

# Welcome to the LSST Image Simulation (imSim) Page

The Large Synoptic Survey Telescope (LSST) Image Simulator (imSim) is a set of fast photon Monte Carlo simulator codes and catalog building codes for simulating optical images as will be seen by [?LSST](#). The catalog building codes make catalogs of astrophysical objects from a synthetic database of the Universe. The photon simulator generates photons from catalogs of astrophysical sources, refracts them as they travel through the atmosphere, follows them as they reflect and refract off the optics, and traces them into the detector.

The image simulation group is attempting to address:

- Generating catalogs of stars and galaxies to a depth of  $r=28$  with associated photometric and structural properties
- Generating high fidelity images of the sky (including the atmosphere, telescope and camera) for use by the Data Management group to test and evaluate the processing pipelines

To do this we use two actively developed codes:

- [Catalog Framework](#)
- [Photon Simulator \(phoSim\)](#)

Mailing list:

- [?We have a mailing list on Hypernews.](#)