WP	CASU WP name /sub task / 05Q1 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	31-Jan-05	held 2 telecons with JAC (last one included Simon Dye) and 2 CASU minuted meetings. MJI, PSB attended ESO VDFS FDR (STH, JRL via videocon)	10	
	prepare for and attend grant review		STH, MJI		no progress	0	
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	31-Jan-05	discussed MSB guidelines at last JAC telecon	10	
	check first pass survey MSBs		STH	31-Jan-05	nothing to report	10	
1.5b	**define VISTA observing protocols**						
	help finish defining science and user requirements		MJI + PSB	31-Jan-05	PSB, MJI discussed VISTA observing protocols at FDR wrt potential science and user requirements	10	
1.6a	**liaise with UKIDSS&JAC on WFCAM obs strategy, surveys planning**						87
	liaise and monitor progress		DWE	31-Jan-05	liaising via JAC telecons	10	
1.6b	**liaise with Project Scientist on VISTA observing strategy & survey planning**						
	liaise and monitor progress		PSB	31-Jan-05	discussions of observing strategy and survey planning took place at FDR	10	
1.7a	**liaise with VDUC on VDFS products for WFCAM**						87
	liaise and monitor progress		STH + MJI	31-Jan-05	nothing to report	10	
	prepare report on results from WFCAM comissioning		JRL	31-Jan-05	version 0.5 of report on WFCAM commisioning -I released -II in preparation	10	
	involve Simon Dye with commissioning analysis progress		JRL	31-Jan-05	SD spent 1 day with CASU and took WFCAM data home with him. Also involved SD in JAC telecons.	10	
1.7b	**liaise with VDUC on VDFS products for VISTA**						
	liaise and monitor progress		MJI + STH	31-Jan-05	nothing to report	10	
	assess and prioritise work required for extra UK VDFS products		MJI + STH	31-Jan-05	no progress	0	
	prepare functional specification for UK review (see VDMT A0501-05)		MJI + STH	31-Jan-05	no progress	0	
1.8a	**liaise with UKIDSS and JAC on survey progress DB**						87
	maintain OMP database mirror to be used with survey progress database, including user interface		JRL	31-Jan-05	fixed problem with OMP database not updating with some JAC help. JRL provided SD with interface to CASU OMP database	10	
1.9	**system documentation**						87
	update and maintain web pages of system docs		DWE	31-Jan-05	documentation updated as necessary	10	
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	31-Jan-05	responded to RIXs and submitted to FDR	50	

#	Description	Who	Date	Comments	%	Total
2.2	**data reduction specification document**					70
	respond to RIXs, update documents as appropriate	PSB	31-Jan-05	responded to RIXs and submitted to FDR	50	
2.3	**calibration plan document**					70
	respond to RIXs, update documents as appropriate	PSB	31-Jan-05	responded to RIXs and submitted to FDR	50	
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	31-Jan-05	data dictionary files updated and submitted for FDR	50	
2.7	**Delivery software modules for exposure time calculator**					0
	submit V1.0 with calculation forms for FDR	STH	31-Jan-05	V1.0 of ETC document submitted with calculation forms	100	
	respond to RIXs, update document as appropriate	STH	31-Jan-05	responded to RIXs	50	
	debug and update ETC software modules	MJI	31-Jan-05	ETC updated and debugged. Modules will be converted to C	50	
2.8	**liaise with VISTA IR camera development team**					75
	continue liaising with VISTA IR camera development team	PSB	31-Jan-05	very useful liaison at FDR	10	
2.9	**Development of DQC measures**					
	respond to RIXs, update QC measures as required	PSB	31-Jan-05	responded to RIXs and submitted to FDR	50	
3	**Pipeline infrastructure and pipeline progress monitoring tools**	**3.5**				
3.1	interactive tools for running pipeline					60
	develop tools and document	JRL	31-Jan-05	continuing development in response to results of Phase I commissioning data	10	
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	31-Jan-05	no progress	0	
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	31-Jan-05	no progress	0	
4.2	**Ingest and verify WFCAM data**					
	ingest and verify Phase I commissioning data	JRL	31-Jan-05	much indigestion due to problems with FITS headers. MR is recreating some test MEFs with fixes to the HDU probems	50	
	ingest and verify Phase II commissioning data	JRL	31-Jan-05	awaiting Phase II commissioning	0	
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	31-Jan-05	no progress - awaiting new offices	0	
	move all computer kit back to APM building and re-install	PSB, JMI	31-Jan-05	organised installation of new network infrastructure	10	

5.3	**integrating and testing**					70
	integrate and test entire VDFS system	PSB, JMI	31-Jan-05	no progress - awaiting move back to APM	0	
5.4	**Manage day-to-day maintenance and upgrades**					50
	continue maintenance and upgrade programme	JMI, PSB	31-Jan-05	system being maintained and upgrades up-to-date	10	
6	**Run standard pipeline**	**2.5**				
6.1	**Update WFCAM master calibration frames**					
	ingest and verify WFCAM on-sky test data	JRL,MJI	31-Jan-05	comm-I data is being used for master calibration frame tests	10	
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	31-Jan-05	investigations continuing using Nov 2004 data	10	
	commissioning enhancements	JRL	31-Jan-05	nothing to report	0	
	develop recipes for dealing with crosstalk, non-linearity, reset anomalies and persistence when test data on these effects become available	JRL	31-Jan-05	making good progress with investigations into detector "features"	10	
7.3a	**documentation for ORAC-DR interface**					60
	update and deliver documentation as development proceeds	JRL	31-Jan-05	documentation added to primitives as they have been written	10	
7.4a	**upgrade and maintain summit pipeline WFCAM**					
	upgrade and maintain	JRL	31-Jan-05	upgrades being added as data are analyzed	10	
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	31-Jan-05	no further progress	0	
8.2a	**liaison with WFCAM development team**					75
	continue discussion on reset anomaly, crosstalk and linearity	JRL	31-Jan-05	have held a lot of dicussion of various "features" and characterisation using the WFCAM commissioning data	10	
	assess science array test data for above problems and report	JRL	31-Jan-05	reset anomlay and linearity much better understood now. Commisioning reports in preparation (see version 0.5 of Phase I)	10	
8.2b	**liaison with Project Scientist & VISTA development team**					
	assess any new detector engineering test data	MJI	31-Jan-05	no new data yet, but some progress on this following FDR	10	
8.3a	**partake in planning WFCAM commissioning observations**					80
	continue liaising with ATC/JAC	STH	31-Jan-05	planned visits to JAC by JRL and STH in March	10	
8.3b	**partake in planning VISTA comissioning observations**					
	liaise and discuss with camera PS and VISTA PS	STH	31-Jan-05	nothing to report	10	

8.4a	**Participate directly in commissioning WFCAM**						
	take part in second stage of WFCAM on-sky commissioning	JRL, STH	31-Jan-05	provisional arrangements made for STH and JRL to take part in WFCAM comm-II	0	
8.5	**Tuning pipeline during commissioning and after**						
	use commissioning data to tune processing strategy	MJI	31-Jan-05	WFCAM commissioning data is yielding interesting insights for tuning processing	10	
	assess the quality and stability of the master calibration data	JRL	31-Jan-05	quality and stability assessment begun	10	
8.6	**documentation for 2D processing software**						50
	updates docs as necessary	JRL	31-Jan-05	no progress	0	
8.7	**Comparison between automated and manual data products**						75
	compare FIRES with published results and write report	STH	31-Jan-05	no progress	0	
	assess CASU processed WFCAM commissioning data in conjunction with CSV	STH	31-Jan-05	reported status of commissioning data to Simon Dye and supplied him with WFCAM fits files	10	
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	31-Jan-05	no progress	0	
9.2	**refine astrometric calibration model**		MJI	31-Jan-05	refined using comm-I data - see report	50	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	31-Jan-05	no progress	0	
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	31-Jan-05	no progress	0	
9.7	**documentation of catalogue software and products**						55
	update catalogue products documentation	MJI	31-Jan-05	no progress	0	
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	31-Jan-05	no progress	0	
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	31-Jan-05	no progress	0	
11.2	**choose secondary standard fields**						80

	refine/shorten list	STH	31-Jan-05	no progress	0	
11.3	**take part in commissioning observations WFCAM**					
	phase II on-sky characterisation	JRL, STH	31-Jan-05	march	0	
11.4a	**Reduce data, compute zero points and colour equations WFCAM**					
	compute ZPs from comissioning data	STH	31-Jan-05	2MASS used to generate first pass zeropoints	50	
	measure colour terms relative to 2mass	STH	31-Jan-05	and colour equations	50	
11.5	**Update, maintain and extend secondary standards system**					
	begin building secondary standard fields system	STH	31-Jan-05	no progress	0	
11.6	**Investigate photometric calibration field systematics WFCAM+VISTA**					
	investigate photometric calibration systematics - use 2MASS to check global systematics	STH	31-Jan-05	no progress	0	
11.7	**assess extinction monitoring methods and develop measures**					50
	use 2MASS comparison to get first order estimate and assess expected accuracy	STH	31-Jan-05	2MASS succesfully used to monitor WFCAM extinction (See Commisioning phase I report)	50	
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	31-Jan-05	trialling begun using WFCAM commissioning data	10	
12.2	**Refine current measures for WFCAM/VISTA data**					20
	trial using WFCAM commissioning data	JRL	31-Jan-05	trialling begun using WFCAM commissioning data	10	
12.3	**implement 2mass for throughput measurement**					75
	implement local access version at summit	JRL	31-Jan-05	no progress	0	
12.4	**master calibration frames for detector monitoring**					35
	assess and report using commissioning data	JRL	31-Jan-05	no progress	0	
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	31-Jan-05	no progress		
13.3	**externally driven WCS photometry and define parameter set**					75
	extend to full 80 parameter set	MJI	31-Jan-05	no progress		
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	31-Jan-05	no progress		
14.5	Advanced stacking/image restoration for variable PSF					
	TBD as part of UK design review	MJI	31-Jan-05	no progress		
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	31-Jan-05	no progress			
15.4	**transit event detection**						**0**
	continue with WASP, INT WFC and APT datasets	STH	31-Jan-05	good progress with lightcurve generation tests for a variety of systems	10		
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	31-Jan-05	Phase 2 report of PSF fitting released - see http://www.ast.cam.ac.uk/vdfs/docs/reports/psf2/			
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	31-Jan-05	awaiting Phase-II commissioning data	0		
	final tuning on WFCAM on-sky data	DWE	31-Jan-05	awaiting Phase-II commissioning data	0		