

STEREO CONFIGURATION CHANGE REQUEST

For Office Use Only	TITLE:	CLASS:	NUMBER:						
		I II	DATE:						
CONFIGURED ITEM:		ORIGINATOR:		PRIORITY:					
STS Number:	Payload: STEREO	Name: Branislav Kecman	<input checked="" type="checkbox"/> Routine <input type="checkbox"/> Urgent <input type="checkbox"/> Emergency						
Component :	Experiment: IMPACT/SEP	Organization: Caltech							
Component Part #:	Serial #:	Phone: 626-395-4264							
		Email: kecman@srl.caltech.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 type="checkbox"/>	Improvement	<input type="checkbox"/> Test/Payload Failure	<input type="checkbox"/>	No					
<input type="checkbox"/>	Reliability	<input checked="" type="checkbox"/> Specification Requirements	<input type="checkbox"/> New Document:	Yes					
<input type="checkbox"/>		<input type="checkbox"/> Other:							
PROPOSED CHANGE (Attach additional pages as required):									
<p>Instead of using known-good-die in the PHASIC hybrid we plan to use unknown-good-die that were not subject to 100% electrical test prior to installation in the hybrid. This violates the hybrid element evaluation requirements for Class H (see document affected below). The need for a waiver has been identified in the PHASIC Hybrid PDR Action Item 24.</p>									
RATIONALE (Attach additional pages as required):									
<p>Mixed-signal ASIC die used in the PHASIC hybrid is noise-sensitive and can be fully tested only in a hybrid circuit environment because of the optimum conditions offered by the hybrid package. Testing such a die at the wafer level gives limited diagnostics (i.e., DC measurements), it cannot accomplish the AC test requirements, and is impractical in this case.</p> <p>Our plan is to test the die in the hybrid and accept the loss of those hybrids where both the first- and the second-installed die prove to be defective. Class H allows die to be replaced only once. The experience with PHASIC hybrids so far has been that even imperfect die can be considered for flight applications where not all of its 32 pulse-height analysis channels are required to be fully functional. We have employed this approach successfully on ACE project and we're confident that it will work this time as well.</p>									
DOCUMENTS/DRAWINGS AFFECTED (Document No./Title/Section) :									
<p>Doc. No.: 100103 / Title: PHASIC Hybrid, Screening Specification for / Section 3.1, which states: <u>Subgroup 1, 100 percent electrical test of die.</u> Each die shall be electrically tested, which may be done at the wafer level provided all failures are identified and removed from the lot when the die are separated from the wafer. When wafer/die level testing requirements are not specified in the procurement documents, the manufacturer/die supplier will choose the parameters, conditions and limits to assure compliance with the electrical characteristics.</p>									
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"/>					
REQUIRED APPROVAL DATE: 3/1/03									
REQUIRED JUSTIFICATION:									
				(Page 1 of 2)					

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			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	