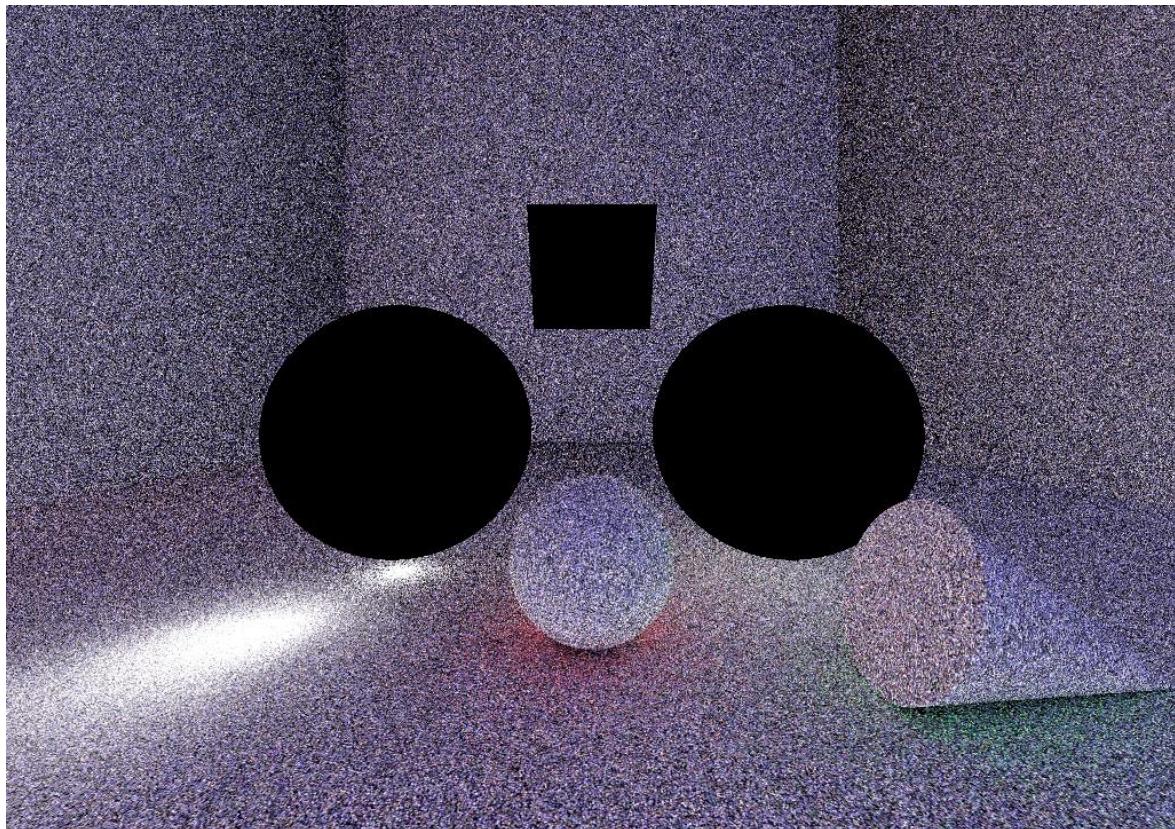
# Photon Mapping as an extension

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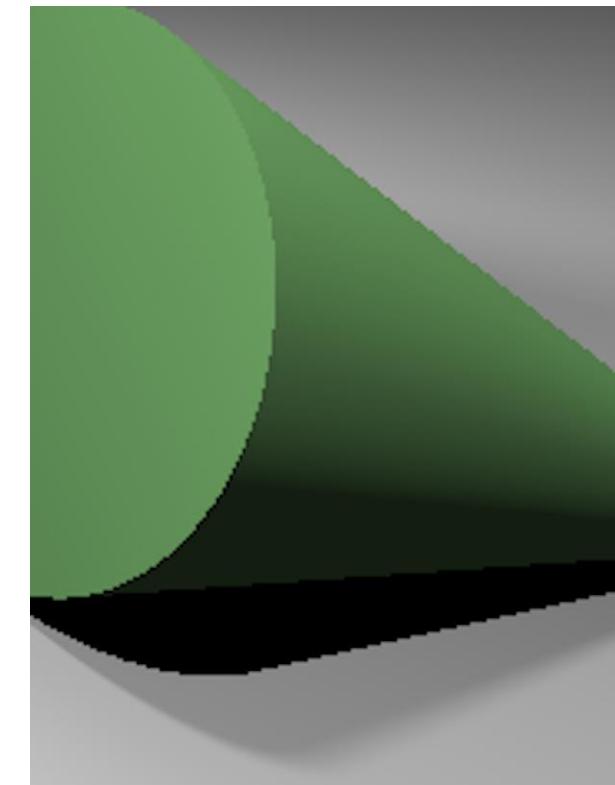
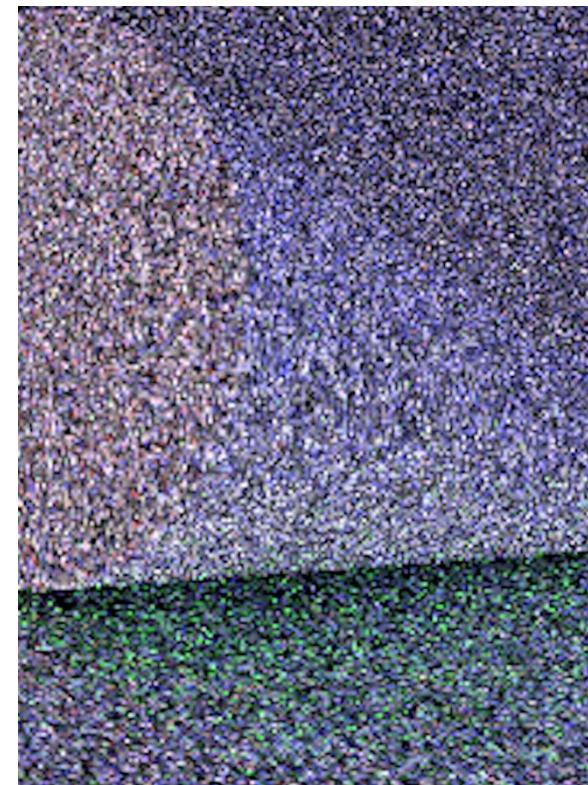
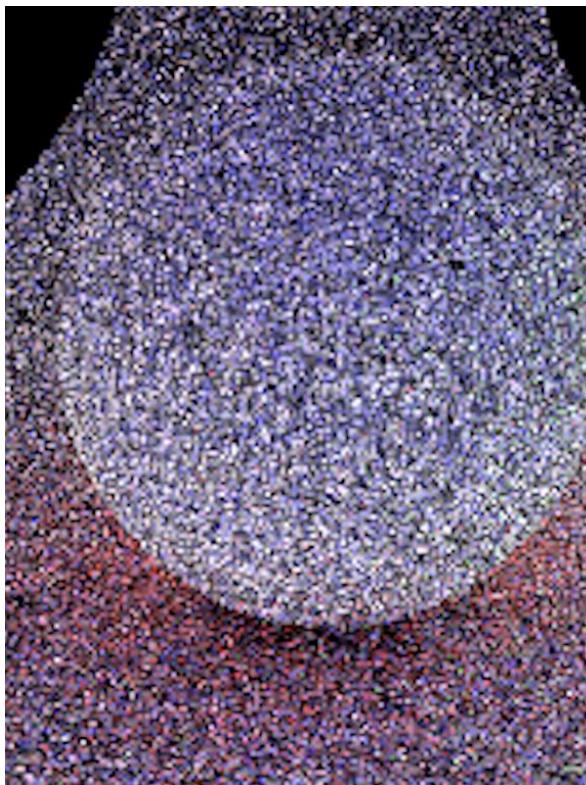
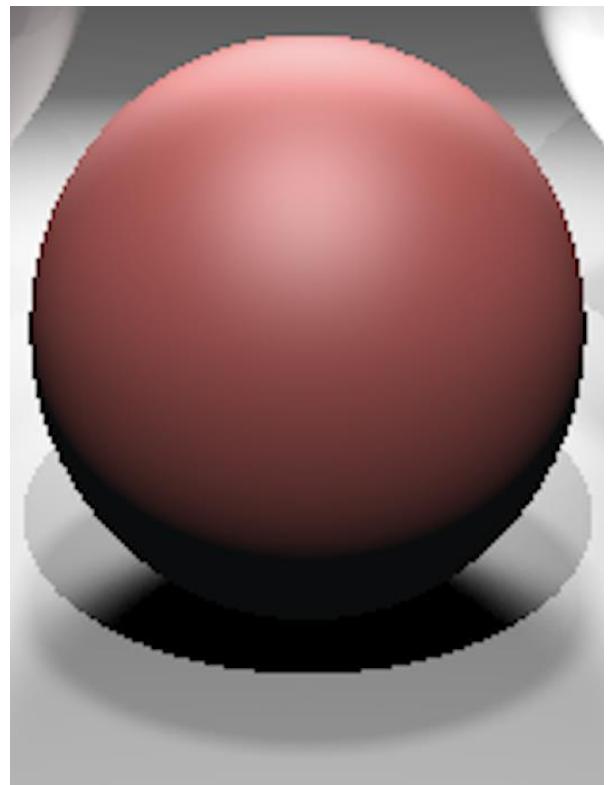
$$L = L_{phong\ model} + L_{photon}$$



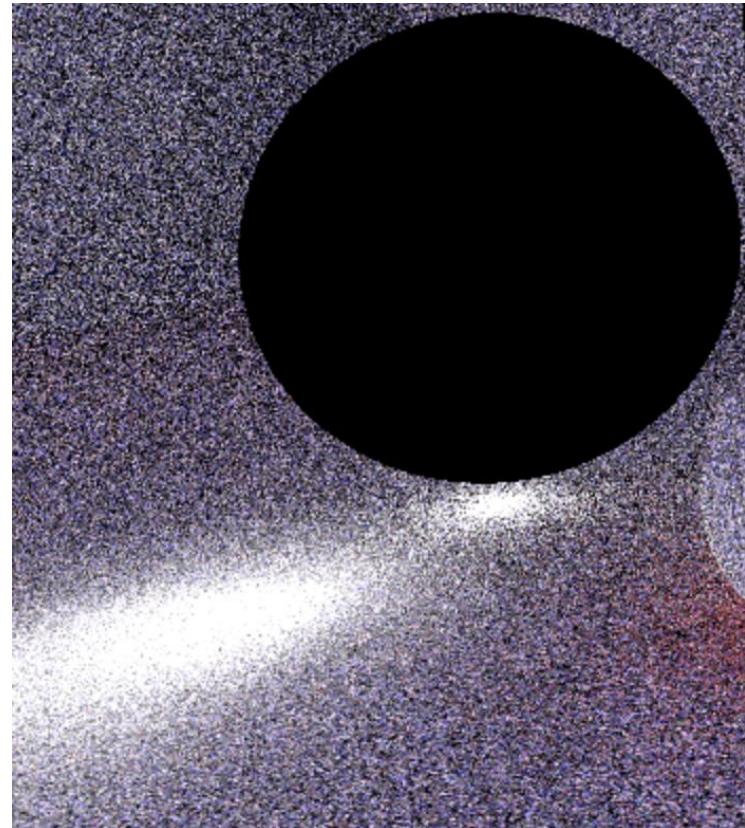
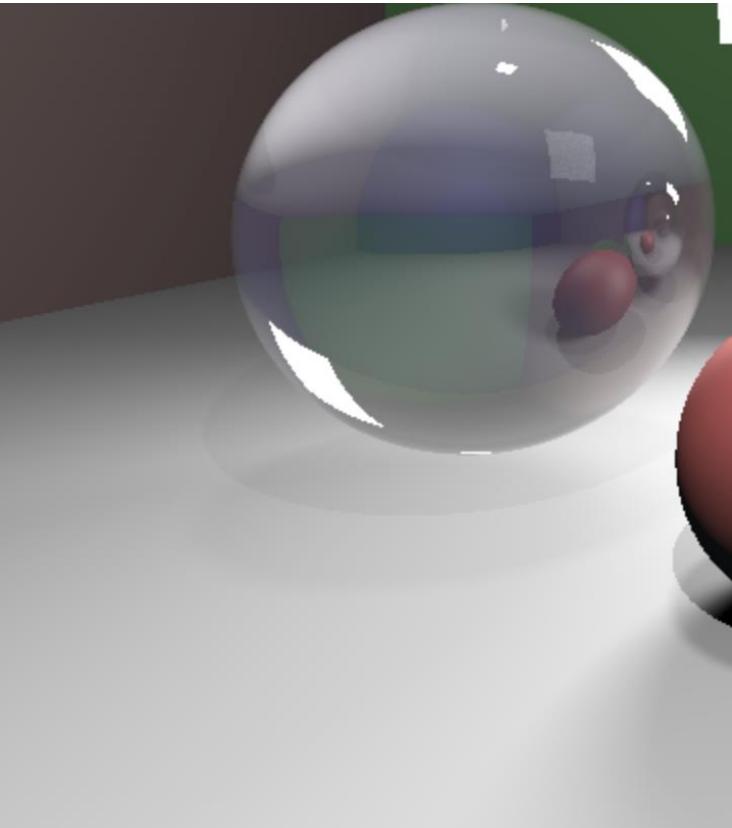
# Photons Visualization



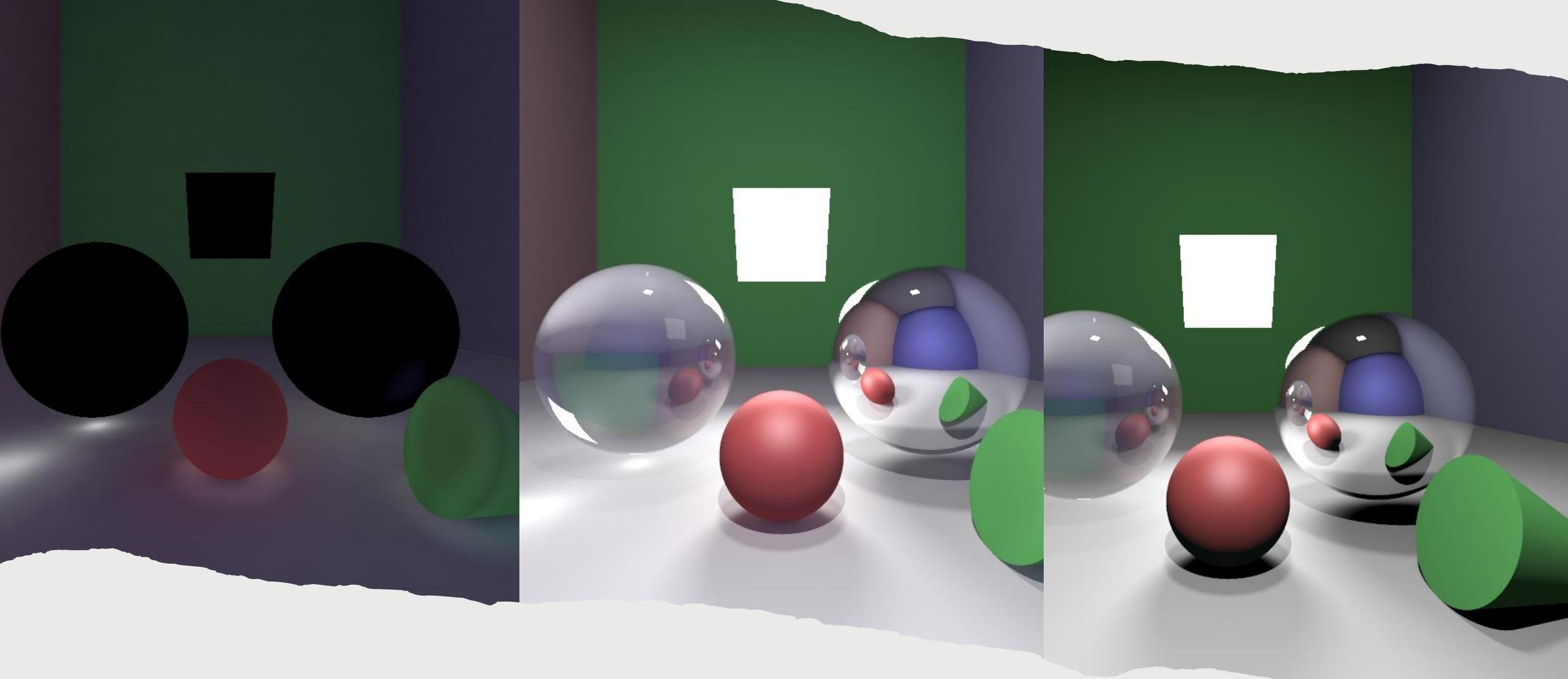
# Indirect Light



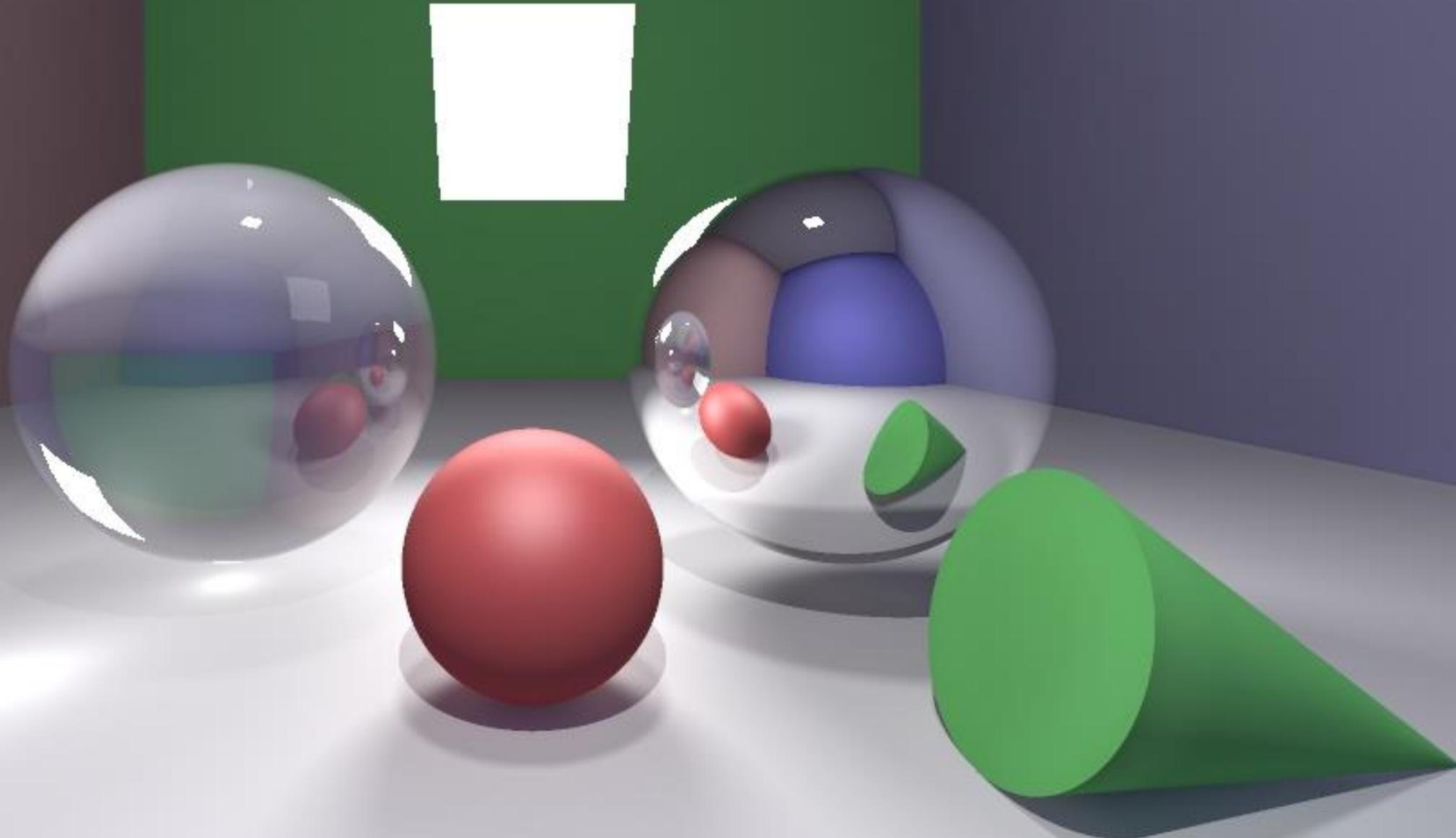
# Caustic

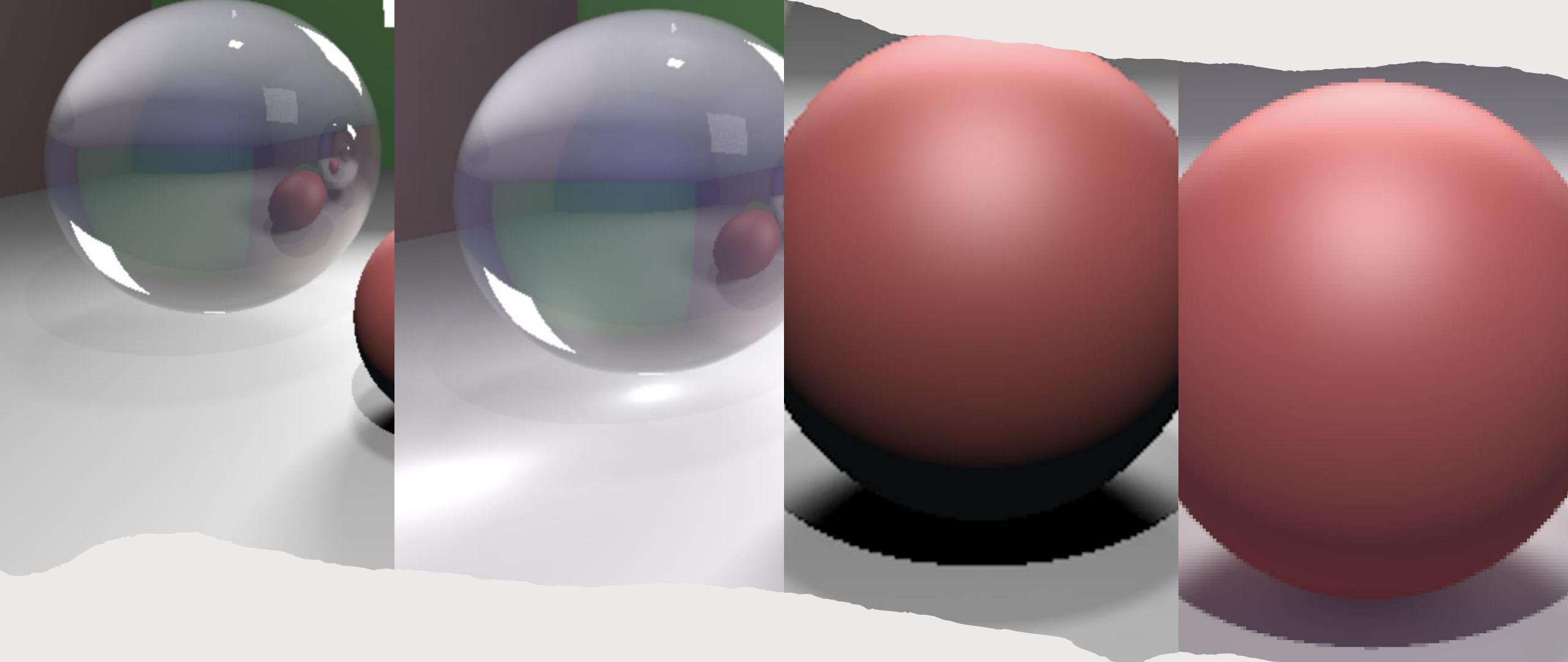


Rendering



# Result





Global Illumination & Caustic