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This document presents work package progress by CASU during Q1m3 and Q2m1 2007. For further details of group activities over the past month and 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>

VISTA

DRL v0.5 was released to ESO. Associated documents (Cal, IDD, ETC spec) awaiting official release. Much interaction between CASU and ESO is now happening to sort out any problems, inconsistencies and in particular QC issues. Work is progressing well towards the next iteration (v0.6) which deals with these queries and includes a set of minor changes to address them.

PSB and JRL enjoyed a fruitful visit to Garching for the meeting entitled '2nd Generation VLT Instrumentation' which included a like-minds meeting of software developers using CPL. Interesting news here is the adoption of CFITSIO and WCSLIB in v4.0 of CPL due out later this year.

Raw WFCAM data

The situation here has improved immeasurably over the last month and we have recently received the backlog of the majority of the raw data for the period from 26th October to 5th April. Raw WFCAM data with complete coverage up to and including the night of April 5th (apart from a still missing 6 nights in January) are now in Cambridge.

We have also been carrying out some bandwidth tests to JAC to assess feasibility of transferring some of the WFCAM data via the Internet. The current average data transfer rates achieved (64 KBytes/s) appear to be rate limited by window (packet) size judging from various tests and traceroute statistics. Further investigations are ongoing since even just transferring problem or missing files this way would be a useful improvement in raw data acquisition efficiency.

WFCAM Processing

All recent processing (ie. from 20th December 2006) has been limited by the rate of arrival of complete sets of data tapes see

<http://casu.ast.cam.ac.uk/surveys-projects/wfcam/data-processing/>

for details of the processing and transfer status. Semester 07A started (by JAC definition) on April 1st and the first few nights of data have already arrived and have been ingested.

A version log noting the changes in 06B processing and a "new features" web page have been written and both are available from the processing status pages.

The new WFCAM campaign proposals have been assessed for pipeline issues. Impact on pipeline operations from these new campaign proposals is expected to be small since most of the data will be taken in already tried and tested observing modes. There will be some impact on operations caused by the greater proportion of time (~75%) that WFCAM will be on the telescope.

MR published an article in the most recent UKIRT Newsletter on the sky brightness properties in the NIR on Mauna Kea derived from WFCAM data.

WFCAM calibration

Work continues to tie down the Z- and Y-band offsets to the Vega system in time for DR3. This is caused by the non-linear stellar colour locus in Z- and Y-band -v- JHK colours and amounts to about 2% for Z and 7% for Y. The calibration working group will meet again in early May to finalise this. A paper discussing the calibration of WFCAM from 2MASS is in preparation.

DR2

During some tests on LAS data in DR2 RGM noted a small effect (an offset averaging ~1%) when comparing DR2 band-merged products with CASU generated band-merged products. This is related to the correction for the photometric distortion inherent in the way that the pipeline deals with the astrometric field distortion (see the report available under astrometric and photometric distortion under

<http://casu.ast.cam.ac.uk/quick-links/wfcam-documentation>

for more details of the effect.