2022-02-15 Science Metric Development Agenda and Meeting notes

Date

15 Feb 2022

Location

Zoom alias : https://ls.st/rsv

Zoom: https://noirlab-edu.zoom.us/j/96120781994?pwd=bCtpT3Q3b2RsU1ZBRUFaSnUrZXo3Zz09#success

Attendees

Peter Ferguson

Jeffrey Carlin

Keith Bechtol

Regrets

Useful links

Metric tracking dashboards

- DC2 and HSC RC2 monthly reprocessing (Gen3 and Gen2/3, faro): https://chronograf-demo.lsst.codes/sources/2/dashboards/75
- Nightly CI (Gen3, faro): https://chronograf-demo.lsst.codes/sources/2/dashboards/70

Rubin science pipelines weekly change log and Github repo: https://github.com/lsst-dm/lsst_git_changelog

Status of jenkins jobs and slack channle for notifications: #dmj-s_verify_drp_metrics slack channel

Discussion items

Item	Who	Pre-meeting notes	Minutes
News, announcements and task review	All		
CI status, bugs, issues of the week	All	Discussion on slack about wPerp requiring a large amount of memory: https://lsstc.slack.com/archives/C011E3ZUZAB/p1643131727008000	- The filtering before multi-match branch was merged last week. No feedback yet on memory consumption yet. - Is there a way we can test this more directly ourselves? What stats are most useful? - See https://github.com/erykoff/fgcm/blob/66f97d1a4ccb31ddf4bd31ac11195c0c0c8b1a4a/fgcm/fgcmUtilities.py#L60-L86 - The metric values computed on nighly runs have, in general, slightly improved as evidenced on SQuaSH. Our hypothesis is that we are getting better quality matches. - wPerp. Jeff started work on a ticket branch. wPerp is currently loading full tract object catalogs in three bands from FITS files. We think this is the only current task that is loading full tract object catalogs.

Faro Development status	Leanne Guy	- Fall 2021 epic ⚠ DM-30748 - Jira project doesn't exist or you don't have permission to view it. - Spring 2022 epic ⚠ DM-33385 - Jira project doesn't exist or you don't have permission to view it. - Backlog epic: ⚠ DM-29525 - Jira project doesn't exist or you don't have permission to view it. - Progress on conversion to parquet	New multimatching approach - N-way matcher (RFC-824) - Another matcher (see #dm-science-pipelines; see here) - FGCM strategy to store the indices. We should see how Eli implements. - Take object table and find the best match in each source - Dan Taranu has 1:1 matcher - Peter will do some research and report back in 2 weeks so we can have a more concrete discussion. Converting to parquet format - Photometric repeatability (Peter is working on this DM-32613) - Is there a way to re-use the calculations from PA and PF? Forced source table only has PSF fluxes. Will we want other flux measurements? Aperture fluxes? Extended model fluxes? What other infrastructure is needed before we start having many more developers and adding many more metrics? - Diagnostic capability. Ability to load the in-memory objects in a notebook. - Additional diagnostic capability. Ability to save a figure. - Metric naming convention and metric package specifications - Documentation - Unit tests - I/O for matching to be able to swap algorithms - N-way (e.g., photometric repeatability) 1:1 matching (e.g., object detection completeness versus external catalog) - Synthetic source injection Proposed prioritization 1. Matching 2. Metric naming conventions
Data processing campaigns	Jeffrey Carlin Keith Bechtol	- RC2/DC2 reprocessing epic : ⚠ DM-26911 - Jira project doesn't exist or you don't have permission to view it. - w_2021_40 RC2: ⚠ DM-32248 - Jira project doesn't exist or you don't have permission to view it. - w_2021_44 DC2 : ⚠ DM-32391 - Jira project doesn't exist or you don't have permission to view it. - AuxTel - AP/DiffIm	
DP0.2	Colin Slater Leanne Guy	Faro for DP0.2	
AOB	Leanne Guy	Potential co-working session ideas here	Next meeting 08 Feb 2022

List of tasks (Confluence)

	Description	Due date	Assignee	Task appears on
☐	Leanne Guy to talk to Science Pipelines (Yusra) about when do this transfer **19 Oct 2021**	19 Oct 2021	Leanne Guy	2021-09-28 Science Metric Development Agenda and Meeting notes
☐	Leanne Guy arrange to disucss at a future meeting if there are metrics from PDR3 & this paper that we might want to include in faro. **26 Oct 2021**	26 Oct 2021	Leanne Guy	2021-08-31 Science Metric Development Agenda and Meeting notes
☐	Colin to ask about capturing ideas for improvement to the stellar locus algorithm **30 Nov 2021**	30 Nov 2021		2021-11-09 Science Metric Development Agenda and Meeting notes
☐	Colin Slater to make a preliminary draft agenda for a workshop to clarify visualization use cases for science verification and validation		Colin Slater	2022-04-19 Science Metric Development Agenda and Meeting notes
☐	Jeffrey Carlin to review metric specification package organization and the relationship to formal requirements documents		Jeffrey Carlin	2022-04-19 Science Metric Development Agenda and Meeting notes
☐	Keith Bechtol Schedule a time to have focused discussion on verification package, potentially next status meeting		Keith Bechtol	2021-09-14 Science Metric Development Agenda and Meeting notes
☐	Keith Bechtol to make a ticket to better understand mapping of these camera and calibration products characterization efforts to verification documents and the focus of these efforts. Discuss with the SCLT		Keith Bechtol	2021-09-14 Science Metric Development Agenda and Meeting notes