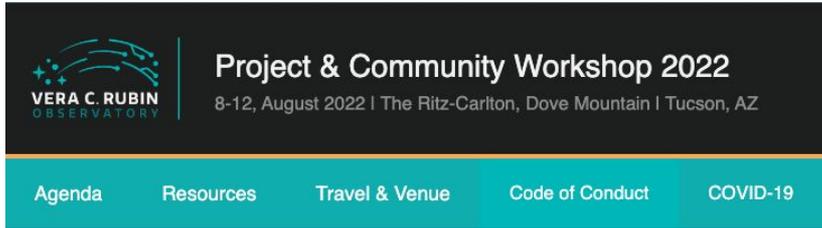


Friendly reminders - CoC & Covid



Home » Code of Conduct

Code of Conduct

Harassment and unprofessional conduct (including the use of offensive language) of any kind is not permitted at any time and should be reported.

Rubin Observatory adheres to the principles of kindness, trust, respect, diversity, and inclusiveness in order to provide a learning environment that produces rigor and excellence.



Handshakes OK
Fold Here

Elbow/Fist Bump OK
Fold Here

I Need My Space
Fold Here

Thank you for masking indoors!

Check name-tags for these contact comfort level stickers.

Use the confidential email rubin2022-covid@lists.lsst.org to request a test, report your test results, or ask questions.

Reporting bullying, harassment, or aggression.

The Rubin 2022 Organizing Committee has appointed designated contacts:

- Ranpal Gill (rgill@lsst.org)
- Andrew Connolly (ajc@astro.washington.edu)
- Melissa Graham (mlg3k@uw.edu)

Contact via email, Slack, or the Community Forum.

Friendly reminders - virtual participation



Virtual participants should be muted when they're not speaking.



In-person participants should speak into the room microphone(s), or the chair should repeat all questions into the microphone, so that the virtual participants can hear what is said.



In the Rubin2022_PCW Slack Space, all participants can use the session's channel for Q&A and discussion. The channel name convention is, e.g.: #day1-mon-slot3a-intro-to-rubin

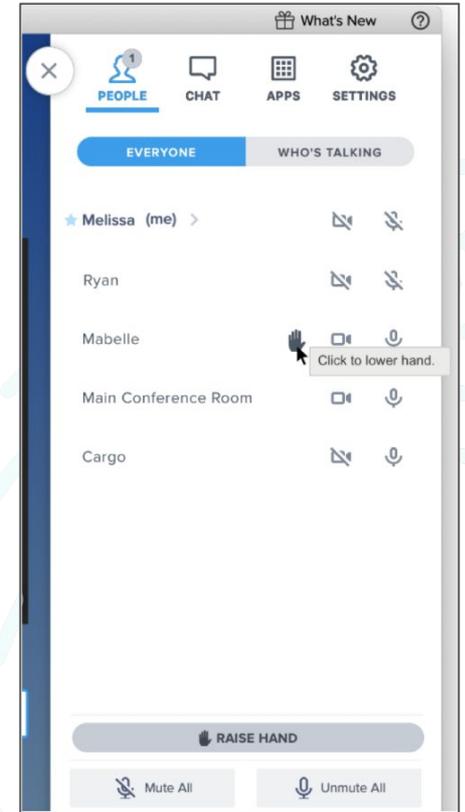


In BlueJeans, virtual participants should:

use the BlueJeans “raise hand” feature and wait for the moderator to call on you before speaking

or

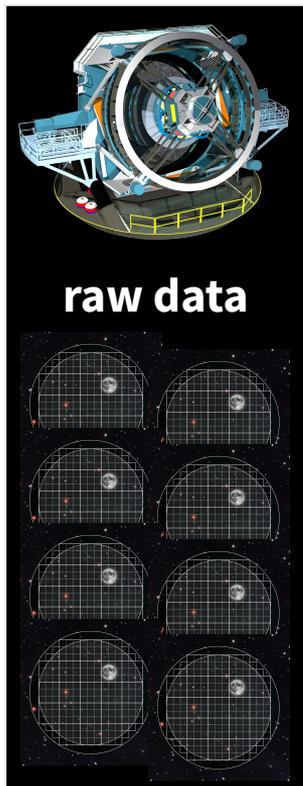
use the BlueJeans chat functionality to ask questions or make comments.



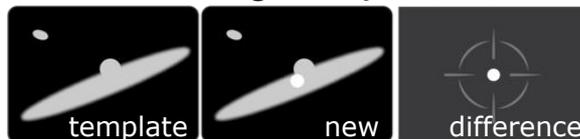
Time Domain Data Products Overview



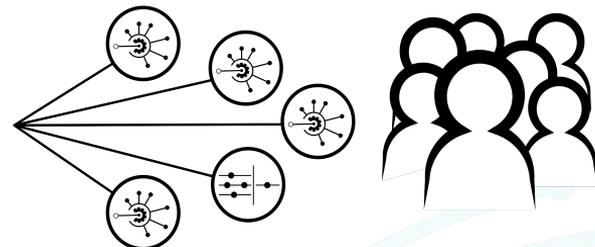
All LSST Data Products



Difference Image Analysis (DIA)



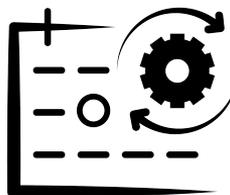
In 60s, raw images are processed, a template is subtracted, and difference-image sources are detected, associated, characterized, and...



...distributed as alerts to brokers, where they can be rapidly analyzed by users.



In 24h, the Prompt Products Database is updated with the DIA data products.



Yearly data releases include reprocessed DIA data products for all images.

The Prompt (24h) and Data Release (annual) data products will be available for users to analyze via the Rubin Science Platform.

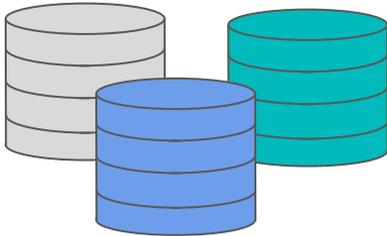


Image Data Products



processed visit images (*PVI*; “direct” or “single-visit” image)
difference image (= *PVI* - template)
template image (*a coadd* based on images from the previous year)
deeply coadded images (*based on all images obtained to date; for hosts*)

Catalog Data Products



DIASource (*SNR*>5 detections in difference-images)
DIAObject (*DIASources* associated by coordinate)
DIAForcedSource (*for all DIAObjects* in *PVIs* & difference images)
Object (*SNR*>5 detections in deeply coadded images; *for hosts*)

Alerts: one DIASource record and the DIAObject with which it is associated.

DIASource (alert trigger)

Measurements for the SNR>5 detection in a difference image. Includes:

- unique identifier
- filter, program identifier
- mid-exposure time
- centroid
- calibrated fluxes
 - e.g., PSF, aperture, trail
 - difference and direct
- shape measurements
 - e.g., PSF FWHM, trail, dipole
- signal-to-noise-ratio
- spuriousness
 - completeness/purity thresholds will be available separately

DIAObject

Associated DIASources, with characterization parameters. Includes:

- unique identifier
- centroid (at a time)
- proper motion, parallax parameters
- lightcurve summary statistics
 - flux mean, std. dev., chi2, #detections
 - difference and direct fluxes
 - periodic & nonperiodic features
- nearby LSST Objects identifiers

- + DIAForcedSources and DIASources associated with the DIAObject, OR difference-image noise estimates for images at that location (12 month history).
- + Within 24h of a *new* DIASource, DIAForcedSources for the past 30 days (“precovery”).
- + Image stamps:
 - difference-image and template
 - flux, variance, and mask
 - size of DIASource footprint
 - no smaller than 30x30 pixels

Will there be host association for DIAObjects?

Yes. The LSST Object ID for the three nearest stars and galaxies (by on-sky distance), three nearest extended objects (by a separation distance that accounts for galaxy size), and the nearest low-*z* galaxy (ls.st/dmtn-151).

How would brokers retrieve host galaxy data from the Object table.

Brokers with authenticated access to the LSST data products could, e.g., remote query the Object table via the Rubin Science Platform's Application Programming Interface (API) aspect using the Object ID in the alert packet, and retrieve any/all columns needed (photometry, shape, photo-*z*).

What photo-*z* data products will be in the Object table?

Products will include, e.g., point estimate(s) with uncertainty; posterior PDF with statistical values; and flags. Potentially from multiple estimators, potentially compressed. (ls.st/dmtn-049)

Will there be “precovery” limits/photometry for *new* DIAObjects?

Yes. For a new DIAObject, a table of the date, filter, and difference image noise (for upper limits) from the past 12 months are added to the first alert. Within 24h, forced photometry on all difference images covering the DIAObject’s location in the past 30 days will be available in the Prompt Products Database (and will be added to future alerts for the same DIAObject).

Will there be derived variability parameters for DIAObjects?

Yes. The exact parameters remain TBD (see ls.st/dmtn-118), but will include periodic and aperiodic statistics for the lightcurve, e.g., periodogram frequencies, amplitude, slope, skewness, StetsonJ.

Would brokers be able to retrieve a larger postage stamp?

Yes, from e.g., the deep coadd of the most recent data release. There will be an image cutout service. Data Rights holders can also get larger stamps of the science and difference images once they become available.

How are the template images made?

TBD, but the coadding process will “take care to remove transient or fast moving objects (eg., asteroids)”, and the time range “will be chosen to minimize false positives due to high proper-motion stars (favoring shorter ranges)”. E.g., created from the previous year’s images.

Are alerts generated from the Deep Drilling Field (DDF) images?

Yes. Within 60s, DDF images undergo DIA and alerts released, flagged as part of a DDF sequence. (And within 24h), updated DIASource/DIAObject catalogs, containing DDF detections, are available.)

Will there be alerts from nightly deep stacks of DDF images?

Not baselined. Exact plan is TBD, but nightly stack-and-difference would take place over a longer timescale and results would be stored in separate tables. (See ls.st/dmtn-065.)