

Herschel/SPIRE



MULLARD SPACE SCIENCE LABORATORY
UNIVERSITY COLLEGE LONDON Author: C BROCKLEY-BLATT

SPIRE – STRUCTURE PFM HISTORICAL RECORD

Document Number: MSSS/SPIRE/PA018.01 1 February 2005

Distribution:

Spire Project Office	B Winter	<input checked="" type="checkbox"/>
ESA PX		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
RAL	B Swinyard	<input type="checkbox"/>
	E Sawyer	<input checked="" type="checkbox"/>
	J Delderfield	<input type="checkbox"/>
	J Long (Project Office)	<input checked="" type="checkbox"/>
	E Clark	<input type="checkbox"/>
Mullard Space Science Laboratory	A Smith	<input type="checkbox"/>
	J Coker	<input type="checkbox"/>
	C Brockley-Blatt	<input checked="" type="checkbox"/>
	A Spencer	Orig
		<input type="checkbox"/>
ATC		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>
Cardiff	M Griffin	<input type="checkbox"/>
	P Hargrave	<input type="checkbox"/>
JPL		<input type="checkbox"/>
		<input type="checkbox"/>
CEA Herschel Project	L Duband Herschel.Planck@esa.int	<input type="checkbox"/>
		<input type="checkbox"/>

Author: 
Checked: 
Approved:

Date: 2/2/05
Date: 2/2/05
Date:

Total number of pages 7

Change Record

ISSUE	Date	Brief description of change
1.0	February 2004	New Document

CONTENTS

1. INTRODUCTION	4
2. REFERENCES.....	4
2.1 Normative References.....	4
3. TABLE DESCRIPTION FOR THE HISTORICAL RECORD	4
3.1 Column Description.....	4

1. INTRODUCTION

This document identifies the manufacturing processes for the different parts of the SPIRE structure. The data is based on mature designs but does not include the thermal hardware, which is covered in a separate EIDP.

2. REFERENCES

2.1 Normative References

NR1 MSSL/SPIRE/PA001 Product Assurance Plan

3. TABLE DESCRIPTION FOR THE HISTORICAL RECORD

3.1 Column Description

1. Item number
2. Part Number
3. Quantity (Number in one Spire Instrument)
4. Material
5. Manufacturer (Who made it)
6. After treatments
7. After treatment conducted by
8. Cleaned By
9. Baked out by

PART	PART NUMBER	QTY	MATERIAL	Manufacturer	After treatments	Aftertreatment conducted by	Cleaned by	Baked Out by
Fixed Mount Cone	5264-302-5	1	Stainless Steel	Electromec	None	-	MSSL	MSSL
BDA Connector Flange Spectrometer	5264-302-22	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Blanking Plug	5264-302-44	2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Insulating Washer	5264-302-2	24	Vespel	MSSL	None	-	MSSL	MSSL
Special Washer	5364-302-3	12	Stainless Steel	MSSL	None	-	MSSL	MSSL
M6x21 LG Cap head bolt	5264-302-34	12	Stainless Steel	MSSL	None	-	MSSL	MSSL
Photometer Cover Wall	5264-302-6	1	Aluminium Alloy 6082 T6	B3 technologies	Alochrome 1200	Acorn Plating	RAL	RAL
Photometer Seals- bottom	5264-302-7	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
Photometer Seals- top	5264-302-8	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
Photometer insert	5264-302-9	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Photometer cover lid	5264-302-10	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
PFIL2 Mount Back Plate	5264-302-12	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
H sections for PFIL 2	5264-302-13	2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
A Frame Support Plates and brackets (both sides)	5264-302-14	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
	5264-302-15	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
H section for CFIL 1	5264-302-16	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
PFIL2 Mount Clamp plate	5264-302-17	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Dowel retaining Plate	5264-302-39	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
CFIL1 Baffle Mount	5264-304-6	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
CFIL1 Baffle Clamp Ring	5264-304-7	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Spectrometer Cover Wall	5264-303-1	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
Spectrometer Cover Lid	5264-303-2	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
Spectrometer Baffle	5264-303-3	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Spectrometer seals top	5264-303-4	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
Spectrometer seals bottom	5264-303-5	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	RAL	RAL
A Frame Support Plate	5264-302-15	2	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
A Frame Bracket Spectrometer	5264-302-26	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Dowel retaining Plate	5264-302-39	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Optical Bench Panel	5264-302-4	1	Aluminium Alloy 6082 T6	B3 technologies	Alochrome 1200	Acorn Plating	RAL	RAL
Support SM6	5264-305-2	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL

PART	PART NUMBER	QTY	MATERIAL	Manufacturer	After treatments	Aftertreatment conducted by	Cleaned by	Baked Out by
Support SM7	5264-305-3	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM8a	5264-305-4	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Spectrometer baffle SM12	5264-303-6	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Support SM9-10a	5264-305-6	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM9-10b	5264-305-7	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM11a	5264-305-8	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM11b	5264-305-9	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM12a	5264-305-10	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support SM12b	5264-305-11	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Secondary optical Bench	5264-305-12	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Support PM6	5264-305-13	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Support PM8	5264-305-14	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Bulkhead SM6 and SM7	5264-305-15	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Tubular Dowels (6-32UNC)	5264-302-18	46	Stainless Steel	MSSL	None	-	MSSL	MSSL
Tubular Dowels (8-32UNC)	5264-302-19	2	Stainless Steel	MSSL	None	-	MSSL	MSSL
Cooler to Phot Detector Box Strap	5264-302-30	1	OFHC Copper	MSSL	Annealing/Goldplate	UKAEA/RAL	MSSL	MSSL
Cooler to Spec Detector Box Strap	5264-302-31	1	OFHC Copper	MSSL	Annealing/Goldplate	UKAEA/RAL	MSSL	MSSL
Special Washer	5264-305-25	3	Stainless Steel	MSSL	None	-	MSSL	MSSL
Mirror Anti-rotation Dowel	5264-305-26	17	Stainless Steel	MSSL	None	-	MSSL	MSSL
Optical Reference Cube	5264-305-27	2	Aluminium Alloy 6082 T6	MSSL	None	-	MSSL	MSSL
SFIL-2 Dowel	5264-305-28	2	Stainless Steel	MSSL	None	-	MSSL	MSSL
SM9B/SBS1 Baffle	5264-305-29	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SM9A/SBS1 Baffle	5264-305-30	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Photometer detector box inner cover	5264-306-1	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Photometer detector box Spine	5264-306-2	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Walton Plating	MSSL	MSSL
Photometer detector box Outer Cover	5264-306-3	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Photometer Cold Stop Clamp PFI3	5264-306-4	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Photometer Cold Stop PFI3	5264-306-5	1		MSSL			MSSL	MSSL
BDA Connector Flange	5264-302-23	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Plug BDA Connector Flange	5264-302-24	2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Harness Support BDA Connector Flange	5264-302-25	2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
PM10 Support	5264-305-17	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
Detector Box support Cone	5264-312	1	Stainless Steel	Electromec	None	-	MSSL	MSSL
Photometer Detector Box A frames supports	5234-313	2	Stainless Steel	Electromec	None	-	MSSL	MSSL
Washer	5264-313-1	2	Stainless Steel	MSSL	None	-	MSSL	MSSL
Bushes	5264-313-2	2	Stainless Steel	MSSL	None	-	MSSL	MSSL

PART	PART NUMBER	QTY	MATERIAL	Manufacturer	After treatments	Aftertreatment conducted by	Cleaned by	Baked Out by
Tubular Dowel 10.7 LG	5264-302-18	2	Stainless Steel	MSSL	None	-	MSSL	MSSL
Spectrometer detector box	5264-307-1	1	Aluminium Alloy 6082 T6	B3 technologies	Alochrome 1200	Acorn Plating	MSSL	MSSL
Filter mount	5264-307-2	1	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Clamp Plate SFIL -3	5264-307-3	2	Aluminium Alloy 6082 T6	Thrust Engineering	Alochrome 1200	Thrust Engineering	MSSL	MSSL
Spectrometer Detector Box supports	5264-307-4	3	Stainless Steel	Electromec	None	-	MSSL	MSSL
Blade Top Bush 2K Spectrometer Box	5264-307-5	3	Stainless Steel	MSSL	None	-	MSSL	MSSL
Washer	5264-313-1	11	Stainless Steel	MSSL	None	-	MSSL	MSSL
Cold Strap Support	5264-307-13	1	OFHC Copper	MSSL	Goldplate	RAL	MSSL	MSSL
PDIC-1 Mount	5264-310-1	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
PDIC-1 Clamp Ring	5264-310-2	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Dowel Screw, 6-32 UNC	5264-310-3	4	Stainless Steel	MSSL	None	-	MSSL	MSSL
PDIC-2 Mount	5264-311-1	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
PDIC-2 Clamp Finger	5264-311-2	3	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Dowel Screw, 6-32 UNC	5264-310-3	4	Stainless Steel	MSSL	None	-	MSSL	MSSL
Scal Box	5264-314-1	1	Aluminium Alloy 6082 T6	Edwards Brothers	Alochrome 1200	MSSL	MSSL	MSSL
SCAI Cover	5264-314-2	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SCAL Exit Baffle Ring	5264-314-3	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SCAL Baffle Clamp	5264-314-4	3	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Filter Mounts - SFIL2	5264-305-20	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Filter Mount - SFIL2 clamp ring	5264-305-21	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SFIL2 Cold Stop	5264-305-22	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SFIL2 dowels	5264-305-27	2	Stainless Steel	MSSL	None	-	MSSL	MSSL
SBS 1and 2 Filter mount	5264-305-23	1	Aluminium Alloy 6082 T6	Electromec	Alochrome 1200	Electromec	MSSL	MSSL
SBS 1and 2 Filter Clamp	5264-305-24	1	Aluminium Alloy 6082 T6	Electromec	Alochrome 1200	Electromec	MSSL	MSSL
RFI Filter Bracket Corner Bracket	A2/5264/302-27	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Temporary RFI Bracket	A2/5264/302-28	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
FRI Filter Frame Edge Bracket	A2/5264/302-29	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
SMEC Card bosses		2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Mounting Block for Spec Cover	A1/5264/303-1A	1	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
Blanking plug	A1/5264/302-44	2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL
MDM Connector Brakets for Photo Cover		2	Aluminium Alloy 6082 T6	MSSL	Alochrome 1200	MSSL	MSSL	MSSL