

# Apps Status Report for April 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 xx/xx/xx

ID	Percent	Task	Comments
APP200	0%	validate initial integration run successfully completed	<i>not started</i>

\*Percent updated in this report

Comments:

## Other Activities

## Axelrod Tim

Reported xx/xx/xx

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

\*Percent updated in this report

Comments:

### Other Activities

## Becker Andy

Reported 04/14/10

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

\*Percent updated in this report

Comments:

### Other Activities

## Becla Jacek

Reported 04/16/10

ID	Percent	Task	Comments
APP54	75%*	schema updates for all exposure related tables	
APP55	0%	synthetic sources of data	<i>not started</i>
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	<i>not started</i>

\*Percent updated in this report

Comments:

## Other Activities

### Dodd Suzy

Reported 4/19/10

Updated Applications plan for DC3b

Set up logistics for and attend integration week held at IPAC April 5-9. Coordinated side bar meetings on Science User Interface tool for PT1.

Established a plan for PT1 SUI/data access tool and helpdesk.

Meeting with Sidney, Tony, Don, Jeff and George regarding proposed changes to DM organization

Vacation April 12-16

Standard meetings: Apps WG, DC3b, SAT, DM management, LSST management

Next Month

Monitor development of SUI/data access tool for PT1

More DC3b Plan updates?

### Good John

Reported 4/19/10

ID	Percent	Task	Comments
APP226	10%	code PT1 SUI tools	

\*Percent updated in this report

Comments:

Confirmed the data content that will be imported into an instance of Gator but there is as yet no example data. Waiting on KT for this. Updating the VOInventory infrastructure to support LSST.

Putting together an LSST-specific (simplified) front-end application to the VOInventory. This is warranted as the general VO interface has too many tie-ins to other VO applications (and is too NVO-specific).

Assuming we receive data, the principle activity this next month will be retrieval, vetting, ingestion, and documentation.

## Other Activities

# Jarvis Mike

Reported 4/13/10

ID	Percent	Task	Comments
APP105	50%	PSF for deep detection	C++ code is complete in ticket branch. Compiles with scon. Working on Python test code.

\*Percent updated in this report

Comments:

## Other Activities

# Krughoff Simon

Reported xx/xx/xx

ID	Percent	Task	Comments
APP84	0%	apply fringe frame correction	<i>not started</i>
APP83	75%	develop camera state classes (CCDinfo and Ampinfo)	
APP82	25%	develop calibration products database classes	
APP253	0%	implement ccd assembly code with appropriate stage code	<i>not started</i>
APP252	0%	test camera geometry classess with <u>ImSim</u> LSST focal plane model	<i>not started</i>
APP251	18%	implement datarel.IsrStageUnit? Test	
APP250	25%	write stage dictionaries and unit tests for ValidateMetaData? and CalibrationDataProducts?	
APP249	25%	create policy files for <u>ImSim</u> camera geometry	
APP254	0%	move saturation and defect correction to the CCD assembly stage	<i>not started</i>

\*Percent updated in this report

Comments:

## Other Activities

progress:

- Integration of ImSim data with ISR and ccdAssembly pipelines
- Investigation of schemes for improving SSM query performance
- Worked with Yusra to port existing Postgres stored procedures to MS

SQL server

- Hand reduced calibration products for input to DM pipelines

Plans

- Continue with integration with DM

- Begin reduction of ImSim data in earnest
- Finish queries for SSM and Galaxy objects for Trim catalog generation
- Continue to examine benefits of commercial DBMS options.

## Laher Russ

Reported 4/19/10

ID	Percent	Task	Comments
APP90	0%	implement SDQA tool functionality to support DC3b goals	<i>not started</i>
?	50%*	Thoth GUI for database visualization and statistical analysis	new task
APP89	0%	query metadata and package in C++ container	<i>not started</i>
APP88	0%	implement threshold comparison	<i>not started</i>
APP211	75%*	WCS verification code	
APP210	75%	ATpy evaluation	
?	25%*	Develop common SQL queries for SDQA and DC3b data validation	new task
APP283	25%*	identify existing sdqa metrics	
APP282	50%*	code to validate ISR pipeline outputs	
APP281	0%	code to validate IC pipeline outputs	<i>not started</i>
APP280	0%	code to validate image subtraction	<i>not started</i>
APP288	0%	code to validate detection of sources in subtracted image	<i>not started</i>
APP290	0%	code to validate association pipeline	<i>not started</i>
APP287	0%	code to validate deep detection and measurement pipeline	<i>not started</i>

\*Percent updated in this report

Comments:

### Other Activities

## Levine Deborah

Reported 04/19/10

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

\*Percent updated in this report

Comments: This list for me is still not terrifically relevant

## Other Activities

Supported integration week. SUI task well underway.

## Lim KT

Reported xx/xx/xx

ID	Percent	Task	Comments
APP6	0%	interslice communications	<i>not started</i>
APP7	0%	post spatial matching (stretch goal)	<i>not started</i>
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	<i>not started</i>
APP100	0%	test difference imaging coadds	<i>not started</i>
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	<i>not started</i>

\*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 4/19/10

ID	Percent	Task	Comments
APP144	0%	move applications code out of stage code	<i>not started</i>
APP162	0%	modify stage code to conform with new MW API	<i>not started</i>
APP244	65%	implement/wrap OPTICS source clustering algorithm	<i>OPTICS implemented, working on computing source cluster attributes</i>
APP243	0%	implement Detection/Source? association	<i>not started (not required for PT1)</i>
APP6	0%	interslice communications	<i>not started</i>
APP7	0%	post spatial matching (stretch goal)	<i>not started</i>
APP74	0%	characterization of and improvements to association cosmic ray rejection performance	<i>not started</i>

\*Percent updated in this report

Comments:

Support Integration week

Working on Source Association for PT1

### 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	35%	run DayMOPS with solar system model	
APP141	90%*	write linkTracklets and unit tests	
APP267	100%*	update DayMOPS for new DIASource Table	
APP266	0%*	Fix C-linkTracklets Python bindings	<i>descooped*</i>
APP265	25%	make DIASource the smallest unit of Tracks and MovingObject??	planned
APP264	25%*	update DayMOPS to stop using template tables	<i>not started</i>
APP270	25%*	remove DIASourceForTonight table, pass DIASource on clipboard	planned
APP269	0%	pass Tracks on clipboard rather than via Tracks table	<i>not started</i>
APP268	25%*	made a new initial stage which gets night numbers from Policy	planned
APP271	0%	add debug printing to C find/linkTracklets and stage code for storing	<i>Descooped*</i>

\*Percent updated in this report

Comments:

Extensive study of C++ linkTracklets performance. Incorporated new changes which dramatically speed up C++ linkTracklets, thus removing the need to rely on wrapped C versions.

Finished implementation and (hopefully) debugging of linkTracklets. Wrote many unit tests for linkTracklets, but have more planned based on further discussion.

Wrote new roadmap for DC3b, based on using C++ find/linkTracklets. This removes the issues of dealing with logging/wrapping problems based on C versions. These tasks are marked as "descooped" and should be removed.

New versions of Inter/IntraNightlyProcessingStages? of DayMOPS are planned, which will not use DIASourceForTonight table and will pass DIASources on clipboard.

## Other Activities

Much conversation about introducing "DB-backed" FindTracklets and LinkTracklets, which will read and write data to/from the DB as needed rather than attempt to store all data in memory. This is expected to prevent the out-of-memory errors which have plagued our current attempts at running DayMOPS. This design is not yet completely finalized, but more tasks will need to be added in response.

# Owen Russ

Reported xx/xx/xx

ID	Percent	Task	Comments
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Other Activities

APP77	0%	fix ticket #873	<i>not started</i>
APP139	0%	integrate HEALPix into software stack	<i>not started</i>
APP94	25%	code to warp images to/from sky pixel representation	
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	<i>not started</i>
APP102	0%	code to measure quality of deep detection coadds	<i>not started</i>

\*Percent updated in this report

Comments:

### Other Activities

## Pierfederici Francesco

Reported xx/xx/xx

ID	Percent	Task	Comments
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\*Percent updated in this report

Comments:

### Other Activities

## Shaw Dick

Reported 4/16/2010

ID	Percent	Task	Comments
APP240	*15%	DC3b User Guide	in work
APP242	0%	create user training program	<i>not started</i>
APP234	0%	develop Use Cases for SUI	<i>not started</i>
APP239	*100%	prepare CFHT-LS Calibration Reference Files	done
APP208	*100%	define CFHT raw data to be used	done
APP283	*75%	Define SDQA Metrics (and subset for PT1)	in work

\*Percent updated in this report

Comments:

- Contributed to definition of DC3b PT1 quality assessment plan, including boot-strap analysis approach
- Verified CFHT-LS per-amp chunking is working correctly for PT1 processing
- Contributed to User Support planning
- Wrote specification for image background check; source code in work

## Other Activities

# Van Dyk Schuyler

Reported 04/14/10

ID	Percent	Task	Comments
APP229	33%	identify tools to support PT1 data analysis	
APP240	8%	DC3b User Guide	
APP296	50%	set up helpdesk system	
APP234	0%	develop Use Cases for SUI	<i>not started</i>
APP235	0%	design and document SUI in UML	<i>not started</i>
APP260	75%	define DC3b data quality requirements	<i>dialed back from previous month</i>
APP230	60%	complete DM system data product quality metrics document	
	25%	develop PT1 data analysis/validation plan	
APP199	0%	PT1 best efforts science data analysis/validation	<i>not started</i>

\*Percent updated in this report

Comments:

## Other Activities

Comments:

## Other Activities

# Major Accomplishments

Significant breakthroughs, issues resolved.

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# Objectives for the Next Period

What you expect to accomplish.

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# Problems Encountered and Solutions Being Pursued

Budget or schedule variance, technical issues, management issues.