End of quarter report for 03Q4

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This document presents a summary of workpackage progress by CASU during December 2003 and is also a summary of overall progress throughout Q4 2003.

For further details of group activitivies over the past month and for the entire quarter, and for links to the reports delivered during the quarter see:-

http://www.ast.cam.ac.uk/vdfs/diary.html

For the minutes of all group meetings see:-

http://www.ast.cam.ac.uk/vdfs/docs/minutes/

Other documentation is available through:-

http://www.ast.cam.ac.uk/vdfs/documentation.html

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The various ICDs between WFAU and CASU and between JAC and CASU have been signed off and an agreed FITS header specification is in place.

The VISTA DID documentation consisting of dictionary, FITS header example, and an overview of observing strategy was produced in consultation with the VPO camera software team. After several useful iterations, this was put in the sharepoint document repository for the camera FDR.

PSB and JRL, in conjunction with JPE and JMS had a very productive ESO visit; while MJI, in conjunction with NCH, IAB and ETWS, went to see what Astrowise was up to.

Excellent progress in setting up and trialling CASU pipeline software was made both during and after a vist by JRL to the JAC. The latest versions of the pipeline continue to be deposited in the CVS at CASU and JAC and example processing recipes have been set up and tested both in Cambridge and at JAC. Intercomparison of CASU pipeline products with the normal JAC pipeline are ongoing and a draft report on this is (almost) available. In spite of MJI's initial misgivings the regular telecons with JAC are proving very useful.

The CASU and JAC agreed milestones to monitor progress on development of the WFCAM summit and Cambridge standard pipelines are on track (bar the usual caveat regarding WFCAM test data)

Test of commissioning the standard pipeline on FIRES data went very well. A number of different approaches were tried and convergence rapidly reached on the best algorithms to employ. Significantly, this data will shortly be ready for testing advanced processing algorithms, particularly advanced stacking. The processed FIRES data will be publicly released to the general community when finished.

The co-located list driven photometry package has made good progress throughout the quarter with a flexible agreed set of catalogue parameters defined, and prototype software that meets most of the specifications for V1 and V2 of the pipeline in trial stages.

Further improvements to the image subtraction/difference imaging WP have lead to CASU software that outperforms the alternative adaptive kernel packages. This has been tested in a variety of cases and has now been ported to the export C version and deposited in the CVS. Final tests and bugs fixes of the V1.0 export code are almost complete. Quantitative statistics for assessing the quality of the generated difference images have been developed and an updated report is available on the web pages.

Good progress on investigation of alternative interpolation strategies has been made and a report produced. This works feeds directly into the PSF modelling, data stacking and difference imaging packages.

JRL, MJI, STH presented talks at the Oxford UKIDSS meeting on the CASU pipeline, 2d image processing and photometric calibration. At the same meeting after much discussion, a way forward for MSB design was agreed. In consultation with JAC staff a draft document containing guidelines for MSB construction has been composed and sent out to the UKIDSS CSS and selected others for comment.

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After several trials and tribulations the data ingest server is now setup, OS installed, dependency software installed and most of the pipeline software integrated and tested.

An interesting conundrum that requires urgent consideration and decision is whether to go ESO's CPL + QFITS route or deliver CASU's own software modules + CFITSIO.

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CASU was not best pleased to find out about the UKIRT board report submitted without consulation by the CSS, and the negative conotations derived from it in certain quarters.

There is still no new WFCAM laboratory test data due to earlier problems with engineering devices. This continues to have a knock on effect on some of the V1 pipeline development. V2 tasks continue to be worked on as replacements.

The collapse of the time frame between commissioning and survey science observations may cause problems, particularly if the majority of the characteristics of the camera are not well defined before commissioning starts.

There is still no progress on revisiting the VDFS Science and User requirements. These are crucial in planning the workload for the next few years and without them there is no point in planning the UK "added value" reviews. Related to this is the issue of VDUC. When is this committee going to meet ?