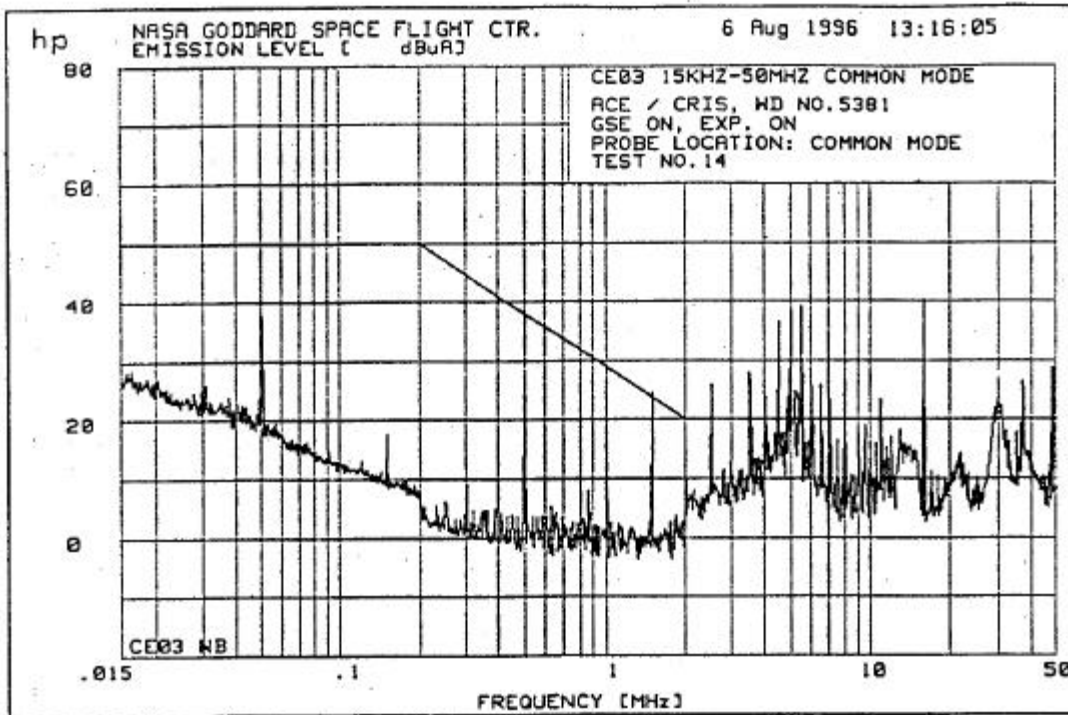


STEREO CONFIGURATION CHANGE REQUEST

For Office Use Only	TITLE:	CLASS:	NUMBER:	
		I II	DATE:	
CONFIGURED ITEM:		ORIGINATOR:		PRIORITY:
STS Number:	Payload: STEREO	Name:	Dave Curtis	<input checked="" type="checkbox"/> Routine
Component :	Experiment: IMPACT	Organization:	U.C. Berkeley	<input type="checkbox"/> Urgent
Component Part #:	Serial #:	Phone:	510-642-5998	<input type="checkbox"/> Emergency
		Email:	dwc@ssl.berkeley.edu	
TYPE OF REQUEST:		RESPONSIBLE ORGANIZATION/INDIVIDUAL:		IMPACTS: (If yes attach additional pages)
<input type="checkbox"/>	Configuration			COST: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/>	Deviation #			SCHEDULE: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/>	Waiver #			
<input type="checkbox"/>	Other:			
REASONS FOR CHANGE:			RETEST REQUIRED:	
<input checked="" type="checkbox"/>	Improvement	<input type="checkbox"/> Test/Payload Failure	<input type="checkbox"/> New Document:	<input type="checkbox"/> No
<input type="checkbox"/>	Reliability	<input type="checkbox"/> Specification Requirements	<input type="checkbox"/> Other:	<input type="checkbox"/> Yes
PROPOSED CHANGE (Attach additional pages as required): The SEP bias supply is not crystal-controlled. This violates the Project EMC requirements as called out in 7381-9030d, section 3.2.1.10				
RATIONALE (Attach additional pages as required): <p>This converter is extremely low power (microamp or less output current) and runs off secondary power. Synchronizing such supplies makes them more complex (less reliable) and take more power. They also get noisier, which may not be a big issue for SWAVES since the noise would be at 50KHz, but it can be a problem for the SEP instruments. Further, this supply is a heritage design; a redesign would impact cost and schedule.</p> <p>The output of this supply has a tiny load and is heavily filtered since it is connected to detectors off which we want to detect handfuls of electrons. This supply shall be shielded and filtered to contain the noise and meet the EMC levels in the requirements.</p> <p>Attached are EMC CE test results from an instrument (ACE CRIS) containing a similar bias supply built by the same manufacturer. The bias supply runs around 800KHz (+/- 10%). The data shows a number of spikes related to harmonics of the primary power converter at 50KHz and some other noise, but only a tiny spike near 800KHz, around 10dBuV, and no significant harmonics.</p>				
DOCUMENTS/DRAWINGS AFFECTED (Document No./Title/Section) :				
AFFECTED (Check all that apply):				
FLIGHT SYSTEMS:		GROUND SYSTEMS:		
<input type="checkbox"/>	Avionics	<input type="checkbox"/>	Electrical and Cables	<input type="checkbox"/>
<input checked="" type="checkbox"/>	Experiment	<input type="checkbox"/>	Software/Firmware	<input type="checkbox"/>
<input type="checkbox"/>	Structures and Mechanical	<input type="checkbox"/>	Other:	<input type="checkbox"/> Other:
REQUIRED APPROVAL DATE: _____				
REQUIRED JUSTIFICATION:				

STEREO CONFIGURATION CHANGE REQUEST

For Office Use Only	TITLE:		CLASS:		NUMBER:
				I	
				II	DATE:
CONTRACT/AGREEMENT NUMBER EFFECTIVITY:					
STEREO NAS5-97271		✓	IMPACT S-13635Y	PLASTIC NAS5-00132	SECCHI S-13631Y
DOCUMENTS/DRAWINGS TO BE REVISED:					
Document/Drawing Number:		Document/Drawing Title:		Section(s) No.	EO No.:
PROCESSING APPROVAL:					
CCB					
Out of Board					
Emergency		Systems Engineer			Date
CCB APPROVAL:					
CCB ACTION DATE:		CCB ACTION ITEMS/CONDITIONS:			
Approved					
Denied					
Withdrawn					
Hold					
CLOSEOUT COMMENTS:				DATE OF CLOSEOUT:	
				CMO	



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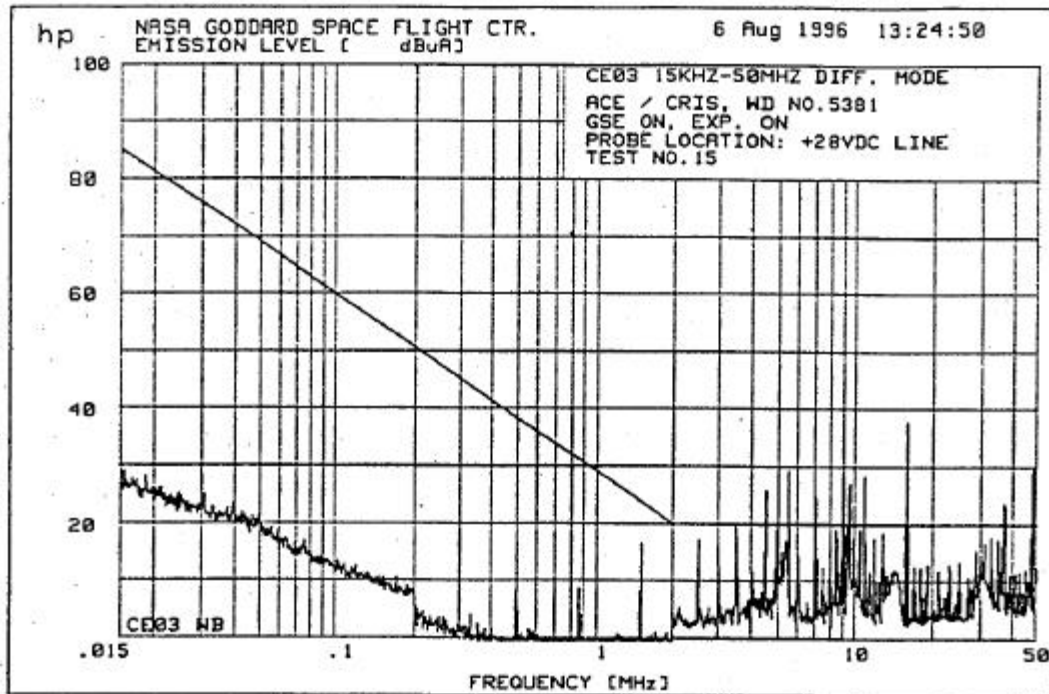
1. CONDUCTED EMISSIONS TEST SETUP
1.4 CE03 15KHZ-50MHZ COMMON MODE

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ACE / CRIS, WD NO.5381
GSE ON, EXP. ON
PROBE LOCATION: COMMON MODE
TEST NO.14

Peaks above 0 dB of Limit Line #1
peak criteria = 6 dB

PEAK#	FREQ (MHz)	(dBuA)	DELTA
1	1.497	24.6	.9
2	2.514	25.9	5.9
3	3.504	28	8.0
4	4.022	23.8	3.8
5	4.505	36.4	16.4
6	4.807	21.9	1.9
7	5.006	38.3	18.3
8	5.213	24.8	4.8
9	5.341	24.5	4.5
10	5.517	39.3	19.3
11	6.031	25.6	5.6
12	6.54	25.8	5.8
13	7.035	23.4	3.4
14	8.009	26.6	6.6
15	10.99	23.4	3.4
16	15.95	40.2	20.2
17	30.01	23.8	3.8
18	37.05	26.3	6.3
19	48.01	28.8	8.8



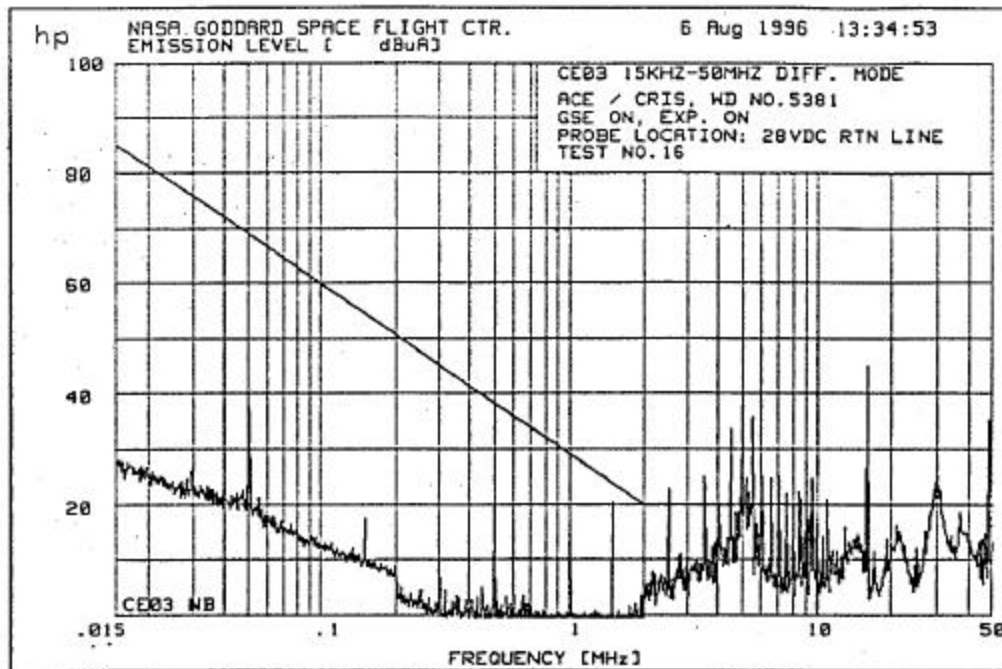
6 Aug 1996 13:24:50

1. CONDUCTED EMISSIONS TEST SETUP
1.2 CE03 15KHZ-50MHZ DIFF. MODE

ACE / CRIS, WD NO.5381
GSE ON, EXP. ON
PROBE LOCATION: +28VDC LINE
TEST NO.15

Peaks above 0 dB of Limit Line #1
peak criteria = 6 dB

PEAK#	FREQ (MHz)	(dBuA)	DELTA
1	4.505	25.6	5.6
2	5.006	29.9	9.9
3	5.517	29.2	9.2
4	7.035	24.4	4.4
5	9.045	28.2	8.2
6	9.572	26.9	6.9
7	9.968	23	3.0
8	10.99	28.3	8.3
9	15.95	37.9	17.9
10	37.05	23.4	3.4
11	48.01	29.4	9.4



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1. CONDUCTED EMISSIONS TEST SETUP
1.2. CE03 15KHZ-50MHZ DIFF. MODE

ACE / CRIS, WD NO.5381
GSE ON, EXP. ON
PROBE LOCATION: 28VDC RTN LINE
TEST NO.16

Peaks above 0 dB of Limit Line #1
peak criteria = 6 dB

PEAK#	FREQ (MHz)	(dBuA)	DELTA
1	2.514	22.6	2.6
2	3.504	24.9	4.9
3	4.022	20.1	.1
4	4.505	33.6	13.6
5	5.006	37.8	17.8
6	5.213	24.8	4.8
7	5.517	35.7	15.7
8	6.031	24.9	4.9
9	6.54	24.6	4.6
10	7.035	24.9	4.9
11	7.507	22	2.0
12	8.477	22.3	2.3
13	9.045	27.4	7.4
14	9.495	24.8	4.8
15	10.99	20.8	.8
16	15.95	44.9	24.9
17	30.01	25.1	5.1
18	48.01	35.3	15.3