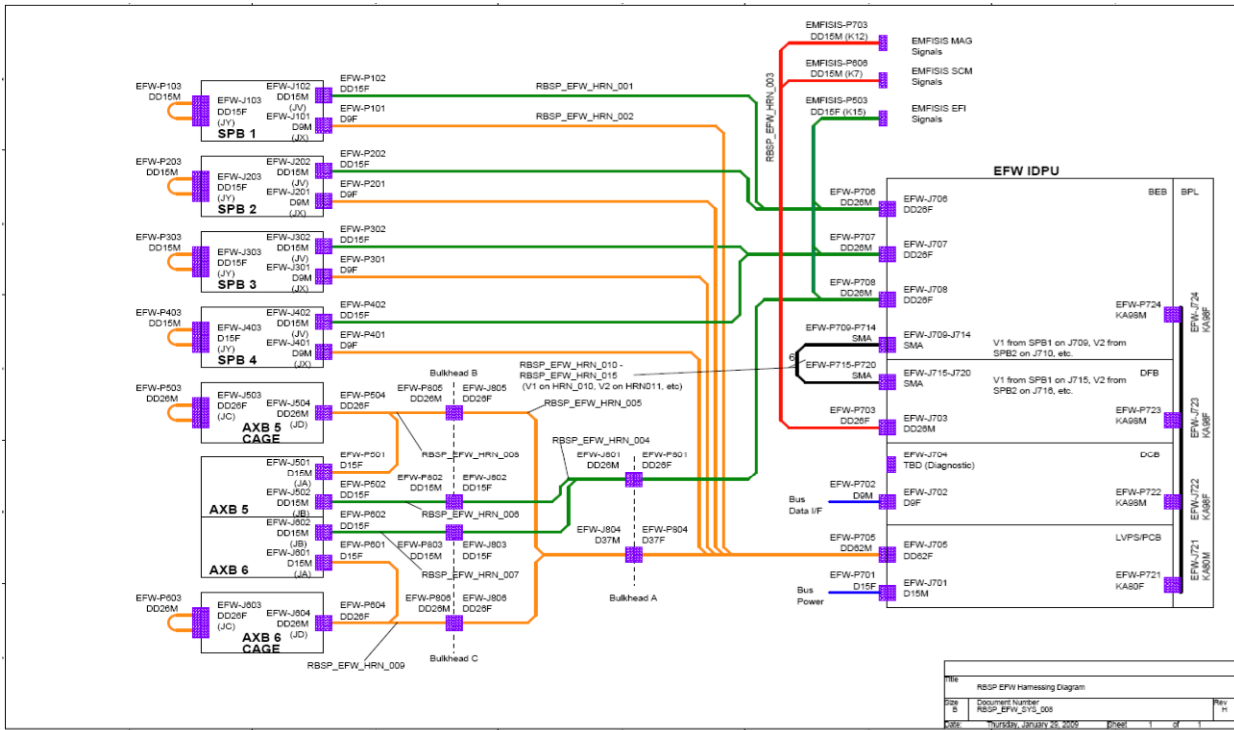


Rbsp EFW Harness Pinouts

Rbsp_EFW_SYS_015

Rev. G



RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_001**

Description: BEB to Booms Signal
Revised:

2009-01-27
2009-02-24
2009-04-07
2009-04-09
2009-05-06
2011-06-09
2011-09-10

Rev. G

M. Ludlam A
M. Ludlam B
M. Ludlam C
M. Ludlam D
M. Ludlam E
R. Hochman F
R. Hochman G

SPACECRAFT A & B

(for all units)

NOTE: Wire types specified as follows:

- A: #24AWG stranded single conductor
- B: #24AWG unshielded twisted pair (UTP)
- C: 50CIS Co-ax

Notes:

Harness Lengths:

- P706 to P102 = 352 cm
- P706 to P202 = 337 cm.
- P706 to EMFISIS-P503 = 85 cm.
- P707 to P302 = 427 cm.
- P707 to P402 = 2 m.
- P707 to EMFISIS-P503 = 77 cm.
- P708 to P801 = 152 cm.
- P708 to EMFISIS-P503 = 69 cm.

Leave pin numbers marked 'spare' as unpopulated.

Quantity (wire & shield in meters)	Type	Part Number
3	DD26M Connector	311P407-2P-B-12
1	DD26F Connector	311P407-2S-B-12
5	DD15F Connector	311P407-1S-B-12
AR	Pin Contacts	G08P1
AR	Socket Contacts	G08S1
1	EMFISIS Backshell	D9000MG00-1144.62
3	Backshell Size 1	550E039M1R3H0-03
5	Backshell Size 2	550E039M2R3H0-03
AR	#24 AWG	M22578/53-24-3
AR	UTP Wire #24 AWG	M27500-25SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DN151 w/ 3M 9703
1	Keying Socket	FC30220-50-1127.3
AR	Neptape	Aluminum Foil #1526

P706		Connector Type: DD26M		Function: BEB signal, bias and test					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
FV2_GND	P706	1	to SPB2	shield	10	C	P202	6	floating ground, coax shield of VSPHERE2
FV2_N15VA	P706	2	to SPB2	power	11	B	P202	7	Preamp2 floating supply, 5mA, -15Vdc
GUARD2	P706	3	to SPB2	analog	-	A	P202	4	Guard2 bias
BIAS2	P706	4	to SPB2	analog	-	A	P202	3	Sphere2 bias
EMFISIS_1_2	P706	5	to EMFISIS	analog	23	C	EMFISIS-P503	6	EMFISIS_1_2 Signal coax center conductor
USHER1	P706	6	to SPB1	analog	-	A	P102	8	Usher1 bias
ACTEST1	P706	7	to SPB1	analog	26	C	P102	14	Sphere1 test signal - stowed
FV1_P15VA	P706	8	to SPB1	power	17	B	P102	2	Preamp1 floating supply, 5mA, +15Vdc
VSPHERE1	P706	9	from SPB1	analog	18	C	P102	1	VSPHERE1 coax center conductor
VSPHERE2	P706	10	from SPB2	analog	1	C	P202	1	VSPHERE2 coax center conductor
FV2_P15VA	P706	11	to SPB2	power	2	B	P202	2	Preamp2 floating supply, 5mA, +15Vdc
ACTEST2	P706	12	to SPB2	analog	19	C	P202	14	Sphere2 test signal - stowed
USHER 2	P706	13	to SPB2	analog	-	A	P202	8	Usher2 bias
(spare)	P706	14							
BIAS1	P706	15	to SPB1	analog	-	A	P102	3	Sphere1 bias
GUARD1	P706	16	to SPB1	analog	-	A	P102	4	Guard1 bias
FV1_N15VA	P706	17	to SPB1	power	8	B	P102	7	Preamp1 floating supply, 5mA, -15Vdc
FV1_GND	P706	18	to SPB1	shield	9	C	P102	6	floating ground, coax shield of VSPHERE1
AGND2	P706	19	to SPB2	analog	12	C	P202	15	ACTEST2 Coax shield, Analog ground
(spare)	P706	20							
(spare)	P706	21							
(spare)	P706	22							
EMF_1-2_RET	P706	23	to EMFISIS	analog	5	C	EMFISIS-P503	7	EMFISIS_1_2 Coax shield
(spare)	P706	24							
(spare)	P706	25							
AGND1	P706	26	to SPB1	analog	7	C	P102	15	ACTEST1 Coax shield, Analog ground

P706 SDD26 Pin Layout		
VSPHERE2	10	
FV2_GND	1	19 AGND2
FV2_P15VA	11	
FV2_N15VA	2	20 (spare)
GUARD2	3	12 ACTEST2
USHER 2	4	21 (spare)
BIAS2	5	22 (spare)
(spare)	6	14
EMFISIS_1_2	7	23 EMF_1-2_RET
USHER1	8	15 BIAS1
(spare)	9	24 (spare)
GUARD1	16	25 (spare)
ACTEST1	17	26 (spare)
FV1_N15VA	18	17
FV1_P15VA	8	26 AGND1
FV1_GND	18	
VSPHERE1	9	

P102		Connector Type: DD15F		Function: SPB1 signal					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
VSPHERE1	P102	1	to BEB	analog	6	C	P706	9	VSPHERE1 coax center conductor
FV1_P15VA	P102	2	from BEB	power	7	B	P706	8	Preamp1 floating supply, 5mA, +15Vdc
BIAS1	P102	3	from BEB	analog	-	A	P706	15	Sphere1 bias
GUARD1	P102	4	from BEB	analog	-	A	P706	16	Guard1 bias
(spare)	P102	5							
FV1_GND	P102	6	from BEB	shield	1	C	P706	18	floating ground, coax shield of VSPHERE1
FV1_N15VA	P102	7	from BEB	power	2	B	P706	17	Preamp1 floating supply, 5mA, -15Vdc
USHER1	P102	8	from BEB	analog	-	A	P706	6	Usher1 bias
(spare)	P102	9							
(spare)	P102	10							
(spare)	P102	11							
(spare)	P102	12							
(spare)	P102	13							
ACTEST1	P102	14	from BEB	digital	15	C	P706	7	Sphere1 test signal - stowed
AGND1	P102	15	from BEB	analog	14	C	P706	26	Analog ground

P102 SDD15 Pin Layout		
VSPHERE1	1	6
FV1_GND	1	11 (spare)
FV1_N15VA	2	7 (spare)
FV1_P15VA	2	12 (spare)
USHER1	3	8 (spare)
BIAS1	3	13 (spare)
(spare)	4	9
GUARD1	4	14 ACTEST1
(spare)	5	10
(spare)	5	15 AGND1

P202		Connector Type: DD15F		Function: SPB2 signal					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
VSPHERE2	P202	1	to BEB	analog	6	C	P706	10	VSPHERE2 coax center conductor
FV2_P15VA	P202	2	from BEB	power	7	B	P706	11	Preamp2 floating supply, 5mA, +15Vdc
BIAS2	P202	3	from BEB	analog	-	A	P706	4	Sphere2 bias
GUARD2	P202	4	from BEB	analog	-	A	P706	3	Guard2 bias
(spare)	P202	5							
FV2_GND	P202	6	from BEB	shield	1	C	P706	1	floating ground, coax shield of VSPHERE2
FV2_N15VA	P202	7	from BEB	power	2	B	P706	2	Preamp2 floating supply, 5mA, -15Vdc
USHER2	P202	8	from BEB	analog	-	A	P706	13	Usher2 bias
(spare)	P202	9							VSPHERE2 coax shield, FV2_GND
(spare)	P202	10							
(spare)	P202	11							
(spare)	P202	12							
(spare)	P202	13							
ACTEST2	P202	14	from BEB	digital	15	C	P706	12	Sphere2 test signal - stowed
AGND2	P202	15	from BEB	analog	14	C	P706	19	Analog ground

P202 SDD15 Pin Layout		
FV2_GND	1	6
VSPHERE2	1	11 (spare)
FV2_N15VA	2	7 (spare)
FV2_P15VA	2	12 (spare)
USHER2	3	8 (spare)
BIAS2	3	13 (spare)
(spare)	4	9
GUARD2	4	14 ACTEST2
(spare)	5	10
(spare)	5	15 AGND2

P707		Connector Type: DD26M Function: BEB signal, bias and test									
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
FV4_GND	P707	1	to SPB4	shield	10	C	P402	6	floating ground, coax shield of VSPHERE4		
FV4_N15VA	P707	2	to SPB4	power	11	B	P402	7	Preamp4 floating supply, 5mA, -15Vdc		
GUARD4	P707	3	to SPB4	analog	-	A	P402	4	Guard4 bias		
BIAS4	P707	4	to SPB4	analog	-	A	P402	3	Sphere4 bias		
EMFISIS_3_4	P707	5	to EMFISIS	analog	23	C	EMFISIS-P503	12	EMFISIS_3_4 Signal coax center conductor		
USHER3	P707	6	to SPB3	analog	-	A	P302	8	Usher3 bias		
ACTEST3	P707	7	to SPB3	analog	26	C	P302	14	Sphere3 test signal - stowed		
FV3_P15VA	P707	8	to SPB3	power	17	B	P302	2	Preamp3 floating supply, 5mA, +15Vdc		
VSPHERE3	P707	9	from SPB3	analog	18	C	P302	1	VSPHERE3 coax center conductor		
VSPHERE4	P707	10	from SPB4	analog	1	C	P402	1	VSPHERE4 coax center conductor		
FV4_P15VA	P707	11	to SPB4	power	2	B	P402	2	Preamp4 floating supply, 5mA, +15Vdc		
ACTEST4	P707	12	to SPB4	analog	19	C	P402	14	Sphere4 test signal - stowed		
USHER 4	P707	13	to SPB4	analog	-	A	P402	8	Usher4 bias		
(spare)	P707	14									
BIAS3	P707	15	to SPB3	analog	-	A	P302	3	Sphere3 bias		
GUARD3	P707	16	to SPB3	analog	-	A	P302	4	Guard3 bias		
FV3_N15VA	P707	17	to SPB3	power	8	B	P302	7	Preamp3 floating supply, 5mA, -15Vdc		
FV3_GND	P707	18	to SPB3	shield	9	C	P302	6	floating ground, coax shield of VSPHERE3		
AGND4	P707	19	to SPB4	analog	12	C	P402	15	ACTest4 Coax shield, Analog ground		
(spare)	P707	20									
(spare)	P707	21									
(spare)	P707	22									
EMF_3-4_RET	P707	23	to EMFISIS	analog	5	C	EMFISIS-P503	13	EMFISIS_3_4 Coax shield		
(spare)	P707	24									
(spare)	P707	25									
AGND3	P707	26	to SPB3	analog	7	C	P302	15	ACTest3 Coax shield, Analog ground		

P707 SDD26 Pin Layout				
VSPHERE4				
FV4_GND	1	10		AGND4
FV4_N15VA	11	19		
FV4_P15VA	2	20		(spare)
ACTEST4	12	21		(spare)
GUARD4	3	21		(spare)
USHER 4	4	22		(spare)
BIAS4	4	22		(spare)
EMFISIS_3_4	5	14		EMF_3-4_RET
USHER3	6	24		(spare)
ACTEST3	7	17		(spare)
FV3_N15VA	8	25		(spare)
FV3_P15VA	8	26		AGND3
FV3_GND	18			
VSPHERE3	9			

P302		Connector Type: DD15F Function: SPB3 signal									
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE3	P302	1	to BEB	analog	6	C	P707	9	VSPHERE3 coax center conductor		
FV3_P15VA	P302	2	from BEB	power	7	B	P707	8	Preamp3 floating supply, 5mA, +15Vdc		
BIAS3	P302	3	from BEB	analog	-	A	P707	15	Sphere3 bias		
GUARD3	P302	4	from BEB	analog	-	A	P707	16	Guard3 bias		
(spare)	P302	5									
FV3_GND	P302	6	from BEB	shield	1	C	P707	18	floating ground, coax shield of VSPHERE3		
FV3_N15VA	P302	7	from BEB	power	2	B	P707	17	Preamp3 floating supply, 5mA, -15Vdc		
USHER3	P302	8	from BEB	analog	-	A	P707	6	Usher3 bias		
(spare)	P302	9									
(spare)	P302	10									
(spare)	P302	11									
(spare)	P302	12									
(spare)	P302	13									
ACTEST3	P302	14	from BEB	digital	15	C	P707	7	Sphere3 test signal - stowed		
AGND3	P302	15	from BEB	analog	14	C	P707	26	Analog ground		

P302 SDD15 Pin Layout				
FV3_GND	1	6		
VSPHERE3	1	11		(spare)
FV3_N15VA	7	7		(spare)
FV3_P15VA	2	8		(spare)
USHER3	3	8		(spare)
BIAS3	3	13		(spare)
(spare)	4	9		
GUARD3	4	14		ACTEST3
(spare)	4	10		
(spare)	5	15		AGND3

P402		Connector Type: DD15F Function: SPB4 signal									
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE4	P402	1	to BEB	analog	6	C	P707	10	VSPHERE4 coax center conductor		
FV4_P15VA	P402	2	from BEB	power	7	B	P707	11	Preamp4 floating supply, 5mA, +15Vdc		
BIAS4	P402	3	from BEB	analog	-	A	P707	4	Sphere4 bias		
GUARD4	P402	4	from BEB	analog	-	A	P707	3	Guard4 bias		
(spare)	P402	5									
FV4_GND	P402	6	from BEB	shield	1	C	P707	1	floating ground, coax shield of VSPHERE4		
FV4_N15VA	P402	7	from BEB	power	2	B	P707	2	Preamp4 floating supply, 5mA, -15Vdc		
USHER4	P402	8	from BEB	analog	-	A	P707	13	Usher4 bias		
(spare)	P402	9									
(spare)	P402	10									
(spare)	P402	11									
(spare)	P402	12									
(spare)	P402	13									
ACTEST4	P402	14	from BEB	digital	15	C	P707	12	Sphere4 test signal - stowed		
AGND4	P402	15	from BEB	analog	14	C	P707	19	Analog ground		

P402 SDD15 Pin Layout				
FV4_GND	1	6		
VSPHERE4	1	11		(spare)
FV4_N15VA	7	7		(spare)
FV4_P15VA	2	12		(spare)
USHER4	3	8		(spare)
BIAS4	3	13		(spare)
(spare)	4	9		
GUARD4	4	14		ACTEST4
(spare)	4	10		
(spare)	5	15		AGND4

P708		Connector Type: DD26M									
Function: BEB signal, bias and test											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
FV6_GND	P708	1	to AXB2	shield	10	C	P801	1	floating ground, coax shield of VSPHERE6		
FV6_N15VA	P708	2	to AXB2	power	11	B	P801	2	Preamp6 floating supply, 5mA, -15Vdc		
GUARD6	P708	3	to AXB2	analog	-	A	P801	3	Guard6 bias		
BIAS6	P708	4	to AXB2	analog	-	A	P801	4	Sphere6 bias		
EMFISIS_5_6	P708	5	to EMFISIS	analog	23	C	EMFISIS-P503	1	EMFISIS_5_6 Signal coax center conductor		
USHER5	P708	6	to AXB1	analog	-	A	P801	6	Usher5 bias		
ACTEST5	P708	7	to AXB1	analog	26	C	P801	7	Sphere5 test signal - stowed		
FV5_P15VA	P708	8	to AXB1	power	17	B	P801	8	Preamp5 floating supply, 5mA, +15Vdc		
VSPHERE5	P708	9	from AXB1	analog	18	C	P801	9	VSPHERE5 coax center conductor		
VSPHERE6	P708	10	from AXB2	analog	1	C	P801	10	VSPHERE6 coax center conductor		
FV6_P15VA	P708	11	to AXB2	power	2	B	P801	11	Preamp6 floating supply, 5mA, +15Vdc		
ACTEST6	P708	12	to AXB2	analog	19	C	P801	12	Sphere6 test signal - stowed		
USHER 6	P708	13	to AXB2	analog	-	A	P801	13	Usher6 bias		
(spare)	P708	14									
BIAS5	P708	15	to AXB1	analog	-	A	P801	15	Sphere5 bias		
GUARD5	P708	16	to AXB1	analog	-	A	P801	16	Guard5 bias		
FV5_N15VA	P708	17	to AXB1	power	8	B	P801	17	Preamp5 floating supply, 5mA, -15Vdc		
FV5_GND	P708	18	to AXB1	shield	9	C	P801	18	floating ground, coax shield of VSPHERE5		
AGND6	P708	19	to AXB2	analog	12	C	P801	19	ACTEST6 Coax shield, Analog ground		
(spare)	P708	20									
(spare)	P708	21									
(spare)	P708	22									
EMF_5_6_RET	P708	23	to EMFISIS	analog	5	C	EMFISIS-P503	2	EMFISIS_5_6 Coax shield		
(spare)	P708	24									
(spare)	P708	25									
AGND5	P708	26	to AXB1	analog	7	C	P801	26	ACTEST5 Coax shield, Analog ground		

P708 SDD26 Pin Layout			
VSPHERE6	10		
FV6_GND	1	19	AGND6
FV6_N15VA	2	20	(spare)
ACTEST6	3	12	
GUARD6	3	21	(spare)
USHER 6	6	13	
BIAS6	4	22	(spare)
(spare)	5	14	
EMFISIS_5_6	5	15	EMF_5_6_RET
BIAS5	15	23	
USHER5	6	24	(spare)
GUARD5	7	16	
ACTEST5	7	25	(spare)
FV5_N15VA	17	26	
FV5_P15VA	8	26	AGND5
FV5_GND	18		
VSPHERE5	9		

P801		Connector Type: DD26F									
Function: BEB signal, bias and test											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
FV6_GND	P801	1	to AXB2	shield	10	C	P708	1	floating ground, coax shield of VSPHERE6		
FV6_N15VA	P801	2	to AXB2	power	11	B	P708	2	Preamp6 floating supply, 5mA, -15Vdc		
GUARD6	P801	3	to AXB2	analog	-	A	P708	3	Guard6 bias		
BIAS6	P801	4	to AXB2	analog	-	A	P708	4	Sphere6 bias		
(spare)	P801	5									
USHER5	P801	6	to AXB1	analog	-	A	P708	6	Usher5 bias		
ACTEST5	P801	7	to AXB1	analog	26	C	P708	7	Sphere5 test signal - stowed		
FV5_P15VA	P801	8	to AXB1	power	17	B	P708	8	Preamp5 floating supply, 5mA, +15Vdc		
VSPHERE5	P801	9	from AXB1	analog	18	C	P708	9	VSPHERE5 coax center conductor		
VSPHERE6	P801	10	from AXB2	analog	1	C	P708	10	VSPHERE6 coax center conductor		
FV6_P15VA	P801	11	to AXB2	power	2	B	P708	11	Preamp6 floating supply, 5mA, +15Vdc		
ACTEST6	P801	12	to AXB2	analog	19	C	P708	12	Sphere6 test signal - stowed		
USHER 6	P801	13	to AXB2	analog	-	A	P708	13	Usher6 bias		
(spare)	P801	14									
BIAS5	P801	15	to AXB1	analog	-	A	P708	15	Sphere5 bias		
GUARD5	P801	16	to AXB1	analog	-	A	P708	16	Guard5 bias		
FV5_N15VA	P801	17	to AXB1	power	8	B	P708	17	Preamp5 floating supply, 5mA, -15Vdc		
FV5_GND	P801	18	to AXB1	shield	9	C	P708	18	floating ground, coax shield of VSPHERE5		
AGND6	P801	19	to AXB2	analog	12	C	P708	19	ACTEST6 Coax shield, Analog ground		
(spare)	P801	20									
(spare)	P801	21									
(spare)	P801	22									
(spare)	P801	23									
(spare)	P801	24									
(spare)	P801	25									
AGND5	P801	26	to AXB1	analog	7	C	P801	26	ACTEST5 Coax shield, Analog ground		

P801 SDD26 Pin Layout			
VSPHERE6	10		
FV6_GND	1	19	AGND6
FV6_N15VA	2	20	(spare)
ACTEST6	3	12	
GUARD6	3	21	(spare)
USHER 6	6	13	
BIAS6	4	22	(spare)
(spare)	5	14	
(spare)	5	23	(spare)
BIAS5	15	23	
USHER5	6	24	(spare)
GUARD5	7	16	
ACTEST5	7	25	(spare)
FV5_N15VA	17	26	
FV5_P15VA	8	26	AGND5
FV5_GND	18		
VSPHERE5	9		

EMFISIS-P503		Connector Type: DD15F									
Function: EFW Signal to EMFISIS											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
EMFISIS_5_6	EMFISIS-P503	1	from BEB	analog	2	C	P708	5	EMFISIS_5_6 Signal coax center conductor		
EMF_5_6_RET	EMFISIS-P503	2	from BEB	analog	1	C	P708	23	EMFISIS_5_6 Coax shield		
(spare)	EMFISIS-P503	3									
Chassis	EMFISIS-P503	5		shield		A			Wire to backshell		
EMFISIS_1_2	EMFISIS-P503	6	from BEB	analog	7	C	P706	5	EMFISIS_3_4 Signal coax center conductor		
EMF_1_2_RET	EMFISIS-P503	7	from BEB	analog	6	C	P706	23	EMFISIS_1_2 Coax shield		
(spare)	EMFISIS-P503	8									
(spare)	EMFISIS-P503	9									
(spare)	EMFISIS-P503	10									
(spare)	EMFISIS-P503	11									
EMFISIS_3_4	EMFISIS-P503	12	from BEB	analog	13	C	P707	5	EMFISIS_3_4 Signal coax center conductor		
EMF_3_4_RET	EMFISIS-P503	13	from BEB	analog	12	C	P707	23	EMFISIS_3_4 Coax shield		
(spare)	EMFISIS-P503	14									
Key	EMFISIS-P503	15							populate pin 15 with keying socket		

EMFISIS P503 SDD15 Pin Layout			
EMFISIS_1_2	6		
EMFISIS_5_6	1	11	(spare)
EMF_1_2_RET	7		
EMF_5_6_RET	2	12	EMFISIS_3_4
(spare)	3	8	
(spare)	3	13	EMF_3_4_RET
(spare)	4	9	(spare)
(spare)	4	10	(spare)
Chassis	5	15	Key

RBSF EFW HARNESS DEFINITION

Harness No. **P801 Extender**
 Description: Extension for connector P801
 Revised:

Rev. G

SPACECRAFT B only

2011-09-10

R. Hochman G

(for all units)

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Lengths: 29 inches
 Leave pin numbers marked 'spare' as unpopulated.

Bill of Materials:		
Quantity	Wire & shield in meters	Part Number
1	DD26M Connector	311P407-2P-B-12
1	DD26F Connector	311P407-2S-B-12
AR	Pin Contacts	G08P1
AR	Socket Contacts	G08S1
1	EMFISIS Backshell	D9000MG00-1144.62
1	Backshell Size 2 RA	557E316M232
1	Backshell Size 2 RA	550E039M2R2H0-03
AR	#24 AWG	M22579/33-24-9
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
1	Keying Socket	FC8022D-50-1127 3
AR	Neptape	Aluminum Foil #1526

*on male connector
 *on female

P801 Connector Type: DD26F Function: BEB signal, bias and test									
Harness Signal Name	Wire From			Signal Type	Twist With	Wire Type	Wire To		Description
	Conn	Pin	Direction				Conn	Pin	
FV6_GND	P801	1	to AXB2	shield	10	C	P708	1	floating ground, coax shield of VSPHERE6
FV6_N15V	P801	2	to AXB2	power	11	B	P708	2	Preamp6 floating supply, 5mA, -15Vdc
GUARD6	P801	3	to AXB2	analog	-	A	P708	3	Guard6 bias
BIAS6	P801	4	to AXB2	analog	-	A	P708	4	Sphere6 bias
(spare)	P801	5							
USHER5	P801	6	to AXB1	analog	-	A	P708	6	Usher5 bias
ACTEST5	P801	7	to AXB1	analog	26	C	P708	7	Sphere5 test signal - stowed
FV5_P15V	P801	8	to AXB1	power	17	B	P708	8	Preamp5 floating supply, 5mA, +15Vdc
VSPHERE5	P801	9	from AXB1	analog	18	C	P708	9	VSPHERE5 coax center conductor
VSPHERE6	P801	10	from AXB2	analog	1	C	P708	10	VSPHERE6 coax center conductor
FV6_P15V	P801	11	to AXB2	power	2	B	P708	11	Preamp6 floating supply, 5mA, +15Vdc
ACTEST6	P801	12	to AXB2	analog	19	C	P708	12	Sphere6 test signal - stowed
USHER 6	P801	13	to AXB2	analog	-	A	P708	13	Usher6 bias
(spare)	P801	14							
BIAS5	P801	15	to AXB1	analog	-	A	P708	15	Sphere5 bias
GUARD5	P801	16	to AXB1	analog	-	A	P708	16	Guard5 bias
FV5_N15V	P801	17	to AXB1	power	8	B	P708	17	Preamp5 floating supply, 5mA, -15Vdc
FV5_GND	P801	18	to AXB1	shield	9	C	P708	18	floating ground, coax shield of VSPHERE5
AGND6	P801	19	to AXB2	analog	12	C	P708	19	ACTEST6 Coax shield, Analog ground
(spare)	P801	20							
(spare)	P801	21							
(spare)	P801	22							
(spare)	P801	23							
(spare)	P801	24							
(spare)	P801	25							
AGND5	P801	26	to AXB1	analog	7	C	P801	26	ACTEST5 Coax shield, Analog ground

P801 SDD26 Pin Layout				
VSPHERE6		10		
FV6_GND	1	19		AGND6
FV6_N15VA		11		
FV6_P15VA	2	20		(spare)
ACTEST6		12		
GUARD6	3	21		(spare)
USHER 6		13		
BIAS6	4	22		(spare)
(spare)		14		
(spare)	BIAS5	15		(spare)
USHER5	6	24		(spare)
GUARD5		16		
ACTEST5	7	25		(spare)
FV5_N15VA		17		
FV5_P15VA	8	26		AGND5
FV5_GND		18		
VSPHERE5	9			

P801 Connector Type: DD26M Function: BEB signal, bias and test									
Harness Signal Name	Wire From			Signal Type	Twist With	Wire Type	Wire To		Description
	Conn	Pin	Direction				Conn	Pin	
FV6_GND	P801	1	to AXB2	shield	10	C	P708	1	floating ground, coax shield of VSPHERE6
FV6_N15V	P801	2	to AXB2	power	11	B	P708	2	Preamp6 floating supply, 5mA, -15Vdc
GUARD6	P801	3	to AXB2	analog	-	A	P708	3	Guard6 bias
BIAS6	P801	4	to AXB2	analog	-	A	P708	4	Sphere6 bias
(spare)	P801	5							
USHER5	P801	6	to AXB1	analog	-	A	P708	6	Usher5 bias
ACTEST5	P801	7	to AXB1	analog	26	C	P708	7	Sphere5 test signal - stowed
FV5_P15V	P801	8	to AXB1	power	17	B	P708	8	Preamp5 floating supply, 5mA, +15Vdc
VSPHERE5	P801	9	from AXB1	analog	18	C	P708	9	VSPHERE5 coax center conductor
VSPHERE6	P801	10	from AXB2	analog	1	C	P708	10	VSPHERE6 coax center conductor
FV6_P15V	P801	11	to AXB2	power	2	B	P708	11	Preamp6 floating supply, 5mA, +15Vdc
ACTEST6	P801	12	to AXB2	analog	19	C	P708	12	Sphere6 test signal - stowed
USHER 6	P801	13	to AXB2	analog	-	A	P708	13	Usher6 bias
(spare)	P801	14							
BIAS5	P801	15	to AXB1	analog	-	A	P708	15	Sphere5 bias
GUARD5	P801	16	to AXB1	analog	-	A	P708	16	Guard5 bias
FV5_N15V	P801	17	to AXB1	power	8	B	P708	17	Preamp5 floating supply, 5mA, -15Vdc
FV5_GND	P801	18	to AXB1	shield	9	C	P708	18	floating ground, coax shield of VSPHERE5
AGND6	P801	19	to AXB2	analog	12	C	P708	19	ACTEST6 Coax shield, Analog ground
(spare)	P801	20							
(spare)	P801	21							
(spare)	P801	22							
(spare)	P801	23							
(spare)	P801	24							
(spare)	P801	25							
AGND5	P801	26	to AXB1	analog	7	C	P801	26	ACTEST5 Coax shield, Analog ground

P801 SDD26 Pin Layout				
VSPHERE6		10		
FV6_GND	1	19		AGND6
FV6_N15VA		11		
FV6_P15VA	2	20		(spare)
ACTEST6		12		
GUARD6	3	21		(spare)
USHER 6		13		
BIAS6	4	22		(spare)
(spare)	(spare)	14		
(spare)	BIAS5	15		(spare)
USHER5	6	24		(spare)
GUARD5		16		
ACTEST5	7	25		(spare)
FV5_N15VA		17		
FV5_P15VA	8	26		AGND5
FV5_GND		18		
VSPHERE5	9			

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_002**

Description: Boom Deployment

Revised: 2009-01-27
 2009-02-24
 2009-04-09
 2009-05-06
 2009-09-23
 2011-06-09

Rev. F

SPACECRAFT A & B

M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 M. Ludlam D
 M. Ludlam E
 R. Hochman F

NOTE: Wire types specified as follows:
 A: #22AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)

Notes:

Harness Length:
 P705 to P101 = 324 cm,
 P705 to P201 = 343 cm,
 P705 to P301 = 420 cm,
 P705 to P401 = 195 cm,
 P705 to P804 = 214 cm.

Leave all pinds marked 'spare' unpopulated.

Quantity (wire & shield in meters)	Type	Part Number
1	DD62M Connector	311P409-4P-B-12
1	D37F Connector	311P409-4S-B-12
4	D9F Connector	311P409-1S-B-12
AR	D socket contacts	G10S1
AR	DD pin contacts	G08P1
4	Backshell Size 1	550E039M1R3H0-02
1	Backshell Size 4	550E039M4R2H0-05
1	Backshell Size 4 Top exit	?????
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

Harness Signal Name	Wire From Conn		Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
	Conn	Pin								
(spare)	P705	1								
DOOR_P6	P705	2	to AXB2	power	3	B	P804	3		Sphere Release Primary
DOOR_P6 RTN	P705	3	to AXB2	power	2	B	P804	4		Sphere Release Primary Return
MOTOR6	P705	4	to AXB2	power	5	B	P804	5		Deployment Motor +28V
MOTOR6 RTN	P705	5	to AXB2	power	4	B	P804	6		Deployment Motor +28V Return
TEMP5	P705	6	to AXB1	analog	7	B	P804	12		Temperature Sensor
TEMP5 RTN	P705	7	to AXB1	analog	6	B	P804	13		Temperature Sensor Return
DOOR_P5	P705	8	to AXB1	power	9	B	P804	14		Sphere Release Primary
DOOR_P5 RTN	P705	9	to AXB1	power	8	B	P804	15		Sphere Release Primary Return
MOTOR5	P705	10	to AXB1	power	11	B	P804	16		Deployment Motor +28V
MOTOR5 RTN	P705	11	to AXB1	power	10	B	P804	17		Deployment Motor +28V Return
(spare)	P705	12								
MOTOR4	P705	13	to SPB4	power	14	B	P401	1		Deployment Motor +28V
MOTOR4 RTN	P705	14	to SPB4	power	13	B	P401	6		Deployment Motor +28V Return
MOTOR3	P705	15	to SPB3	power	16	B	P301	1		Deployment Motor +28V
MOTOR3 RTN	P705	16	to SPB3	power	15	B	P301	6		Deployment Motor +28V Return
(spare)	P705	17								
MOTOR2	P705	18	to SPB2	power	19	B	P201	1		Deployment Motor +28V
MOTOR2 RTN	P705	19	to SPB2	power	18	B	P201	6		Deployment Motor +28V Return
MOTOR1	P705	20	to SPB1	power	21	B	P101	1		Deployment Motor +28V
MOTOR1 RTN	P705	21	to SPB1	power	20	B	P101	6		Deployment Motor +28V Return
(spare)	P705	22								
DOOR_S6	P705	23	to AXB2	power	24	B	P804	22		Sphere Release Secondary
DOOR_S6 RTN	P705	24	to AXB2	power	23	B	P804	23		Sphere Release Secondary Return
STACER_P6	P705	25	to AXB2	power	26	B	P804	24		Stacer Release Primary
STACER_P6 RTN	P705	26	to AXB2	power	25	B	P804	25		Stacer Release Primary Return
(spare)	P705	27								
(spare)	P705	28								
DOOR_S5	P705	29	to AXB1	power	30	B	P804	32		Sphere Release Secondary
DOOR_S5 RTN	P705	30	to AXB1	power	29	B	P804	33		Sphere Release Secondary Return
STACER_P5	P705	31	to AXB1	power	32	B	P804	34		Stacer Release Primary
STACER_P5 RTN	P705	32	to AXB1	power	31	B	P804	35		Stacer Release Primary Return
(spare)	P705	33								
DOOR4_SMA	P705	34	to SPB4	power	35	B	P401	2		Sphere Release Primary
DOOR4_SMA RTN	P705	35	to SPB4	power	34	B	P401	7		Sphere Release Primary Return
DOOR3_SMA	P705	36	to SPB3	power	37	B	P301	2		Sphere Release Primary
DOOR3_SMA RTN	P705	37	to SPB3	power	36	B	P301	7		Sphere Release Primary Return
(spare)	P705	38								
DOOR2_SMA	P705	39	to SPB2	power	40	B	P201	2		Sphere Release Primary
DOOR2_SMA RTN	P705	40	to SPB2	power	39	B	P201	7		Sphere Release Primary Return
DOOR1_SMA	P705	41	to SPB1	power	42	B	P101	2		Sphere Release Primary
DOOR1_SMA RTN	P705	42	to SPB1	power	41	B	P101	7		Sphere Release Primary Return
TEMP6	P705	43	to AXB2	analog	44	B	P804	1		Temperature Sensor
TEMP6 RTN	P705	44	to AXB2	analog	43	B	P804	2		Temperature Sensor Return
SENSE6	P705	45	to AXB2	power	46	B	P804	7		Motor Turns Count
SENSE6 RTN	P705	46	to AXB2	power	45	B	P804	8		Motor Turns Count Return
STACER_S6	P705	47	to AXB2	power	48	B	P804	26		Stacer Release Primary
STACER_S6 RTN	P705	48	to AXB2	power	47	B	P804	27		Stacer Release Primary Return
SENSE5	P705	49	to AXB1	power	50	B	P804	18		Motor Turns Count
SENSE5 RTN	P705	50	to AXB1	power	49	B	P804	19		Motor Turns Count Return
STACER_S5	P705	51	to AXB1	power	52	B	P804	36		Stacer Release Primary
STACER_S5 RTN	P705	52	to AXB1	power	51	B	P804	37		Stacer Release Primary Return
(spare)	P705	53								
SENSE4	P705	54	to SPB4	power	55	B	P401	3		Motor Turns Count
SENSE4 RTN	P705	55	to SPB4	power	54	B	P401	8		Motor Turns Count Return
SENSE3	P705	56	to SPB3	power	57	B	P301	3		Motor Turns Count
SENSE3 RTN	P705	57	to SPB3	power	56	B	P301	8		Motor Turns Count Return
(spare)	P705	58								
SENSE2	P705	59	to SPB2	power	60	B	P201	3		Motor Turns Count
SENSE2 RTN	P705	60	to SPB2	power	59	B	P201	8		Motor Turns Count Return
SENSE1	P705	61	to SPB1	power	62	B	P101	3		Motor Turns Count
SENSE1 RTN	P705	62	to SPB1	power	61	B	P101	8		Motor Turns Count Return

J501 SDD26 Pin Layout			
(spare)	22		
(spare)	1	43	TEMP6
DOOR_S6	23		
DOOR_P6	2	44	TEMP6 RTN
DOOR_S6 RTN	24		
DOOR_P6 RTN	3	45	SENSE6
STACER_P6	25		
MOTOR6	4	46	SENSE6 RTN
STACER_P6 RTN	3	47	STACER_S6
MOTOR6 RTN	5	27	
(spare)	27		
TEMP5	6	48	STACER_S6 RTN
(spare)	28		
TEMP5 RTN	7	49	SENSE5
DOOR_S5	29		
DOOR_P5	8	50	SENSE5 RTN
DOOR_S5 RTN	30		
DOOR_P5 RTN	9	51	STACER_S5
STACER_P5	31		
MOTOR5	10	52	STACER_S5 RTN
STACER_P5 RTN	32		
MOTOR5 RTN	11	53	(spare)
(spare)	33		
(spare)	12	54	SENSE4
DOOR4_SMA	13	55	SENSE4 RTN
MOTOR4	14	56	SENSE3
DOOR3_SMA	15	57	SENSE3 RTN
MOTOR3	16	58	(spare)
MOTOR3 RTN	17	59	SENSE2
(spare)	18	60	SENSE2 RTN
DOOR2_SMA	19	61	SENSE1
DOOR2 RTN	20	62	SENSE1 RTN
DOOR1_SMA	21		
MOTOR1	22		
DOOR1_SMA RTN	23		
MOTOR1 RTN	24		

P101		Connector Type: D9F Function: Spin Plane Boom 1 Deployment								
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire Type	Wire To		Description	
	Conn	Pin					Conn	Pin		
MOTOR1A	P101	1	to SPB1	power	6	B	P705	20	Motor +28V	
DOOR1 SMA	P101	2	to SPB1	power	7	B	P705	41	Door SMA +28V	
SENSE1	P101	3	from SPB1	digital	8	B	P705	61	Motor Turns Count	
(spare)	P101	4								
(spare)	P101	5								
MOTOR1A RTN	P101	6	to SPB1	power	1	B	P705	21	Motor Return	
DOOR1 SMA RTN	P101	7	to SPB1	power	2	B	P705	42	Door SMA Return	
SENSE1 RTN	P101	8	from SPB1	digital	3	B	P705	62	Motor Turns Count Return	
(spare)	P101	9								

P101 D9F Pin Layout		
MOTOR1A	1	6
DOOR1 SMA	2	7
SENSE1	3	8
(spare)	4	9
(spare)	5	

P201		Connector Type: D9F Function: Spin Plane Boom 2 Deployment								
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire Type	Wire To		Description	
	Conn	Pin					Conn	Pin		
MOTOR2A	P201	1	to SPB2	power	6	B	P705	18	Motor +28V	
DOOR2 SMA	P201	2	to SPB2	power	7	B	P705	39	Door SMA +28V	
SENSE2	P201	3	from SPB2	digital	8	B	P705	59	Motor Turns Count	
(spare)	P201	4								
(spare)	P201	5								
MOTOR2A RTN	P201	6	to SPB2	power	1	B	P705	19	Motor Return	
DOOR2 SMA RTN	P201	7	to SPB2	power	2	B	P705	40	Door SMA Return	
SENSE2 RTN	P201	8	from SPB2	digital	3	B	P705	60	Motor Turns Count Return	
(spare)	P201	9								

P201 D9F Pin Layout		
MOTOR2A	1	6
DOOR2 SMA	2	7
SENSE2	3	8
(spare)	4	9
(spare)	5	

P301		Connector Type: D9F Function: Spin Plane Boom 3 Deployment								
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire Type	Wire To		Description	
	Conn	Pin					Conn	Pin		
MOTOR3A	P301	1	to SPB3	power	6	B	P705	15	Motor +28V	
DOOR3 SMA	P301	2	to SPB3	power	7	B	P705	36	Door SMA +28V	
SENSE3	P301	3	from SPB3	digital	8	B	P705	56	Motor Turns Count	
(spare)	P301	4								
(spare)	P301	5								
MOTOR3A RTN	P301	6	to SPB3	power	1	B	P705	16	Motor Return	
DOOR3 SMA RTN	P301	7	to SPB3	power	2	B	P705	37	Door SMA Return	
SENSE3 RTN	P301	8	from SPB3	digital	3	B	P705	57	Motor Turns Count Return	
(spare)	P301	9								

P301 D9F Pin Layout		
MOTOR3A	1	6
DOOR3 SMA	2	7
SENSE3	3	8
(spare)	4	9
(spare)	5	

P401		Connector Type: D9F Function: Spin Plane Boom 4 Deployment								
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire Type	Wire To		Description	
	Conn	Pin					Conn	Pin		
MOTOR4A	P401	1	to SPB4	power	6	B	P705	13	Motor +28V	
DOOR4 SMA	P401	2	to SPB4	power	7	B	P705	34	Door SMA +28V	
SENSE4	P401	3	from SPB4	digital	8	B	P705	54	Motor Turns Count	
(spare)	P401	4								
(spare)	P401	5								
MOTOR4A RTN	P401	6	to SPB4	power	1	B	P705	14	Motor Return	
DOOR4 SMA RTN	P401	7	to SPB4	power	2	B	P705	35	Door SMA Return	
SENSE4 RTN	P401	8	from SPB4	digital	3	B	P705	55	Motor Turns Count Return	
(spare)	P401	9								

P401 D9F Pin Layout		
MOTOR4A	1	6
DOOR4 SMA	2	7
SENSE4	3	8
(spare)	4	9
(spare)	5	

P804		Connector Type: D37F Function: AXB Deployment Bulkhead A Connectio								
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire Type	Wire To		Description	
	Conn	Pin					Conn	Pin		
TEMP6	P804	1	to AXB2	analog	2	B	P705	43	Temperature Sensor	
TEMP6 RTN	P804	2	to AXB2	analog	1	B	P705	44	Temperature Sensor Return	
DOOR_P6	P804	3	to AXB2	power	4	B	P705	2	Sphere Release Primary	
DOOR_P6 RTN	P804	4	to AXB2	power	3	B	P705	3	Sphere Release Primary Return	
MOTOR6	P804	5	to AXB2	power	6	B	P705	4	Deployment Motor +28V	
MOTOR6 RTN	P804	6	to AXB2	power	5	B	P705	5	Deployment Motor +28V Return	
SENSE6	P804	7	to AXB2	analog	8	B	P705	45	Motor Turns Count	
SENSE6 RTN	P804	8	to AXB2	analog	7	B	P705	46	Motor Turns Count Return	
(spare)	P804	9								
(spare)	P804	10								
(spare)	P804	11								
TEMP5	P804	12	to AXB1	analog	13	B	P705	6	Temperature Sensor	
TEMP5 RTN	P804	13	to AXB1	analog	12	B	P705	7	Temperature Sensor Return	
DOOR_P5	P804	14	to AXB1	power	15	B	P705	8	Sphere Release Primary	
DOOR_P5 RTN	P804	15	to AXB1	power	14	B	P705	9	Sphere Release Primary Return	
MOTOR5	P804	16	to AXB1	power	17	B	P705	10	Deployment Motor +28V	
MOTOR5 RTN	P804	17	to AXB1	power	16	B	P705	11	Deployment Motor +28V Return	
SENSE5	P804	18	to AXB1	analog	19	B	P705	49	Motor Turns Count	
SENSE5 RTN	P804	19	to AXB1	analog	18	B	P705	50	Motor Turns Count Return	
(spare)	P804	20								
(spare)	P804	21								
DOOR_S6	P804	22	to AXB2	power	23	B	P705	23	Sphere Release Secondary	
DOOR_S6 RTN	P804	23	to AXB2	power	22	B	P705	24	Sphere Release Secondary Return	
STACER_P6	P804	24	to AXB2	power	25	B	P705	25	Stacer Release Primary	
STACER_P6 RTN	P804	25	to AXB2	power	24	B	P705	26	Stacer Release Primary Return	
STACER_S6	P804	26	to AXB2	power	27	B	P705	47	Sphere Release Secondary	
STACER_S6 RTN	P804	27	to AXB2	power	26	B	P705	48	Sphere Release Secondary Return	
(spare)	P804	28								
(spare)	P804	29								
(spare)	P804	30								
(spare)	P804	31								
DOOR_S5	P804	32	to AXB1	power	33	B	P705	29	Sphere Release Secondary	
DOOR_S5 RTN	P804	33	to AXB1	power	32	B	P705	30	Sphere Release Secondary Return	
STACER_P5	P804	34	to AXB1	power	35	B	P705	31	Stacer Release Primary	
STACER_P5 RTN	P804	35	to AXB1	power	34	B	P705	32	Stacer Release Primary Return	
STACER_S5	P804	36	to AXB1	power	37	B	P705	51	Sphere Release Secondary	
STACER_S5 RTN	P804	37	to AXB1	power	36	B	P705	52	Sphere Release Secondary Return	

P804 SDD26 Pin Layout		
TEMP6	1	20
TEMP6 RTN	2	21
DOOR_P6	3	22
DOOR_P6 RTN	4	23
MOTOR6	5	24
MOTOR6 RTN	6	25
SENSE6	7	26
SENSE6 RTN	8	27
(spare)	9	28
(spare)	10	29
(spare)	11	30
TEMP5	12	31
TEMP5 RTN	13	32
DOOR_P5	14	33
DOOR_P5 RTN	15	34
MOTOR5	16	35
MOTOR5 RTN	17	36
SENSE5	18	37
SENSE5 RTN	19	

RBSP EFW HARNESS DEFINITION

Dwg No. **RBSP_EFW_HRN_003**

Description: EMFISIS Signals to DFB

Revised: 2009-01-27
 2009-02-24
 2009-04-10
 2011-06-09

Rev. F

SPACECRAFT A & B

M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 R. Hochman F

NOTE: Wire types specified as follows:

- A: #24AWG stranded single conductor
- B: #24AWG unshielded twisted pair (UTP)
- C: 50CIS Co-ax

Notes:

Harness Length:
 P703 to EMFISIS-P703 = 83 cm.
 P703 to EMFISIS-P606 = 83 cm.

Leave all pins marked 'spare' unpopulated.

Quantity (wire & shield in meters)	Type	Part Number
1	DD26F Connector	311P407-2S-B-12
2	DD15M Connector	311P407-1P-B-12
AR	DD socket Contacts	G08S1
AR	DD pin contacts	G08P1
1	Backshell Size 1 RA	550T039M2F0H0-04
2	EMFISIS backshells	D9000MG00-1144.62
6/72	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

P703		Connector Type: DD26F		Function: DFB EFW Connector					
Harness	Wire From	Signal	Twist	Wire	Wire To				
Signal Name	Conn	Pin	Direction	Type	With	Type	Conn	Pin	Description
SCM_X	P703	1	from EMFISIS	analog	2	C	EMFISIS-P606	1	SCM X Signal, co-ax center conductor
SCM_X_Shield	P703	2	from EMFISIS	analog	1	C	EMFISIS-P606	6	Co-ax Shield for SCM X
(spare)	P703	3							
SCM_Y	P703	4	from EMFISIS	analog	5	C	EMFISIS-P606	3	SCM Y Signal, co-ax center conductor
SCM_Y_Shield	P703	5	from EMFISIS	analog	4	C	EMFISIS-P606	8	Co-ax Shield for SCM Y
(spare)	P703	6							
SCM_Z	P703	7	from EMFISIS	analog	8	C	EMFISIS-P606	5	SCM Z Signal, co-ax center conductor
SCM_Z_Shield	P703	8	from EMFISIS	analog	7	C	EMFISIS-P606	10	Co-ax Shield for SCM Z
(spare)	P703	9							
(spare)	P703	10							
(spare)	P703	11							
(spare)	P703	12							
(spare)	P703	13							
(spare)	P703	14							
(spare)	P703	15							
(spare)	P703	16							
(spare)	P703	17							
(spare)	P703	18							
MAG_X	P703	19	from EMFISIS	analog	20	C	EMFISIS-P703	2	MAG X Signal, co-ax center conductor
MAG_X_Shield	P703	20	from EMFISIS	analog	19	C	EMFISIS-P703	7	Co-ax Shield for MAG X
(spare)	P703	21							
MAG_Y	P703	22	from EMFISIS	analog	23	C	EMFISIS-P703	3	MAG Y Signal, co-ax center conductor
MAG_Y_Shield	P703	23	from EMFISIS	analog	22	C	EMFISIS-P703	8	Co-ax Shield for MAG Y
(spare)	P703	24							
MAG_Z	P703	25	from EMFISIS	analog	26	C	EMFISIS-P703	4	MAG Z Signal, co-ax center conductor
MAG_Z_Shield	P703	26	from EMFISIS	analog	25	C	EMFISIS-P703	9	Co-ax Shield for MAG Z

P703 SDD26 Pin Layout			
(spare)		10	
SCM_X	(spare)	1	19 MAG X
SCM_X_Shield	(spare)	2	20 MAG X_Shield
(spare)		3	21 (spare)
(spare)		13	
SCM_Y	(spare)	4	22 MAG Y
SCM_Y_Shield	(spare)	5	23 MAG Y_Shield
(spare)		15	
(spare)		6	24 (spare)
SCM_Z	(spare)	7	25 MAG Z
SCM_Z_Shield	(spare)	8	26 MAG_Z_Shield
(spare)		18	
(spare)		9	

EMFISIS-P606		Connector Type: DD15M		Function: EMFISIS WAVES Signa					
Harness	Wire From	Signal	Twist	Wire	Wire To				
Signal Name	Conn	Pin	Direction	Type	With	Type	Conn	Pin	Description
SCM_X	EMFISIS-P606	1	from EMFISIS	analog	6	C	P703	1	SCM X Signal, co-ax center conductor
(spare)	EMFISIS-P606	2							
SCM_Y	EMFISIS-P606	3	from EMFISIS	analog	8	C	P703	4	SCM Y Signal, co-ax center conductor
(spare)	EMFISIS-P606	4							
SCM_Z	EMFISIS-P606	5	from EMFISIS	analog	10	C	P703	7	SCM Z Signal, co-ax center conductor
SCM_X_Shield	EMFISIS-P606	6	from EMFISIS	shield	1	C	P703	2	Co-ax Shield for SCM X
(spare)	EMFISIS-P606	7							NB: DO NOT POPULATE PIN 7
SCM_Y_Shield	EMFISIS-P606	8	from EMFISIS	shield	3	C	P703	5	Co-ax Shield for SCM Y
(spare)	EMFISIS-P606	9							
SCM_Z_Shield	EMFISIS-P606	10	from EMFISIS	shield	5	C	P703	8	Co-ax Shield for SCM Z
(spare)	EMFISIS-P606	11							
(spare)	EMFISIS-P606	12							
(spare)	EMFISIS-P606	13							
(spare)	EMFISIS-P606	14							
(spare)	EMFISIS-P606	15							

P606 SDD15 Pin Layout			
SCM_X_Shield		6	
SCM_X	(spare)	1	11 (spare)
(spare)		2	12 (spare)
SCM_Y_Shield		3	8
SCM_Y	(spare)	4	9 (spare)
(spare)		5	10 (spare)
SCM_Z_Shield		4	14 (spare)
SCM_Z	(spare)	5	15 (spare)

EMFISIS-P703		Connector Type: DD15M		Function: EMFISIS MAG Signa					
Harness	Wire From	Signal	Twist	Wire	Wire To				
Signal Name	Conn	Pin	Direction	Type	With	Type	Conn	Pin	Description
(spare)	EMFISIS-P703	1							
MAG_X	EMFISIS-P703	2	from EMFISIS	analog	7	C	P703	19	MAG X Signal, co-ax center conductor
MAG_Y	EMFISIS-P703	3	from EMFISIS	analog	8	C	P703	22	MAG Y Signal, co-ax center conductor
MAG_Z	EMFISIS-P703	4	from EMFISIS	analog	9	C	P703	25	MAG Z Signal, co-ax center conductor
(spare)	EMFISIS-P703	5							
(spare)	EMFISIS-P703	6							
MAG_X_Shield	EMFISIS-P703	7	from EMFISIS	shield	2	C	P703	20	Co-ax Shield for MAG X
MAG_Y_Shield	EMFISIS-P703	8	from EMFISIS	shield	3	C	P703	23	Co-ax Shield for MAG Y
MAG_Z_Shield	EMFISIS-P703	9	from EMFISIS	shield	4	C	P703	26	Co-ax Shield for MAG Z
(spare)	EMFISIS-P703	10							
(spare)	EMFISIS-P703	11							
(spare)	EMFISIS-P703	12							NB: DO NOT POPULATE PIN 12
(spare)	EMFISIS-P703	13							
(spare)	EMFISIS-P703	14							
(spare)	EMFISIS-P703	15							

P703 SDD15 Pin Layout			
(spare)	(spare)	1	6
(spare)		7	11 (spare)
MAG_X_Shield		2	12 (spare)
MAG_Y_Shield		3	8
MAG_Y	(spare)	4	9 (spare)
MAG_Z_Shield		5	10 (spare)
MAG_Z	(spare)	4	14 (spare)
(spare)		5	15 (spare)

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_004_SCA**

Description: Signal Bulkhead A to Bulkhead B1 & C1

Revised: 2009-01-27
 2009-02-24
 2009-04-10
 2009-05-06
 2011-06-09

Rev. F

SPACECRAFT A

M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 M. Ludlam D
 R. Hochman F

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 J801 to J802 = 85',
 J801 to J803 = 74',
 Split in harness is at J801

Leave contacts marked 'spare' unpopulated

Quantity (wire & shield in meters)		
Type	Part Number	
1 DD26M Connector	311P409-4P-B-12	
2 DD15F Connector	311P407-2S-B-12	
AR DD socket Contacts	G08S1	
AR DD pin contacts	G08P1	
2 Backshell Size 1 RA	557E316M130	
1 Backshell Size 2 RA	557E316M232	
AR #24AWG Wire	M22579/33-24-9	
AR UTP Wire #24 AWG	M27500-24SC2U00	
AR 50CIS Co-ax	ESA/SCC 3902001 01B3	
AR Black Kapton Tape	DM151 w/ 3M 9703	
AR Neptape	Aluminum Foil #1526	

J801		Connector Type: DD26M Function: AXB signal at Bulkhead J									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
FV6_GND	J801	1	to AXB2	shield	10	C	J803	6	floating ground, coax shield of VSPHERE6		
FV6_N15VA	J801	2	to AXB2	power	11	B	J803	7	Preamp6 floating supply, 5mA, +15Vdc		
GUARD6	J801	3	to AXB2	analog	-	A	J803	4	Guard6 bias		
BIAS6	J801	4	to AXB2	analog	-	A	J803	3	Sphere6 bias		
(spare)	J801	5									
USHER5	J801	6	to AXB1	analog	-	A	J802	8	Usher5 bias		
ACTEST5	J801	7	to AXB1	analog	26	C	J802	14	Sphere5 test signal - stowed		
FV5_P15VA	J801	8	to AXB1	power	17	B	J802	2	Preamp5 floating supply, 5mA, +15Vdc		
VSPHERE5	J801	9	from AXB1	analog	18	C	J802	1	VSPHERE5 coax center conductor		
VSPHERE6	J801	10	from AXB2	analog	1	C	J803	1	VSPHERE6 coax center conductor		
FV6_P15VA	J801	11	to AXB2	power	2	B	J803	2	Preamp6 floating supply, 5mA, +15Vdc		
ACTEST6	J801	12	to AXB2	analog	19	C	J803	14	Sphere6 test signal - stowed		
USHER 6	J801	13	to AXB2	analog	-	A	J803	8	Usher6 bias		
(spare)	J801	14									
BIAS5	J801	15	to AXB1	analog	-	A	J802	3	Sphere5 bias		
GUARD5	J801	16	to AXB1	analog	-	A	J802	4	Guard5 bias		
FV5_N15VA	J801	17	to AXB1	power	8	B	J802	7	Preamp5 floating supply, 5mA, +15Vdc		
FV5_GND	J801	18	to AXB1	shield	9	C	J802	6	floating ground, coax shield of VSPHERE5		
AGND6	J801	19	to AXB2	analog	12	C	J803	15	ACTest6 Coax shield, Analog ground		
(spare)	J801	20									
(spare)	J801	21									
(spare)	J801	22									
(spare)	J801	23									
(spare)	J801	24									
(spare)	J801	25									
AGND5	J801	26	to AXB1	analog	7	C	J802	15	ACTest5 Coax shield, Analog ground		

J801 SDD26 Pin Layout			
VSPHERE6	10		
FV6_GND	1	10	AGND6
FV6_P15VA	11	19	(spare)
FV6_N15VA	2	20	(spare)
ACTEST6	3	12	(spare)
GUARD6	3	21	(spare)
USHER 6	3	13	(spare)
BIAS6	4	22	(spare)
(spare)	5	23	(spare)
BIAS5	5	15	(spare)
USHER5	6	24	(spare)
GUARD5	6	16	(spare)
ACTEST5	7	25	(spare)
FV5_N15VA	7	17	(spare)
FV5_P15VA	8	26	AGND5
FV5_GND	8	18	(spare)
VSPHERE5	9	18	(spare)

J802		Connector Type: DD15F Function: AXB1 signal at Bulkhead B									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE5	J802	1	to BEB	analog	6	C	J801	9	VSPHERE5 coax center conductor		
FV5_P15VA	J802	2	from BEB	power	7	B	J801	8	Preamp5 floating supply, 5mA, +15Vdc		
BIAS5	J802	3	from BEB	analog	-	A	J801	15	Sphere5 bias		
GUARD5	J802	4	from BEB	analog	-	A	J801	16	Guard5 bias		
(spare)	J802	5									
FV5_GND	J802	6	from BEB	shield	1	C	J801	18	floating ground, coax shield of VSPHERE5		
FV5_N15VA	J802	7	from BEB	power	2	B	J801	17	Preamp5 floating supply, 5mA, +15Vdc		
USHER5	J802	8	from BEB	analog	-	A	J801	6	Usher5 bias		
(spare)	J802	9									
(spare)	J802	10									
(spare)	J802	11									
(spare)	J802	12									
(spare)	J802	13									
ACTEST5	J802	14	from BEB	digital	15	C	J801	7	Sphere5 test signal - stowed		
AGND5	J802	15	from BEB	analog	14	C	J801	26	Analog ground		

J802 SDD15 Pin Layout			
FV5_GND	6		
VSPHERE5	1	6	(spare)
FV5_N15VA	2	7	(spare)
FV5_P15VA	2	12	(spare)
USHER5	2	8	(spare)
BIAS5	3	13	(spare)
(spare)	3	9	(spare)
GUARD5	4	14	ACTEST5
(spare)	4	10	(spare)
(spare)	5	15	AGND5

J803		Connector Type: DD15F Function: AXB2 signal at Bulkhead C									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE6	J803	1	to BEB	analog	6	C	J801	10	VSPHERE6 coax center conductor		
FV6_P15VA	J803	2	from BEB	power	7	B	J801	11	Preamp6 floating supply, 5mA, +15Vdc		
BIAS6	J803	3	from BEB	analog	-	A	J801	4	Sphere6 bias		
GUARD6	J803	4	from BEB	analog	-	A	J801	3	Guard6 bias		
(spare)	J803	5									
FV6_GND	J803	6	from BEB	shield	1	C	J801	1	floating ground, coax shield of VSPHERE6		
FV6_N15VA	J803	7	from BEB	power	2	B	J801	2	Preamp6 floating supply, 5mA, +15Vdc		
USHER6	J803	8	from BEB	analog	-	A	J801	13	Usher6 bias		
(spare)	J803	9									
(spare)	J803	10									
(spare)	J803	11									
(spare)	J803	12									
(spare)	J803	13									
ACTEST6	J803	14	from BEB	digital	15	C	J801	12	Sphere6 test signal - stowed		
AGND6	J803	15	from BEB	analog	14	C	J801	19	Analog ground		

J803 SDD15 Pin Layout			
FV6_GND	6		
VSPHERE6	1	11	(spare)
FV6_N15VA	2	7	(spare)
FV6_P15VA	2	12	(spare)
USHER6	2	8	(spare)
BIAS6	3	13	(spare)
(spare)	3	9	(spare)
GUARD6	4	14	ACTEST6
(spare)	4	10	(spare)
(spare)	5	15	AGND6

RBSP EFW HARNESS DEFINITION
 Harness No. **RBSP_EFW_HRN_004_SCB**
 Description: Signal Bulkhead A to Bulkhead B & C
 Revised: 2009-01-27
 2009-02-24
 2009-04-10
 2009-05-06

Rev. D
 M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 M. Ludlam D

SPACECRAFT B

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 J801 to J802 = 92",
 J801 to J803 = 80",
 Split in harness is at J801

Unless where noted all pins should be populated in the connectors.

Quantity (wire & shield in meters)		
Wire From	Type	Part Number
1	DD26M Connector	311P409-4P-B-12
2	DD15F Connector	311P407-2S-B-12
AR	DD socket Contacts	G08S1
AR	DD pin contacts	G08P1
2	Backshell Size 1 RA	557E316M130
1	Backshell Size 2 RA	557E316M232
AR	#24AWG Wire	M22579/33-24-9
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

J801		Connector Type: DD26M									
Function: AXB signal at Bulkhead I											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Length	Wire To Conn	Pin	Description	
FV6_GND	J801	1	to AXB2	shield	10	C	1.27	J803	6	floating ground, coax shield of VSPHERE6	
FV6_N15VA	J801	2	to AXB2	power	11	B	1.27	J803	7	Preamp6 floating supply, 5mA, -15Vdc	
GUARD6	J801	3	to AXB2	analog	-	A	1.27	J803	4	Guard6 bias	
BIAS6	J801	4	to AXB2	analog	-	A	1.27	J803	3	Sphere6 bias	
(spare)	J801	5									
USHER5	J801	6	to AXB1	analog	-	A	1.80	J802	8	Usher5 bias	
ACTEST5	J801	7	to AXB1	analog	26	C	1.80	J802	14	Sphere5 test signal - stowed	
FV5_P15VA	J801	8	to AXB1	power	17	B	1.80	J802	2	Preamp5 floating supply, 5mA, +15Vdc	
VSPHERE5	J801	9	from AXB1	analog	18	C	1.80	J802	1	VSPHERE5 coax center conductor	
VSPHERE6	J801	10	from AXB2	analog	1	C	1.27	J803	1	VSPHERE6 coax center conductor	
FV6_P15VA	J801	11	to AXB2	power	2	B	1.27	J803	2	Preamp6 floating supply, 5mA, +15Vdc	
ACTEST6	J801	12	to AXB2	analog	19	C	1.27	J803	14	Sphere6 test signal - stowed	
USHER6	J801	13	to AXB2	analog	-	A	1.27	J803	8	Usher6 bias	
(spare)	J801	14									
BIAS5	J801	15	to AXB1	analog	-	A	1.80	J802	3	Sphere5 bias	
GUARD5	J801	16	to AXB1	analog	-	A	1.80	J802	4	Guard5 bias	
FV5_N15VA	J801	17	to AXB1	power	8	B	1.80	J802	7	Preamp5 floating supply, 5mA, -15Vdc	
FV5_GND	J801	18	to AXB1	shield	9	C	1.80	J802	6	floating ground, coax shield of VSPHERE5	
AGND6	J801	19	to AXB2	analog	12	C	1.27	J803	15	ACTest6 Coax shield, Analog ground	
(spare)	J801	20									
(spare)	J801	21									
(spare)	J801	22									
(spare)	J801	23									
(spare)	J801	24									
(spare)	J801	25									
AGND5	J801	26	to AXB1	analog	7	C	1.80	J802	15	ACTest5 Coax shield, Analog ground	

J801 SDD26 Pin Layout			
VSPHERE6	10		
FV6_GND	1	19	AGND6
FV6_P15VA	11		
FV6_N15VA	2	20	(spare)
ACTEST6	12		
GUARD6	3	21	(spare)
USHER6	13		
BIAS6	4	22	(spare)
(spare)	14	23	(spare)
(spare)	5	15	(spare)
BIAS5	15		
USHER5	6	24	(spare)
GUARD5	16		
ACTEST5	7	25	(spare)
FV5_N15VA	17		
FV5_P15VA	8	26	AGND5
FV5_GND	18		
VSPHERE5	9		

J802		Connector Type: DD15F									
Function: AXB1 signal at Bulkhead I											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Length	Wire To Conn	Pin	Description	
VSPHERE5	J802	1	to BEB	analog	6	C	1.80	J801	9	VSPHERE5 coax center conductor	
FV5_P15VA	J802	2	from BEB	power	7	B	1.80	J801	8	Preamp5 floating supply, 5mA, +15Vdc	
BIAS5	J802	3	from BEB	analog	-	A	1.80	J801	15	Sphere5 bias	
GUARD5	J802	4	from BEB	analog	-	A	1.80	J801	16	Guard5 bias	
(spare)	J802	5									
FV5_GND	J802	6	from BEB	shield	1	C	1.80	J801	18	floating ground, coax shield of VSPHERE5	
FV5_N15VA	J802	7	from BEB	power	2	B	1.80	J801	17	Preamp5 floating supply, 5mA, -15Vdc	
USHER5	J802	8	from BEB	analog	-	A	1.80	J801	6	Usher5 bias	
(spare)	J802	9									
(spare)	J802	10									
(spare)	J802	11									
(spare)	J802	12									
(spare)	J802	13									
ACTEST5	J802	14	from BEB	digital	15	C	1.80	J801	7	Sphere5 test signal - stowed	
AGND5	J802	15	from BEB	analog	14	C	1.80	J801	26	Analog ground	

J802 SDD15 Pin Layout			
FV5_GND	6		
VSPHERE5	1	11	(spare)
FV5_N15VA	7	12	(spare)
FV5_P15VA	2	12	(spare)
USHER5	8		
BIAS5	3	13	(spare)
(spare)	9		
GUARD5	4	14	ACTEST5
(spare)	(spare)	10	
(spare)	5	15	AGND5

J803		Connector Type: DD15F									
Function: AXB2 signal at Bulkhead C											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Length	Wire To Conn	Pin	Description	
VSPHERE6	J803	1	to BEB	analog	6	C	1.27	J801	10	VSPHERE6 coax center conductor	
FV6_P15VA	J803	2	from BEB	power	7	B	1.27	J801	11	Preamp6 floating supply, 5mA, +15Vdc	
BIAS6	J803	3	from BEB	analog	-	A	1.27	J801	4	Sphere6 bias	
GUARD6	J803	4	from BEB	analog	-	A	1.27	J801	3	Guard6 bias	
(spare)	J803	5									
FV6_GND	J803	6	from BEB	shield	1	C	1.27	J801	1	floating ground, coax shield of VSPHERE6	
FV6_N15VA	J803	7	from BEB	power	2	B	1.27	J801	2	Preamp6 floating supply, 5mA, -15Vdc	
USHER6	J803	8	from BEB	analog	-	A	1.27	J801	13	Usher6 bias	
(spare)	J803	9									
(spare)	J803	10									
(spare)	J803	11									
(spare)	J803	12									
(spare)	J803	13									
ACTEST6	J803	14	from BEB	digital	15	C	1.27	J801	12	Sphere6 test signal - stowed	
AGND6	J803	15	from BEB	analog	14	C	1.27	J801	19	Analog ground	

J803 SDD15 Pin Layout			
FV6_GND	6		
VSPHERE6	1	11	(spare)
FV6_N15VA	7	12	(spare)
FV6_P15VA	2	12	(spare)
USHER6	8		
BIAS6	3	13	(spare)
(spare)	9		
GUARD6	4	14	ACTEST6
(spare)	(spare)	10	
(spare)	5	15	AGND6

RBSP EFW HARNESS DEFINITION
Harness No. RBSP_EFW_HRN_005_SCA

Description: Power Bulkhead A to Bulkhead B1 and C1

Revised: 2009-01-27
 2009-02-24
 2009-10-04
 2009-05-06
 2009-09-23
 2011-06-09

Rev. F

SPACECRAFT A

M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 M. Ludlam D
 M. Ludlam E
 R. Hochman F

NOTE: Wire types specified as follows:

- A: #24AWG stranded single conductor
- B: #24AWG unshielded twisted pair (UTP)
- C: 50CIS Co-ax

Notes:

Harness Length:
 J804 to J805 = 73"
 J804 to J806 = 56"
 Split in harness should occur at J804

Leave contacts marked 'spare' unpopulated

Bill of Materials:		
Quantity (wire & shield in meters)	Type	Part Number
1	D37M Connector	311P409-4P-B-12
AR	D pin contacts	G10P1
AR	DD socket contacts	G08S1
2	DD26F Connector	311P407-2S-B-12
2	Sommer Size 2 Backshell	DW214-15-2-6-9316
1	Backshell Size 4	S57E316M432
AR	UTP Wire #24 AWG	MZ7500-24S-C2J00
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

J804									
Connector Type: D37M									
Function: AXB1 Deployment Bulkhead A Connection									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
TEMP6	J804	1	to AXB2	analog	2	B	J806	1	Temperature Sensor
TEMP6 RTN	J804	2	to AXB2	analog	1	B	J806	2	Temperature Sensor Return
DOOR_P6	J804	3	to AXB2	power	4	B	J806	21	Sphere Release Primary
DOOR_P6 RTN	J804	4	to AXB2	power	3	B	J806	22	Sphere Release Primary Return
MOTOR6	J804	5	to AXB2	power	6	B	J806	8	Deployment Motor +28V
MOTOR6 RTN	J804	6	to AXB2	power	5	B	J806	17	Deployment Motor +28V Return
SENSE6	J804	7	to AXB2	analog	8	B	J806	25	Motor Turns Count
SENSE6 RTN	J804	8	to AXB2	analog	7	B	J806	26	Motor Turns Count Return
(spare)	J804	9							
(spare)	J804	10							
(spare)	J804	11							
TEMP5	J804	12	to AXB1	analog	13	B	J805	1	Temperature Sensor
TEMP5 RTN	J804	13	to AXB1	analog	12	B	J805	2	Temperature Sensor Return
DOOR_P5	J804	14	to AXB1	power	15	B	J805	21	Sphere Release Primary
DOOR_P5 RTN	J804	15	to AXB1	power	14	B	J805	22	Sphere Release Primary Return
MOTOR5	J804	16	to AXB1	power	17	B	J805	8	Deployment Motor +28V
MOTOR5 RTN	J804	17	to AXB1	power	16	B	J805	17	Deployment Motor +28V Return
SENSE5	J804	18	to AXB1	analog	19	B	J805	25	Motor Turns Count
SENSE5 RTN	J804	19	to AXB1	analog	18	B	J805	26	Motor Turns Count Return
(spare)	J804	20							
(spare)	J804	21							
DOOR_S6	J804	22	to AXB2	power	23	B	J806	23	Sphere Release Secondary
DOOR_S6 RTN	J804	23	to AXB2	power	22	B	J806	24	Sphere Release Secondary Return
STACER_P6	J804	24	to AXB2	power	25	B	J806	9	Stacer Release Primary
STACER_P6 RTN	J804	25	to AXB2	power	24	B	J806	18	Stacer Release Primary Return
STACER_S6	J804	26	to AXB2	power	27	B	J806	19	Sphere Release Secondary
STACER_S6 RTN	J804	27	to AXB2	power	26	B	J806	20	Sphere Release Secondary Return
(spare)	J804	28							
(spare)	J804	29							
(spare)	J804	30							
(spare)	J804	31							
DOOR_S5	J804	32	to AXB1	power	33	B	J805	23	Sphere Release Secondary
DOOR_S5 RTN	J804	33	to AXB1	power	32	B	J805	24	Sphere Release Secondary Return
STACER_P5	J804	34	to AXB1	power	35	B	J805	9	Stacer Release Primary
STACER_P5 RTN	J804	35	to AXB1	power	34	B	J805	18	Stacer Release Primary Return
STACER_S5	J804	36	to AXB1	power	37	B	J805	19	Sphere Release Secondary
STACER_S5 RTN	J804	37	to AXB1	power	36	B	J805	20	Sphere Release Secondary Return

J804 SDD26 Pin Layout		
TEMP6	1	20 (spare)
TEMP6 RTN	2	21 (spare)
DOOR_P6	3	22 DOOR_S6
DOOR_P6 RTN	4	23 DOOR_S6 RTN
MOTOR6	5	24 STACER_P6
MOTOR6 RTN	6	25 STACER_P6 RTN
SENSE6	7	26 STACER_S6
SENSE6 RTN	8	27 STACER_S6 RTN
(spare)	9	28 (spare)
(spare)	10	29 (spare)
(spare)	11	30 (spare)
TEMP5	12	31 (spare)
TEMP5 RTN	13	32 DOOR_S5
DOOR_P5	14	33 DOOR_S5 RTN
DOOR_P5 RTN	15	34 STACER_P5
MOTOR5	16	35 STACER_P5 RTN
MOTOR5 RTN	17	36 STACER_S5
SENSE5	18	37 STACER_S5 RTN
SENSE5 RTN	19	

J805									
Connector Type: DD26F									
Function: AXB1 Deployment Power									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
TEMP5	J805	1	to AXB1	power	2	B	J804	12	Temperature Sensor
TEMP5 RTN	J805	2	to AXB1	power	1	B	J804	13	Temperature Sensor Return
(spare)	J805	3							
(spare)	J805	4							
(spare)	J805	5							
(spare)	J805	6							
(spare)	J805	7							
MOTOR5	J805	8	to AXB1 Cage	power	17	B	J804	16	Deployment Motor +28V
STACER_P5	J805	9	to AXB1 Cage	power	18	B	J804	34	Stacer Release Primary
(spare)	J805	10							
(spare)	J805	11							
(spare)	J805	12							
(spare)	J805	13							
(spare)	J805	14							
(spare)	J805	15							
(spare)	J805	16							
MOTOR5 RTN	J805	17	to AXB1 Cage	power	8	B	J804	17	Deployment Motor +28V Return
STACER_P5 RTN	J805	18	to AXB1 Cage	power	9	B	J804	35	Stacer Release Primary Return
STACER_S5	J805	19	to AXB1 Cage	power	20	B	J804	36	Stacer Release Secondary
STACER_S5 RTN	J805	20	to AXB1 Cage	power	19	B	J804	37	Stacer Release Secondary Return
DOOR_P5	J805	21	to AXB1 Cage	power	22	B	J804	14	Sphere Release Primary
DOOR_P5 RTN	J805	22	to AXB1 Cage	power	21	B	J804	15	Sphere Release Primary Return
DOOR_S5	J805	23	to AXB1 Cage	power	24	B	J804	32	Sphere Release Secondary
DOOR_S5 RTN	J805	24	to AXB1 Cage	power	23	B	J804	33	Sphere Release Secondary Return
SENSE5	J805	25	to AXB1 Cage	digital	26	B	J804	18	Motor Turns Count
SENSE5 RTN	J805	26	to AXB1 Cage	digital	25	B	J804	19	Motor Turns Count Return

J805 SDD26 Pin Layout (Ref)		
(spare)	10	
TEMP5	1	19 STACER_S5
TEMP5 RTN	2	20 STACER_S5 RTN
(spare)	3	21 DOOR_P5
(spare)	4	22 DOOR_P5 RTN
(spare)	5	23 DOOR_S5
(spare)	6	24 DOOR_S5 RTN
(spare)	7	25 SENSE5
MOTOR5 RTN	8	26 SENSE5 RTN
MOTOR5	9	

J806		Connector Type: DD26F							
Harness		Function: AXB 2 Deployment Power							
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
TEMP6	J806	1	to AXB2	power	2	B	J804	1	Temperature Sensor
TEMP6 RTN	J806	2	to AXB2	power	1	B	J804	2	Temperature Sensor Return
(spare)	J806	3							
(spare)	J806	4							
(spare)	J806	5							
(spare)	J806	6							
(spare)	J806	7							
MOTOR6	J806	8	to AXB2 Cage	power	17	B	J804	5	Deployment Motor +28V
STACER P6	J806	9	to AXB2 Cage	power	18	B	J804	24	Stacer Release Primary
(spare)	J806	10							
(spare)	J806	11							
(spare)	J806	12							
(spare)	J806	13							
(spare)	J806	14							
(spare)	J806	15							
(spare)	J806	16							
MOTOR6 RTN	J806	17	to AXB2 Cage	power	8	B	J804	6	Deployment Motor +28V Return
STACER P6 RTN	J806	18	to AXB2 Cage	power	9	B	J804	25	Stacer Release Primary Return
STACER S6	J806	19	to AXB2 Cage	power	20	B	J804	26	Stacer Release Secondary
STACER S6 RTN	J806	20	to AXB2 Cage	power	19	B	J804	27	Stacer Release Secondary Return
DOOR P6	J806	21	to AXB2 Cage	power	22	B	J804	3	Sphere Release Primary
DOOR P6 RTN	J806	22	to AXB2 Cage	power	21	B	J804	4	Sphere Release Primary Return
DOOR S6	J806	23	to AXB2 Cage	power	24	B	J804	22	Sphere Release Secondary
DOOR S6 RTN	J806	24	to AXB2 Cage	power	23	B	J804	23	Sphere Release Secondary Return
SENSE6	J806	25	to AXB2 Cage	digital	26	B	J804	7	Motor Turns Count
SENSE6 RTN	J806	26	to AXB2 Cage	digital	25	B	J804	8	Motor Turns Count Return

J806 SDD26 Pin Layout				
(spare)	1	10		
TEMP6	1	19	STACER S6	
(spare)				
TEMP6 RTN	2	20	STACER S6 RTN	
(spare)				
(spare)	3	21	DOOR P6	
(spare)				
(spare)	4	13		
(spare)	(spare)	4	22	DOOR P6 RTN
(spare)	(spare)	14		
(spare)		5	23	DOOR S6
(spare)	(spare)	15		
(spare)		6	24	DOOR S6 RTN
(spare)	(spare)	16		
(spare)		7	25	SENSE6
(spare)				
	MOTOR6 RTN	17		
MOTOR6		8	26	SENSE6 RTN
STACER P6 RTN		18		
STACER P6		9		

RBSP EFW HARNESS DEFINITION
Harness No. RBSP_EFW_HRN_005_SCB

Description: Power Bulkhead A to Bulkhead B and C
 Revised: 2009-01-27

Rev. F
 M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 M. Ludlam D
 M. Ludlam E
 R. Hochman F

SPACECRAFT B

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 J804 to J805 = 224cm,
 J804 to J806 = 181cm.
 Split in harness should occur at J804

Leave pins marked 'spare' unpopulated

Bill of Materials:		
Quantity (wire & shield in meters)	Type	Part Number
1	D37M Connector	311P409-4P-B-12
AR	D pin contacts	G10P1
AR	DD socket contacts	G08S1
2	DD26F Connector	311P407-2S-B-12
2	Backshell Size 2	557E316M232
1	Backshell Size 4	557E316M432
AR	UTP Wire #24 AWG	M27500-24SCU00
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

J804		Connector Type: D37M									
Function: AXB Deployment Bulkhead A Connection											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
TEMP6	J804	1	to AXB2	analog	2	B	J806	1	Temperature Sensor		
TEMP6 RTN	J804	2	to AXB2	analog	1	B	J806	2	Temperature Sensor Return		
DOOR_P6	J804	3	to AXB2	power	4	B	J806	21	Sphere Release Primary		
DOOR_P6 RTN	J804	4	to AXB2	power	3	B	J806	22	Sphere Release Primary Return		
MOTOR6	J804	5	to AXB2	power	6	B	J806	8	Deployment Motor +28V		
MOTOR6 RTN	J804	6	to AXB2	power	5	B	J806	17	Deployment Motor +28V Return		
SENSE6	J804	7	to AXB2	analog	8	B	J806	25	Motor Turns Count		
SENSE6 RTN	J804	8	to AXB2	analog	7	B	J806	26	Motor Turns Count Return		
(spare)	J804	9									
(spare)	J804	10									
(spare)	J804	11									
TEMP5	J804	12	to AXB1	analog	13	B	J805	1	Temperature Sensor		
TEMP5 RTN	J804	13	to AXB1	analog	12	B	J805	2	Temperature Sensor Return		
DOOR_P5	J804	14	to AXB1	power	15	B	J805	21	Sphere Release Primary		
DOOR_P5 RTN	J804	15	to AXB1	power	14	B	J805	22	Sphere Release Primary Return		
MOTOR5	J804	16	to AXB1	power	17	B	J805	8	Deployment Motor +28V		
MOTOR5 RTN	J804	17	to AXB1	power	16	B	J805	17	Deployment Motor +28V Return		
SENSE5	J804	18	to AXB1	analog	19	B	J805	25	Motor Turns Count		
SENSE5 RTN	J804	19	to AXB1	analog	18	B	J805	26	Motor Turns Count Return		
(spare)	J804	20									
(spare)	J804	21									
DOOR_S6	J804	22	to AXB2	power	23	B	J806	23	Sphere Release Secondary		
DOOR_S6 RTN	J804	23	to AXB2	power	22	B	J806	24	Sphere Release Secondary Return		
STACER_P6	J804	24	to AXB2	power	25	B	J806	9	Stacer Release Primary		
STACER_P6 RTN	J804	25	to AXB2	power	24	B	J806	18	Stacer Release Primary Return		
STACER_S6	J804	26	to AXB2	power	27	B	J806	19	Sphere Release Secondary		
STACER_S6 RTN	J804	27	to AXB2	power	26	B	J806	20	Sphere Release Secondary Return		
(spare)	J804	28									
(spare)	J804	29									
(spare)	J804	30									
(spare)	J804	31									
DOOR_S5	J804	32	to AXB1	power	33	B	J805	23	Sphere Release Secondary		
DOOR_S5 RTN	J804	33	to AXB1	power	32	B	J805	24	Sphere Release Secondary Return		
STACER_P5	J804	34	to AXB1	power	35	B	J805	9	Stacer Release Primary		
STACER_P5 RTN	J804	35	to AXB1	power	34	B	J805	18	Stacer Release Primary Return		
STACER_S5	J804	36	to AXB1	power	37	B	J805	19	Sphere Release Secondary		
STACER_S5 RTN	J804	37	to AXB1	power	36	B	J805	20	Sphere Release Secondary Return		

J804 SDD26 Pin Layout		
TEMP6	1	20 (spare)
TEMP6 RTN	2	
DOOR_P6	3	21 (spare)
DOOR_P6 RTN	4	22 DOOR_S6
MOTOR6	5	23 DOOR_S6 RTN
MOTOR6 RTN	6	24 STACER_P6
MOTOR6 RTN	6	25 STACER_P6 RTN
SENSE6	7	26 STACER_S6
SENSE6 RTN	8	27 STACER_S6 RTN
(spare)	9	28 (spare)
(spare)	10	29 (spare)
(spare)	11	30 (spare)
TEMP5	12	31 (spare)
TEMP5 RTN	13	32 DOOR_S5
DOOR_P5	14	33 DOOR_S5 RTN
DOOR_P5 RTN	15	34 STACER_P5
MOTOR5	16	35 STACER_P5 RTN
MOTOR5 RTN	17	36 STACER_S5
SENSE5	18	37 STACER_S5 RTN
SENSE5 RTN	19	

J805		Connector Type: DD26F									
Function: AXB1 Deployment Power											
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
TEMP5	J805	1	to AXB1	power	2	B	J804	12	Temperature Sensor		
TEMP5 RTN	J805	2	to AXB1	power	1	B	J804	13	Temperature Sensor Return		
(spare)	J805	3									
(spare)	J805	4									
(spare)	J805	5									
(spare)	J805	6									
(spare)	J805	7									
MOTOR5	J805	8	to AXB1 Cage	power	17	B	J804	16	Deployment Motor +28V		
STACER_P5	J805	9	to AXB1 Cage	power	18	B	J804	34	Stacer Release Primary		
(spare)	J805	10									
(spare)	J805	11									
(spare)	J805	12									
(spare)	J805	13									
(spare)	J805	14									
(spare)	J805	15									
(spare)	J805	16									
MOTOR5 RTN	J805	17	to AXB1 Cage	power	8	B	J804	17	Deployment Motor +28V Return		
STACER_P5 RTN	J805	18	to AXB1 Cage	power	9	B	J804	35	Stacer Release Primary Return		
STACER_S5	J805	19	to AXB1 Cage	power	20	B	J804	36	Stacer Release Secondary		
STACER_S5 RTN	J805	20	to AXB1 Cage	power	19	B	J804	37	Stacer Release Secondary Return		
DOOR_P5	J805	21	to AXB1 Cage	power	22	B	J804	14	Sphere Release Primary		
DOOR_P5 RTN	J805	22	to AXB1 Cage	power	21	B	J804	15	Sphere Release Primary Return		
DOOR_S5	J805	23	to AXB1 Cage	power	24	B	J804	32	Sphere Release Secondary		
DOOR_S5 RTN	J805	24	to AXB1 Cage	power	23	B	J804	33	Sphere Release Secondary Return		
SENSE5	J805	25	to AXB1 Cage	digital	26	B	J804	18	Motor Turns Count		
SENSE5 RTN	J805	26	to AXB1 Cage	digital	25	B	J804	19	Motor Turns Count Return		

J501 SDD26 Pin Layout (Ref)		
(spare)	10	
TEMP5	1	19 STACER_S5
TEMP5 RTN	2	20 STACER_S5 RTN
(spare)	3	12
(spare)	4	21 DOOR_P5
(spare)	5	13
(spare)	6	22 DOOR_P5 RTN
(spare)	7	23 DOOR_S5
(spare)	8	15
(spare)	9	24 DOOR_S5 RTN
(spare)	10	16
(spare)	11	25 SENSE5
MOTOR5 RTN	12	17
MOTOR5	13	26 SENSE5 RTN
STACER_P5 RTN	14	18
STACER_P5	15	9

J806		Connector Type: DD26F							
Function: AXB 2 Deployment Power									
Harness	Wire From	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To	Pin	Description
Signal Name	Conn						Conn		
TEMP6	J806	1	to AXB2	power	2	B	J804	1	Temperature Sensor
TEMP6 RTN	J806	2	to AXB2	power	1	B	J804	2	Temperature Sensor Return
(spare)	J806	3							
(spare)	J806	4							
(spare)	J806	5							
(spare)	J806	6							
(spare)	J806	7							
MOTOR6	J806	8	to AXB2 Cage	power	17	B	J804	5	Deployment Motor +28V
STACER P6	J806	9	to AXB2 Cage	power	18	B	J804	24	Stacer Release Primary
(spare)	J806	10							
(spare)	J806	11							
(spare)	J806	12							
(spare)	J806	13							
(spare)	J806	14							
(spare)	J806	15							
(spare)	J806	16							
MOTOR6 RTN	J806	17	to AXB2 Cage	power	8	B	J804	6	Deployment Motor +28V Return
STACER P6 RTN	J806	18	to AXB2 Cage	power	9	B	J804	25	Stacer Release Primary Return
STACER S6	J806	19	to AXB2 Cage	power	20	B	J804	26	Stacer Release Secondary
STACER S6 RTN	J806	20	to AXB2 Cage	power	19	B	J804	27	Stacer Release Secondary Return
DOOR P6	J806	21	to AXB2 Cage	power	22	B	J804	3	Sphere Release Primary
DOOR P6 RTN	J806	22	to AXB2 Cage	power	21	B	J804	4	Sphere Release Primary Return
DOOR S6	J806	23	to AXB2 Cage	power	24	B	J804	22	Sphere Release Secondary
DOOR S6 RTN	J806	24	to AXB2 Cage	power	23	B	J804	23	Sphere Release Secondary Return
SENSE6	J806	25	to AXB2 Cage	digital	26	B	J804	7	Motor Turns Count
SENSE6 RTN	J806	26	to AXB2 Cage	digital	25	B	J804	8	Motor Turns Count Return

J806 SDD26 Pin Layout			
(spare)	1	10	
TEMP6	1	19	STACER S6
(spare)	2	11	
TEMP6 RTN	2	20	STACER S6 RTN
(spare)	3	12	
(spare)	3	21	DOOR P6
(spare)	4	13	
(spare)	4	22	DOOR P6 RTN
(spare)	5	14	
(spare)	5	23	DOOR S6
(spare)	6	15	
(spare)	6	24	DOOR S6 RTN
(spare)	7	16	
(spare)	7	25	SENSE6
(spare)	8	17	
MOTOR6 RTN	8	17	
MOTOR6	8	26	SENSE6 RTN
STACER P6 RTN	9	18	
STACER P6	9		

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_006**
 Description: AXB1 Signal Bulkhead B/B1 to AXB1
 Revised: 2009-01-27
 2009-02-24
 2011-06-09

Rev. F
 M. Ludlam A
 M. Ludlam B
 R. Hochman F

SPACECRAFT A & B

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

P802 to P502 =
 0.55m

Leave contacts marked 'spare' unpopulated

Bill of Materials:		
Quantity (wire & shield in meters)	Type	Part Number
1	DD15M Connector	311P407-1P-B-12
1	DD15F Connector	311P407-1S-B-12
AR	dd pin contacts	G08P1
AR	dd socket contacts	G08S1
2	Backshell Size 1	550E039M1R2H0-02
AR	#24AWG Wire	M25T579/33-24-9
AR	LTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

P802		Connector Type: DD15M									
Harness		Function: AXB1 Signal Bulkhead B Connection									
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE5	P802	1	to BEB	analog	6	C	P502	1	VSPHERE5 coax center conductor		
FV5_P15VA	P802	2	from BEB	power	7	B	P502	2	Preamp5 floating supply, 5mA, +15Vdc		
BIASS	P802	3	from BEB	analog	-	A	P502	3	Sphere5 bias		
GUARD5	P802	4	from BEB	analog	-	A	P502	4	Guard5 bias		
(spare)	P802	5									
FV5_GND	P802	6	from BEB	shield	1	C	P502	6	floating ground, coax shield of VSPHERE5		
FV5_N15VA	P802	7	from BEB	power	2	B	P502	7	Preamp5 floating supply, 5mA, -15Vdc		
USHER5	P802	8	from BEB	analog	-	A	P502	8	Usher5 bias		
(spare)	P802	9									
(spare)	P802	10									
(spare)	P802	11									
(spare)	P802	12									
(spare)	P802	13									
ACTEST5	P802	14	from BEB	digital	15	C	P502	14	Sphere5 test signal - stowed		
AGND5	P802	15	from BEB	analog	14	C	P502	15	Analog ground		

P802 SDD15 Pin Layout			
FV5_GND	1	6	
VSPHERE5	1	11	(spare)
FV5_N15VA	7		
FV5_P15VA	2	12	(spare)
USHER5	8		
BIASS	3	13	(spare)
(spare)	9		
GUARD5	4	14	ACTEST5
(spare)	(spare)	10	
(spare)	5	15	AGND5

P502		Connector Type: DD15F									
Harness		Function: AXB1 Signal Connection									
Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSPHERE5	P502	1	to BEB	analog	6	C	P802	1	VSPHERE5 coax center conductor		
FV5_P15VA	P502	2	from BEB	power	7	B	P802	2	Preamp5 floating supply, 5mA, +15Vdc		
BIASS	P502	3	from BEB	analog	-	A	P802	3	Sphere5 bias		
GUARD5	P502	4	from BEB	analog	-	A	P802	4	Guard5 bias		
(spare)	P502	5									
FV5_GND	P502	6	from BEB	shield	1	C	P802	6	floating ground, coax shield of VSPHERE5		
FV5_N15VA	P502	7	from BEB	power	2	B	P802	7	Preamp5 floating supply, 5mA, -15Vdc		
USHER5	P502	8	from BEB	analog	-	A	P802	8	Usher5 bias		
(spare)	P502	9									
(spare)	P502	10									
(spare)	P502	11									
(spare)	P502	12									
(spare)	P502	13									
ACTEST5	P502	14	from BEB	digital	15	C	P802	14	Sphere5 test signal - stowed		
AGND5	P502	15	from BEB	analog	14	C	P802	15	Analog ground		

P502 SDD15 Pin Layout			
FV5_GND	1	6	
VSPHERE5	1	11	(spare)
FV5_N15VA	7		
FV5_P15VA	2	12	(spare)
USHER5	8		
BIASS	3	13	(spare)
(spare)	9		
GUARD5	4	14	ACTEST5
(spare)	(spare)	10	
(spare)	5	15	AGND5

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_007**
 Description: AXB2 Signal Bulkhead C/I to AXB2
 Revised: 2009-01-27
 2009-02-24
 2011-06-09

Rev. F
 M. Ludlam A
 M. Ludlam B
 R. Hochman F

SPACECRAFT A & B

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 P803 to P602 = 0.55m

Unless where noted all pins should be populated in the connectors.

Bill of Materials:		
Quantity (wire & shield in meters)	Type	Part Number
1	DD15M Connector	311P407-1P-B-12
1	DD15F Connector	311P407-1S-B-12
AR	DD pin contacts	G08P1
AR	DD socket contacts	G08S1
2	Backshell Size 1	550E039M1R2H0-03
AR	#24AWG Wire	M22579/33-24-9
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

P803		Connector Type - DD15M									
		Function: AXB1 signal									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSHPERE5	P803	1	to BEB	analog	6	C	P602	1	VSPHERE6 coax center conductor		
FV5_P15VA	P803	2	from BEB	power	7	B	P602	2	Preamp6 floating supply, 5mA, +15Vdc		
BIASS	P803	3	from BEB	analog	-	A	P602	3	Sphere6 bias		
GUARD5	P803	4	from BEB	analog	-	A	P602	4	Guard6 bias		
(spare)	P803	5									
FV5_GND	P803	6	from BEB	shield	1	C	P602	6	floating ground, coax shield of VSPHERE6		
FV5_N15VA	P803	7	from BEB	power	2	B	P602	7	Preamp6 floating supply, 5mA, -15Vdc		
USHER5	P803	8	from BEB	analog	-	A	P602	8	Usher6 bias		
(spare)	P803	9									
(spare)	P803	10									
(spare)	P803	11									
(spare)	P803	12									
(spare)	P803	13									
ACTEST5	P803	14	from BEB	digital	15	C	P602	14	Sphere6 test signal - stowed		
AGND5	P803	15	from BEB	analog	14	C	P602	15	Analog ground		

P803 DD15 Pin Layout			
FV5_GND	1	6	
VSHPERE5	1	11	(spare)
FV5_N15VA	7		
FV5_P15VA	2	12	(spare)
USHER5	8		
BIASS	3	13	(spare)
(spare)	9		
GUARD5	4	14	ACTEST5
(spare)	5	15	AGND5

P602		Connector Types - DD15F									
		Function: AXB2 signal									
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description		
VSHPERE6	P602	1	to BEB	analog	6	C	P803	1	VSPHERE6 coax center conductor		
FV6_P15VA	P602	2	from BEB	power	7	B	P803	2	Preamp6 floating supply, 5mA, +15Vdc		
BIAS6	P602	3	from BEB	analog	-	A	P803	3	Sphere6 bias		
GUARD6	P602	4	from BEB	analog	-	A	P803	4	Guard6 bias		
(spare)	P602	5									
FV6_GND	P602	6	from BEB	shield	1	C	P803	6	floating ground, coax shield of VSPHERE6		
FV6_N15VA	P602	7	from BEB	power	2	B	P803	7	Preamp6 floating supply, 5mA, -15Vdc		
USHER6	P602	8	from BEB	analog	-	A	P803	8	Usher6 bias		
(spare)	P602	9									
(spare)	P602	10									
(spare)	P602	11									
(spare)	P602	12									
(spare)	P602	13									
ACTEST6	P602	14	from BEB	digital	15	C	P803	14	Sphere6 test signal - stowed		
AGND6	P602	15	from BEB	analog	14	C	P803	15	Analog ground		

P602 DD15 Pin Layout			
FV6_GND	1	6	
VSHPERE6	1	11	(spare)
FV6_N15VA	7		
FV6_P15VA	2	12	(spare)
USHER6	8		
BIAS6	3	13	(spare)
(spare)	9		
GUARD6	4	14	ACTEST6
(spare)	5	15	AGND6

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_008**
 Description: AXB1 Power Bulkhead B/B1 to AXB1
 Revised: 2009-01-27
 2009-02-24
 2009-09-23
 2011-06-09

Rev. F
 M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 R. Hochmar F

SPACECRAFT A & B

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 P805 to P504 = 0.39m,
 P504 to P501 = 0.42m,
 Wires in P805 pins 1,2,10,11 should go up to P504 backshell and then to P501 connector - the split in the harness is at P504.

Leave contacts marked 'spare' unpopulated

Bill of Materials:		
Quantity (wires & shield in meters)	Type	Part Number
1	DD26M Connector	311P407-2P-B-12
1	DD26F Connector	311P407-2S-B-12
1	D15F Connector	311P409-2S-B-12
AR	DD pin contacts	G08P1
AR	DD socket contacts	G08S1
AR	D socket contacts	G10S1
1	Backshell Size 2	550S039M2R340-05
2	Backshell Size 2 RA	550E039M2R240-03
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3900201 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neptape	Aluminum Foil #1526

P805		Connector Type: DD26M		Function: AXB 1 Deployment Power at bulkhead E					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
TEMP5	P805	1	to AXB1	power	2	B	P501	6	Temperature Sensor
TEMP5 RTN	P805	2	to AXB1	power	1	B	P501	14	Temperature Sensor Return
(spare)	P805	3							
(spare)	P805	4							
(spare)	P805	5							
(spare)	P805	6							
(spare)	P805	7							
MOTOR5	P805	8	to AXB1 Cage	power	17	B	P504	8	Deployment Motor +28V
STACER P5	P805	9	to AXB1 Cage	power	18	B	P504	9	Stacer Release Primary
(spare)	P805	10							
(spare)	P805	11							
(spare)	P805	12							
(spare)	P805	13							
(spare)	P805	14							
(spare)	P805	15							
(spare)	P805	16							
MOTOR5 RTN	P805	17	to AXB1 Cage	power	8	B	P504	17	Deployment Motor +28V Return
STACER P5 RT	P805	18	to AXB1 Cage	power	9	B	P504	18	Stacer Release Primary Return
STACER S5	P805	19	to AXB1 Cage	power	20	B	P504	19	Stacer Release Secondary
STACER SS RT	P805	20	to AXB1 Cage	power	19	B	P504	20	Stacer Release Secondary Return
DOOR P5	P805	21	to AXB1 Cage	power	22	B	P504	21	Sphere Release Primary
DOOR P5 RTN	P805	22	to AXB1 Cage	power	21	B	P504	22	Sphere Release Primary Return
DOOR S5	P805	23	to AXB1 Cage	power	24	B	P504	23	Sphere Release Secondary
DOOR S5 RTN	P805	24	to AXB1 Cage	power	23	B	P504	24	Sphere Release Secondary Return
SENSE5	P805	25	to AXB1 Cage	digital	26	B	P504	25	Motor Turns Count
SENSE5 RTN	P805	26	to AXB1 Cage	digital	25	B	P504	26	Motor Turns Count Return

P805 SDD26 Pin Layout (Ref)			
(spare)			
TEMP5	1	10	STACER_S5
TEMP5 RTN	2	11	STACER_S5 RTN
(spare)	3	12	
(spare)	4	13	DOOR_P5
(spare)	5	14	DOOR_P5 RTN
(spare)	6	15	DOOR_S5
(spare)	7	16	DOOR_S5 RTN
(spare)	8	17	SENSE5
(spare)	9	18	SENSE5 RTN
MOTOR5 RTN	8	17	SENSE5 RTN
STACER P5 RTN	8	18	
STACER P5	9		

P504		Connector Type: DD26F		Function: AXB 1 Deployment Power at AXB1 Cage					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
MOTOR5E	P504	1	to AXB1	power	10	B	P501	1	Deployment Motor After Enable Plug
STACER P5E	P504	2	to AXB1	power	11	B	P501	2	Stacer Release Primary After Enable Plug
STACER S5E	P504	3	to AXB1	power	12	B	P501	3	Stacer Release Secondary After Enable Plug
SENSE5E	P504	4	to AXB1	digital	13	B	P501	5	Motor Turns Count After Enable Plug
ACTEST5	P504	5	to AXB1	digital	14	C	P501	16	Sphere Test Signal Coax Center Conductor
(spare)	P504	6							
(spare)	P504	7							
MOTOR5	P504	8	to AXB1 Cage	power	17	B	P805	8	Deployment Motor +28V
STACER P5	P504	9	to AXB1 Cage	power	18	B	P805	9	Stacer Release Primary
MOTOR5E RTN	P504	10	to AXB1	power	1	B	P501	9	Deployment Motor After Enable Plug Return
STACER P5E R	P504	11	to AXB1	power	2	B	P501	10	Stacer Release Primary After Enable Plug Return
STACER S5E R	P504	12	to AXB1	power	3	B	P501	11	Stacer Release Secondary After Enable Plug Return
SENSE5E RTN	P504	13	to AXB1	power	4	B	P501	13	Motor Turns Count After Enable Plug Return
AGND5	P504	14	to AXB1	ground	5	C	P501	8	Analog Ground, Coax shield of ACTEST
(spare)	P504	15							
(spare)	P504	16							
MOTOR5 RTN	P504	17	to AXB1 Cage	power	8	B	P805	17	Deployment Motor +28V Return
STACER P5 RT	P504	18	to AXB1 Cage	power	9	B	P805	18	Stacer Release Primary Return
STACER S5	P504	19	to AXB1 Cage	power	20	B	P805	19	Stacer Release Secondary
STACER SS RT	P504	20	to AXB1 Cage	power	19	B	P805	20	Stacer Release Secondary Return
DOOR P5	P504	21	to AXB1 Cage	power	22	B	P805	21	Sphere Release Primary
DOOR P5 RTN	P504	22	to AXB1 Cage	power	21	B	P805	22	Sphere Release Primary Return
DOOR S5	P504	23	to AXB1 Cage	power	24	B	P805	23	Sphere Release Secondary
DOOR S5 RTN	P504	24	to AXB1 Cage	power	23	B	P805	24	Sphere Release Secondary Return
SENSE5	P504	25	to AXB1 Cage	digital	26	B	P805	25	Motor Turns Count
SENSE5 RTN	P504	26	to AXB1 Cage	digital	25	B	P805	26	Motor Turns Count Return

P504 SDD26 Pin Layout (Ref)			
MOTOR5E RTN	1	10	STACER_S5
MOTOR5E	1	11	STACER_S5 RTN
STACER P5E RTN	2	10	STACER_S5 RTN
STACER P5E	2	10	STACER_S5 RTN
STACER S5E RTN	3	13	DOOR_P5
STACER S5E	3	13	DOOR_P5
SENSE5E RTN	4	22	DOOR_P5 RTN
SENSE5E	4	22	DOOR_P5 RTN
AGND5	5	14	
ACTEST5	5	14	DOOR_S5
(spare)	6	15	DOOR_S5 RTN
(spare)	7	16	DOOR_S5 RTN
(spare)	8	17	SENSE5
(spare)	9	18	SENSE5 RTN
MOTOR5 RTN	8	17	SENSE5 RTN
STACER P5 RTN	8	18	
STACER P5	9		

P501		Connector Type: D15F		Function: AXB1 Stacer Deployment at AXB1 Boor					
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description
MOTOR5E	P501	1	from AXB1 Cage	power	9	B	P504	1	Deployment Motor After Enable Plug
STACER P5E	P501	2	from AXB1 Cage	power	10	B	P504	2	Stacer Release Primary After Enable Plug
STACER S5E	P501	3	from AXB1 Cage	power	11	B	P504	3	Stacer Release Secondary After Enable Plug
(spare)	P501	4							
SENSE5E	P501	5	from AXB1 Cage	digital	13	B	P504	4	Motor Turns Count After Enable Plug
TEMP5	P501	6	to IDPU	analog	14	B	P805	1	Temperature Sensor
(spare)	P501	7							
AGND5	P501	8	from AXB1 Cage	ground	15	C	P504	14	Analog Ground, Coax shield of ACTEST
MOTOR5E RTN	P501	9	from AXB1 Cage	power	1	B	P504	10	Deployment Motor After Enable Plug Return
STACER P5E R	P501	10	from AXB1 Cage	power	2	B	P504	11	Stacer Release Primary After Enable Plug Return
STACER S5E R	P501	11	from AXB1 Cage	power	3	B	P504	12	Stacer Release Secondary After Enable Plug Return
(spare)	P501	12							
SENSE5E RTN	P501	13	from AXB1 Cage	digital	5	B	P504	13	Motor Turns Count After Enable Plug Return
TEMP5 RTN	P501	14	to IDPU	analog	6	B	P805	2	Temperature Sensor Return
ACTEST5	P501	15	from AXB1 Cage	digital	8	C	P504	5	Sphere Test Signal Coax Center Conductor

P501 SD15 Pin Layout			
MOTOR5E	1	9	MOTOR5E RTN
STACER P5E	2	10	STACER_P5E RTN
STACER S5E	3	11	STACER_S5E RTN
(spare)	4	11	STACER_S5E RTN
(spare)	5	12	(spare)
SENSE5E	5	13	SENSE5E RTN
TEMP5	6	14	TEMP5 RTN
(spare)	7		
(spare)	8	15	ACTEST5
AGND5	8		

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_009**
 Description: AXB2 Power Bulkhead C/C1 to AXB2
 Revised: 2009-01-27
 2009-02-24
 2009-09-23
 2011-06-09

Rev. F

SPACECRAFT A & B

M. Ludlam A
 M. Ludlam B
 M. Ludlam C
 R. Hochman F

NOTE: Wire types specified as follows:
 A: #24AWG stranded single conductor
 B: #24AWG unshielded twisted pair (UTP)
 C: 50CIS Co-ax

Notes:

Harness Length:
 P806 to P604 = 0.44m,
 P604 to P601 = 0.43m,
 Wires in P806 pins 1,2,10,11 should go up to P604 backshell and then to P601 connector - the split in the harness is at P604.

Leave contacts marked 'spare' unpopulated

Quantity (wire & shield in meters)	Type	Part Number
1	DD26M Connector	311P407-2P-B-12
1	DD26F Connector	311P407-2S-B-12
1	D15F Connector	311P409-2S-B-12
AR	DD pin contacts	G08P1
AR	DD socket contacts	G08S1
AR	D socket contacts	G10S1
1	Backshell size 2	550S039M2R3H0-05
2	Backshell Size 2 RA	550S039M2R2H0-03
AR	UTP Wire #24 AWG	M27500-24SC2U00
AR	50CIS Co-ax	ESA/SCC 3902001 01B3
AR	Black Kapton Tape	DM151 w/ 3M 9703
AR	Neplape	Aluminum Foil #1526

P806		Connector Type: DD26M		Function: AXB 2 Deployment Power at Bulkhead C						
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description	
TEMP6	P806	1	to AXB2	analog	2	B	P601	6	Temperature Sensor	
TEMP6 RTN	P806	2	to AXB2	analog	1	B	P601	14	Temperature Sensor Return	
(spare)	P806	3								
(spare)	P806	4								
(spare)	P806	5								
(spare)	P806	6								
(spare)	P806	7								
MOTOR6	P806	8	to AXB2 Cage	power	17	B	P604	8	Deployment Motor +28V	
STACER_P6	P806	9	to AXB2 Cage	power	18	B	P604	9	Stacer Release Primary	
(spare)	P806	10								
(spare)	P806	11								
(spare)	P806	12								
(spare)	P806	13								
(spare)	P806	14								
(spare)	P806	15								
(spare)	P806	16								
MOTOR6 RTN	P806	17	to AXB2 Cage	power	8	B	P604	17	Deployment Motor +28V Return	
STACER_P6 RT	P806	18	to AXB2 Cage	power	9	B	P604	18	Stacer Release Primary Return	
STACER_S6	P806	19	to AXB2 Cage	power	20	B	P604	19	Stacer Release Secondary	
STACER_S6 RT	P806	20	to AXB2 Cage	power	19	B	P604	20	Stacer Release Secondary Return	
DOOR_P6	P806	21	to AXB2 Cage	power	22	B	P604	21	Sphere Release Primary	
DOOR_P6 RTN	P806	22	to AXB2 Cage	power	21	B	P604	22	Sphere Release Primary Return	
DOOR_S6	P806	23	to AXB2 Cage	power	24	B	P604	23	Sphere Release Secondary	
DOOR_S6 RTN	P806	24	to AXB2 Cage	power	23	B	P604	24	Sphere Release Secondary Return	
SENSE6	P806	25	to AXB2 Cage	digital	26	B	P604	25	Motor Turns Count	
SENSE6 RTN	P806	26	to AXB2 Cage	digital	25	B	P604	26	Motor Turns Count Return	

P806 SDD26 Pin Layout (Ref)			
(spare)	10	19	STACER_S6
TEMP6	1	11	STACER_S6
TEMP6 RTN	2	20	STACER_S6 RTN
(spare)	3	21	DOOR_P6
(spare)	4	13	DOOR_P6 RTN
(spare)	5	14	DOOR_S6
(spare)	6	15	DOOR_S6 RTN
(spare)	7	25	SENSE6
(spare)	8	17	SENSE6 RTN
MOTOR6 RTN	9	18	SENSE6 RTN
STACER_P6 RTN	9		
STACER_P6	9		

P604		Connector Type: DD26F		Function: AXB 2 Deployment Power at AXB2 Cage						
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description	
MOTOR6E	P604	1	to AXB2	power	10	B	P601	1	Deployment Motor After Enable Plug	
STACER_P6E	P604	2	to AXB2	power	11	B	P601	2	Stacer Release Primary After Enable Plug	
STACER_S6E	P604	3	to AXB2	power	12	B	P601	3	Stacer Release Secondary After Enable Plug	
SENSE6E	P604	4	to AXB2	digital	13	B	P601	5	Motor Turns Count After Enable Plug	
ACTEST6	P604	5	to AXB2	digital	14	C	P601	15	Sphere Test Signal Coax Center Conductor	
(spare)	P604	6								
(spare)	P604	7								
MOTOR6	P604	8	to AXB2 Cage	power	17	B	P806	8	Deployment Motor +28V	
STACER_P6	P604	9	to AXB2 Cage	power	18	B	P806	9	Stacer Release Primary	
MOTOR6E RTN	P604	10	to AXB2	power	1	B	P601	5	Deployment Motor After Enable Plug Return	
STACER_P6E R	P604	11	to AXB2	power	2	B	P601	10	Stacer Release Primary After Enable Plug Return	
STACER_S6E R	P604	12	to AXB2	power	3	B	P601	11	Stacer Release Secondary After Enable Plug Return	
SENSE6E RTN	P604	13	to AXB2	power	4	B	P601	13	Motor Turns Count After Enable Plug Return	
AGND6	P604	14	to AXB2	ground	5	C	P601	8	Analog Ground, Coax shield of ACTEST	
(spare)	P604	15								
(spare)	P604	16								
MOTOR6 RTN	P604	17	to AXB2 Cage	power	8	B	P806	17	Deployment Motor +28V Return	
STACER_P6 RT	P604	18	to AXB2 Cage	power	9	B	P806	18	Stacer Release Primary Return	
STACER_S6	P604	19	to AXB2 Cage	power	20	B	P806	19	Stacer Release Secondary	
STACER_S6 RT	P604	20	to AXB2 Cage	power	19	B	P806	20	Stacer Release Secondary Return	
DOOR_P6	P604	21	to AXB2 Cage	power	22	B	P806	21	Sphere Release Primary	
DOOR_P6 RTN	P604	22	to AXB2 Cage	power	21	B	P806	22	Sphere Release Primary Return	
DOOR_S6	P604	23	to AXB2 Cage	power	24	B	P806	23	Sphere Release Secondary	
DOOR_S6 RTN	P604	24	to AXB2 Cage	power	23	B	P806	24	Sphere Release Secondary Return	
SENSE6	P604	25	to AXB2 Cage	digital	26	B	P806	25	Motor Turns Count	
SENSE6 RTN	P604	26	to AXB2 Cage	digital	25	B	P806	26	Motor Turns Count Return	

P604 SDD26 Pin Layout (Ref)				
MOTOR6E RTN	10	19	STACER_S6	
MOTOR6E	1	11	STACER_S6	
STACER_P6E RTN	1	11	STACER_S6 RTN	
STACER_P6E	2	20	STACER_S6 RTN	
STACER_S6E RTN	3	21	DOOR_P6	
STACER_S6E	3	13	DOOR_P6 RTN	
SENSE6E RTN	4	22	DOOR_P6 RTN	
SENSE6E	AGND6	4	23	DOOR_S6
ACTEST6	(spare)	5	15	DOOR_S6 RTN
(spare)	(spare)	6	16	DOOR_S6 RTN
(spare)	(spare)	7	25	SENSE6
(spare)	MOTOR6 RTN	8	17	SENSE6 RTN
MOTOR6	8	18	SENSE6 RTN	
STACER_P6 RTN	9			
STACER_P6	9			

P601		Connector Type: D15F		Function: AXB2 Stacer Deployment at AXB2 Boor						
Harness Signal Name	Wire From Conn	Pin	Direction	Signal Type	Twist With	Wire Type	Wire To Conn	Pin	Description	
MOTOR6E	P601	1	from AXB2 Cage	power	9	B	P604	1	Deployment Motor After Enable Plug	
STACER_P6E	P601	2	from AXB2 Cage	power	10	B	P604	2	Stacer Release Primary After Enable Plug	
STACER_S6E	P601	3	from AXB2 Cage	power	11	B	P604	3	Stacer Release Secondary After Enable Plug	
(spare)	P601	4								
SENSE6E	P601	5	from AXB2 Cage	digital	13	B	P604	4	Motor Turns Count After Enable Plug	
TEMP6	P601	6	to IDPU	analog	14	B	P806	1	Temperature Sensor	
(spare)	P601	7								
AGND6	P601	8	from AXB2 Cage	ground	15	C	P604	14	Analog Ground, Coax shield of ACTEST	
MOTOR6E RTN	P601	9	from AXB2 Cage	power	1	B	P604	10	Deployment Motor After Enable Plug Return	
STACER_P6E R	P601	10	from AXB2 Cage	power	2	B	P604	11	Stacer Release Primary After Enable Plug Return	
STACER_S6E R	P601	11	from AXB2 Cage	power	3	B	P604	12	Stacer Release Secondary After Enable Plug Return	
(spare)	P601	12								
SENSE6E RTN	P601	13	from AXB2 Cage	digital	5	B	P604	13	Motor Turns Count After Enable Plug Return	
TEMP6 RTN	P601	14	to IDPU	analog	6	B	P806	2	Temperature Sensor Return	
ACTEST6	P601	15	from AXB2 Cage	digital	8	C	P604	5	Sphere Test Signal Coax Center Conductor	

P601 SD15 Pin Layout			
MOTOR6E	1	9	MOTOR6E RTN
STACER_P6E	2	10	STACER_P6E RTN
STACER_S6E	3	11	STACER_S6E RTN
(spare)	4	12	(spare)
SENSE6E	5	13	SENSE6E RTN
TEMP6	6	14	TEMP6 RTN
(spare)	7		
AGND6	8	15	ACTEST6

RBSP EFW HARNESS DEFINITION

Harness No. **RBSP_EFW_HRN_010-015**

Description: SMA Connection from BEB to DFB

Revised: 2009-02-23

Rev. A

SPACECRAFT A & B

M. Ludlam

NOTE: Wire types specified as follows:

- A: #24AWG stranded single conductor
- B: #24AWG unshielded twisted pair (UTP)
- C: 50CIS Co-ax

Notes:

Harness Length: All 7.5cm

Bill of Materials:		
Quantity (wire & shield in meters)	Type	Part Number
2	SMA Pin Connector	16 SMA-50-2-105/111 QE
0.45	50CIS Co-ax	ESA/SCC 3902001 01B3

P709-P714										
Connector Type: SMA										
Function: BEB to DFB										
Harness Signal Name	Wire From		Direction	Signal Type	Twist With	Wire		Wire To		Description
	Conn	Pin				Type	Length (m)	Conn	Pin	
V1	P709	1	to DFB	analog		C	0.075	P715	1	RBSP_EFW_HRN_010
V2	P710	1	to DFB	analog		C	0.075	P716	1	RBSP_EFW_HRN_011
V3	P711	1	to DFB	analog		C	0.075	P717	1	RBSP_EFW_HRN_012
V4	P712	1	to DFB	analog		C	0.075	P718	1	RBSP_EFW_HRN_013
V5	P713	1	to DFB	analog		C	0.075	P719	1	RBSP_EFW_HRN_014
V6	P714	1	to DFB	analog		C	0.075	P720	1	RBSP_EFW_HRN_015