

2022-03-15 Science Metric Development Agenda and Meeting notes

Date

15 Mar 2022

Location

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

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

Attendees

[Keith Bechtol](#)

[Michael Martinez](#)

[Colin Slater](#)

[Christopher Waters](#)

[Erik Dennihy](#)

Regrets

[Leanne Guy](#)

[Jeffrey Carlin](#)

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
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News, announcements and task review	All		<ul style="list-style-type: none"> Chris Waters shares a presentation "Introduction to cp_verify" <ul style="list-style-type: none"> Slides: cp_verify overview-VV.20220314.pdf Example notebook: cp_verify_exampleNotebook-20220315.pdf DMTN-101: https://dmtn-101.lsst.io/ Measure metrics on a calibration residual image Do the calibration product corrections do what it is expected to do DMTN-101 defines the metrics <ul style="list-style-type: none"> Several of the metrics are likely to partially cover OSS requirements, however, there was not yet a dedicated effort so far to check the traceability. The system is sufficiently modular that it should be straightforward to add more metrics. Used both for checking the afternoon calibrations, and for certifying data for the set of master calibration products Currently implements: bias, dark, flat, brighter-fatter. <ul style="list-style-type: none"> Zero-residual tests for crosstalk, linearity, and fringes in development Would like to have the cp_verify metrics available in a database. Currently being output as yaml files. It does correctly catch bad data Run as part of OCPS. Observers can run a script that runs cp_pipe and cp_verify. Trying to condense the information into a summary report, e.g., sending warning messages to LOVE Ongoing work: <ul style="list-style-type: none"> Documentation Visualization is a challenge (e.g., full focal plane mosaics). This has overlap with FAFF charge as well. Visualization use cases include both pixel-level data and representation of scalar fields. <ul style="list-style-type: none"> Relationship with analysis_drp and code is afw (see cam geom utils) for drawing sensor boundaries. Ask Sophie Reed what is the plan. DRP plotting sprint is happening through Wednesday this week Do you see these notebooks as a debugging tool during development, or a more long term tool like a "report" or diagnostic tool when warning appear? <ul style="list-style-type: none"> Initially for development, Alysha might(?) be looking at them? Chris is effectively serving as calibrations control board. In the future, might have a board with more people, e.g., with a specific commissioning needs in mind. For example, Erik has started to engage in this process, running the notebooks that Chris wrote. We are verifying, but in some cases, want to go deeper. In some cases, might want to go back and inspect even after the calibrations have been applied. In practical terms of how the certification is done, is the long-term goal to fully automate the certification based on scalar metric values, or will there always been a need for visual inspection? <ul style="list-style-type: none"> In practice, running a notebook and doing visual inspection as part of certification. In principle, there is a cell that checks all the metric values against specs, but still like to have visual inspection for assurance. Used parametrized notebooks to generate report as notebook automatically Already, Chris is doing some iteration of the analysis and labeling versions of the analysis as collection names Calibrations change over time. How is this handled? <ul style="list-style-type: none"> We should be able to preemptively make calibrations to capture trends The bookkeeping is done for you with the butler. Each calibration has a valid time interval (datetime). Metric tracking <ul style="list-style-type: none"> Can only track if have some inputs. Don't want 10 points on your dashboard for the 10 iterations that were run on some day. Processing streams get validated against daily calibration data Daily calibrations get validated against current master calibration products Can certify into different collections.
CI status, bugs, issues of the week	All		

Faro Development status	Leanne Guy	<ul style="list-style-type: none"> Spring 2022 epic <div data-bbox="352 178 583 665">  DM-33385 - Jira project doesn't exist or you don't have permission to view it. </div> Backlog epic: <div data-bbox="352 688 583 1176">  DM-29525 - Jira project doesn't exist or you don't have permission to view it. </div> Progress on conversion to parquet 	<ul style="list-style-type: none"> Create MatchedCatalogTableMeasurement base class (DM-33980) <ul style="list-style-type: none"> https://github.com/lsst/faro/pull/126 Also want to add columns to isolatedStarAssociation config (branch in pipe_task), pull request made. Update wPerp so it uses less memory (https://github.com/lsst/faro/pull/122 , DM-33389)
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Data processing campaigns	Jeffrey Carlin Keith Bechtol	<ul style="list-style-type: none">RC2/DC2 reprocessing epic : <div> DM-26911 - Jira project doesn't exist or you don't have permission to view it.</div> <ul style="list-style-type: none">w_2021_40 RC2: <div></div> <p>DM-32248 - Jira project doesn't exist or you don't have permission to view it.</p> <ul style="list-style-type: none">w_2021_44 DC2 : <div> DM-32391 - Jira project doesn't exist or you don't have permission to view it.</div> <ul style="list-style-type: none">AuxTel - Erik to give updateAP/DiffIm	<ul style="list-style-type: none">AT data reduction
DP0.2	Colin Slater Leanne Guy		

AOB	Leanne Guy	Potential co-working session ideas here	Next meeting 22 Mar 2022
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List of tasks (Confluence)

Description	Due date	Assignee	Task appears on
<input type="checkbox"/> 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
<input type="checkbox"/> Leanne Guy arrange to discuss 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
<input type="checkbox"/> 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
<input type="checkbox"/> 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
<input type="checkbox"/> 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
<input type="checkbox"/> 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
<input type="checkbox"/> 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