WP #	CASU WP name /sub task / 04Q3 deliverable	V.I. F.	name	date	end of month report	%sub	% task
1	**Management and definition of project responsibilities**	**3.0**					
1.1	**report to VISTA, UKIDSS, JAC, ATC, GSC**						**87**
	provide fornightly meeting minutes, monthly reports on progress + quarterly review reports and planning, attend VDUC meetings, have regular telecons with JAC, attend ESO VDFS FDR		STH, MJI				
	prepare for and attend grant review		STH, MJI				
1.2	**interface control document between CASU and JAC**				completed		**100**
1.3	**interface control document between CASU and WFAU**				completed		**100**
	liaise with WFAU for design of VISTA ICD		MJI				
1.4a	**define WFCAM data structures and FITS headers**				completed		**100**
1.4b	**update proposed VISTA FITS headers as necessary**						
1.5a	**define WFCAM observing protocols**						**87**
	monitor and help update MSB guidelines		MJI + STH				
	check first pass survey MSBs		STH				
1.5b	**define VISTA observing protocols**						
	help finish defining science and user requirements		MJI + PSB				
1.6a	**liaise with UKIDSS&JAC on WFCAM obs strategy, surveys planning**						**87**
	liaise and monitor progress		DWE				
1.6b	**liaise with Project Scientist on VISTA observing strategy & survey planning**						
	liaise and monitor progress		PSB				
1.7a	**liaise with VDUC on VDFS products for WFCAM**						**87**
	liaise and monitor progress		STH + MJI				
	prepare report on results from WFCAM comissioning		JRL				
	involve Simon Dye with commissioning analysis progress		JRL				
1.7b	**liaise with VDUC on VDFS products for VISTA**						
	liaise and monitor progress		MJI + STH				
	assess and prioritise work required for extra UK VDFS products		MJI + STH				
	prepare functional specification for UK review (see VDMT A0501-05)						
1.8a	**liaise with UKIDSS and JAC on survey progress DB**		JRL				**87**
	maintain OMP database mirror to be used with survey progress database, including user interface		JRL				
1.9	**system documentation**						**87**
	update and maintain web pages of system docs		DWE				
2	**ESO VISTA software interface deliverables and documentation**	**4.0**					
2.1	**VDFS user requirements document**						**70**
	respond to RIXs, update documents as appropriate		PSB				
2.2	**data reduction specification document**						**70**
	respond to RIXs, update documents as appropriate		PSB				

2.3	**calibration plan document**						**70**
	respond to RIXs, update documents as appropriate		PSB				
2.4	Specification of calibration procedures for ESO				subsumed into 2.3		
2.5	**ICD ESO/VPO**						**60**
	update FITS header docs and DID/DIC and submit data dictionary files for FDR, update as necessary		PSB				
2.7	**Delivery software modules for exposure time calculator**						**0**
	submit V1.0 with calculation forms for FDR		STH				
	respond to RIXs, update document as appropriate		STH				
	debug and update ETC software modules		MJI				
2.8	**liaise with VISTA IR camera development team**						**75**
	continue liaising with VISTA IR camera development team		PSB				
2.9	Development of DQC measures						
	respond to RIXs, update QC measures as required		PSB				
3	**Pipeline infrastructure and pipeline progress monitoring tools**	**3.5**					
3.1	**interactive tools for running pipeline**						**60**
	develop tools and document		JRL				
3.2	**high level scripts to interrogate headers**		STH, JMI		paused		**50**
3.3	**automatic progression of results to web pages**		STH, JMI		paused		**50**
3.4	**automatic checks to spot failure of pipeline**		JMI, STH		paused		**0**
3.5	Tools for fixing problem datasets		JRL, JMI		paused		
3.6	**group documentation on pipeline infrastructure**						**60**
	stress test documentation and update as necessary		STH, JRL				
3.7	Oversee reprocessing WFCAM data after bug fixes/improvements				awaiting WFCAM science data		
4	**Set up and manage raw science archive**	**0.0**					
4.1	**extend UKIRT archive to cope with WFCAM data**						**50**
	finish creating version 1 of WFCAM raw data archive		JRL				
4.2	Ingest and verify WFCAM data						
	ingest and verify Phase I commissioning data		JRL				
	ingest and verify Phase II commissioning data		JRL				
5	**Set up and manage data processing system hardware**	**2.0**					
5.1	**Investigate alternatives (benchmarking, reliability etc)**				completed		**100**
5.2	**buy hardware and install**						**80**
	purchase and install RAID disk storeage and backup LTO tape unit		PSB, JMI				
	move all computer kit back to APM building and re-install		PSB, JMI				
5.3	**integrating and testing**						**70**
	integrate and test entire VDFS system		PSB, JMI				
5.4	**Manage day-to-day maintenance and upgrades**						**50**
	continue maintenance and upgrade programme		JMI, PSB				

6	**Run standard pipeline**	**2.5**					
6.1	**Update WFCAM master calibration frames**						
	ingest and verify WFCAM on-sky test data			JRL, MJI			
6.2	**Monitor detector performance WFCAM**				awaiting WFCAM science data		
6.3	**Oversee standard processing WFCAM**				awaiting WFCAM science data		
6.4	**Astrometric calibration WFCAM**				awaiting WFCAM science data		
6.5	**Photometric Calibration WFCAM**				awaiting WFCAM science data		
6.6	**Verify Science products and monitor DQC measures WFCAM**				awaiting WFCAM science data		
6.7	**Monitor data product transfer to WFAU**				awaiting WFCAM science data		
6.8	**Reprocess WFCAM data**				awaiting WFCAM science data		
7	**Development work for summit pipeline**	**1.0**					
7.1	**Interface test pipelines in ORAC-DR**		JRL		completed		**100**
7.2a	**implement WFCAM pipeline at summit**						**75**
	demonstrate catalogue and non-catalogue DQCs		JRL				
	update & maintain + commissioning enhancements		JRL				
	develop recipes for dealing with crosstalk, non-linearity, reset anomalies and persistence when test data on these effects become available		JRL				
7.3a	**documentation for ORAC-DR interface**						**60**
	update and deliver documentation as development proceeds		JRL				
7.4a	**upgrade and maintain summit pipeline WFCAM**						
	upgrade and maintain		JRL				
8	**Development and testing of standard 2d processing**	**4.0**					
8.1a	**further development of standard pipeline for WFCAM**						**80**
	finish implementing new version of imcore to include full param set		JRL				
8.2a	**liaison with WFCAM development team**						**75**
	continue discussion on reset anomaly, crosstalk and linearity		JRL				
	assess science array test data for above problems and report		JRL				
8.2b	**liaison with Project Scientist & VISTA development team**						
	assess any new detector engineering test data		MJI				
8.3a	**partake in planning WFCAM commissioning observations**						**80**
	continue liaising with ATC/JAC		STH				
8.3b	**partake in planning VISTA comissioning observations**						
	liaise and discuss with camera PS and VISTA PS		STH				
8.4a	Participate directly in commissioning WFCAM						
	take part in second stage of WFCAM on-sky commissioning		JRL, STH				
8.5	**Tuning pipeline during commissioning and after**						
	use commissioning data to tune processing strategy		MJI				
	assess the quality and stability of the master calibration data		JRL				

8.6	**documentation for 2D processing software**						**50**
	updates docs as necessary		JRL				
8.7	**Comparison between automated and manual data products**						**75**
	compare FIRES with published results and write report		STH				
	assess CASU processed WFCAM commissioning data in conjunction with CSV		STH				
9	**Development and testing of standard catalogue products**	**4.0**					
9.1	**add in new measures requested**						**60**
	finish testing and debugging new catalogue parameter measures		MJI				
9.2	**refine astrometric calibration model**		MJI		paused		**85**
9.3	**generate model simulations of expected data**		STH, JMI		finished		**100**
9.4	**assess catalogue parameter reliability**						**70**
	refine parameter error estimates and check for systematics in new params, finish in conjunction with 9.1		MJI				
9.5	**intercomparison of catalogue products with other packages**		JMI		stopped - subsumed into 9.4		**60**
9.6	**Completeness and error estimates**						
	design and report on completeness model		MJI				
9.7	**documentation of catalogue software and products**						**55**
	update catalogue products documentation		MJI				
10	**Setup trial and run further processing pipeline**	**3.0**					
10.1	Manage and run further processing stages				placeholder (start in Q3)		
10.2	**development and assessment of PSF options 1,2**						**50**
	produce prototype for PSF level 2		MJI				
10.3	**develop 1D/2D PSF-deconvolved Sersic profile fits**				paused awaiting real WFCAM data (start in Q2)		
10.4	**Develop LSBG/nebulosity detection/parameterisation**				placeholder (start in Q2)		
10.5	**Full iterative profile fitting for stellar images**				paused		
10.6	**Develop and optimize Bayesian image classification**				placeholder (start in Q2)		
10.7	**Modelling and simulations of further processing steps**				placeholder (start in Q2)		
11	**Photometric standards and calibration**	**3.0**					
11.1	**agree on primary standards**						**90**
	complete narrow band filter calibration plan and update document		STH				
11.2	**choose secondary standard fields**						**80**
	refine/shorten list		STH				
11.3	take part in commissioning observations WFCAM		JRL, STH				
	phase II on-sky characterisation						
11.4a	Reduce data, compute zero points and colour equations WFCAM						
	compute ZPs from comissioning data		STH				
	measure colour terms relative to 2mass		STH				

11.5	Update, maintain and extend secondary standards system						
	begin building secondary standard fields system		STH				
11.6	Investigate photometric calibration field systematics WFCAM+VISTA						
	investigate photometric calibration systematics - use 2MASS to check global systematics		STH				
11.7	**assess extinction monitoring methods and develop measures**						**50**
	use 2MASS comparison to get first order estimate and assess expected accuracy		STH				
12	**Further development of DQC measures at summit and Cambr**	**2.0**					
12.1	**develop extra systematic noise measures**						**50**
	trial using WFCAM commissioning data		MJI				
12.2	**Refine current measures for WFCAM/VISTA data**						**20**
	trial using WFCAM commissioning data		JRL				
12.3	**implement 2mass for throughput measurement**						**75**
	implement local access version at summit		JRL				
12.4	**master calibration frames for detector monitoring**						**35**
	assess and report using commissioning data		JRL				
13	**Co-located list driven photometry**	**3.0**					
13.1	**test methods for master catalogue generation**				completed		**100**
13.2	**develop basic WCS-based list driven photometer**						**90**
	extend to full 80 parameter set		MJI				
13.3	**externally driven WCS photometry and define parameter set**						**75**
	extend to full 80 parameter set		MJI				
14	**Stacking and mosaicing**	**4.0**					
14.1	**develop benchmark simple stacking/mosaicing framework**		MJI		completed		**100**
14.2	**NN algorithm with simple rejection**		MJI		completed		**100**
14.3	**More sophisticated rejection dealing with pixellation**		MJI		completed		**100**
14.4	**Stacking with optimum wighting and defect rejection**						**25**
	refine and test current seeing weighting method on FIRES data		MJI				
14.5	Advanced stacking/image restoration for variable PSF						
	TBD as part of UK design review		MJI				
15	**Continuum subtraction and basic difference imaging**	**4.0**					
15.1	**Simple WCS-based subtraction techniques**		MJI		completed		**100**
15.2	**investigate and apply different interpolation methods**		MJI		completed		**100**
15.3	**develop adaptive kernel matching option**						**80**
	continue debugging and enhancements to adaptive kernel package		MJI				
15.4	**transit event detection**						**0**
	continue with WASP, INT WFC and APT datasets		STH				
16	**Interpolation techniques and PSF modeling**	**4.0**					

16.1	**investigate alternative interpolation/PSF schemes**				completed		**100**
16.2	**implications for different stacking methods**				paused awaiting stage II of WFCAM commissioning		**20**
16.3	**implications for deriving catalogues and parameters**						**70**
	finish development and testing of astrometric refinement code		DWE				
16.4	**oversampled PSF generation per detector**				finished		**100**
16.5	**develop oversampled spatially varying PSF model**						**0**
	finish development of spatially varying PSF model		DWE				
	final tuning on WFCAM on-sky data		DWE				