

WP	CASU WP name /sub task / 05Q2 deliverable	Siz	Pmo	Staff	Vers	Prog				Textual Summary
#						05Q1	Apr	May	Jun	
1	Management and definition of project responsibilities	138	15.0							
	V2 progress		6.3			31	33			
	V3 progress		1.9			0	0			
	V4 progress		4.3			12	13			
1.2	interface control document between CASU and JAC	4	0.4	MJI	V1					completed
1.3a	interface control document between CASU and WFAU (WFCAM)	3	0.3	MJI	V1					completed
1.4a	define WFCAM data structures and FITS headers	3	0.3	MJI, JRL, PSB	V1					completed
1.1	report to VISTA, UKIDSS, JAC, ATC, GSC	20	2.2	STH, MJI, PSB, JRL, DWE, MR, EGS	V2-V5	17	19			meeting minutes, monthly reports, quarterly review/reports & planning, VDOC meetings, JAC telecons; prepare for and attend ESO VDFS FDR update meeting
1.5a	define WFCAM observing protocols	8	0.9	STH	V2	55	60			much interaction at JAC, discussion of standard stars obs with Hirst, Leggett, Cross
1.6a	liaise with UKIDSS&JAC on WFCAM obs strategy, surveys	10	1.1	STH	V2	40	50			STH attended UKIDSS SV meeting, visited UKIRT/JAC, observed SV
1.6b	liaise with Proj. Sci. on VISTA observing strategy & survey planning	10	1.1	PSB	V2	17	19			discussions include. data rates & handling radioactive chips, feasibility of external reproduction of pipeline operations
1.7a	liaise with VDOC on VDFS products for WFCAM	10	1.1	STH, MJI, JRL	V2	50	55			liaise Dye, finalise comm-I reports, CSV & PI access to raw data
1.8a	liaise with UKIDSS and JAC on survey progress DB (WFCAM)	10	1.1	JRL	V2	50	50			maintain OMP database mirror
1.9	system documentation	20	2.2	DWE, EGS,	V2-V5	17	19			update and maintain WWW pages, trial Plone
1.10	VST processing preparation	4	0.4	EGS, MJI	V3	0	0			monitor, assess and respond to VST proposal feedback
1.8b	liaise with VDOC and ESO on survey progress DB (VISTA)	10	1.1		V3-V5	0	0			
1.3b	interface control document between CASU and WFAU (VISTA)	4	0.4		V4	0	0			
1.4b	update proposed VISTA FITS headers as necessary	7	0.8	PSB	V4	10	10			produced draft DRS dictionary; waiting for new issues of inst/telescope dictionaries
1.5b	define VISTA observing protocols	4	0.4	PSB	V4	15	15			liaise with development team
1.7b	liaise with VDOC on VDFS products for VISTA	11	1.2	MJI, STH	V4	17	19			liaise, assess work for extra UK VDFS products, begin functional spec for UK review
2	ESO VISTA software interface deliverables and documentation	66	13.8							
	V2 progress		6.3			39	43			
	V3 progress		4.5			5	8			
	V4 progress		2.6			0	0			
2.1	DFS impact document	7	1.5	PSB	V2	70	70			produced feedback for RIX board dispositions, post-FDR draft sent to ESO
2.2	Calibration Plan document	7	1.5	PSB	V2	70	70			produced feedback for RIX board dispositions, post-FDR draft sent to ESO
2.3	Data Reduction Library Design document	7	1.5	PSB	V2	70	70			produced feedback for RIX board dispositions, post-FDR draft sent to ESO
2.5	ICD ESO/VPO	4	0.8	PSB	V2	0	5			incorporated changes from D1CD v3, QC & DRS dictionaries into DRLD
2.9	Development of DQC measures	7	1.5	PSB	V2,V4	0	5			QC now consistent across Dictionary, Cal Plan and DRLD
2.8	liaise with VISTA IR camera development team	7	1.5	PSB	V2-V5	8	19			various issues; eagerly await proper IRACE and final FITS MEF-construction software
2.6	Instrument specification and interface documents	6	1.3		V3	0	0			
2.7	Delivery software modules for exposure time calculator	7	1.5	STH, PSB	V3	20	20			update ETC doc, produce C versions of ETC software modules: no progress
2.4	Data Reduction Library	14	2.9	PSB	V3-V4	0	5			test procedures in CPL
3	Pipeline infrastructure and pipeline progress monitoring tools	43	6.3							
	V2 Progress		2.5			40	43			
	V3 Progress		0.7			17	37			
	V4 Progress		0.8			0	0			
3.1	interactive tools for running pipeline	4	0.6	JRL	V1-V2	60	70			develop tools in the light of comm-II and document
3.3	automatic progression of results to web pages	4	0.6	MR	V2	50	50			prototype a web-based pipeline progress system
3.4	automatic checks to spot failure of pipeline	4	0.6	STH	V2	0	0			develop scripts to pick out problem datasets
3.5a	Tools for fixing problem datasets (WFCAM)	4	0.6	JRL	V2	20	25			develop tools to handle problems in comm-II data
3.6	group documentation on pipeline infrastructure	6	0.9	STH, JRL	V1-V2	60	60			stress test documentation and update as necessary
3.2	high level scripts to interrogate headers	4	0.6	STH	V1,V3	50	50			update header interrogation scripts and test
3.7a	Oversee reprocessing WFCAM data after bug fixes/improvements	8	1.2	MR	V3-V5	0	30			reprocess science data in comm-I, comm-II, SV as necessary
3.5b	Tools for fixing problem datasets (VISTA)	6	0.9		V4-V5	0	0			
3.7b	Oversee reprocessing VISTA data after bug fixes/improvements	3	0.4		V5	0	0			
4	Set up and manage raw science archive	4	0.5							
	V2 Progress		0.5			50	55			
4.1	extend UKIRT archive to cope with WFCAM data	4	0.5	JRL, MJR	V2	50	55			finished V1 of WFCAM raw data archive, manage WFCAM->ESO raw data transfer
5	Set up and manage data processing system hardware	8	0.3							
5.1	Investigate alternatives (benchmarking, reliability etc)	3	0.1	MJI, PSB, JMI	V1	100	100			completed
5.2	buy hardware and install	2	0.1	PSB, JMI, MJI	V1	50	100			completed
5.3	integrating and testing	3	0.1	PSB, JMI	V1	50	100			completed

6	Run standard pipeline								
7	Development work for summit pipeline	46	3.0						
	V2 Progress		0.6			37	39		
	V3 Progress		0.4			0	0		
	V4 Progress		0.7			0	0		
7.1a	Interface test pipelines in ORAC-DR	6	0.4	JRL	V1	100	100		completed
7.2a	implement WFCAM pipeline at summit	4	0.3	JRL	V1-V2	75	75		demonstrate catalogue and non-catalogue DQCs; develop recipes for dealing with crosstalk, non-linearity, reset anomalies and persistence, tackle speed issues
7.3a	documentation for ORAC-DR interface	6	0.4	JRL	V1-V2	60	60		update and deliver documentation as development proceeds
7.4a	upgrade and maintain summit pipeline WFCAM	14	0.9	JRL	V2-V5	17	19		update & maintain, include commissioning enhancements
7.3b	documentation for interface VISTA	5	0.3	JRL	V3-V4	0	0		
7.1b	Interface test pipelines to VISTA summit DR	2	0.1	JRL	V4	0	0		
7.2b	Implement VISTA pipeline at summit	3	0.2	JRL	V4	0	0		
7.4b	upgrade and maintain summit pipeline VISTA	6	0.4	JRL	V4-V5	0	0		
8	Development and testing of standard 2d processing	59	5.3						
	V2 Progress		1.8			50	59		
	V3 Progress		1.3			2	5		
	V4 Progress		0.7			0	0		
8.1a	further development of standard pipeline for WFCAM	6	0.5	JRL	V1-V2	80	80		finish implementing new version of imcore to include full param set
8.2a	liaison with WFCAM development team	6	0.5	JRL	V1-V2	8	19		continue discussion on reset anomaly, crosstalk and linearity; assess science array test data for above problems and report
8.3a	partake in planning WFCAM commissioning observations	6	0.5	STH	V1-V2	80	100		WFCAM commissioning completed
8.6a	documentation for 2D processing software WFCAM	6	0.5	JRL	V1-V2	50	50		updates docs as necessary
8.7	Comparison between automated and manual data products	5	0.4	STH	V1-V2	50	50		assess CASU processed WFCAM commissioning data in conjunction with CSV
8.4a	Participate directly in commissioning WFCAM	2	0.2	STH	V2	50	100		took part in second stage of WFCAM on-sky commissioning - completed
8.5a	Tuning pipeline during commissioning and after WFCAM	4	0.4	MJI, JRL, EGS	V2	20	30		use commissioning data to tune processing strategy; assess the quality and stability of
8.1b	development of VISTA specific packages	5	0.4	JRL	V3	0	0		
8.2b	liaison with Project Scientist & VISTA development team	4	0.4	MJI	V3	8	19		assess any new detector engineering test data
8.3b	partake in planning VISTA commissioning observations	3	0.3	STH	V3	0	0		liaise and discuss with camera PS and VISTA PS
8.6b	documentation for additional 2D processing software VISTA	4	0.4	JRL	V3-V4	0	0		
8.4b	Participate directly in commissioning VISTA	4	0.4	STH	V4	0	0		
8.5b	Tuning pipeline during commissioning and after VISTA	4	0.4	MJI, JRL, EGS	V4-V5	0	0		
9	Development and testing of standard catalogue products	47	3.3						
	V2 Progress		1.3			63	65		
	V3 Progress		0.1			0	0		
	V4 Progress		0.1			0	0		
9.3	generate model simulations of expected data	3	0.2	STH	V1	100	100		completed
9.5	intercomparison of catalogue products with other packages	8	0.6	MJI	V1-V2	100	100		completed
9.2a	refine astrometric calibration model	6	0.4	MJI	V1-V2	85	85		assess astrometric properties of WFCAM comm-II and SV data
9.4	assess catalogue parameter reliability	6	0.4	MJI	V1-V2	70	70		refine parameter error estimates and check for systematics in new params, finish in
9.6	Completeness	6	0.4	MJI, EGS	V1-V2	0	10		design and report on completeness model, check completeness [9.6] and error
9.7	documentation of catalogue software and products	8	0.6	MJI	V1-V2	55	55		update catalogue products documentation
9.1	add in new measures requested	6	0.4	MJI	V1-V3	60	60		finish testing and debugging new catalogue parameter measures
9.2b	refine astrometric calibration model - VISTA specific	4	0.3	MJI	V4-V5	0	0		
10	Setup trial and run further processing pipeline	38	21.8						
	V2 Progress		6.9			13	13		
	V3 Progress		9.2			0	0		
	V4 Progress		4.0			0	0		
10.2	development and assessment of PSF options 1,2	6	3.4	DWE	V1-V2	60	60		develop and test prototype version of code for PSF level 2
10.3	develop 1D/2D PSF-deconvolved Sersic profile fits	6	3.4	MJI	V2-V3	0	0		prototype methods for Sersic profile fitting
10.7	Modelling and simulations of further processing steps	4	2.3		V2-V3	0	0		
10.4	Develop LSBG/nebulosity detection/parameterisation	12	6.9	MJI	V2-V4	0	0		investigate feasibility of nebulosity detection
10.6	Develop and optimize Bayesian image classification	4	2.3	MJI	V3	0	0		trial Bayesian classification schemes
10.5	Full iterative profile fitting for stellar images	6	3.4		V3-V4	0	0		
11	Photometric standards and calibration	29	6.3						
	V2 Progress		1.9			18	23		
	V3 Progress		1.3			0	0		

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	V4 Progress		2.0			0	0		
11.3a	take part in commissioning observations WFCAM	1	0.2	STH	V2	10	100		phase II on-sky characterisation - completed
11.4a	Reduce data, compute zero points and colour equations WFCAM	2	0.4	STH	V2	15	20		compute ZPs from commissioning data, update colour terms relative to 2mass
11.5	Update, maintain and extend secondary standards system	7	1.5	STH	V2-V4	0	0		begin building secondary standard fields system
11.6	Investigate photometric calibration field systematics	6	1.3	STH	V2-V5	0	0		investigate photometric calibration systematics
11.7	assess extinction monitoring methods and develop measures	8	1.7	STH	V2-V5	50	50		use 2MASS comparison to get first order estimate and assess expected accuracy
11.3b	take part in commissioning observations VISTA	2	0.4	STH	V4	0	0		
11.4b	Reduce data, compute zero points and colour equations VISTA	3	0.7	STH	V4-V5	0	0		
12 Further development of DQC measures at summit and Cambr		19	3.3						
	V2 Progress		1.3			43	57		
	V3 Progress		0.7			20	25		
12.3	implement 2mass for throughput measurement	4	0.7	JRL	V1-V2	75	100		implemented local access version at summit - completed
12.4	master calibration frames for detector monitoring	7	1.2	JRL	V1-V2	35	40		assess and report using commissioning data
12.1	develop extra systematic noise measures	4	0.7	MJI	V1-V2	50	75		trial with comm-II data, continue testing and monitoring systematic noise remover
12.2	Refine current measures for WFCAM/VISTA data	4	0.7	JRL, MJI	V3	20	25		trial with comm-II data, monitor DQC assessment and random visual checks
13 Co-located list driven photometry		10	0.5						
	V2 Progress		0.2			75	75		
13.1	test methods for master catalogue generation	2	0.1	MJI	V1	100	100		completed
13.2	develop basic WCS-based list driven photometer	4	0.2	MJI	V1	90	90		extend to full 80 parameter set
13.3	externally driven WCS photometry and define parameter set	4	0.2	MJI	V2	75	75		extend to full 80 parameter set
14 Stacking and mosaicing		25	10.3						
	V2 Progress		2.1			55	55		
	V3 Progress		2.7			0	0		
	V4 Progress		1.5			0	0		
14.1	develop benchmark simple stacking/mosaicing framework	2	0.8	MJI	V1	100	100		completed
14.2	NN algorithm with simple rejection	2	0.8	MJI	V1	100	100		completed
14.3	More sophisticated rejection dealing with pixellation	4	1.6	MJI	V1-V2	100	100		completed
14.4	Stacking with optimum weighting and defect rejection	6	2.5	MJI	V2-V3	25	25		refine and test current seeing weighting method on FIRES data
14.5	Advanced stacking/image restoration for variable PSF	11	4.5	MJI	V3-V5	0	0		TBD as part of UK design review
15 Continuum subtraction and basic difference imaging		21	2.5						
	V2 Progress		1.3			70	70		
	V3 Progress		0.4			20	20		
15.1	Simple WCS-based subtraction techniques	3	0.4	MJI	V1-V2	100	100		completed
15.2	investigate and apply different interpolation methods	4	0.5	MJI	V1-V2	100	100		completed
15.3	develop adaptive kernel matching option	8	1.0	MJI	V1-V2	80	80		continue debugging and enhancements to adaptive kernel package
15.4	transit event detection	6	0.7	STH	V2-V3	20	20		continue with WASP, INT WFC and APT datasets
16 Interpolation techniques and PSF modeling		31	3.3						
	V2 Progress		0.7			52	52		
	V3 Progress		0.5			0	0		
	V4 Progress		0.5			0	0		
16.1	investigate alternative interpolation/PSF schemes	2	0.2	DWE	V1	100	100		completed
16.3	implications for deriving catalogues and parameters	4	0.4	DWE	V1	70	70		finish development and testing of astrometric refinement code
16.2	implications for different stacking methods	4	0.4	DWE	V1-V2	20	20		paused
16.4	oversampled PSF generation per detector	10	1.1	DWE	V1-V5	100	100		completed
16.5	develop oversampled spatially varying PSF model	11	1.2	DWE	V2-V5	20	20		finish development of spatially varying PSF model, final tuning on WFCAM on-sky data