ENGINEERING CHANGE ORDER Center for Astrophysics & Space Astronomy University of Colorado, Boulder				**ECO No.** COS-061 Date 5 April 2001 Sheet 1 of 2
Drawing/Document Title	Drwg/Doc No.	Revision Letter Current	 New	Special Distribution
OP-01	COS-01-0001	12	13	
				Stop Production Now ❑ Yes ❑ No

Description of Change:

1. Section 3.2.1.2, p. 64 of Rev 12: Some details in the implementation of buffer management for TIME-TAG mode need to be modified. Please replace the third paragraph of Sec. 3.2.1.2 with the following:

The time required to dump half the data buffer (9 MBytes of data) to the SSR is ~110 seconds, including ~20 seconds of setup overhead. The ground system will schedule an "interim dump" to start at the end of every Buffer-Time interval during the exposure, provided there is more than ~90 seconds remaining (enough time for the dump to complete) until the end of the exposure. For example, if Buffer-Time is 200 seconds and the integration time is 750 seconds, interim dumps of 9 MBytes each will be scheduled to begin at intervals of 200, 400, and 600 seconds into the exposure. If Buffer-Time is greater than the integration time minus ~90 seconds, no interim dumps will be scheduled. If Buffer-Time is less than 110 seconds, so that data are expected to accumulate faster than it can be dumped (corresponding to a count rate greater than ~21,000 counts/sec), the integration time is required to be no greater than 2 x Buffer-Time. Figure 3.2-1 shows three buffer dumping scenarios: Case 1 has no interim dumps scheduled, Case 2 has one interim dump, and Case 3 has multiple interim dumps scheduled during a long exposure. The minimum specifiable Buffer-Time is 80 [TBR] seconds, corresponding to a count rate of ~30,000 counts/sec, which is the maximum rate the DIB FSW is required to support in Time-tag mode.

Reason for Change: Updates to COS operations in OP-01.	Disposition/Effectivity				
	To Comply With ECO				
	Use As Is				
	Rework To ECO				
	Scrap And Rebuild				
	Record change Only				
	Other (See Above)				

Prepared By:	Jon Morse	Date	5 April 2001	CCB Required ❑Yes ❑No	❑Approved ❑NotApproved
Approved By:		Date			
Approved By:		Date			Immediate Incorporation
Approved By:		Date		❑Class I	
Approved By:		Date		❑Class II	❑Yes ❑No
Approved By:		Date		Completion	
Project Mgr:		Date		Date	

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				Stop Production Now ❑ Yes ❑ No

2. Replace the accompanying Figure 3.2-1 (on p. 66 of Rev 12) with the following: