LSST-GalSim Meeting May 19-20, 2016

Location: SLAC

Participants:

George Angeli

Andrew Connolly

Mike Jarvis

Rachel Mandelbaum (by phone)

Josh Meyers

Aaron Roodman

Michael Schenider

Chris Walter

Bo Xin

Andy Rasmussen

Presentations:

LSST Overview: Actuators, Perturbations, Controls, and Metrics

Linear optical model for a large ground based telescope

GalSim Plans

LSST Integrated Model with Phosim (Bo Xin)

Modeling optics perturbations with GalSim

Simulation needs for Data Management

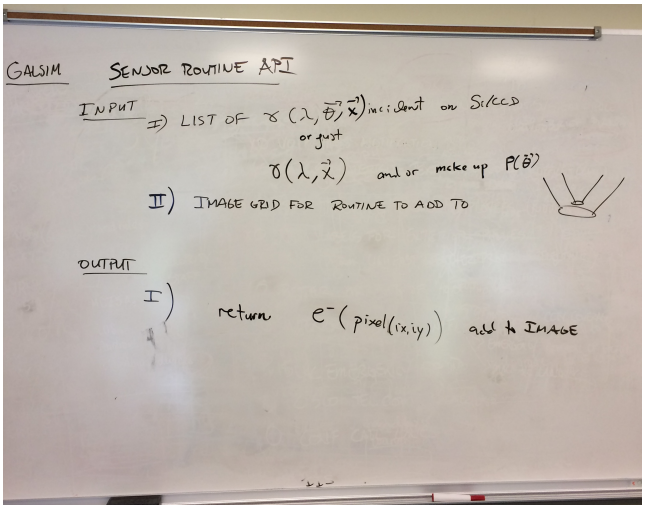
Sensor Models and Validation

GalSim Overview

Action items:

- Aberration modeling
  - Check the accuracy of the assumption of linearity in the sensitivity matrix
    - Bo will give Aaron and Michael the sensitivity matrices he has derive
    - Michael will interpolate to a new position see if his predicted values are “better” (better means doesnt impact the PSSN by more than 10^{-3})
  - Compare the Galsim wavefront sensor simulations
    - Michael will compare the wavefront images using the LSST Zemax model (from Aaron)
    - Once this comparison is complete Bo will provide Michael zemax images and the zernicke coefficients and Michael will compare
- Optical model
  - Provide GalSim with spider description (either from phosim or the latest model) and post on confluence page
- Atmospheric modeling
  - Josh validate his model comparing against Arroyo, looking at structure function, dependence on screen size
  - Provide Josh with the distributions for the wind velocities and directions, CN2 (either from phosim or somewhere else)
  - Possible to use Josh's work to validate effects of assuming photon based approach for the atmosphere (after it is validated) but recognizing that phosim has done many of these tests

- Galsim sensor API



- Whiteboard photo of Michael's atmospheric effects implementation comparison