	SPIRE BSM Declared Process List Procedure ID SPI-BSM-PRJ-708 ITEM #24 Version no 1.0	Ref: SPI-BSM-NOT_0719 Page : Page 1 of 7 Date : 16 June 2004 Author: BG/TB
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SPIRE BSM Declared Processes

Procedure ID SPI-BSM-PRJ-719 ITEM 24

Magnet removal

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Date:	16/06/2004
Version:	1.0

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Version Control

Date	Index	Remarks
02/03/2003	1.0	New release

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Applicable documents

Applicable documents are project specific and may be assumed to apply fully to the BSM, unless stated otherwise

Ref	Title	Author	Reference	Date
AD 1	SPIRE BSM Declared Process List v 1.6	IP	SPI-BSM-PRJ-0708	16/06/04
AD 2	SPIRE ATC PA PLAN v1.5	BCG	SPI-ATC-PRJ-000711	09/06/03
AD 3				
AD 4				
AD 5				

Reference documents


Reference documents are generic and may only apply in part to the project, or may be for information or reference only.

Ref	Title	Author	Reference	Date
RD 1	SPIRE BSM Declared Materials List v1.5	IP	SPI-BSM-PRJ-0710	15/06/04
RD 2				
RD 3				
RD 4				
RD 5				
RD 6				
RD 7				

Glossary

Abbr	Definition	Abbr	Definition
AD	Applicable Document	LAM	Laboratoire d'Astrophysique de Marseille
ADP	Acceptance Data Package	LAT	Lot Acceptance Tests
ARB	The Acceptance Review Board	MAPTIS	Materials and Processes Technical Information Service
BSM	Beam Steering Mirror	MSFC	Marshall Space Flight Center
BSMe	Beam Steering Mirror electronics	MCU	Mechanism Control Unit
CAE	Computer Aided Engineering	MIP	Mandatory Inspection Point
CDR	Critical Design Review	MGSE	Mechanical Ground Support Equipment
CoG	Centre of Gravity	MPIA	Max Planck Institute for Astronomy

Abbr	Definition	Abbr	Definition
CIL	Critical Items List	MSSL	Mullard Space Science Laboratory
CQM	Cryogenic Qualification Model	NASA	National Aeronautical Space Agency
CTD	Change to Drawing/Document	NA	Not Applicable
DCL	Declared Components List	NCR	Non Conformance Report
DDR	Detailed Design Review	NCRP	Non Conformance Review Panel
DM	Development Model	OGSE	Optical Ground Support Equipment
DML	Declared Materials List	PA	Product Assurance
DPA	Destructive Physical Analysis	PAD	Part Approval Document
ECSS	European Cooperation for Space Standardisation	PFM	Proto Flight Model
EGSE	Electrical Ground Support Equipment	PPARC	Particle Physics and Astronomy Research Council
ESA	European Space Agency	PI	Principal Investigator
FMEA	Failure Modes and Effects Analysis	QA	Quality Assurance
FMECA	Failure Modes, Effects and Criticality Analysis	RAL	Rutherford Appleton Laboratory
FPGA	Field Programmable Gate Array	RAL SSD	RAL Space Science Department
FPU	Focal Plane Unit	RD	Reference Document
FSM	Flight Spare model	SMEC	Spectrometer Mechanism
GSFC	Goddard Space Flight Center	SPIRE	Spectral and Photometric Imaging REceiver
GSE	Ground Support Equipment	TBC	To Be Confirmed
HoS	Head of Specialism	TBD	To Be Defined
Herschel	ESA Mission name (formerly FIRST)	TBW	To Be Written
IBDR	Instrument Baseline Design Review	UK ATC	United Kingdom Astronomy Technology Centre
KIP	Key Inspection Point	UK SPO	UK SPIRE Project Office
		WE	Warm Electronics

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1 SCOPE

The scope of the procedure is to describe the removal of the motor magnets from the mirror structure.

2 INTRODUCTION

The magnets are bonded into the housings using Eccobond which is then cured. To remove the magnets, stripper 93 is used to soften the Eccobond.

3 SAFETY

Wear gloves and eye protection during this process and work in a well ventilated area.

4 APPARATUS

- Beaker
- Stripper 93
- Jig for pressing magnets out of mirror

5 PROCESS

- Put the mirror in a small polythene bag with the magnets exposed.
- Seal the bag with lacing cord.
- Place the mirror, with magnets uppermost, in beaker supported on two pieces of flat plastic (see pictures below)
- Apply stripper 93, a few drops at a time, to the Eccobond using a wooden spatula and leave for 5-10 minutes or until the Eccobond has softened.
- Using a scalpel blade, remove as much Eccobond as possible.
- Apply more stripper 93 and leave for a farther 5-10 minutes.
- Repeat until all traces of the Eccobond have been removed.
- Once all of the Eccobond has been removed, push the magnets out of the mounts using the jig shown in the picture below.
- Clean thoroughly with Iso Propyl alcohol and dry off carefully using clean compressed air.

