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## Summary

This document presents work package progress by CASU during December 2004.

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

The Data Reduction Library Design (DRLD) document version 1.0 was completed. The DRLD has had the most effort spent on it over the last 3 months with major revisions and additions to all sections. This has been circulated and updated after internal comment within the VDFS project. Version 1.0 of this document was submitted for FDR on the 17<sup>th</sup> December.

The other FDR documentation (URD, DRS and CAL) has been updated with all the required responses to PDR RIXs and updated as far as possible to incorporate the changes in template design and other design changes necessitated by the switch from deliverable specification 1618 issue 1.0 to 1618 issue 2.0.

Although this and the DRLD development led to a larger upfront effort to incorporate the changes in design requirements, it should noticeably reduce the longer-term support effort required to maintain the VDFS pipelines in an ESO runtime environment.

Much of the rationale for this change of plan came about from a productive visit by JRL and PSB to ADASS. This visit included a lot of informal and detailed discussion with Michele Peron and Carlo Izzo about the earlier CASU CPL+QFITS enhancements request document and about the required content of the DRLD and other FDR documents.

The other work package that has taken rather more effort than planned this quarter is the ETC document and "calculation forms". Although an interim ETC document version 0.9 was submitted on December 23<sup>rd</sup>, Version 1.0 of this, required for FDR, is still awaiting final discussion and iteration. Many of the problems with the design of the ETC are related to the overlap of the ETC requirements with the design and requirements of the Survey Definition Tool. In addition, given the difficulty of properly testing "calculation forms" for both strategy, ease of use and numerical viability, we decided it was more useful to develop a live working ETC based on a perl cgi script, accessible via a web form interface

(<u>http://www.ast.cam.ac.uk/vdfs/etc.html</u>). This was put in place on 31<sup>st</sup> December and is being used to assess the viability of the proposed ETC calculations and strategy.

The CASU rolling grant application took up a large amount of effort during the first half of this quarter. Although not entirely VDFS related, this included WFCAM/VISTA operational requirements and the related provision for processing

UK-led ESO VST public surveys. The grant application was submitted electronically on the 19<sup>th</sup> November.

WFCAM first light occurred during the quarter. JRL went out to Hawaii for two weeks to participate in stage-1 of WFCAM commissioning and on-sky-verification, working mainly with Paul Hirst at JAC. Simon Dye, the UKIDSS CSV, also took part in some of the on-sky-verification as part of a WFCAM familiarisation strategy. Over Christmas we finally acquired the rest of the WFCAM data commissioning tapes and we are now in the middle of ingesting the data and assessing various aspects of it.

Roughly 1/2 of the commissioning data has now been reconstituted in MEF format and various tests are being conducted on it. The summit pipeline has generally been working well. As expected there have been a number of minor problems, a lot relating to missing header entries, but most of these have been fixed in pseudo-real time.

Although MSBs characterising the main UKIDSS survey observing components were constructed in advance of the latter stages of commissioning none of these were executed at the summit. In spite of this however, a lot of on-sky data has been taken in pawprint/jitter/microstep mode, which will enable us to measure the properties of the detectors and tune the majority of the processing strategy. MJI submitted a report on progress with the WFCAM data reduction pipeline to Andy Adamson, which was used to help construct a report for presentation to the UKIRT board on Nov 11<sup>th</sup>/12<sup>th</sup>.

We have had good interaction with Simon Dye during visits to Cambridge and during commissioning. Further visits to liaise with WFCAM processing strategy and data properties are being organised.

The amount of paperwork generated this quarter has had an adverse effect on code development in several work packages. We anticipate that this problem will be alleviated by the recent arrival of Marco Reillo from Padova/Garching to take up his position within CASU as a software developer/astronomer.