

Document Title	Deliverable Items List
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CHANGE RECORD

Issue	Date	Section affected	Change Description
0.1	12-11-03	All	First draft issue for comment
0.2	08-12-03	All	Incorporates Comments from ATC & JAC project teams
0.3	12-02-04	Applicable docs	Changed AD1 ref to latest versions
1.0	02-06-04	2	First issue prior to Acceptance test

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APPLICABLE DOCUMENTS

Reference	Document Title	Document Number	Issue & Date
AD1	Deliverable spares list	1.1D060G	1.0 / 02-06-04



Document Number:	1.1 d 070 G
Issue:	1.0
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TABLE OF CONTENTS

1. INTRODUCTION	5
2. WFCAM DELIVERABLE ITEMS LIST.....	7



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1. INTRODUCTION

Section 2 of this document lists all of the items that are to be delivered to JAC by the WFCAM project with the exception of the spares which are listed in document 1.1D060G.

2. WFCAM DELIVERABLE ITEMS LIST (SPARES COVERED BY DOC 1.1D060G)

Ref No.	Description	Quantity	Part No.	Comments
WFCAM-DEL 1	Instrument cryostat	1		Includes major following sub-assemblies – 1. Focal plane 4 SG FPA's + 1 CCD 2. Filter arm assembly – 8 off arms with J, K, H, Y, H2, Br gamma, Z + blank filter sets 3. M3 mirror 4. Corrector plate lens 5. Autoguider SDSU controller 6. 4 off IR array pre-amp boxes 7. CTI 1050 2 stage coldhead 8. Cryostat Window assy Supplied with cover for Window, Corrector Plate & M3
WFCAM-DEL 2	Field tower assembly	1		Includes major following sub-assemblies – 1. Field lens 2. Autoguider optics Supplier with cover for Field lens
WFCAM-DEL 3	Controller cabinet	1		Includes following items – 1. 4 SDSU 32-chanel IR controllers 2. 5 SDSU controller PSU's 3. 1 Anti-surge unit 4. 1 Fan tray
WFCAM-DEL 4	Services cabinet	1		Includes following items – 1. 2 off Lakeshore temperature controllers 2. 1 Lake shore temperature monitor 3. 2 off Cortex motor controller units (6 motor drive cards in each box) 4. Emulux terminal server 5. Pressure gauge monitor 6. Anti-surge unit 7. Turbo pump controller 8. Warm up heater controller 9. VMW crate (includes 1 PowerPC, 2 vme 58 cards, 1 vme 240 card & 3 vme I/F cards) 10. Motor control enable unit 11. Fan tray (2 fans)
WFCAM-DEL 5	Secondary mirror	1		Bonded onto baseplate via flexures. Supplier with cover & storage box and a set of 3 spacers (50, 60 & 70 mm) Delivered to JAC in May 2004
WFCAM-DEL 6	Computer rack	1		Comprises of :- 1. 5 off data reduction PC's (1 spare - see document 1.1D060) 2. 5 off data acquisition PC's (1 spare - see document 1.1D060) 3. Network switch

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Ref No.	Description	Quantity	Part No.	Comments
WFCAM-DEL 7	Instrument drawing set	2	N/A	Includes – 1. Complete paper copy (2 off copies) 2. 2 off Copies on CD (pdf format for protel drawings, Mech drawings in AutoCad format) The above includes both electrical & mechanical drawings
WFCAM-DEL 8	Instrument users manual	2		Includes (note - this document may be in electronic format only if formal agreement is reach with JAC)– 1. Complete paper copy (2 off copies) 2. 2 off Copies on CD (native word format) This manual covers software use
WFCAM-DEL 9	Operation & maintenance manual	2		Includes – 1. Complete paper copy (2 off copies) 2. 2 off Copies on CD (native word format) This manual lists recommended spares
WFCAM-DEL 10	MICHELLE manipulator Interface bracket	1		Delivered to JAC in March 2004
WFCAM-DEL 11	Tilt shims	2		
WFCAM-DEL 12	Guide cone	2		
WFCAM-DEL 13	Optical handling aid	1		Secondary mirror handling aid
WFCAM-DEL 14	Main cryostat lifting pintel	2		
WFCAM-DEL 15	19 inch Flat panel monitor	4		Including wall mount fixing brackets - IIYAMA (1600 x 1200 max resolution) Model No. AU4831 DG
WFCAM-DEL 16	PowerPC card	1		For Autoguider system – was delivered to JAC in October 2003
WFCAM-DEL 17	Lifting truck & custom boom	1		All ready delivered to JAC in March 2003 direct from suppliers

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Ref No.	Description	Quantity	Part No.	Comments
WFCAM-DEL 18	Mirror plug	1		All ready delivered to JAC but not used due to fit problems on telescope. Will be retained at JAC.
WFCAM-DEL 19	Software	1	N/A	To be downloaded via ATC CVS depository
WFCAM-DEL 20	Rockwell Engineering grade FPA	2 (see comment)		It is intended that all EG arrays that are delivered to the ATC will be shipped to JAC after Acceptance. As of June 2004 there are 2 EG arrays at the ATC, No.9 & No.37
WFCAM-DEL 21	Autoguider filters	See comments	N/A	The 7 filter arms have a range of autoguider filters which are different thickness. They go from 2mm to 6mm in 0.2 mm steps i.e. 20 filters. During I&T at ATC the nominal AG filter will be put into each of the 7 filter paddles. The 13 unused filters will be delivered to JAC as they may be needed if the AG focus is found to be out when the instrument goes on sky.
WFCAM-DEL 22	Cables	See comments		Comprises of :- 1. Services & SDSU Cabinet 110v mains cable (2 off) 2. SDSU CCD PSU cable(1 off) 3. SDSU CCD Fibre optic cable (1 off) 4. Filter paddle/Focus Motor drive cable (9 off) 5. SDSU Detector signal & bias – pre-amp/cabinet cable (4 off) 6. SDSU Detector clocks – pre-amp/cabinet cable (4 off) 7. SDSU Detector signal, clock & bias – pre-amp/cryostat cable (4 off) 8. SDSU CCD signal, clock & bias – pre-amp/cryostat cable (1 off) 9. Fibre optic link cable from SDSU cabinet to NE mirror cell cable panel – 5m length – (5 off) 10. Warm-up heater cable (1 off) 11. Turbo pump cable (1 off) 12. Vacuum gauge cable (1 off) 13. Temperature sense/control (IR) cable (1 off) 14. Temperature sense/control (CCD) cable (1 off) 15. Temperature sensor cable (1 off) 16. Filter paddle/focus switches cable (9 off) 17. LAN cable (2 off – standard of the self 10m length)