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Summary

This document presents work package progress by CASU during June 2005.
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

We have ingested and verified all SV data up to June 20th, the last of the semester 05A WFCAM data. After improvements to summit conversion and tape writing checks, the number of missing single detector files is around 1 in 20,000 and these now all appear to be genuinely missing e.g. one of the data taking PCs crashed during observing.

Security to the interface for the raw WFCAM archive has been improved (http://archive.ast.cam.ac.uk/wfcam/) such that now each person only has access to specified project IDs. As noted before, there have been several requests for direct access to the raw data and these continue to keep us entertained.

A JAC-end problem with the header meta-data for certain types of MSB caused some grief for processing data taken during the period 5th-23rd May. The relevant headers have now been identified and fixed and the raw archive updated.

A pipeline progress status web page has been set up. This automatically scans various disks for raw data, processing data and processed data every few hours and updates a web page with the status. This is currently available on http://apm15.ast.cam.ac.uk/wfcam/ but will be also linked through the usual VDFS webpage shortly. This and the raw archive interface are now linked from the JAC web pages. The status webpage also provides access to nightly "observing logs" and assorted nightly diagnostic plots.

Transfers of raw WFCAM data to ESO have been going smoothly, albeit somewhat slowly given the bottleneck into Garching. All raw UKIDSS and calibration data up to May 15th have been transferred to ESO. The rest is queued to go as needed, but the overall transfer speed is only ~0.45 Mb/s, i.e. 7 hours to shift ~10 Gbytes of data.

Further improvements to the speed of the summit pipeline have been made to attempt to keep up with the weird observing methods the deep surveys are using. Further tests on the summit PCs are ongoing during the WFCAM downtime period.

Tuning of the pipeline image processing strategy is essentially complete and the pipeline is now running 24/7 using all 8 processors on the 4 processing PCs. Several DQC check stages are run on each night of data followed by internal science verification on a sampled subset. A typical full night of data contains ~3000+ images (up to 250 Gbytes) and takes around 24-36 hours to process.

The processing preview script has been further improved to minimise the aggro of running the pipeline, equivalently, to help organise the data processing in a more efficient way.

Processed data up and including the 24th May is available for download to WFAU. Processing of the remaining May nights is running now.

PSB has converted the algorithmic part of the VDFS ETC software into ANSI C modules and has written a simple C test main program to debug the resulting code. He continues to monitor and comment on the VISTA FITS file developments.

MJI attended an interesting VST PSP meeting in Garching on 22-23 June. The selected core and secondary survey programme PIs were tasked with coming up with a coherent and complementary set of public surveys to optimally make use of a likely ~40-50% of VST time. After much debate 4 programmes were put forward as a likely ~4 year programme. These will be resubmitted to the PSP for a seal of approval and if satisfactory they will be passed on to the OPC for final approval, or otherwise.

The chosen few are:

KIDS: [subsumes Dalton and Warren surveys - clipped and drop Z-band?]
PI Kuijken.
375 nights.
1500 sq. deg survey primarily to study weak lensing

ATLAS: [unchanged]
PI Shanks.
30 nights per year, at least 3 years
4500+ sq. deg. survey as SDSS counterpart using poor seeing

VPHAS/UVEX: [combined Galactic Plane surveys +/-5 deg band]
PI Drew/Groot.
130 nights.
Galactic plane survey.

Census: [clipped and drop Z-band?]
PI Oliver
80 nights
30 sq. deg. survey covering selected SWIRE/UKIDSS DXS fields to 25th mag

Further discussions on the expected data products, format, validation of same and delivery method also took place. This was very much seen as a foretaste of the anticipated VISTA public survey programmes, which are expected to follow a similar ritual, beginning with a call for survey proposals in the Autumn.

During the meeting MJI also found out that all ESO public survey raw archive data and PI private time-elapsed data have been made public (worldwide) since April. He does not know if this includes WFCAM raw data.