

## STEREO CONFIGURATION CHANGE REQUEST

For Office Use Only	TITLE: <b>IMPACT SWEA door actuator power return ground isolation</b>	CLASS:	NUMBER:	
		<input checked="" type="checkbox"/> X <input type="checkbox"/> I	<input type="checkbox"/> I <input type="checkbox"/> II	DATE: 8/1/05
CONFIGURED ITEM:		ORIGINATOR:		PRIORITY:
STS Number:	Payload: <b>STEREO</b>	Name:	<b>Dave Curtis</b>	<input checked="" type="checkbox"/> Routine
Component :	Experiment: <b>IMPACT</b>	Organization:	<b>U.C. Berkeley</b>	<input type="checkbox"/> Urgent
Component Part #:	Serial #: <b>All flight units</b>	Phone:	<b>510-642-5998</b>	<input type="checkbox"/> Emergency
		Email:	<b>dwc@ssl.berkeley.edu</b>	
TYPE OF REQUEST:		RESPONSIBLE ORGANIZATION/INDIVIDUAL:		IMPACTS: (If yes attach additional pages)
<input type="checkbox"/>	Configuration			COST:
<input type="checkbox"/>	Deviation #			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/>	Waiver #			SCHEDULE:
<input type="checkbox"/>	Other:			<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
REASONS FOR CHANGE:			RETEST REQUIRED:	
<input type="checkbox"/>	Improvement	<input type="checkbox"/> Test/Payload Failure	<input type="checkbox"/> New Document:	<input type="checkbox"/> No
<input type="checkbox"/>	Reliability	<input checked="" type="checkbox"/> Specification Requirements	<input type="checkbox"/> Other:	<input type="checkbox"/> Yes
PROPOSED CHANGE (Attach additional pages as required):				
<p>The <b>STEREO EMC Requirements Specification, 7381-9030, section 3.2.1.1</b>, states that the power return shall be isolated from chassis ground by at least 1Mohm.</p> <p>This requirement is violated by a sense circuit for the status of the SWEA door. The sense circuit consists of a 5 V secondary power source, a 10K series resistor, followed by a series diode, followed by the actuator, to primary return. Electrical current from the secondary power path is returning via the primary return to star ground and then back to the instrument return via the chassis. This small DC current of 0.5mA is present only when the door is closed and as soon as the door opens the circuit opens and there is no current flow.</p> <p>The SWEA door was open during IMPACT FM EMI testing, but during observatory EMC testing, the SWEA door will be opened and closed to check for EMC emissions.</p>				
RATIONALE (Attach additional pages as required):				
<p>The electrical path is fairly high impedance and the circuit is opened in science mode (after SWEA door is opened).</p>				
DOCUMENTS/DRAWINGS AFFECTED (Document No./Title/Section) : <b>STEREO EMC Requirements Specification, 7381-9030</b>				
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:				
				(Page 1 of 2)

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For Office Use Only	TITLE:		CLASS:		NUMBER:	
			I		DATE:	
			II			
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.:	Date Completed:
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	