

WP	CASU WP name /sub task / 04Q4m2 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 fortnightly meeting minutes, monthly reports on progress + quarterly review reports and planning, attend VDUC meetings		STH, MJJ	31-Oct-04	meetings held and minuted. monthly report written.	10	
			STH, MJJ	30-Nov-04	meetings held and minuted. monthly report written	50	
	finish and deliver ADASS paper		JRL	31-Oct-04	finished poster and attended ADASS	100	
	prepare CASU grant bid (operations)		STH, MJJ	31-Oct-04	preparation well underway. to be submitted mid november	50	
			STH, MJJ	30-Nov-04	grant bid completed and submitted	100	
1.2	interface control document between CASU and JAC				completed		100
1.3	interface control document between CASU and WFAU				completed		100
1.4a	define WFCAM data structures and FITS headers				completed		100
1.4b	update proposed VISTA FITS headers as necessary				paused		
1.5a	define WFCAM observing protocols						87
	monitor and help update MSB guidelines		MJJ + STH	31-Oct-04	contact with Simon Dye and AA to discuss status of MSBs	10	
			MJJ, STH	30-Nov-04	held meeting with Simon Dye: included discussion on MSB preparation	50	
	check first pass survey MSBs		STH	31-Oct-04	checked GPS MSBs in UKIRT OT. Began construction of GCS MSBs in consultation with NCH. MJJ sent textual summary of MSB designs to AA	10	
			STH	30-Nov-04	redesign of MSBs within OT. Can make no progress until SDT updated to reflect these changes	10	
1.5b	define VISTA observing protocols						
	help finish defining science and user requirements		MJJ + PSB	31-Oct-04	nothing further to add pending release of UKURD and feedback from UK community	0	
			MJJ + PSB	30-Nov-04	UKURD released, but no feedback yet - VDUC meeting would be useful to discuss this	0	
1.6a	liaise with UKIDSS&JAC on WFCAM obs strategy, surveys planning						87
	liaise and monitor progress		DWE	31-Oct-04	arranged meeting with Simon Dye. discussed sky brightness with JAC as well as commissioning plans.	10	
			STH	30-Nov-04	held meeting with Simon Dye to discuss commissioning and to keep CSV in touch with CASU activities	50	
1.6b	liaise with Project Scientist on VISTA observing strategy & survey planning						
	liaise and monitor progress		PSB	31-Oct-04	comments on SDT document fed to JMS and WJS. Awaiting next version.	10	
			PSB	30-Nov-04	reviewed last version of SDT	50	
1.7a	liaise with VDUC on VDFS products for WFCAM						87
	liaise and monitor progress		STH + MJJ	31-Oct-04	nothing to report. meeting with simon dye will include discussion of science verification and pipeline strategy	10	
			STH + MJJ	30-Nov-04	held meeting with Simon Dye including discussion of pipeline and data products	50	
1.7b	liaise with VDUC on VDFS products for VISTA						
	liaise and monitor progress		MJJ + STH	31-Oct-04	nothing to report	10	
			MJJ + STH	30-Nov-04	nothing to report	10	

1.8a	liaise with UKIDSS and JAC on survey progress DB					87
	create version 1 of OMP database mirror to be used with survey progress database, including user interface	JRL	31-Oct-04	no further development	0	
		JRL	30-Nov-04	no further progress	0	
1.9	system documentation					87
	update and maintain web pages of system docs	DWE	31-Oct-04	documentation updated as necessary	10	
		DWE	30-Nov-04	documentation updated as necessary	50	
2 ESO VISTA software interface deliverables and documentation 4.0						
2.1	VDFS user requirements document					70
	prepare for FDR	PSB	31-Oct-04	discussions over schedule for FDR held. date of FDR now moved to January.	0	
		PSB	30-Nov-04	paused		
	update document as appropriate	PSB	31-Oct-04	no further updates	0	
		PSB	30-Nov-04	incorporated feedback received so far on V1.0 draft, now includes failure strategy	50	
2.2	data reduction specification document					70
	prepare for FDR	PSB	31-Oct-04	FDR moved to January	0	
		PSB	30-Nov-04	paused		
	create new DRS document as required	PSB	31-Oct-04	new document is DRLD. Significant progress on this in the last month resulting in two drafts. 2nd draft is complete in structure and includes most of the details. now awaiting detailed comments from group, plus addition of figures from STH	10	
		PSB	30-Nov-04	incorporated feedback for several sections of DRLD	50	
	assess CPL+QFITS work requirements	PSB	31-Oct-04	held discussions with Michele Peron and Carlo Izzo at ADASS. Now awaiting official response	10	
		PSB	30-Nov-04	awaiting official response	10	
2.3	calibration plan document					70
	prepare for and attend FDR	PSB	31-Oct-04	FDR moved to January	0	
		PSB	30-Nov-04	paused		
	update doc as appropriate	PSB	31-Oct-04	no further progress	0	
		PSB	30-Nov-04	incorporated feedback received so far on V1.0 draft. Major revision to templates and updated FITS info	50	
2.5	ICD ESO/VPO					60
	update FITS header docs and DID/DIC and submit V0.5 for FDR	PSB	31-Oct-04	QC dictionary written and included in DRLD	50	
		PSB	30-Nov-04	QC dictionary update after critical feedback	50	
2.7	Delivery software modules for exposure time calculator					0
	prepare ETC doc for FDR	PSB	31-Oct-04	latest draft of ETC doc (0.3.3) circulated by STH for internal comment and input from JPE, JMS and WJS following initial comments from MJl, DWE, JMS	50	
		STH	30-Nov-04	ETC v0.5 completed and sent off to ESO for comment	50	
2.8	liaise with VISTA IR camera development team					75
	continue liaising with VISTA IR camera development team	PSB	31-Oct-04	held discussions with JMS and SB	10	
		PSB	30-Nov-04	held discussions with JMS and SB	50	
2.9	Development of DQC measures					
	specify what DQC measures will be needed for FDR	PSB	31-Oct-04	listed required parameters and added to DRLD. now need more detailed formulation of how to compute	10	
		PSB	30-Nov-04	formulated more detailed description of QC measures included in DRLD	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-Oct-04	more commissioning recipes and scripts written. tests of recipes with WFCAM first light images go well.	10		
	JRL	30-Nov-04	more recipes written and tuned at summit during commissioning.	50		
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	JRL, JMI	31-Oct-04	no progress	0		
	JRL, JMI	30-Nov-04	no progress	0		
3.7 Oversee reprocessing WFCAM data after bug fixes/improvements			placeholder			
4 Set up and manage raw science archive						
0.0						
4.1 extend UKIRT archive to cope with WFCAM data						50
create version 1 of WFCAM raw data archive	JRL	31-Oct-04	table schema written. waiting to complete upgrade to sybase database devices before creating the new database	10		
	JRL	30-Nov-04	no further progress	10		
4.2 Ingest and verify WFCAM data						
ingest commissioning data	JRL	30-Nov-04	ingested WFCAM commissioning data for period 18/10-07/11	10		
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 bulk storage devices	PSB, JMI		paused			
purchase and install spare ultrium device	PSB, JMI		paused			
5.3 integrating and testing						70
integrate and test bulk storage devices	PSB, JMI		paused			
integrate and test spare ultrium device	PSB, JMI		paused			
5.4 Manage day-to-day maintenance and upgrades						50
continue maintenance and upgrade programme	JMI, PSB	31-Oct-04	proceeding as needed	10		
	JMI, PSB	30-Nov-04	proceeding as required	50		
6 Run standard pipeline						
2.5						
6.1 Update WFCAM master calibration frames						
ingest and verify WFCAM on-sky test data	JRL, MJJ	31-Oct-04	awaiting receipt of WFCAM first light images			
	JRL, MJJ	30-Nov-04	have ingested first set of WFCAM commissioning images [all sdf]. verified small sample of individual detectors by direct transfer from summit pipeline	10		
6.2 Monitor detector performance WFCAM			placeholder			
6.3 Oversee standard processing WFCAM			placeholder			

04Q4m2_casu_deliverables.xls

6.4	Astrometric calibration WFCAM			placeholder		
6.5	Photometric Calibration WFCAM			placeholder		
6.6	Verify Science products and monitor DQC measures WFCAM			placeholder		
6.7	Monitor data product transfer to WFAU			placeholder		
6.8	Reprocess WFCAM data			placeholder		
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-Oct-04	no further progress	0	
			30-Nov-04	investigated QC measures during commissioning	10	
	update & maintain + commissioning enhancements	JRL	31-Oct-04	pipeline recipes added for a variety of microstep and jitter schemes.	10	
			30-Nov-04	improvements and enhancements made during commissioning.	50	
	develop recipes for dealing with crosstalk, non-linearity, reset anomalies	JRL	31-Oct-04	no further progress	10	
		JRL	30-Nov-04	recipes for dealing with detector artefacts in being developed with the help of much on-sky data	50	
7.3a	documentation for ORAC-DR interface					60
	update and deliver documentation as development proceeds	JRL	31-Oct-04	documentation added for primitives as they have been written	10	
		JRL	30-Nov-04	documentation added as recipes delivered	50	
7.4a	upgrade and maintain summit pipeline WFCAM					
	upgrade and maintain	JRL	31-Oct-04	further upgrades waiting until end of first part of commissioning run	0	
		JRL	30-Nov-04	upgraded in situ during commissioning	50	
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-Oct-04	no further progress	0	
		RJL	30-Nov-04			
8.2a	liaison with WFCAM development team					75
	continue discussion on reset anomaly, crosstalk and linearity	JRL	31-Oct-04	pre-commissioning science-array test data received and analysed.	10	
		JRL	30-Nov-04	much discussion of these issues during commissioning and much data taken to enable characterization of detector 'features'	50	
	assess science array test data for above problems and report	JRL	31-Oct-04	as above	10	
		JRL	30-Nov-04	test data now in hand and under investigation to enable comprehensive report	50	
8.2b	liaison with Project Scientist & VISTA development team					
	assess detector engineering test data	MJI	31-Oct-04	awaiting further engineering test data	0	
		MJI	30-Nov-04	have received VISTA detector test reports and in the process of compiling CASU engineering test wish list	10	
8.3a	partake in planning WFCAM commissioning observations					80
	continue liaising with ATC/JAC	STH	31-Oct-04	discussions held with JAC via telecon	10	
		STH	30-Nov-04	telecon with JAC on Nov 4th including discussion of commissioning. held meeting with Simon Dye. JRL then out to UKIRT.	100	
8.3b	partake in planning VISTA commissioning observations					
	liaise and discuss with camera PS and VISTA PS	STH	31-Oct-04	nothing to report	0	
		STH	30-Nov-04	nothing to report	0	

04Q4m2_casu_deliverables.xls

8.4a	Participate directly in commissioning WFCAM help with first phase of WFCAM on-sky commissioning	JRL	31-Oct-04	bug fixes and upgrades being issued in real time	10	
		JRL	30-Nov-04	visited UKIRT to participate directly	100	
8.5	Tuning pipeline during commissioning and after use commissioning data to tune processing strategy	MJI	31-Oct-04	awaiting commissioning data	0	
		MJI	30-Nov-04	some tuning and refinement completed at JAC	50	
	assess the quality and stability of the master calibration data	JRL	31-Oct-04	awaiting commissioning data	0	
		JRL	30-Nov-04	quality assessed. stability to be assessed back in Cambridge	50	
8.6	documentation for 2D processing software updates docs as necessary	JRL	31-Oct-04	no progress	0	50
		JRL	30-Nov-04	no progress	0	
8.7	Comparison between automated and manual data products compare FIRES with published results and write report	STH	31-Oct-04	MJI has compared imcore runs on FIRES reduced and CASU reduced datasets.	10	75
		STH	30-Nov-04	no progress	10	
	compare CSV reduced FIRES data with pipeline reduction	STH	31-Oct-04	meeting arranged with CSV	0	
		STH	30-Nov-04	Simon Dye has made no progress and does not plan to reduce this dataset. paused	0	
9 Development and testing of standard catalogue products 4.0						
9.1	add in new measures requested finish testing and debugging new catalogue parameter measures	MJI	31-Oct-04	no progress	0	60
		MJI	30-Nov-04	no progress	0	
9.2	refine astrometric calibration model	MJI		paused		85
9.3	generate model simulations of expected data refine simulations	STH, JMI		paused		80
		DWE	31-Oct-04	more detailed simulations run due to improved accuracy of astrometric PSF fitting and updated interleaving report	100	
9.4	assess catalogue parameter reliability refine parameter error estimates and check for systematics in new params	MJI	31-Oct-04	no progress	0	70
		MJI	30-Nov-04	no progress	0	
9.5	intercomparison of catalogue products with other packages	JMI		paused		60
9.6	Completeness and error estimates			stopped - subsumed into 9.4		
9.7	documentation of catalogue software and products update catalogue products documentation	MJI	31-Oct-04	no progress	0	55
		MJI	30-Nov-04	more updates to docs (pods) made	50	
10 Setup trial and run further processing pipeline 3.0						
10.1	Manage and run further processing stages			placeholder		
10.2	development and assessment of PSF options 1,2 produce robust version of code for PSF level 1	MJI	31-Oct-04	no progress	0	50
		MJI	30-Nov-04	Level one code completed.	100	
	produce prototype for PSF level 2	MJI	31-Oct-04	no progress	0	
		MJI	30-Nov-04	level 2 ML code constructed, still needs debugging and incorporation	50	

04Q4m2_casu_deliverables.xls

10.3	develop 1D/2D PSF-deconvolved Sersic profile fits				paused awaiting real WFCAM data		
10.4	Develop LSBG/nebulosity detection/parameterisation				placeholder		
10.5	Full iterative profile fitting for stellar images				placeholder		
10.6	Develop and optimize Bayesian image classification				placeholder		
10.7	Modelling and simulations of further processing steps				placeholder		
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-Oct-04		discussions with Paul Hirst and contacted Sandy Leggett	10	
		STH	30-Nov-04		no further progress	10	
11.2	choose secondary standard fields						80
	refine/shorten list	STH	31-Oct-04		list updated to include more northern stars. next need to reject fields with too bright objects in WFCAM footprint	10	
		STH	30-Nov-04		folded WFCAM expected saturation level into target selection. list shortened	50	
11.3	take part in commissioning observations WFCAM						
	phase I on-sky characterisation	JRL	31-Oct-04		planned trip to Hawaii for November	10	
		JRL	30-Nov-04		took part in on-sky characterisation phase I	100	
11.7	assess extinction monitoring methods and develop measures						50
	simulate from night(s) data and estimate expected accuracy	STH	31-Oct-04		no progress	0	
		STH	30-Nov-04		no progress	0	
12 Further development of DQC measures at summit and Cambr		2.0					
12.1	develop extra systematic noise measures						50
	trial when WFCAM data becomes available	MJI	31-Oct-04		awaiting WFCAM data	0	
		MJI	30-Nov-04		no progress - only just received data	0	
12.2	Refine current measures for WFCAM/VISTA data						20
	trial when WFCAM data becomes available	JRL	31-Oct-04		will progress this when WFCAM commissioning data becomes available	0	
		JRL	30-Nov-04		no progress - only just received data	0	
12.3	implement 2mass for throughput measurement						75
	implement local access version at summit	JMI	31-Oct-04		no progress	0	
		JMI	30-Nov-04		no progress	0	
12.4	master calibration frames for detector monitoring						35
	assess and report on science array test data	JRL	31-Oct-04		awaiting commissioning data	0	
		JRL	30-Nov-04		no progress - only just received data	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-Oct-04		no progress	0	
		MJI	30-Nov-04		no progress	0	
13.3	externally driven WCS photometry and define parameter set						75
	extend to full 80 parameter set	MJI	31-Oct-04		no progress	0	
		MJI	30-Nov-04		no progress	0	
14 Stacking and mosaicing		4.0					

04Q4m2_casu_deliverables.xls

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 weighting and defect rejection					25
	refine and test current seeing weighting method on FIRES data	MJI	31-Oct-04	seeing weighting apparently gives 0.2 mag improvement in depth. tests continuing	10	
		MJI	30-Nov-04	no further progress	10	
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-Oct-04	upgraded as needed	10	
		MJI	30-Nov-04	upgraded as needed	50	
15.4	transit event detection					0
	assess difference imaging method (continuum subtraction)	STH	31-Oct-04	no progress	0	
		STH	30-Nov-04	assessment ongoing - using INT WFC Orion observations	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 real WFCAM data		20
16.3	implications for deriving catalogues and parameters					70
	finish development and testing of astrometric refinement code	DWE	31-Oct-04	alternative non-linear least squares module being debugged with astrometric PSF fitting. Slow algorithm 2-4 times more accurate than standard pipeline	10	
		DWE	30-Nov-04	astrometric refinement code effectively finished. Phase 2 report being written	50	
16.4	oversampled PSF generation per detector			finished		100
16.5	develop oversampled spatially varying PSF model					0
	finish initial development of spatially varying PSF model	DWE	31-Oct-04	no progress	0	
		DWE	30-Nov-04	programme written to analyse spatial variation of PSF using chi-squared from PSF fits. Tested on optical data. Awaiting real data.	10	
	final tuning on WFCAM on-sky data	DWE	31-Oct-04	no progress	0	
		DWE	30-Nov-04	paused	0	