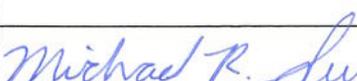


A-8-1

PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)		c. PHASE: III
d. SUBSYSTEM:	Electrical	e. HAZARD GROUP:	f. DATE: August 4, 2010
			Electric Shock. Injury/Illness
g. HAZARD TITLE:	Electric Shock/Discharge		i. HAZARD CATASTROPHIC X CATEGORY: CRITICAL
h. APPLICABLE SAFETY REQUIREMENTS:	NSTS 1700.7B and ISS Addendum, paragraph 102.1, 200.1b		
j. DESCRIPTION OF HAZARD:	<p>Incidental contact by an EVA crewmember with the high voltages and currents of the AMS-02 systems (TRD, TOF, ACC, Tracker, RICH, and ECAL could result in damage to the EMU/Orlan and/or physiological effects on the crewmember. Electrical Discharge of high voltage sources through a rarified atmosphere can damage EVA equipment, payload hardware, SSP and ISS systems and injure the EVA Crew.</p> <p style="text-align: center;">Table of HV Applications Attached</p>		
k. CAUSES	<p>(list)</p> <ol style="list-style-type: none"> 1. Defective design, component, wire, insulation and/or workmanship 2. Exposed terminals, Connectors, energized conductive surfaces. 3. Coronal Discharge 4. Hazardous Alteration of ISS Plasma Environment 		
o. APPROVAL	PAYLOAD ORGANIZATION	SSP/ISS	
PHASE I			
PHASE II			
PHASE III	 TRENT MARITZ 8/4/10	 Michael R. Lumb 8/6/10	

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A.8-2

PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)	c. PHASE:	III
1. HAZARD CONTROL (CONTROL), m. SAFETY VERIFICATION METHODS (SVM), n. STATUS OF VERIFICATIONS (STATUS)			OPS CONTROL
1. CAUSE: Defective design, component, wire, insulation and/or workmanship			
1.1 CONTROL: <Deleted> See AMS-02-F12			I, S
1.2 CONTROL: <Deleted. UPS Removed from AMS-02>			
1.3 CONTROL: Defective components, wires and insulation will be screened out by inspection of the individual components as they are received and installed. 1.3.1 SVM: Review of Design. 1.3.2 SVM: Inspection of as built hardware. 1.3.1 STATUS: Closed. ESCG Memorandum ESCG-4175-09-REENTES-MEMO-0029, "AMS-02 Component and Wire Inspection and Testing Summary," dated June 4, 2009 1.3.2 STATUS: Closed to SVTL.			
1.4 CONTROL: HV insulation and potting will be selected to be compatible with the HV source voltages and for compatibility with the operating environment. 1.4.1 SVM: Review of Design. 1.4.2 SVM: Inspection of as built hardware. 1.4.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, "Review of AMS-02 Hight Voltage Design," dated April 24, 2009 1.4.2 STATUS: Closed to SVTL.			
2. CAUSE: Exposed terminals, connectors, energized conductive surfaces.			
2.1 CONTROL: All exposed connectors will either have automatic covers that preclude contact with energized circuits when demated (UMA, PVGF), or diodes and drain resistors will be used to prevent presence of power at unshielded connectors (ROEU-PDA). 2.1.1 SVM: Review of design. 2.1.2 SVM: Functional testing of covers.			

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PAYLOAD FLIGHT HAZARD REPORT		a. NO: AMS-02-F08
b. PAYLOAD	c. PHASE: III	
<p>Alpha Magnetic Spectrometer-02 (AMS-02)</p> <p>2.1.3 SVM: Testing of exposed connectors for proper diode blocking.</p> <p>2.1.1 STATUS: Closed. ESCG Memorandum ESCG-4175-09-REENTES-MEMO-0005 “Electric Shock/Discharge”, dated March 4, 2009</p> <p>2.1.2 STATUS: Closed to SVTL.</p> <p>2.1.3 STATUS: Closed to SVTL.</p>		
<p>2.2 CONTROL: All AMS-02 electrical components will be grounded/bonded through the AMS-02 Unique Support Structure through nickel plated guide vanes and through the nominal power distribution system. These bonding paths to the Orbiter shall be in accordance with NSTS 21000-IDD-ISS, Rev A. Bonding paths to the ISS upon installation will be made through the Payload Attach System (PAS) per SSP 57003A.</p> <p>2.2.1 SVM: Review of design.</p> <p>2.2.2 SVM: Testing of integration grounding of AMS-02 Components to integration hardware.</p> <p>2.2.3 SVM: Testing of Interface paths to the Shuttle and ISS (UMA & Nickel Plated Guide Vanes).</p> <p>2.2.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, “Review of AMS-02 High Voltage Design,” dated April 24, 2009</p> <p>2.2.2 STATUS: Closed to SVTL.</p> <p>2.2.3 STATUS: Closed to SVTL.</p>		
<p>2.3 CONTROL: All high voltage power supplies (>120VDC) will be located in fully potted avionics boxes that are properly bonded to the AMS-02 structure and grounding paths.</p> <p>2.3.1 SVM: Review of Design.</p> <p>2.3.2 SVM: Testing of enclosure’s grounding path connectivity.</p> <p>2.3.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, “Review of AMS-02 High Voltage Design,” dated April 24, 2009</p> <p>2.3.2 STATUS: Closed to SVTL.</p>		
<p>2.4 CONTROL: The TRD high voltage (1600VDC maximum) components implement high voltage insulation and potting to control high voltage exposure. HV power supply for the TRD is current limited to 100µA per HV channel. The TRD will be covered by a grounded MLI blanket enclosing the entire TRD octagon.</p>		

A.8-4

PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)	c. PHASE:	III
	<p>2.4.1 SVM: Review of design for potting and insulation of high voltage sources.</p> <p>2.4.2 SVM: Inspection of flight hardware to assure proper potting and insulation.</p> <p>2.4.3 SVM: Review of Design for MLI grounding points to structure.</p> <p>2.4.4 SVM: Testing of MLI grounding resistance.</p> <p>2.4.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, "Review of AMS-02 High Voltage Design," dated April 24, 2009</p> <p>2.4.2 STATUS: Closed. Review of TRD ADP (Maintained in AMS-02 Project files) confirmed by email on July 16, 2010 from ESCG/J. C. Tutt</p> <p>2.4.3 STATUS: Closed. ESCG Memo ESCG-4390-07-SP-MEMO-0018, "Grounding of the TRD MLI Blanket", dated November 12, 2007</p> <p>2.4.4 STATUS: Closed to SVTL. ESCG Memo ESCG-4390-07-SP-MEMO-0018, "Grounding of the TRD MLI Blanket", dated November 12, 2007</p>		
	<p>2.5 CONTROL: PMT applications utilize potting and conformal coating to preclude exposure of high voltage connectors, components and wiring. PMTs are isolated from any potential exterior contact. Cabling carrying high voltages to the PMTs are all space rated and qualified for voltages in excess to the maximum voltages present.</p> <p>2.5.1 SVM: Review of design for potting and insulation of high voltage applications and wiring.</p> <p>2.5.2 SVM: Inspection to verify that there is no exterior accessibility of the PMT or their circuitry.</p> <p>2.5.3 SVM: Inspection of flight hardware to assure proper use of potting and high voltage wiring.</p> <p>2.5.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, "Review of AMS-02 High Voltage Design," dated April 24, 2009</p> <p>2.5.2 STATUS: Closed. Photographic Survey inspection performed by ESCG/P. Mott, 7/21/2010</p> <p>2.5.3 STATUS: Closed to SVTL.</p>		
	<p>2.6 CONTROL: The Orbiter side of the ROEU (GFE hardware) will be depowered for the disconnect operation and remain unpowered once the umbilical is separated from the AMS-02. Any EVA subsequent to this separation could come in contact with this connector. AMS-02 procedures will call out the removal of power for disconnecting the ROEU and will not include any procedures that will require power to be resumed to the connector without reconnection of the ROEU to the ROEU-PDA. Design of the ROEU connector is certified GFE and is being used within its certification. NOTE: If power is</p>		S

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A.8-5

PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)	c. PHASE:	III
<p>to be reapplied to the ROEU for some reason, a Shuttle based Flight Rule to enact a keep out zone would be implemented independent of AMS-02 operational requirements.</p> <p>2.6.1 SVM: Formal Acceptance of procedural requirement by MOD through an OCAD(OCAD 67864) .</p> <p>2.6.1 STATUS: Closed. OCAD Closure reported to AMS-02 Project on 6/4/2010 by JSC-DA8/B. O’Keeffe.</p>			
<p>2.7 CONTROLS: Avionics and heaters operating from up to 120 VDC from the ISS or Shuttle APCU utilizes properly insulated wiring/cabling that are potted/conformally coated to preclude incidental shorting. Insulation rating of the heaters minimized the potential for shorting or exposing high voltages.</p> <p>2.7.1 SVM: Review of HV designs.</p> <p>2.7.2 SVM: Review of 120V heater design.</p> <p>2.7.3 SVM: Inspection of as built hardware of HV design</p> <p>2.7.4 SVM: Inspection of as built hardware of 120V heater design</p> <p>2.7.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, “Review of AMS-02 High Voltage Design,” dated April 24, 2009</p> <p>2.7.2 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, “Review of AMS-02 High Voltage Design,” dated April 24, 2009</p> <p>2.7.3 STATUS: Closed to SVTL</p> <p>2.7.4 STATUS: Closed to SVTL</p>			
<p>2.8 CONTROL: All exposed conductive surfaces will be bonded through the AMS-02 Unique Support Structure. These bonding paths to the Orbiter shall be in accordance with NSTS 21000-IDD-ISS, Rev A. Bonding paths to the ISS upon installation will be made through the Payload Attach System (PAS) per SSP 57003A.</p> <p>2.8.1 SVM: Review of design.</p> <p>2.8.2 SVM: Testing of bonding of AMS-02 Conductive surfaces to integration hardware.</p> <p>2.8.3 SVM: Testing of Interface paths to the Shuttle and ISS (UMA & Nickel Plated Guide Vanes).</p> <p>2.8.1 STATUS: Closed. ESCG Memorandum ESCG-4295-10-ADV SY-MEMO-0028, “Bonding of AMS-02 Flight Hardware Conductive Surfaces – Review of Design,” dated July 21, 2010</p> <p>2.8.2 STATUS: Closed to SVTL.</p>			

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PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)	c. PHASE:	III
2.8.3 STATUS: Closed to SVTL.			
3. CAUSE: Coronal Discharge			
<p>3.1 CONTROL: During ascent and entry, high voltage sources will not be powered.</p> <p>3.1.1 SVM: Confirmation of AMS-02 Status prior to launch, science systems unpowered for launch.</p> <p>3.1.2 SVM: Formal acceptance of procedural requirements to turn off high voltages on AMS-02 by MOD through an OCAD (OCAD 67865). (Note: Ascent Checklist and Reentry)</p> <p>3.1.1 STATUS: Closed. OMRSD File II, Volume 2 (P507 – ISS-ULF6 Baseline), requirement # P507KC.020 requires procedure for powering off AMS-02.</p> <p>3.1.2 STATUS: Closed. OCAD Closure reported to AMS-02 Project on 6/4/2010 by JSC-DA8/B. O’Keeffe.</p>		S	
<p>NOTE: The potential effects of coronal discharges upon the AMS-02 are degradation of HV circuitry and EMI, conducted and radiated, “white noise” being generated. All HV sources will be depowered as a consequence of nominal power removal when any EVA involving the AMS occurs on the ISS.</p>			
<p>3.2 CONTROL: AMS-02 high voltage sources will be potted and conformally coated and/or insulated using high voltage insulating compounds. All cabling carrying high voltage utilizes insulation that is properly rated for the voltages that are to be carried. High voltage systems will implement the design practices suggested in MSFC-STD-531 to minimize the potential for corona effects.</p> <p>3.2.1 SVM: Review of design.</p> <p>3.2.2 SVM: Inspection of as built hardware.</p> <p>3.2.3 SVM: Corona testing/analysis.</p> <p>3.2.4 SVM: Functional testing of AMS-02 in flight configuration in thermal-vacuum chamber.</p> <p>3.2.1 STATUS: Closed. ESCG Memorandum ESCG-4175-REENTES-MEMO-0020, “Review of AMS-02 High Voltage Design,” dated April 24, 2009</p> <p>3.2.2 STATUS: Closed to SVTL.</p> <p>3.2.3 STATUS: Closed. ESCG Memorandum ESCG-4175-09-REENTES-MEMO-0018, “AMS-02 Coronal Discharge Testing,” Dated April 14, 2009 documents ESCG Review of testing and analysis of coronal discharge potential of AMS-02.</p>			

A.8-6

JSC 49978C

PAYLOAD FLIGHT HAZARD REPORT		a. NO:	AMS-02-F08
b. PAYLOAD	Alpha Magnetic Spectrometer-02 (AMS-02)	c. PHASE:	III
3.2.4 STATUS: Closed. Thermal Vacuum Testing Report, "ETS Facility Data report AMS-02 Thermal Vacuum Test," ETS-REP-THER-3326 Issue 1, dated July 5, 2010, indicates no anomalies associated with Coronal Discharge.			
4. CAUSE: Hazardous Alteration of ISS Plasma Environment			
4.1 CONTROL: AMS-02 limits their potential impact to the ISS plasma environment by limiting gas releases to only neutral gases (carbon dioxide, xenon, helium. The AMS-02 generates a magnetic field that does not extend out with sufficient distance and intensity to adversely impact the voltage potentials of the ISS and the local plasma environment. 4.1.1 SVM: Analysis of AMS-02 gas releases and magnetic field by ISS Environments AIT. 4.1.1 STATUS: Closed. AG-92-J3EU-RJA-2009-01, "ISS AMS-02 On-Orbit EME Analysis," dated October 1, 2009. Email confirmation of acceptability from Boeing/OA/R.R. Mikatarian by email to USA/OZ2/R. Miley, dated June 1, 2010.			
Notes:			

A.8-7

ACRONYMS	
ACC – Anti-Coincidence Counter	PDS – Power Distribution System
AMS-02 – Alpha Magnetic Spectrometer 02	PMT – Photomultiplier Tube
APCU – Auxiliary Power Control Unit	PVGF – Power Video Grapple Fixture
CAB – Cryomagnet Avionics Box	RHVx – Specific Crate Designator (RICH HV Supply (brick))
CC1, CC2, CC3, CC4 – Cryocooler 1-4	RICH – Ring Imaging Cherenkov (detector)
CCEB – Cryocooler Electronics Box	ROEU – Remotely Operated Electrical Umbilical
CCS – Cryomagnet Current Source	ROEU-PDA - Remotely Operated Electrical Umbilical Power Data
CDD-P, S – Cryomagnet Dump Diodes (Port, Starboard)	SHVx – S-Crate High Voltage (brick)
COV – Coronal Onset Voltage	SVM – Safety Verification Method

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ACRONYMS

CSP – Cryomagnet Self Protection	TBS – To Be Supplied
ECAL – Electromagnetic Calorimeter	TOF – Time of Flight
EHVx – Specific Crate Designator (ECAL HV Supply (brick))	TPD – Tracker Power Distribution
EMI – Electromagnetic Interference	TRD – Transition Radiation Detector
EVA – Extravehicular Activity	UHVG – Specific Crate Designator (TRD HV Supply)
GFE – Government Furnished Equipment	UMA – Umbilical Mating Adapter
HV – High Voltage	UPD – Specific Crate Designator (TRD Power Supply)
LTOF – Lower Time of Flight	UPS – Uninterruptible Power Supply
LUSS – Lower Unique Support Structure	UTE – Specific Crate Designator (TRD Tube End Board)
MLI – Multilayer Insulation	UTOF – Upper Time of Flight
nA – nano Ampere	V – Volts
PAS – Payload Attach System	

A.8-8

High Voltages (and Currents) in AMS-02.

M.Capell

03-01-2007

Item	Subsystem	Source	Load	Voltage	Current	AWG
14	ECAL	EHV0-0	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
15	ECAL	EHV0-1	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
16	ECAL	EHV0-2	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
17	ECAL	EHV1-0	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
18	ECAL	EHV1-1	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
19	ECAL	EHV1-2	55 ECAL PMTs	<1000VDC	<250uA	Coax-26
20	Interface	ISS	AMS-PDS	120VDC	<25A	8
21	Interface	ISS/PVGF	AMS-PDS	120VDC	<15A	12
22	Interface	ISS/T0	AMS-PDS	120VDC	<25A	12
23	Interface	STS/APCU	AMS-PDS	120VDC	<25A	8
24	Power	PDS	CCS in CAB	120VDC	<20A	12
25	Power	PDS	CCEB	120VDC	<7.5A	12
26	RICH	RHV0-0	40 RICH PMTs	<1000VDC	<80uA	Coax-26
27	RICH	RHV0-1	40 RICH PMTs	<1000VDC	<80uA	Coax-26
28	RICH	RHV1-0	40 RICH PMTs	<1000VDC	<80uA	Coax-26
29	RICH	RHV1-1	40 RICH PMTs	<1000VDC	<80uA	Coax-26
30	S:TOF+ACC	SHV0	34 TOF+4 ACC PMTs	<2500VDC	<50uA	Coax-26
31	S:TOF+ACC	SHV1	34 TOF+4 ACC PMTs	<2500VDC	<50uA	Coax-26
32	S:TOF+ACC	SHV2	38 TOF+4 ACC PMTs	<2500VDC	<50uA	Coax-26
33	S:TOF+ACC	SHV3	38 TOF+4 ACC PMTs	<2500VDC	<50uA	Coax-26
34	Thermal	PDS	ECAL Heaters	120VDC	<3A	20
35	Thermal	PDS	Ram Heaters	120VDC	<7.5A	20
36	Thermal	PDS	TRD Heaters	120VDC	<3A	20
37	Thermal	PDS	Tracker Wake Heaters	120VDC	<3A	20
38	Thermal	PDS	Wake Heaters	120VDC	<5A	20
39	Thermal	PDS	LUSS Boxes	120VDC	<3A	20
40	Thermal	PDS	RICH Heaters	120VDC	<3A	20
41	Thermal	PDS	LTOF Heaters	120VDC	<3A	20

A.8-9

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High Voltages (and Currents) in AMS-02.

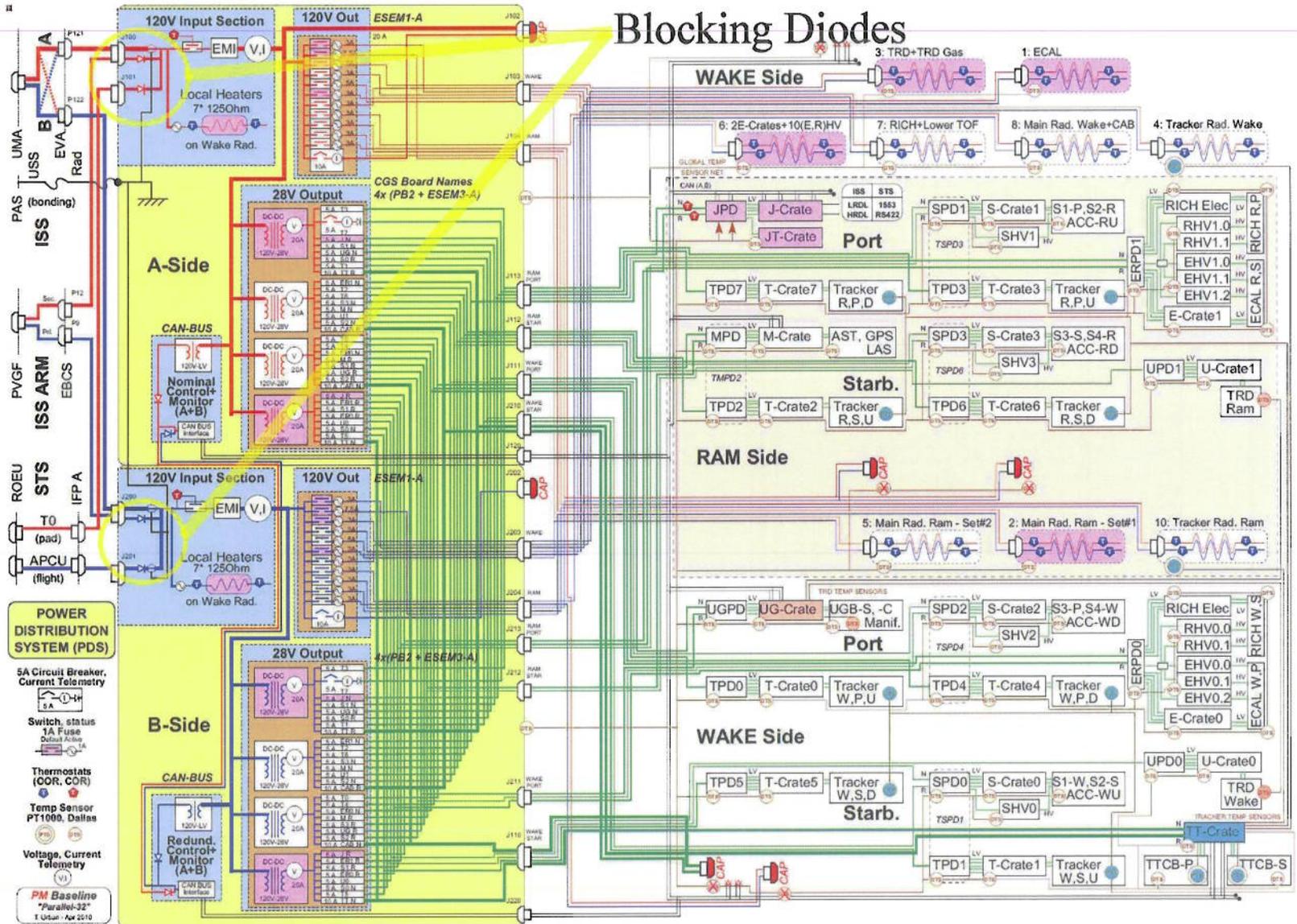
M.Capell

03-01-2007

Item	Subsystem	Source	Load	Voltage	Current	AWG
43	Thermal	PDS	Tracker Ram Heaters	120VDC	<3A	20
45	Tracker	TPD0	2 TBS in T0-Crate	<120VDC	<10mA	22
46	Tracker	TPD1 in TSPD1	2 TBS in T1-Crate	<120VDC	<10mA	22
47	Tracker	TPD2 in TMPD2	2 TBS in T2-Crate	<120VDC	<10mA	22
48	Tracker	TPD3 in TSPD3	2 TBS in T3-Crate	<120VDC	<10mA	22
49	Tracker	TPD4 in TSPD4	2 TBS in T4-Crate	<120VDC	<10mA	22
50	Tracker	TPD5	2 TBS in T5-Crate	<120VDC	<10mA	22
51	Tracker	TPD6 in TSPD6	2 TBS in T6-Crate	<120VDC	<10mA	22
52	Tracker	TPD7	2 TBS in T7-Crate	<120VDC	<10mA	22
53	Tracker	2 TBS in T0-Crate	24 Tracker Ladders	<80VDC	<10mA	26
54	Tracker	2 TBS in T1-Crate	24 Tracker Ladders	<80VDC	<10mA	26
55	Tracker	2 TBS in T2-Crate	24 Tracker Ladders	<80VDC	<10mA	26
56	Tracker	2 TBS in T3-Crate	24 Tracker Ladders	<80VDC	<10mA	26
57	Tracker	2 TBS in T4-Crate	24 Tracker Ladders	<80VDC	<10mA	26
58	Tracker	2 TBS in T5-Crate	24 Tracker Ladders	<80VDC	<10mA	26
59	Tracker	2 TBS in T6-Crate	24 Tracker Ladders	<80VDC	<10mA	26
60	Tracker	2 TBS in T7-Crate	24 Tracker Ladders	<80VDC	<10mA	26
61	TRD	UPD0	6 UHVG in U0-Crate	<120VDC	<35mA	22
62	TRD	UPD1	6 UHVG in U1-Crate	<120VDC	<35mA	22
63	TRD	6 UHVG in U0-Crate	2624 TRD Straw Tubes	<1800VDC	<100uA	Coax-26
64	TRD	6 UHVG in U1-Crate	2624 TRD Straw Tubes	<1800VDC	<100uA	Coax-26
65	TRD-Gas	UGPD	UHVG in UG-Crate	<120VDC	<35mA	22

A.8-10

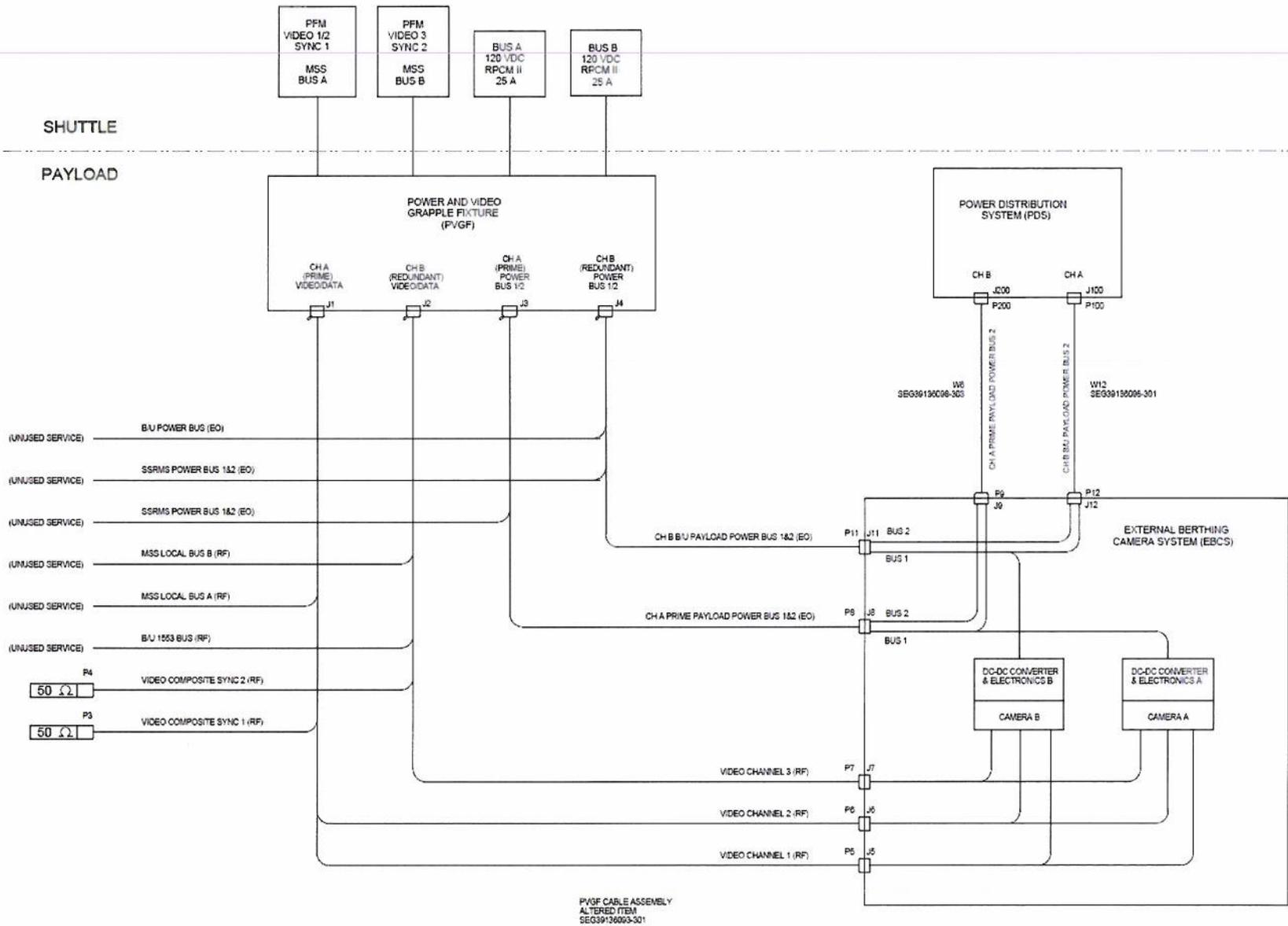
 ISS, STS Voltages after EMI filter



Blocking Diodes

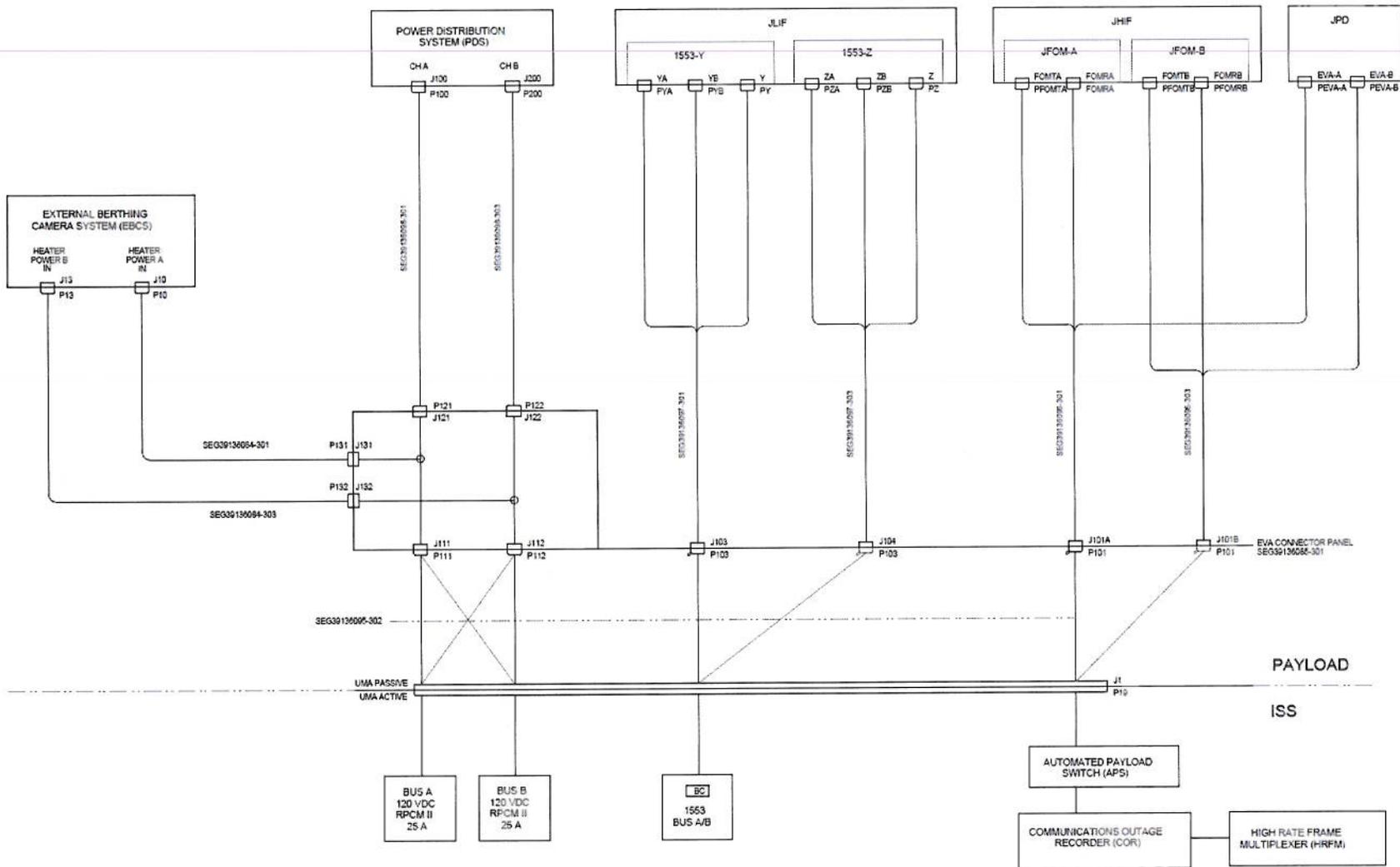
Blocking Diodes isolating ROEU and PVGF connectors from alternate power sources.

A.8-14

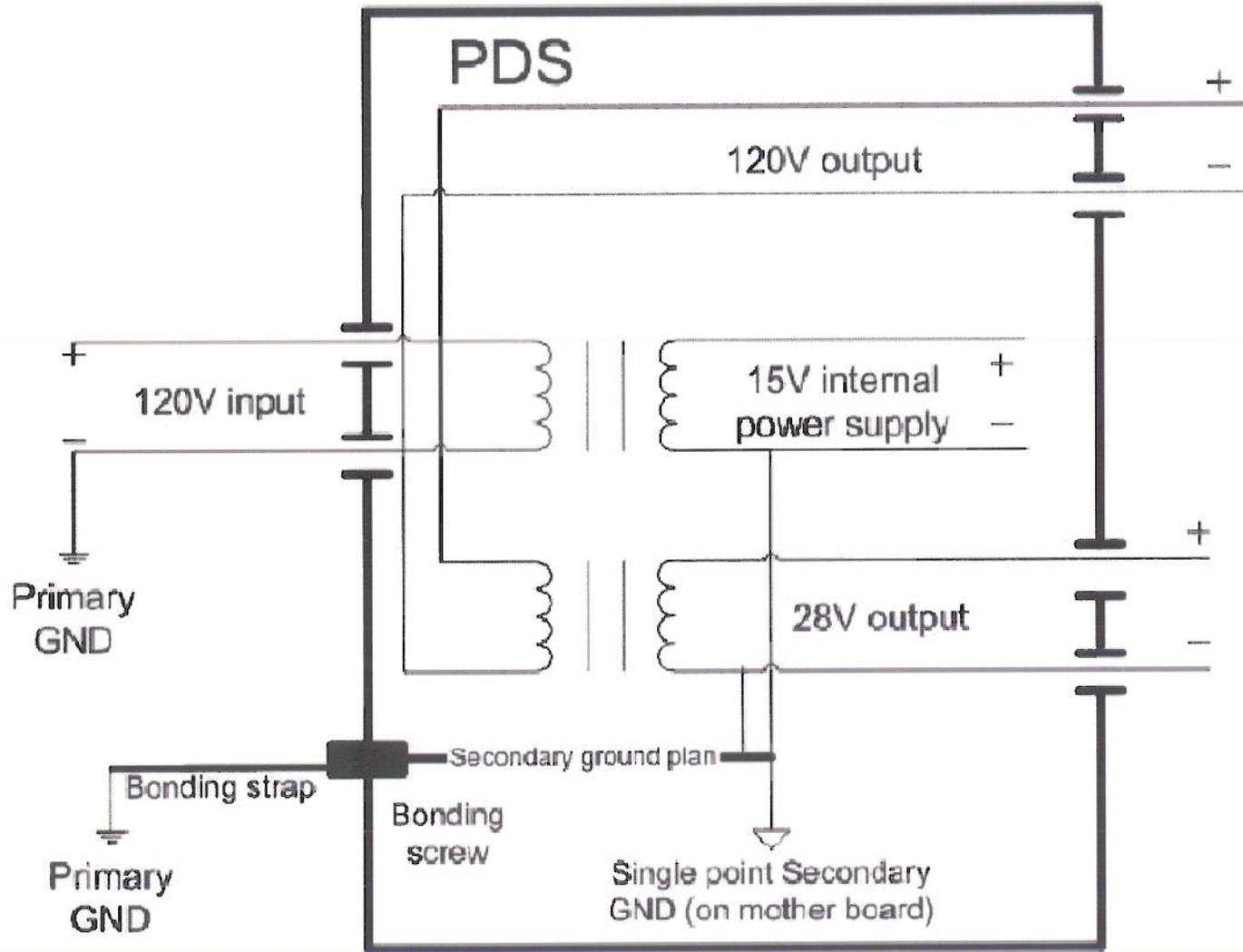


AMS-02 Power Interface with Space Station Remote Manipulator System

A.8-15



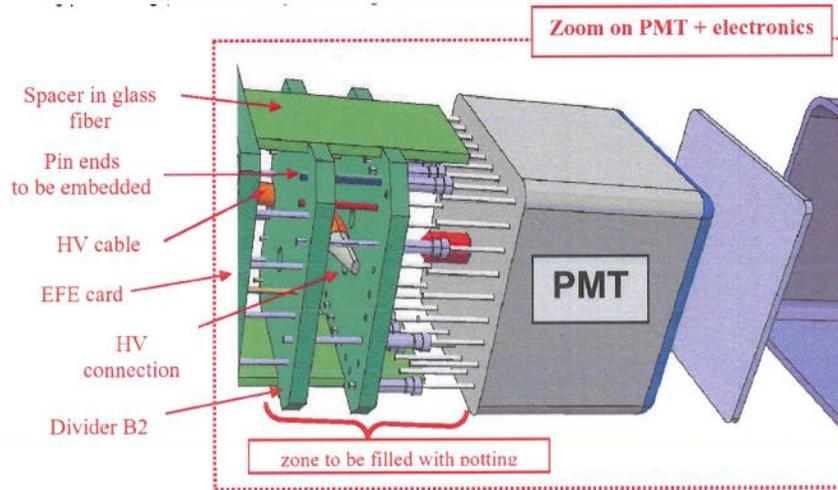
AMS-02 Power Interface with ISS at berthing location

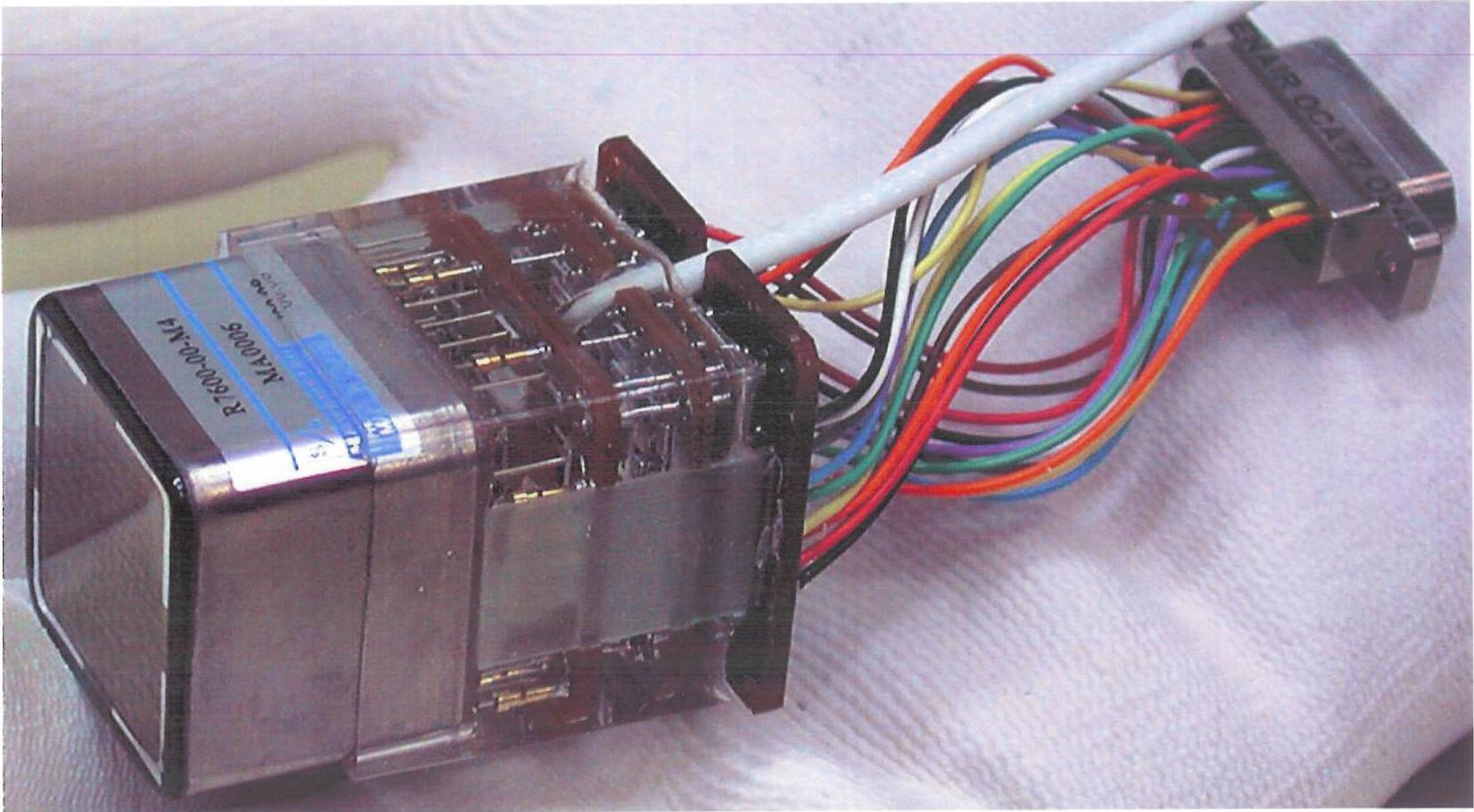


PDS Bonding Diagram

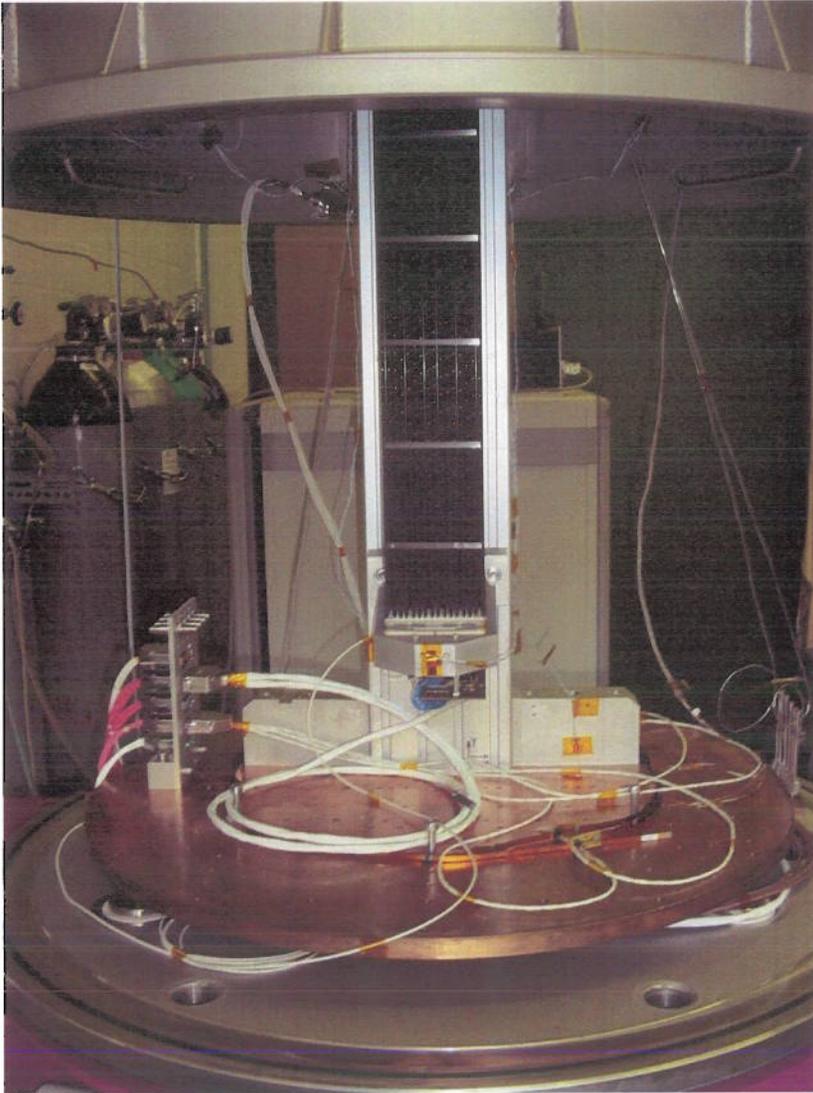


Example of High Voltage
Component Potting.
RICH Photo Multiplier
Tube

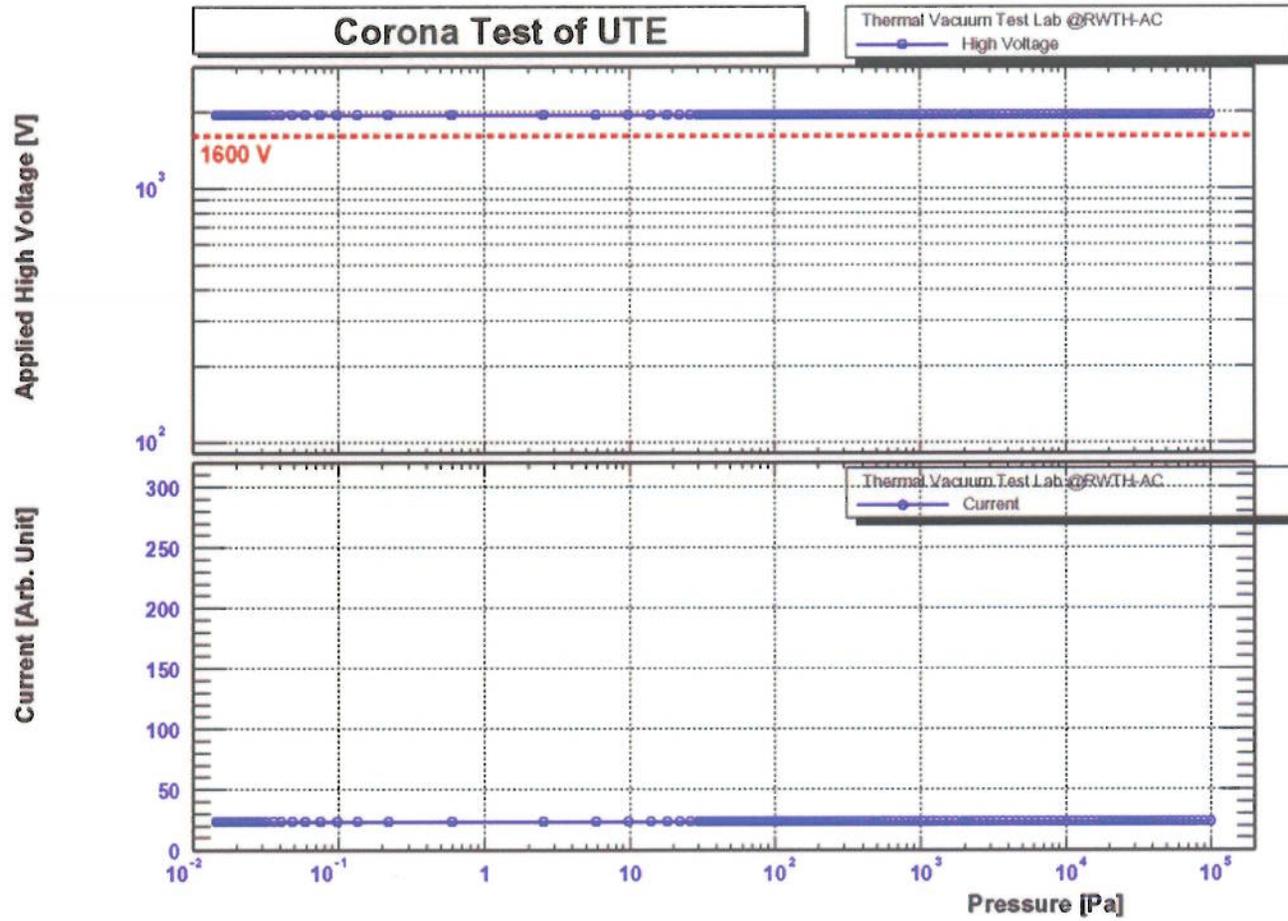




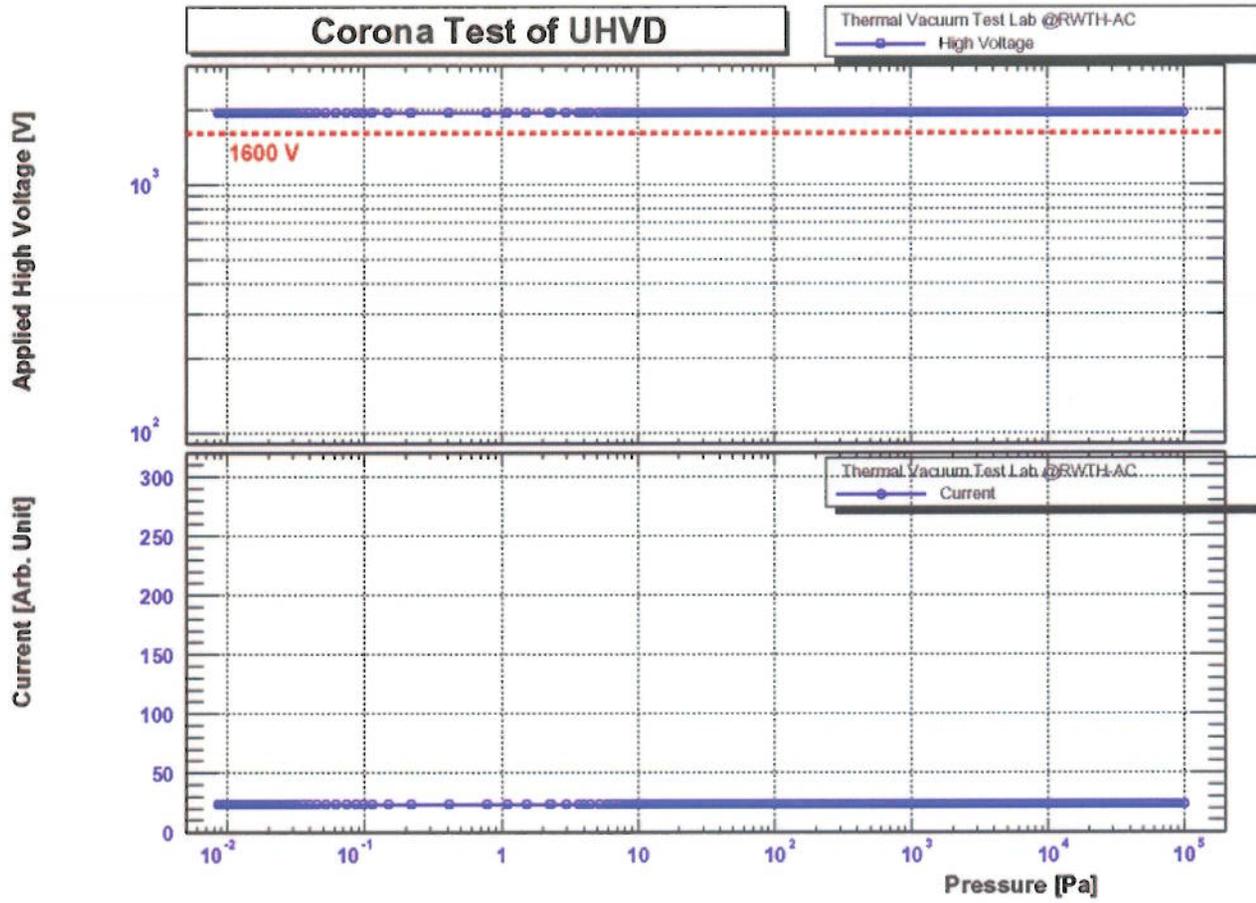
Example of High Voltage Component Potting.
ECAL Photo Multiplier Tube Potting



Coronal Discharge Testing of TRD
High Voltage Straws.



Corona Test Results for TRD UTE



Coronal Testing Results for TRD UHVD

260-0121-1000(A)

D/E 600 PLUG CABLE ASSY



ITEMS LIST for
 Drawing Title: D/E 600 PLUG CABLE ASSY
 Drawing No: 260-0121-1000(A)

CN: 3213
 date: 21/10/05

Page
 1
 of
 1

ItemNo	Ident	Qty	UOM	PartNumber	PartDesc	SuppliersDesc	SupplierCode
			DOC	260-0121-GA(A)	ASSEMBLY DRAWING		
			DOC	260-0121-PS(A)	PROCESS SPEC.		
1		2	EA		600 BODY ASSEMBLY, MOLDED		
2		2	EA		600 COUPLING NUT		
3		2	EA		600 RING RETAINER		
4		2	EA		600 FEMALE CONTACT		
5		0.008	MT		KYNAR 1.5 CLR	KYNAR-1/16-X	
6		2	EA		600 'U' SLEEVE		
7		2	EA		600 DOUBLE 'O' RING SEAL		
8		2	EA		WASHER 600		
9		0.080	MT		KYNAR 4.8 CLR	KYNAR-3/16-X	
10		1.000	MT	167-2896	CABLE .050 FEP SPC SHIELDED		

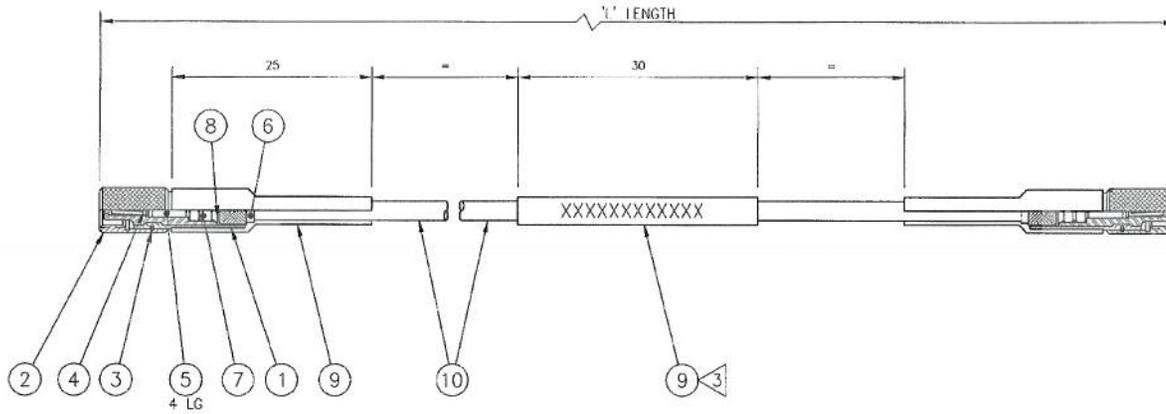
A.8-22

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	NCAGE CODE U3968		
	COMPUTER GENERATED ITEMS LIST FOR APPROVAL SEE RELEVANT CHANGE NOTE		

A.8-23

UNLESS OTHERWISE STATED:
ALL DIMENSIONS IN
MM
REMOVE BURRS AND SHARP EDGES
DO NOT SCALE

ISSUES		
BS	CHANGE NOTE	DATE
A	CHG213	21/10/05



3. PRINT (BLACK) T.R.L., PART NUMBER AND DATECODE IN CHARACTERS 2mm HIGH (APPROX).
2. HI-POT TEST AT 10KV.DC PIN TO SHELL AT A SIMULATED ALTITUDE OF 70,000FT FOR 60 SEC'S (MATED). LEAKAGE NOT TO EXCEED 10µA MAX.
1. CABLE LENGTH TO BE DEPICTED AS SUFFIX TO PART No.
I.E:- 260-0121-0450 IS AN OVERALL LENGTH OF 450MM.
TOLERANCE IS 1% OF OVERALL LENGTH OR 6.5MM, WHICHEVER IS GREATER.

TOLERANCES UNLESS OTHERWISE STATED: 0 ± 0.5 0.0 ± 0.20 0.00 ± 0.14	ANGLES ± 0.5°	DRAWN D.RANGER	DATE 09/08/02	Reynolds Industries Ltd. NAVIGATION HOUSE : CANAL VIEW RD. NEWBURY, BERKS RG14 5UR ENGLAND	
MATERIAL		COMPUTER GENERATED DRAWING FOR APPROVALS SEE RELEVANT CHANGE NOTE		TITLE 600 PLUG/D.050" FEP D/E CABLE ASSEMBLY	
FINISH		NSCAGE CODE U3006 © REYNOLDS INDUSTRIES LTD 2002		SIZE A3	DRG. NO. 260-0121-GA
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				SHEET 1	OF 1

Typical Construction of HV Cable (2 of 2)

JSC 49978C