

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):				
Use single-ended digital interfaces between the SEP Central and SIT, SEPT-E, and SEPT-NS. This violates the Project EMC requirements as called out in 7381-9030-, section 3.2.2.4.				
RATIONALE (Attach additional pages as required):				
<p>Proposed interface saves significant power over differential interfaces. The interface meets the intent of the requirement by returning the bulk of the current through a dedicated return path, and limiting signal rise time (see attached schematic).</p> <p>To first order no current gets forced into the chassis by this interface. The series resistor on the driver, together with both the cable and terminating capacitance limit the signal rise time to the microsecond range. The signals have dedicated returns through which AC and DC currents will flow, minus some small fraction that may return via the 50 ohm resistor (at these frequencies the return impedance will look much smaller than the 50 ohms path).</p> <p>The capacitance on the receiver end is required to eliminate capacitive cross-talk between signals in the harness.</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:				

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				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	

