ENGINEERING CHANGE ORDER Center for Astrophysics & Space Astronomy University of Colorado, Boulder				**ECO No.** COS-083 Date February 12, 2003 Sheet 1 of 4
Drawing/Document Title	Drwg/Doc No.	Revision Letter Current	 New	Special Distribution
OP-01	COS-01-0001	20	21	
				Stop Production Now ❑ Yes ❑ No

Description of Change:

1. **Page 40 (Rev. 20), Sec. 2.1.5: Replace Figure 2.1-4 with the following labeled figure of OSM1 and revised figure caption.**

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	12-Feb-2003	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	

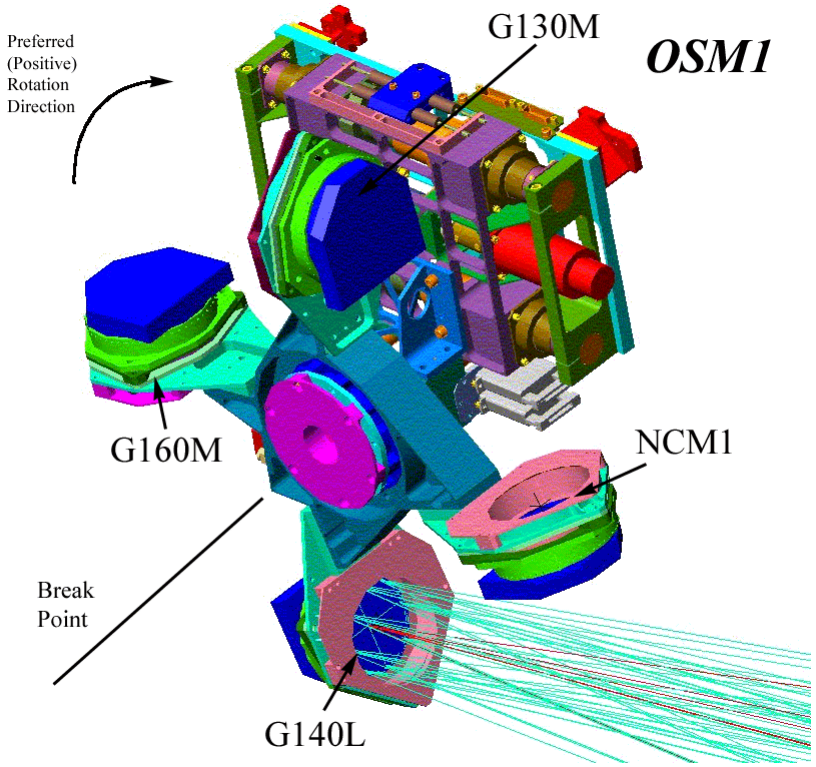

Figure 2.1-4: *Isometric drawing of the OSM1 mechanism. The optics are labeled and the preferred direction of rotation (increasing step numbers) is indicated. The "Break Point" between G140L and G160M is the position through which the OSM1 is not rotated in order to remain on the same motor "track" – i.e., moving between G140L and G160M requires a 270-degree rotation.*

2. Page 40 (Rev. 20), Sec. 2.1.5: Replace Figure 2.1-5 with the following labeled figure of OSM2 and revised figure caption.

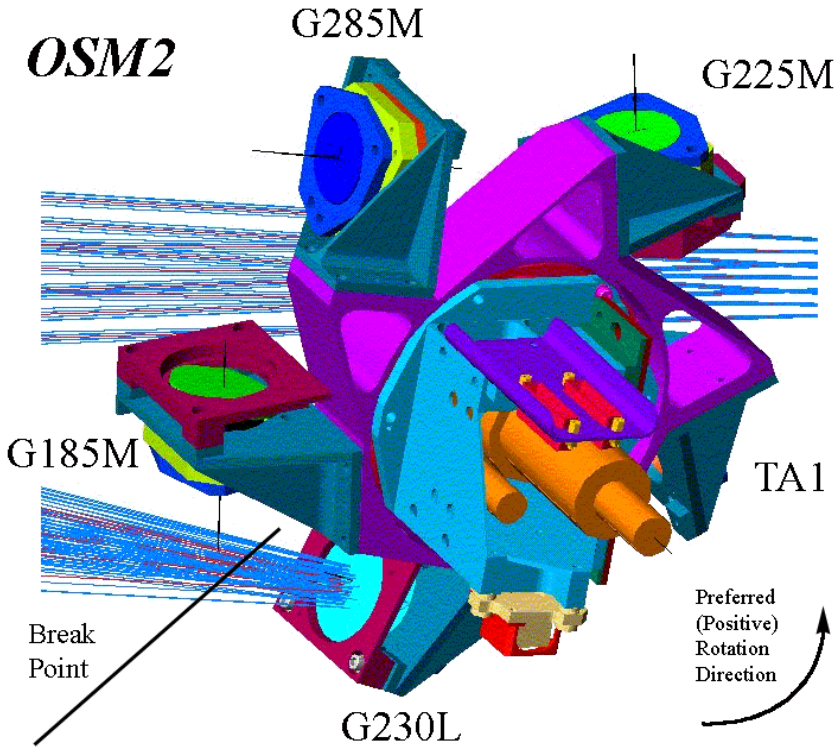

Figure 2.1-5: *Isometric drawing of the OSM2 mechanism. The optics are labeled and the preferred direction of rotation (increasing step numbers) is indicated. The "Break Point" between G230L and G185M is the position through which the OSM2 is not rotated in order to remain on the same motor "track" – i.e., moving between G230L and G185M requires a 288-degree rotation.*

3. Page 17 (Rev. 20), Sec. 1.3.4: Add the following text to the end of the last paragraph (i.e., after "… for FUV detector lifetime adjustments.").

Because both science apertures always view the sky when the external shutter is open, the STScI target screening procedure must ensure that no bright targets are within a ~4" radius of either aperture for all observations. Since the spacecraft orientation may not be known and either of the science apertures could be specified, it may be prudent to screen the entire region within a ~17" radius of the nominal aperture position.

4. Page 119 (Rev. 20), Sec. 5.2.1.2: Add the following paragraph to the end of this subsection.

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Note: The TA1-RVMM imaging mode actually produces two images: a primary image from the first surface of the order-sorter filter, and a secondary image from the second surface of the filter. Thus, the downlinked TA1-RVMM images will contain "double sources." Ground testing shows that the secondary image will contain ~1/2 the flux of the primary image. Due to the slight wedge-shape of the order-sorter filter, the secondary image projects ~20 pixels in the –Y (dispersion) direction (MAMA detector coordinates) from the primary image. Simulations show that the MBPFC algorithm properly computes the centroid of the primary image for an isolated point source. However, for extended sources or for crowded fields, the presence of the secondary image may compromise the accuracy of the MBPFC algorithm.