SIM Validation strategy

Simulators do not validate their own simulation

- ***How to validate simulations and do it systematically***

  Simulators provide both scientific data and data for validation purposes

  Full validation tests set every change (code/input data)

  Sim planner will enable the option to run validation simulation set (special input files and/or config options to be passed to the simulators)

SIM Validation strategy

- ***Where to store the validation tests code***

  Specific OUSIM Validation code on euclidsim svn repo (tests/verify/)

  Allowing complementary validation code from OUs/SOC to be stored under their code repository

- ***Who is running the validation tests***

  The owners of the validation tests code, during the validation phase (just after the sim production...)

- ***Where to store the validation results***

  Simulation release metadata in the EAS, if possible

SIM Validation strategy

Code tests with special input/config

Create simulations with

basic mock catalogue, extract the objects and compare to the input catalogue.

Create simulation with only:

- **zodiacal light from model (maps or analytical model)**, measure the mean flux and variance
- **DGL from model (maps or analytical model)**, measure the mean flux and variance
- **faint objects (unresolved)**, measure mean flux and variance
- **cosmic rays,** measure rate and intensity
- grid of stars with **ghosts** on noiseless images, measure flux and position of the ghosts
- background and diffused scattered light (**diffuse zodiacal light**)
- spatially homogeneous source and shutter effect, measure signal 2D surface across FPA
- Flat illuminated image and instrument vignetting mode
- grid of stars, measure the position shifts and shapes from undistorted projection

and compare to the input model.