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

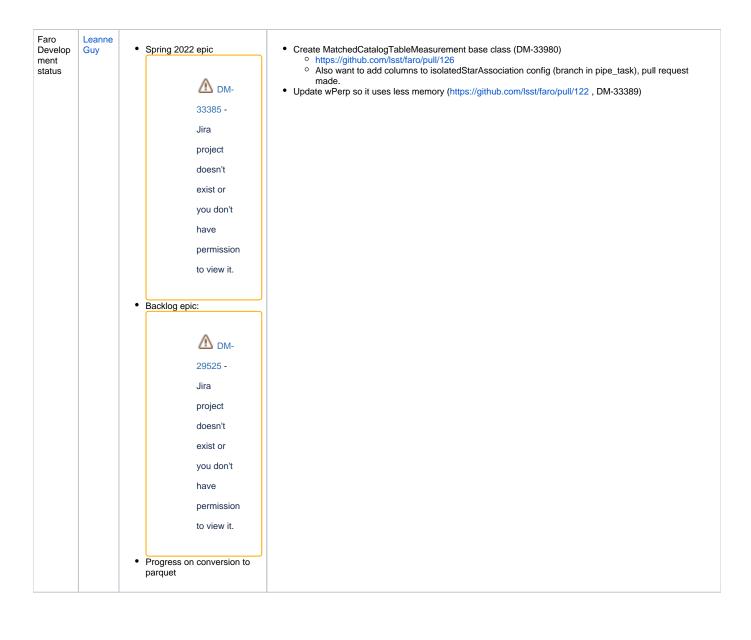
Rubin science pipelines weekly change log and Github repo: https://github.com/lsst-dm/lsst_git_changelog

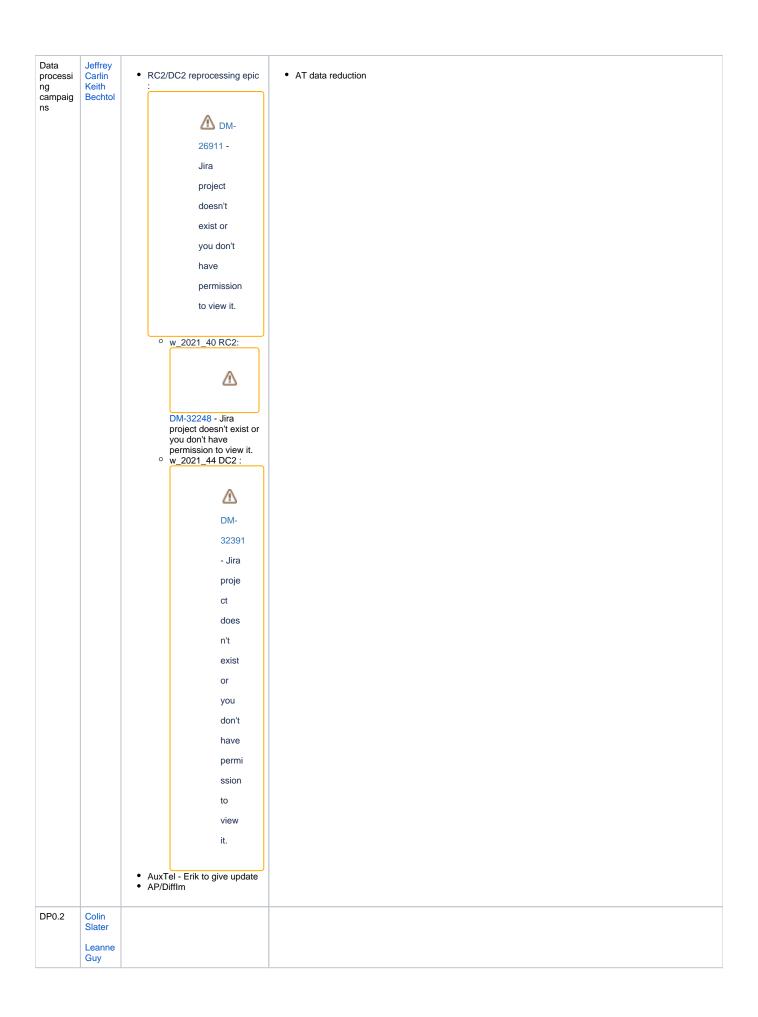
 ${\bf Status\ of\ jenkins\ jobs\ and\ slack\ channle\ for\ notifications:\ \#dmj-s_verify_drp_metrics\ slack\ channel}$

Discussion items

Item	Who	Pre-meeting notes	Minutes	
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News,	All				
announc		 Chris Waters shares a presentation "Introduction to cp_verify" 			
ements		 Slides: cp_verify overview-VV.20220314.pdf 			
and task		 Example notebook: cp_verify_exampleNotebook-20220315.pdf DMTN-101: https://dmtn-101.lsst.io/ 			
review		Measure metrics on a calibration residual image			
		 Do the calibration product corrections do what it is expected to do 			
		 DMTN-101 defines the metrics 			
		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.			
		 Zero-residual tests for crosstalk, linearity, and fringes in development Would like to have the cp_verify metrics available in a database. Currently being ouput 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:			
		 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.			
		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?			
		• Initially for development, Alysha might(?) be looking at them?			
		O 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.			
		o 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? 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? 			
		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). Output O			
		 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	All				
status,					
bugs,					
issues of the					
week					





AOB	Leanne	Potential co-working session	Next meeting 22 Mar 2022
	Guy	ideas here	

List of tasks (Confluence)

Description		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