Previous month Apps MW/Inf

Current Month MW/Inf - Mgt/SE

Next month Apps - MW/Inf- Mgt/SE

Apps Status Report for July 15, 2010

Guide on Reporting Percentage Completed:

For software development tasks,

- use 0% if the solution is still being designed;
- use 25% if the solution's design is completed;
- use 50% if the solution is implemented and tested within the Ticket branch;
- use 75% if the implementation review is complete, the Ticket branch has been merged onto the Trunk branch, and the Ticket is closed.
- use 100% if the affected Trunk packages are tagged and released.

For other tasks, still use these increments, but apply their meaning as best as possible.

Note: Please place an asterisk (*****) after the percent if you updated this value in this report.

Allsman Robyn

Reported 22 July 2010

ID	Percent	Task	Comments
APP200	100%*	validate initial integration run successfully completed	

*Percent updated in this report

Comments:

- Science results from the PT1 software stack were analyzed and validated as consistent with the algorithms used.
- The pipeline on ABE was integrated with the orchestration layer (job office, ctrl_orca, ctrl_events, etc).
- Both abe and the lsst cluster were used for production runs on the CFHT dataset. Due to disk capacity restrictions on the lsst cluster, most of the CFHT production runs occurred on ABE.
- The PT1 ImSim Production was run on the SLAC cluster which provided access to a large amount of disk space and compute cycles for a short window of opportunity.
- Results of identical science runs on the lsst cluster and ABE, and later SLAC, were compared and determined to be equivalent.

Other Activities

Axelrod Tim

Reported xx/xx/xx

ID	Percent	Task	Comments
APP155	0%	photometric self calibration	*not started*
APP56	80%	defining units	
APP261	20%	create calibration catalogs for CFHTLS	
APP291	0%	create input data for ImSim	*not started*
APP263	50%	identify set of images for compression tests	
APP260	90%	define DC3b data quality requirements	
APP204	0%	identify scientists to analyze stage output	*not started*
APP199	0%	PT1 best efforts science data analysis/validation	*not started*
APP191	50%	Provide special case simulation needs (Axelrod)	

*Percent updated in this report

Comments:

Other Activities

Becker Andy

Reported 07/22/2010

ID	Percent	Task	Comments
APP246	50%	update Diff-Im post design review (ticket 1176)	*
APP245	25%	implement correlation function for spatial kernal fit (ticket 1140)	
APP100	0%	test difference imaging coadds	*not started*
APP247	40%	code to measure quality of difference imaging coadds	
APP123	100%	find CFHT fringe frames and move to NCSA	*

*Percent updated in this report

Comments: Extensive improvements on regularization of delta function kernels

Other Activities

Chopping up CFHT images for PT1.

Becla Jacek

Reported xx/xx/xx

ID	Percent	Task	Comments
APP54	50%	schema updates for all exposure related tables	
APP55	0%	synthetic sources of data	*not started*

APP56	80%	defining units

*Percent updated in this report

Comments:

Other Activities

Bickerton Steve

Reported xx/xx/xx

ID	Percent	Task	Comments
APP295	25%	stellar photometry	
APP256	0%	compute statistics on a sky pixel masked image	*not started*

*Percent updated in this report

Comments:

Other Activities

Good John

Reported xx/xx/xx

ID	Percent	Task	Comments
APP226	0%	code PT1 SUI tools	*not started*

*Percent updated in this report

Comments:

Other Activities

Jarvis Mike

Reported 07/22/10

ID	Percent	Task	Comments
APP105	50%	PSF for deep detection	Code is complete, and passed a code review of the .h files only. However, I have not done much in the way of unit tests yet.

*Percent updated in this report

Comments:

Other Activities

Jones Lynne

Reported xx/xx/xx

ID	Percent	Task	Comments

*Percent updated in this report

Comments:

Other Activities

Krughoff Simon

Reported xx/xx/xx

ID	Percent	Task	Comments
APP84	0%	apply fringe frame correction	*not started*
APP83	NA	develop camera state classes (CCDinfo and Ampinfo)	Butler does this
APP82	NA	develop calibration products database classes	Butler does this
APP253	*100%	implement ccd assembly code with appropriate stage code	
APP252	*100%	test camera geometry classess with ImSim LSST focal plane model	
APP251	*100%	implement datarel.IsrStageUnit? Test	
APP250	NA	write stage dictionaries and unit tests for ValidateMetaData? and CalibrationDataProducts?	Butler does this
APP249	*100%	create policy files for ImSim camera geometry	
APP254	*100%	move saturation and defect correction to the CCD assembly stage	

*Percent updated in this report

Comments:

Other Activities

Laher Russ

Reported xx/xx/xx

ID	Percent	Task	Comments
APP90	0%	implement SDQA tool functionality to support DC3b goals	*not started*
APP89	0%	query metadata and package in C++ container	*not started*
APP88	0%	implement threshold comparision	*not started*
APP211	50%	WCS verification code	
APP210	75%	ATpy evaluation	
APP283	0%	identify existing sdqa metrics	*not started*

APP282	0%	code to validate ISR pipeline outputs	*not started*
APP281	0%	code to validate IC pipeline outputs	*not started*
APP280	0%	code to validate image subtraction	*not started*
APP288	0%	code to validate detection of sources in subtracted image	*not started*
APP290	0%	code to validate association pipeline	*not started*
APP287	0%	code to validate deep detection and measurement pipeline	*not started*

*Percent updated in this report

Comments:

Other Activities

Levine Deborah

Reported xx/xx/xx

ID	Percent	Task	Comments
APP90	0%	implement SDQA tool functionality to support DC3b goals	*not started*
APP229	25%	identify tools to support PT1 data analysis	
APP227	0%	manage PT1 data access tools task	*not started*
APP235	0%	design and document SUI in UML	*not started*

*Percent updated in this report

Comments:

Other Activities

Lim KT

Reported xx/xx/xx

ID	Percent	Task	Comments
APP6	0%	interslice communications	*not started*
APP7	0%	post spatial matching (stretch goal)	*not started*
APP192	75%	translate overall production into pipeline, stages, and policies	

*Percent updated in this report

Comments:

Other Activities

Lupton Robert

Reported xx/xx/xx

ID	Percent	Task	Comments

APP139	0%	integrate HEALPix into software stack	*not started*
APP100	0%	test difference imaging coadds	*not started*
APP121	50%	adapt astrometry code for DC3b use	

*Percent updated in this report

Comments:

Other Activities

Mannings Vince

Reported xx/xx/xx

ID	Percent	Task	Comments
APP235	0%	design and document SUI in UML	*not started*

*Percent updated in this report

Comments:

Other Activities

Monet Dave

Reported xx/xx/xx

ID	Percent	Task	Comments
APP121	50%	adapt astrometry code for DC3b use	

*Percent updated in this report

Comments:

Other Activities

Monkewitz Serge

Reported xx/xx/xx

ID	Percent	Task	Comments
APP144	50%	move applications code out of stage code	still needs to be done for nightly association
APP162	50%	modify stage code to conform with new MW API	still needs to be done for nightly association
APP244	100%	implement/wrap OPTICS source clustering algorithm	
APP243	0%	implement Detection/Source? association	*not started*
APP6	0%	interslice communications	*not started*
APP7	0%	post spatial matching (stretch goal)	*not started*

APP74	0%	characteriztion of and improvements to association cosmic ray rejection performance	*not started*
?	0%	Assist Russel Owen with APP139 and APP94 as needed	*not started*

*Percent updated in this report

Comments:

Other Activities

Mullally Fergal

Reported xx/xx/xx

ID	Percent	Task	Comments
APP86	60%	implement improvements for WCS	
APP151	60%	implement stage structure for support astrometry code	

*Percent updated in this report

Comments:

Other Activities

Myers Jon

Reported xx/xx/xx

ID	Percent	Task	Comments
APP140	25%	integrate MOPS stages with new C++ KD-Tree tools	
APP129	75%*	run DayMOPS with solar system model	Successful track generation for a large subset of our data has been completed.
APP141	75%	write linkTracklets and unit tests	
APP267	50%	update DayMOPS for new DIASource Table	Schema written and tested, stages not rewritten
APP266	0%	Fix C-linkTracklets Python bindings	*not started*
APP265	0%	make DIASource the smallest unit of Tracks and MovingObject??	*not started*
APP264	0%	update DayMOPS to stop using template tables	*not started*
APP270	0%	remove DIASourceForTonight table, pass DIASource on clipboard	*not started*
APP269	0%	pass Tracks on clipboard rather than via Tracks table	*not started*
APP268	0%	made a new initial stage which gets night numbers from Policy	*not started*
APP271	0%		*not started*

		add debug printing to C find/linkTracklets and stage code for storing	

*Percent updated in this report

Comments:

As we await response from SAT about how to handle too-large-for-memory data sets, the current set of DayMOPS runs were performed using ad-hoc methods (command-lines scripts, later ingest to DB).

Other Activities

We have modified Kubica's version of linkTracklets, which was crashing when the number of tracks in memory became too large. It now writes out track data continuously. This version successfully ran for about 20 nights of data before we ran out of disk space.

Currently we are building estimates of the number of tracks to be generated and trying to calculate cost of doing IOD on them. Currently the numbers are quite large - we have about 1 billion tracks so far and ultimately expect on the order of 10s of billions. We need to reduce IOD costs, reduce our goals, or attempt a different approach if this is to be tractable for DC3b.

Ran experiments with ranging/LSL and examined possible methods to reduce the number of calls to ranging. Found an approach which looks to prevent > 90% of our calls.

Communicated with Larry Denneau about finding a faster IOD method; moving away from ranging could work.

Communication with Mikael Granvik about alternative ranging-based methods which may ultimately be cheaper than the current tracks->IOD approach, e.g. tracklets->ranging->tracklet linking->tracks->LSL

Communication with

Owen Russ

Reported xx/xx/xx

ID	Percent	Task	Comments
APP77	100%	fix ticket #873	
APP139	25%	integrate HEALPix into software stack	this has changed to implement sky pixelization
APP94	25%	code to warp images to/from sky pixel representation	If we adopt my sky pixelization proposal then this is finished (existing code will work)
APP209	50%	implement outlier rejection	
APP98	50%	code to create PSF-matched difference imaging coadds (no outlier rejection)	
APP257	50%	code to create deep monochromatic coadds	
APP104	75%	code to detect chi-squared deep detection coadds (no outlier rejection)	
APP103	0%	create a set of chi-squared deep detection coadds	*not started*

APP102	0%	code to measure quality of deep detection coadds	*not started*

*Percent updated in this report

Comments:

Other Activities

Shaw Dick

Reported xx/xx/xx

ID	Percent	Task	Comments
APP240	*15%	DC3b User Guide	
APP242	0%	create uesr training program	*not started*
APP234	0%	develop Use Cases for SUI	*not started*
APP239	*100%	CFHT-LS Calibration Reference Files	*done*
APP208	*100%	define CFHT to be used	*Done*

*Percent updated in this report

Comments:

Other Activities

- Presented talk on SDQA at SPIE meeting in San Diego
- Working on SDQA development plan for PDR
- Responded to a few CFHT-LS calibration file issues encountered during PT1 processing

Van Dyk Schuyler

Reported xx/xx/xx

ID	Percent	Task	Comments
APP229	25%	identify tools to support PT1 data analysis	
APP240	8%	DC3b User Guide	
APP296	0%	set up helpdesk system	*not started*
APP234	0%	develop Use Cases for SUI	*not started*
APP235	0%	design and document SUI in UML	*not started*
APP260	90%	define DC3b data quality requirements	
APP230	50%	complete DM system data product quality metrics document	
APP199	0%	PT1 best efforts science data analysis/validation	*not started*

*Percent updated in this report

Comments:

Other Activities

Major Accomplishments

Significant breakthroughs, issues resolved.

- PT1 Production runs completed

Objectives for the Next Period

What you expect to accomplish.

Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues.

- The problems of data accessibility (permissions), availability (location and quantity) and backup to mass storage, were addressed and new policies and procedures are being developed by the ABE and lsst cluster managers.
- PT1 production pipeline stack startup time lengthens with increases in the number of raw input items. The short-term remedy of multiple shorter runs, was effective. The long-term issue is being addressed.