

Adding SNIa to LSST Sims

Basic Plan

- Add SNIa to galaxies in LSST catalogs with peak MJD drawn from a uniform distribution of width tuned to match observed SNIa rate
- Distribute SNIa parameters to match observed distributions if available, or simple model based expectations
- Use a model like SALT2 + scatter to provide SNIa seds in rest frame, use LSST sims framework to redshift, apply extinction corrections, calculate passband magnitudes in observer frame
- Use instance catalog to obtain properties and filter magnitudes of SN in the field at a particular viewing

Quantities available from Catalog

- Quantities like z , SN params, scatter should match observed distributions, band magnitudes will be available
- Quantities like positions, vel, will be built on simple models

Status

- Have InstanceCatalogs that provide SN params and Seds
- Working on obtaining effective bandpass/throughputs from obs_metadata