VERA C. RUBIN OBSERVATORY

Alert Production

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LSST Legacy Survey of Space and Time

NSF NOIRLab AURA SLAC U.S. DEPARTMENT OF ENERGY

AP staffing update

- **Two new hires:**
  - Brianna (Bri) Smart started as a Research Scientist in August at UW
    - Formerly a postdoc at the University of Hertfordshire (UK) writing pipelines for MeerKAT
  - Erin Howard started as a Research Assistant in August at UW
    - They will support our QA efforts on precursor datasets
  - **One new hire in the works:**
    - Bruno Sanchez will join AP in *December* through IN2P3 at Marseille, France
      - Currently a postdoc at Duke University, contributing to the DESC difference imaging pipeline

Alert Production - Recent progress

- **Data analysis and QA 02C.03.04**
  - Regularly processing both DECam HiTS and HSC COSMOS in CI
  - New hires Howard and Smart learned how to run the AP pipelines at USDF
    - The transition to a new data facility cost many team members ~2 months of productivity.
- **Infrastructure 02C.03.05**
  - Removed deprecated code, and final Gen 2 Butler code from AP
  - Switched pipelines to use the new image differencing
  - Started using the new analysis_tools framework to create plots and metrics for AP.

Alert Production - Recent highlights

- **Solar System Processing (formerly known as MOPS) 02C.03.06**
  - Wrapped up work on Heliolinc
    - There will be further adjustments of the algorithm, but it is believed to meet requirements.
  - Tested Heliolinc with extensive simulations, and Juric and Heinze presented the results at DPS earlier this month.

- **Integration 02C.03.08**
  - Krzysztof has been fixing all of the issues from the pipeline side discovered during the Prompt Processing sprint

Alert Production F22B cycle plan

- **Alert Distribution**
  - Smart is reading through all of Spencer Nelson's documentation on his Alert Distribution system
  - Several services have changed in the last year
    - She will fix those changes and stand up a working prototype first on Google Cloud
- **Analysis and QA**
  - Meredith is going on Maternity leave around the end of October
  - Howard is taking over regular data processing runs from Meredith
  - Parejko will focus on performance characterization and tuning of AP
  - Herner will work on image differencing characterization

Alert Production F22B cycle plan

- **Pipeline Infrastructure / Integration**
  - Findeisen (with some support) will work with Yee, Wei, Speck, Lim, Chiang to stand up Prompt Processing at the USDF
  - Parejko will set up a new CI test dataset using DC2 data
- **Tools for machine learning** - real-bogus classification (now called Transinet)
  - Building a flexible prototype that supports traditional real-bogus classification as well as more advanced models
  - John Parejko will work with him for additional training and to assist building the API to interface with the rest of AP
  - The traditional real-bogus classifier will be run in CI using the new DC2 dataset
  - Some work was on hold pending obtaining a SLAC account, but now we know we will have to do real-bogus work on Google Cloud

Alert Production F22B cycle plan

- **Solar System Processing**
  - Ari Heinze is making massive improvements in speed and performance to the Heliolinc2 algorithm
    - New “Heliovane” algorithm for asteroids near the sun
    - These algorithmic improvements continued through early October, with a shift to integration in F22B