STEREO CONFIGURATION CHANGE REQUEST

For Office Use Only	TITLE:	CLASS:		NUMBER:
			I	
			II	DATE:

CONFIGURED ITEM:		ORIGINATOR:		PRIORITY:	
		Name:	Dave Curtis		
STS Number:	Payload: STEREO	Organization:	U.C. Berkeley	√	Routine
Component :	Experiment: IMPACT	Phone:	510-642-5998		Urgent
Component Part #:	Serial #:	Email:	dwc@ssl.berkeley.edu		Emergency

TYPE OF REQUEST:			RESPONSIBLE ORGANIZATION / INDIVIDUAL:	IMPACTS: (If yes attach additional pages)				
	Configuration							
√	Deviation	#		COST:		Yes	√	No
	Waiver	#		SCHEDULE:		Yes	√	No
	Other:							

REASONS FOR CHANGE:						RETEST REQUIRED:	
	Improvement		Test / Payload Failure		New Document:		No
	Reliability		Specification Requirements	√	Other:		Yes

PROPOSED CHANGE (Attach additional pages as required):

The Mission Requirements Document (460-RQMT-001 Rev B, Section 4.7 F&G) requires that the SEP package measure ions, including protons, down to 30keV. The SEP package will not be able to meet this requirement for protons. It will measure protons down to only about 60keV.

RATIONALE (Attach additional pages as required):

The SEPT part of the SEP suite measures the lower energy Protons., nominally from 20keV to 7MeV (The SIT instrument measures the higher mass species over a similar range). In order to suppress the instrument response to scattered light, a thin layer of Aluminum was deposited on the detectors. This was required because various booms, etc, impinged into the SEPT FOV, and was the subject of an IMPACT PDR RFA, #29. This aluminum layer makes the detectors relatively insensitve to light so that they can work with the expected level of glint, but it increases their low energy threshold by stopping low energy protons before they are measured. The electron measurements are not affected, nor are the higher mass measurements (made by SIT). The PLASTIC instrument can measure protons up to 80-100keV (though with less sensitivity than SEPT), and so the energy range is covered. At this time the flight detectors have been purchased by Keil with this Aluminum layer, and so even if we could find some other way to suppress scattered light, it would have a significant cost and schedule hit to change these detectors.

DOCUMENTS / DRAWINGS AFFECTED (Document No. / Title / Section) :

460-RQMT-001 Rev B, Section 4.7 F&G

AFFECTED (Check all that apply):

FLIGHT SYSTEMS:				GROUND SYSTEMS:			
	Avionics		Electrical and Cables				
√	Experiment		Software / Firmware				
	Structures and Mechanical		Other:				Other:

REQUIRED APPROVAL DATE: _____

REQUIRED JUSTIFICATION:

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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