VERA C. RUBIN OBSERVATORY

Data Preview 0 Delegate Flash Talks

All are welcome! Thanks for participating.

Fri Dec 9, 9am-11am US Pacific

Presented by
the Rubin Observatory Community Engagement Team

NSF NOIR Lab AURA SLAC U.S. DEPARTMENT OF ENERGY

DP0 Delegate Flash Talks

photos are great!

plots are great too!

Instructions

Go to the next empty flash talk slide. Replace the title with your name, and add text, photos, plots – whatever content you want to speak about.
Be ready to unmute when the host displays your slide during the Delegate Assembly.
You'll have 60s to speak. **Thank you for participating!**

Start with information such as:

- name and affiliation, career stage, location
- how should people contact you? (email, direct message at community.lsst.org)

Add sciencey stuff like:

- LSST-related science interests
- DP0-related activities or interests
- are you looking to collaborate on any topics in particular?
- what are you hoping to learn from participating in DP0?

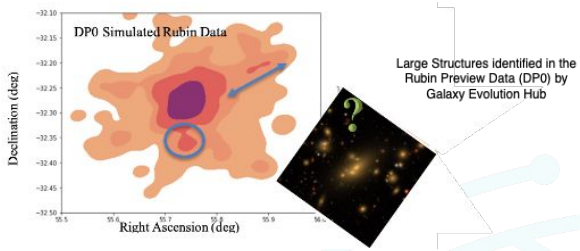
Louise Edwards & Brian Morsony (+undergrads)

Establishing a diverse community of expert Rubin Observatory users throughout the California State University System

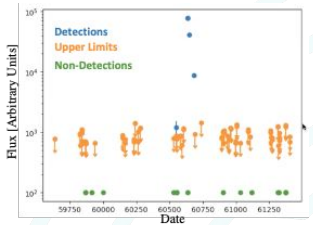
PI Louise Edwards, Associate Professor, Cal Poly SLO (email best: ledwar04@calpoly.edu)
Co-PI Brian Morsony, Associate Professor, Cal State Uni, Stanislaus

DP0/Rubin Interests:

- Galaxy environment and characterization, merging, ICL injection, SED fitting
- Transient follow-up and identification – Gamma Ray Burst afterglows
- Undergraduate-focused projects and professional development (abstract writing)
- Some student projects: Iliana Alvarez: Early Classifications of Transients using Deep Learning; Just Bopp: Photometric Redshift Estimator; Dylan Fleming: Supervised Learning Light Curves of SNe1a; Luisa Gonzalez: Galaxies and Color-Color Diagrams; Vicente Puga: Cluster Color-Magnitude Diagrams; Sam Scott: Pre-SNeII R-band magnitude light-curves; Denvir Higgins: Expected location of strong lenses around massive galaxies
- **Happy to collaborate!**
- Github contributions:
  https://github.com/rubin-dp0/delegate-contributions-dp01/tree/main/Structure/StructureAroundCluster
  https://github.com/rubin-dp0/delegate-contributions-dp02/tree/main/forced_photometry_at_location



Large Structures identified in the Rubin Preview Data (DP0) by Galaxy Evolution Hub



ID transients using forced photometry at any location in DP0 by Gamma Ray Burst Afterglow Hub

AST-2218943 (PAARE)
AST-2205976 (RUI)

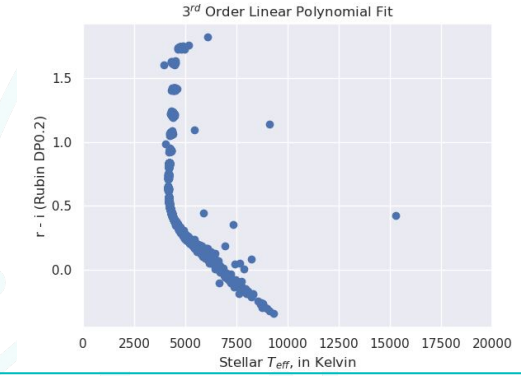
Summer Data Summit 2022!

Bob Abel

Prof. Emeritus, Olympic College
Affiliate, DiRAC Institute, U. Washington Astronomy
Working on LSST/Rubin projects every summer since 2009
babel@olympic.edu

Interests: Learning how to ask the LSST the right questions, with a focus on machine learning modeling

Current Work: Modeling SDSS star colors with respect to effective temperature, [Fe/H] and log_g,
and applying the model to the Rubin DP0.2 star colors to see what they produce. With Tina Adair, Jennifer Soebeck and Douglas Tucker.



Aaron Meisner (NOIRLab; aaron.meisner@noirlab.edu)

RSP JupyterHub terminal: 'bulk' DECam data reduction with the LSST pipelines

Context: our NOIRLab/CSDC team (Tom Matheson, PI; Shenming Fu; Aaron Meisner; Destry Saul; Sebastian Vicencio) is building systems based around the LSST pipelines to:

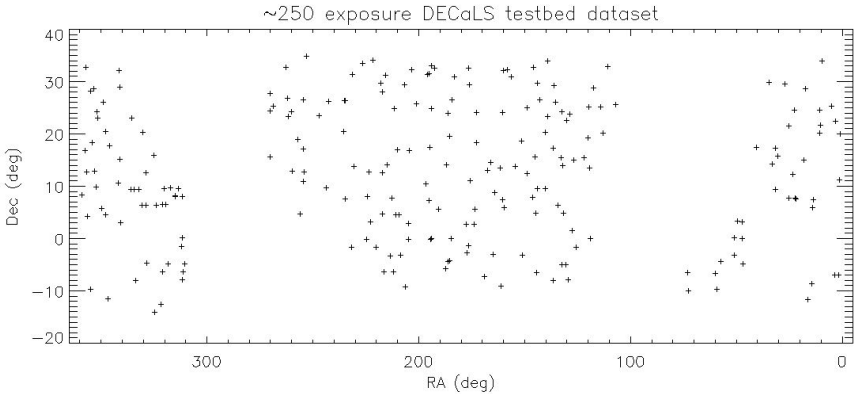
- process raw DECam data in ~real-time and issue an MMA-optimized alert stream via difference imaging.
- reduce ~all raw DECam data in a manner similar to what the NOIRLab Community Pipeline (CP) currently does.

DP0: access to RSP, particularly its JupyterHub terminal, is very helpful for a variety of reasons, including:

- Ability to benchmark on alternative (cloud) hardware & evaluate portability of our deployment framework.
- Ability to easily test/compare multiple different LSST pipeline versions without installing each ourselves.

Initial success! In late November 2022, I used the RSP JupyterHub terminal to reduce ~250 raw DECam exposures (DECaLS, PROPID = 2014B-0404; > 14k CCDs) ~evenly split between the grz bands and ~randomly distributed across the sky (see map at right). The LSST pipeline version was v23_0_2. The total size of my resulting Butler repo – dominated by "reduced" outputs – is ~2.5 TB, located in the /scratch area.

RSP JupyterHub terminal "just works" – thank you!



Alessandro Mazzi

Postdoc @ University of Padova, Italy (until Sep 2023)
Member of the SMWLV Science Collaboration

Scientific interests

- Stellar populations (Milky Way, Magellanic Clouds, Local Group)
- Formation/Evolution/Structure of Milky Way
- Data analysis

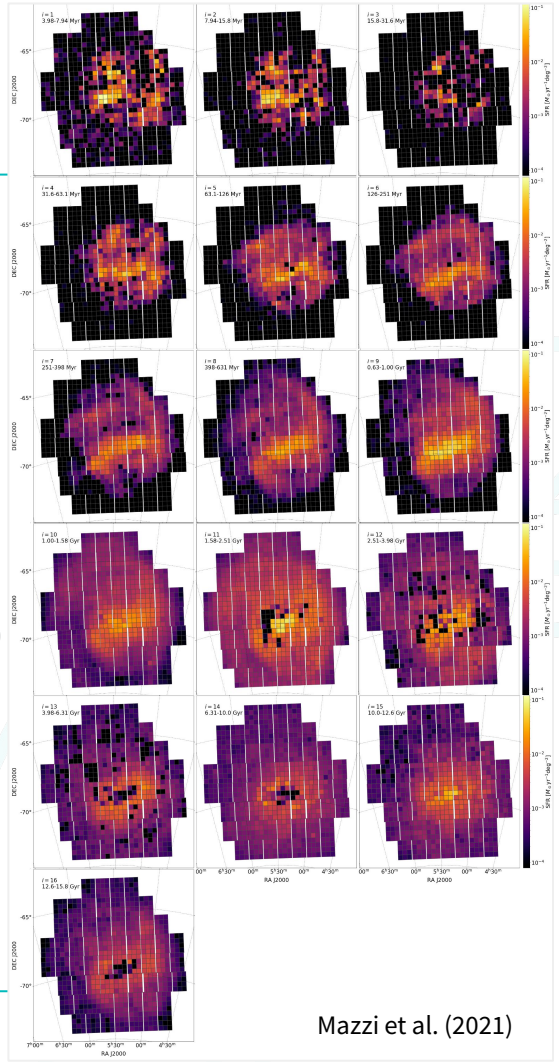
Working on

- Code to determine resolved star formation histories of large areas of the sky
  - Large and Small Magellanic Clouds
  - Neighborhood of the Sun (up to 1kpc)
  - Local Group

DP0

- Currently exploring RSP functionalities

alessandro.mazzi@unipd.it



Mazzi et al. (2021)

Aneesh P. Dewoo

Graduate Student,
San Jose State University, CA, USA (Dept of Physics and Astronomy)
Pharikshеetaneesh.dewoo@sjsu.edu

Interests:

- Blazar classification using machine learning.
- Globular cluster characterisation and detection from SDSS data.

DP0.2:

- Apply current Globular Cluster research model to Lsst Data.
- Learn to retrieve light curves from high redshift Blazars (from the butler services).

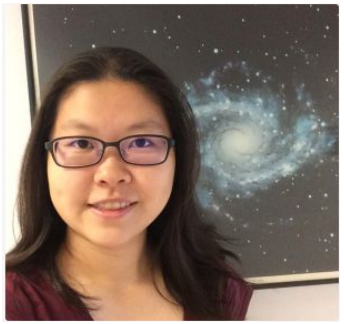
Martín Rodríguez Monroy

Postdoc
Irène Joliot-Curie Laboratoire (IJCLab), Orsay, France - Groupe d'Etude de l'Energie Noire (GREEN)
rodriguez-monroy@ijclab.in2p3.fr / martin.rodriguez.monroy@gmail.com

- Scientific interests:
  - Large-scale structure (galaxy clustering, BAO, PNGs….)
  - Observational systematics and decontamination methods
  - Data analysis and dimensionality reduction methods
- Working on:
  - LSST (PCWG, with Marc Moniez and Sylvie Dagoret-Campagne):
    - Atmospheric transparency estimation
    - Photometric corrections for LSST with AuxTel
    - Special flat-fielding for spectroscopy with AuxTel
  - DES (LSS WG):
    - Observational systematics decontamination for DES-Y6 galaxy clustering
- DP0 interests:
  - Use simulations and survey property maps to develop systematics correction methods for LSST-DESC (see DP0 tutorial "survey_property_maps")

Jennifer Li

Postdoc at University of Michigan
jennili@umich.edu



Scientific Interests:

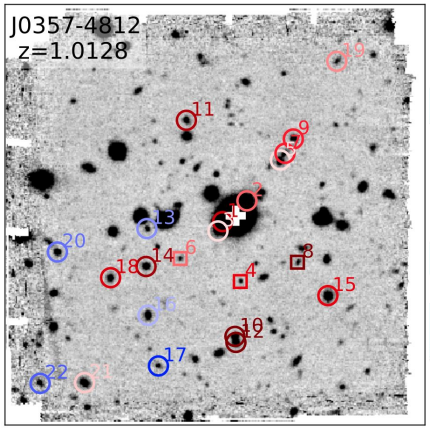
- Reverberation Mapping
- AGN variability
- Supermassive black holes, their host galaxies, and their environments
- Machine learning applications in time-series analysis

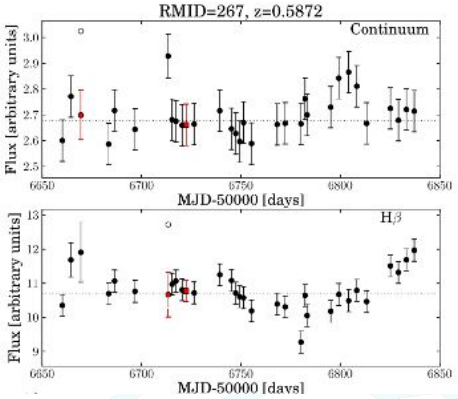
DP0:

- Learning about RSP functionalities

Other interests:

- Education and Public Outreach :)





replace with your name

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