

05Q1m2_casu_deliverables.xls

WP	CASU WP name /sub task / 05Q1m2 deliverable	V.I. F.	name	date	end of month report	%sub	% task
#							
1 Management and definition of project responsibilities							27.01
3.0							
1.1	report to VISTA, UKIDSS, JAC, ATC, GSC						8.3
	provide fortnightly 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	
			STH,MJI	28-Feb-05	held 3 telecons with JAC (2 with Simon Dye) and a CASU meeting	50	
	prepare for and attend grant review		STH, MJI	31-Jan-05	no progress	0	
			STH,MJI	28-Feb-05	talks prepared and presented by JRL, MJI and STH to PPARC review panel. MR and EG also in attendance.	100	
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	28-Feb-05	no progress	0	
1.4a	define WFCAM data structures and FITS headers				completed		100
1.4b	update proposed VISTA FITS headers as necessary						0
1.5a	define WFCAM observing protocols						8.3
	monitor and help update MSB guidelines		MJI + STH	31-Jan-05	discussed MSB guidelines at last JAC telecon	10	
			MJI + STH	28-Jan-05	no further progress	10	
	check first pass survey MSBs		STH	31-Jan-05	nothing to report	10	
			STH	28-Feb-05	NCH has progressed GCS MSBs. STH in discussion with Phil Lucas over GPS MSBs	50	
1.5b	define VISTA observing protocols						10
	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	
			MJI + PSB	28-Feb-05	discussed new templates with SMB arising from FDR and new requirement for propagation of tile information through to FITS	50	
1.6a	liaise with UKIDSS&JAC on WFCAM obs strategy, surveys planning						8.3
	liaise and monitor progress		DWE	31-Jan-05	liaising via JAC telecons	10	
			DWE	28-Feb-05	more discussion during JAC telecons	50	
1.6b	liaise with Project Scientist on VISTA observing strategy & survey planning						10
	liaise and monitor progress		PSB	31-Jan-05	discussions of observing strategy and survey planning took place at FDR	10	
			PSB	28-Feb-05	no further progress	10	
1.7a	liaise with VDUC on VDFS products for WFCAM						8.3
	liaise and monitor progress		STH + MJI	31-Jan-05	nothing to report	10	
			STH + MJI	28-Feb-05	VDUC meeting held in Edinburgh. Discussion included: status of the	50	
	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	
			JRL	28-Feb-05	WFCAM early commissioning report -I updates. reports -II and -III released and presented to VDUC		
	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	

05Q1m2_casu_deliverables.xls

		JRL	28-Feb-05	SD's involvement continued via JAC telecons and VDUC	50	
1.7b	liaise with VDUC on VDFS products for VISTA					8.3
	liaise and monitor progress	MJI + STH	31-Jan-05	nothing to report	10	
		MJI + STH	28-Feb-05	nothing to report	50	
	assess and prioritise work required for extra UK VDFS products	MJI + STH	31-Jan-05	no progress	0	
		MJI + STH	28-Feb-05	no progress	0	
	prepare functional specification for UK review (see VDMT A0501-05)	MJI + STH	31-Jan-05	no progress	0	
		MJI + STH	28-Feb-05	no progress	0	
1.8a	liaise with UKIDSS and JAC on survey progress DB					8.3
	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	
		JRL	28-Feb-05	no further progress	10	
1.8b	liaise with VDUC and ESO on survey progress database					0
1.9	system documentation					8.3
	update and maintain web pages of system docs	DWE	31-Jan-05	documentation updated as necessary	10	
		DWE	28-Feb-05	documents and www pages updated as necessary	50	
2 ESO VISTA software interface deliverables and documentation						27.83
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	
		PSB	28-Feb-05	now renamed to VDFS Impact Document. FDR rix's drafted	50	
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	
		PSB	28-Feb-05	renamed to Data Reduction Library Specification document. Some RIX's drafted	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	
		PSB	28-Feb-05	some RIX's drafted	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	
		PSB	28-Feb-05	examined and tested IRACE output files from RAL. reported FITS header and data-type problems	50	
2.6	Instrument specification and interface documents					0
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					8.3
	continue liaising with VISTA IR camera development team	PSB	31-Jan-05	very useful liaison at FDR	10	
		PSB	28-Feb-05	see 1.5b and 2.5	50	
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	
		PSB	28-Feb-05	no progress	50	

2.10	Development of DQC measures						0
3 Pipeline infrastructure and pipeline progress monitoring tools		3.5					26.67
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	
		JRL	28-Feb-05	continuing development in response to results of November 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
3.5a	Tools for fixing problem datasets	JRL, JMI		paused			20
		JRL	28-Feb-05	routines for shuffling headers written		10	
3.5b	Tools for fixing VISTA problem datasets						0
3.6	group documentation on pipeline infrastructure						60
	stress test documentation and update as necessary	STH, JRL	31-Jan-05	no progress		0	
		STH, JRL	28-Feb-05	no progress			
3.7a	Oversee reprocessing WFCAM data after bug fixes/improvements			awaiting WFCAM science data			0
3.7b	Oversee reprocessing VISTA data after bug fixes/improvements						0
4 Set up and manage raw science archive		0.0					50
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	
		JRL	28-Feb-05	no progress		0	
4.2a	Ingest and verify WFCAM data						10
	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 problems		50	
		JRL	28-Feb-05	best commissioning data now ingested. MR has set up data transfer to ESO		50	
	ingest and verify Phase II commissioning data	JRL	31-Jan-05	awaiting Phase II commissioning		0	
		JRL	28-Feb-05	awaiting Phase II commissioning		0	
4.2b	ingest and verify VISTA data						0
5 Set up and manage data processing system hardware		2.0					83.33
5.1	Investigate alternatives (benchmarking, reliability etc)			completed			100
5.2	buy hardware and install						80
	purchase and install RAID disk storage and backup LTO tape unit	PSB, JMI	31-Jan-05	no progress - awaiting new offices		0	
		PSB	28-Feb-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	
		PSB, JMI	28-Feb-05	purchased and installed Gigabit switch with 2G trunk to LAN, ditto APC intelligent switched mains supplies for pipeline racks.		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	
		PSB, JMI	28-Feb-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	
		JMI, PSB	28-Feb-05	continuing		50	
5.5	Hardware additions for further data processing system						0
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	
		JRL,MJI	28-Feb-05	verification tests progressing well		50	
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					29.38
7.1a	Interface test pipelines in ORAC-DR	JRL		completed			100
7.1b	Interface test pipelines to VISTA summit DR						0
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	
		JRL	28-Feb-05	investigations continuing using Nov 2004 data		10	
	commissioning enhancements	JRL	31-Jan-05	nothing to report		0	
		JRL	28-Feb-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	
		JRL	28-Feb-05	some progress made on detectr anomalies - including dark behaviour and reset anomaly		50	
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	
7.3b	Documentation for interface to VISTA						0
7.4a	upgrade and maintain summit pipeline WFCAM						
	upgrade and maintain	JRL	31-Jan-05	upgrades being added as data are analyzed		10	
		JRL	28-Feb-05	work done to speed up some algorithms		50	
7.4b	upgrade and maintain summit pipeline VISTA						0
8	Development and testing of standard 2d processing	4.0					28.58
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	

05Q1m2_casu_deliverables.xls

		JRL	28-Feb-05	80 column tables now generated. missing parameters filled with zeros	10	
8.1b	development of VISTA specific packages					0
8.2a	liaison with WFCAM development team					8.3
	continue discussion on reset anomaly, crosstalk and linearity	JRL	31-Jan-05	have held a lot of discussion of various "features" and characterisation using the WFCAM commissioning data	10	
		JRL	28-Feb-05	flatfielding and 2d effects are now better understood. Microstepping tests also performed	50	
	assess science array test data for above problems and report	JRL	31-Jan-05	reset anomaly and linearity much better understood now. Commissioning reports in preparation (see version 0.5 of Phase I)	10	
		JRL	28-Feb-05	Commissioning report -I updated and reports -II and -III released to reflect progress. see: http://www.ast.cam.ac.uk/~wfcam/docs/reports/commissioning2/index.html (dark and reset anomaly correction), http://www.ast.cam.ac.uk/~wfcam/docs/reports/commissioning3/index.html (microstep offsets)	50	
8.2b	liaison with Project Scientist & VISTA development team					8.3
	assess any new detector engineering test data	MJI	31-Jan-05	no new data yet, but some progress on this following FDR	10	
		MJI	28-Feb-05	no progress	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	
		STH	28-Feb-05	JRL has just set off for Hawaii to take part in commissioning phase 2. STH will visit JAC from March 15th and will take part in science verification, photometric calibration observations and will help with UKIDSS startup if required.	100	
8.3b	partake in planning VISTA commissioning observations					0
	liaise and discuss with camera PS and VISTA PS	STH	31-Jan-05	nothing to report	0	
		STH	28-Feb-05	nothing to report	0	
8.4a	Participate directly in commissioning WFCAM					50
	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	
		JRL, STH	28-Feb-05	plans firmed up	0	
8.4b	Participate directly in commissioning VISTA					0
8.5a	Tuning pipeline during commissioning and after WFCAM					20
	use commissioning data to tune processing strategy	MJI	31-Jan-05	WFCAM commissioning data is yielding interesting insights for tuning processing	10	
		MJI	28-Feb-05	experiments continuing with alternate processing strategies	50	
	assess the quality and stability of the master calibration data	JRL	31-Jan-05	quality and stability assessment begun	10	
		JRL	28-Feb-05	investigations continue - darks and resets found to be pretty stable when taken in repeatable conditions (i.e. following same numbers of resets). awaiting phase-2 commissioning data to investigate long term trends	10	
8.5b	Tuning during pipeline commissioning and after VISTA					0
8.6a	documentation for 2D processing software					50
	updates docs as necessary	JRL	31-Jan-05	no progress	0	
		JRL	28-Feb-05	no progress	0	
8.6b	documentation of additions to 2D processing software					0

05Q1m2_casu_deliverables.xls

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	
		STH	28-Feb-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	
		STH	28-Feb-05	CASU and CSV reductions of commissioning phase-1 data reported and discussed at VDUC and JAC telecon	50	
9 Development and testing of standard catalogue products						53.75
9.1	add in new measures requested					60
	finish testing and debugging new catalogue parameter measures	MJI	31-Jan-05	no progress	0	
		MJI	28-Feb-05	no progress	0	
9.2a	refine astrometric calibration model	MJI	31-Jan-05	refined using comm-I data - see report	50	85
		MJI	28-Feb-05	no further progress	50	
9.2b	refine astrometric model - VISTA specific					0
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	
		MJI	28-Feb-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	
		MJI	28-Feb-05	no progress	0	
9.7	documentation of catalogue software and products					55
	update catalogue products documentation	MJI	31-Jan-05	no progress	0	
		MJI	28-Feb-05	no progress	0	
10 Setup trial and run further processing pipeline						8.333
10.1	Manage and run further processing stages			placeholder (start in Q3)		0
10.2	development and assessment of PSF options 1,2					50
	produce prototype for PSF level 2	MJI	31-Jan-05	no progress	0	
		MJI	28-Feb-05	no progress	0	
10.3	develop 1D/2D PSF-deconvolved Sersic profile fits			paused awaiting real WFCAM data (start in Q2)		0
10.4	Develop LSBG/nebulosity detection/parameterisation			placeholder (start in Q2)		0
10.5	Full iterative profile fitting for stellar images			paused		0
10.6	Develop and optimize Bayesian image classification			placeholder (start in Q2)		0
10.7	Modelling and simulations of further processing steps			placeholder (start in Q2)		0
11 Photometric standards and calibration						25.56
11.1	agree on primary standards					90
	complete narrow band filter calibration plan and update document	STH	31-Jan-05	no progress	0	

05Q1m2_casu_deliverables.xls

		STH	28-Feb-05	discussions with Phil Lucas on narrow band plans and agreement reached on strategy. No narrow band flux standards yet defined. Document not yet updated	50	
11.2 choose secondary standard fields						80
refine/shorten list		STH	31-Jan-05	no progress	0	
		STH	28-Feb-05	secondary standard list revised and sent to JAC for comment. Further refinement requested and completed. Document not yet updated.	50	
11.3a take part in commissioning observations WFCAM						0
phase II on-sky characterisation		JRL, STH	31-Jan-05	march	0	
		JRL, STH	28-Feb-05	STH is making detailed plan for photometric calibration observations	10	
11.3b take part in commissioning observations VISTA						0
11.4a Reduce data, compute zero points and colour equations WFCAM						10
compute ZPs from commissioning data		STH	31-Jan-05	2MASS used to generate first pass zeropoints	50	
		STH	28-Feb-05	no further progress	50	
measure colour terms relative to 2mass		STH	31-Jan-05	colour equations computed	50	
		STH	28-Feb-05	no further progress	50	
11.4b Reduce data, compute zero points and colour equations VISTA						0
11.5 Update, maintain and extend secondary standards system						
begin building secondary standard fields system		STH	31-Jan-05	no progress	0	
		STH	28-Feb-05	no progress	0	
11.6 Investigate photometric calibration field systematics WFCAM+VISTA						0
investigate photometric calibration systematics - use 2MASS to check global systematics		STH	31-Jan-05	no progress	0	
		STH	28-Feb-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 successfully used to monitor WFCAM extinction (See Commissioning phase I report)	50	
		STH	28-Feb-05	no progress	50	
12 Further development of DQC measures at summit and Cambr						45
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	
		MJI	28-Feb-05	no further progress	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	
		JRL	28-Feb-05	awaiting phase-2 commissioning	10	
12.3 implement 2mass for throughput measurement						75
implement local access version at summit		JRL	31-Jan-05	no progress	0	
		JRL	28-Feb-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	
		JRL	28-Feb-05	flatfield investigations from phase-1 commissioning completed. Now need more data from Phase-2 to investigate night-to-night and longer term trends. plans for dark monitoring proposed to JAC	10	
13 Co-located list driven photometry						88.33
3.0						
13.1 test methods for master catalogue generation				completed		100

05Q1m2_casu_deliverables.xls

13.2	develop basic WCS-based list driven photometer extend to full 80 parameter set	MJI	31-Jan-05	no progress	0	90
		MJI	28-Feb-05	no progress	0	
13.3	externally driven WCS photometry and define parameter set extend to full 80 parameter set	MJI	31-Jan-05	no progress	0	75
		MJI	28-Feb-05	no progress	0	
14 Stacking and mosaicing						65
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 weighting and defect rejection refine and test current seeing weighting method on FIRES data	MJI	31-Jan-05	no progress	0	25
		MJI	28-Feb-05	no progress	0	
14.5	Advanced stacking/image restoration for variable PSF TBD as part of UK design review	MJI	31-Jan-05	no progress	0	0
		MJI	28-Feb-05	no progress	0	
15 Continuum subtraction and basic difference imaging						72.5
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 continue debugging and enhancements to adaptive kernel package	MJI	31-Jan-05	no progress	0	80
		MJI	28-Feb-05	no progress	0	
15.4	transit event detection continue with WASP, INT WFC and APT datasets	STH	31-Jan-05	good progress with lightcurve generation tests for a variety of systems	10	10
		STH	28-Feb-05	lightcurve generation and systematic removals code refined	50	
16 Interpolation techniques and PSF modeling						58
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 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/		70
		DWE	28-Feb-05	awaiting Phase-2 commissioning data		
16.4	oversampled PSF generation per detector			finished		100
16.5	develop oversampled spatially varying PSF model finish development of spatially varying PSF model	DWE	31-Jan-05	awaiting Phase-2 commissioning data	0	0
		DWE	28-Feb-05	awaiting Phase-2 commissioning data	0	
	final tuning on WFCAM on-sky data	DWE	31-Jan-05	awaiting Phase-2 commissioning data	0	
		DWE	28-Feb-05	awaiting Phase-2 commissioning data	0	