June 8, 2016

Chris: Proponent of real-time awareness of effecitve clouds for reducing transparency, and if moon is up, it increases sky brightness

Daniel Rothchild: Physics/CS major at Harvard

goal: Construct a module that might survive that would help inform the scheduler for real-time.

Increase efficiency of the telescope by not looking at clouds or where clouds are going to be.

From daytime: Clouds are pretty stable and easy to propigate on 10min timescales.

John Tonry is doing work to convert fisheye images to transparency--waiting for him to do things for transparency.

How do we want to send things to the scheduler?

Fransisco:

Observatry Control System: OCS

Data Distribution Service: DDS

How to handle mapping in DDS.

Micheal:

SOCS -- Simulated Observatory Control System

Everything has to run through DDS. Currently running 2,000x faster than real-time.

For running a simulation, need a cloud database, to pull up an image, package as an array in DDS,

skymap = HEALPix representation of the sky.

Perhaps send a sequence of skymaps that include the current cloud map and then a sequence of future predictions?

Stubbs: The units of the map should be degredation of coadded m_5 depth relative to xxx. The all sky should deliver a map of m5 degredation. Where does the prediction lie?

Map of m5 degredation due to cloud extinction, and a map of m5 degredation due to sky brightness. In each band.

How do you represent a time sequence of healpix maps, and how to pass to the scheduler?

Discussion of if cloud prediction should be located inside or outside the scheduler.

Issue of how to do interpolation--if a cloud prediction model is publishing cloud predictions should it do it for every X minutes and then the scheduler interpolates?

Stubbs summary:

all-sky instrumentation --> makes healpix maps of sky --> maps + forward model prediction --> SOCS (eventually) --> DDS --> scheduler

Michael: Just need a healpix map for current. Then work out how to do the predictions and publish that.

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weather forecast update from Sandrine:

Gemini is going away from U Santiago for weather forecasts. ALMA has a good weather model.