



## 17970 - WFC3 UVIS Internal Flats

Cycle: 33, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

### INVESTIGATORS

<i>Name</i>	<i>Institution</i>
<b>Anne O'Connor (PI) (Contact)</b>	<b>Space Telescope Science Institute</b>
Benjamin Kuhn (CoI) (Contact)	Space Telescope Science Institute

### VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	DEUTERIUM	WFC3/UVIS	1	16-Jul-2025 17:00:30.0	yes
02	DEUTERIUM	WFC3/UVIS	1	16-Jul-2025 17:00:31.0	yes
03	DEUTERIUM	WFC3/UVIS	1	16-Jul-2025 17:00:31.0	yes
04	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:32.0	yes
05	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:32.0	yes
06	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:32.0	yes
07	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:33.0	yes
08	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:33.0	yes
09	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:33.0	yes
10	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:34.0	yes
11	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:34.0	yes
12	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:34.0	yes
13	TUNGSTEN	WFC3/UVIS	1	16-Jul-2025 17:00:35.0	yes

13 Total Orbits Used

## **ABSTRACT**

Internal flats are taken across all 62 UVIS filters in order to track the stability of the UVIS pixel-to-pixel sensitivity, the functionality of the filters, and the operation of the Tungsten lamp. The monitor uses both the Tungsten and Deuterium lamps, the former for optical and the latter for UV wavelengths. This is a continuation of the following proposals:

12337 (Cy 18), 12711 (Cy 19), 13097 (Cy 20), 13568 (Cy 21), 14028 (Cy 22)

14390 (Cy 23), 14547 (Cy 24), 14997 (Cy 25), 15590 (Cy 26), 15730 (Cy 27)

16410 (Cy 28), 16585 (Cy 29), 17020 (Cy 30), 17369 (Cy 31), 17690 (Cy 32)

## **OBSERVING DESCRIPTION**

This program consists of 3 orbits with the Deuterium (D2) lamp for the following filters: F218W, F200LP, F225W, F275W, F280N, F300X, F336W, F343N, F373N, F390M, F390W, F395N, FQ232N, FQ243N, FQ378N, and FQ387N.

8 orbits will be taken with the Tungsten lamp for the remaining 46 filters.

Observations in the 4 filters, F390W, F438W, F606W, and F814W with the Tungsten lamp will be repeated 2 times over the cycle for a total of 2 orbits.

### ----- Calibration Justification -----

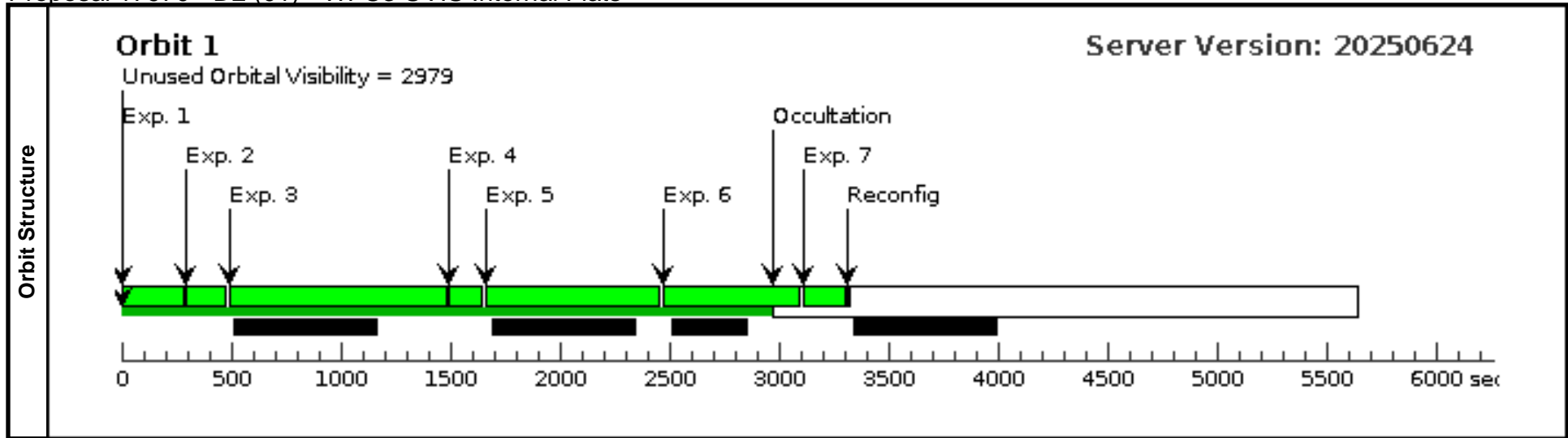
We will compare the flat fields taken in this cycle to the SMOV flat fields to check for any temporal change in the illumination pattern/brightness of the lamps, and serves as a way to monitor the health of all of the UVIS filters. Current analysis of the UVIS flat fields is completed by Khandrika and Kuhn (2021-15) and Kuhn and Khandrika (2021-16). Analysis shows partial degradation in lamp performance, possibly due to photometric sensitivity loss but also overall tungsten and deuterium lamp degradation. The bluer filters show greater reduction, indicating that the two lamps may be reddening over time. New never-before-seen artifacts have been discovered in the flat field ratios, including a dark region named the bowling pin between amp A and B quadrants as well as a dark vertical box in amp B dubbed the roller shade. New data and further analysis will help with determining

how much more degradation will occur and help keep track of any further issues.

Proposal 17970 - D2 (01) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

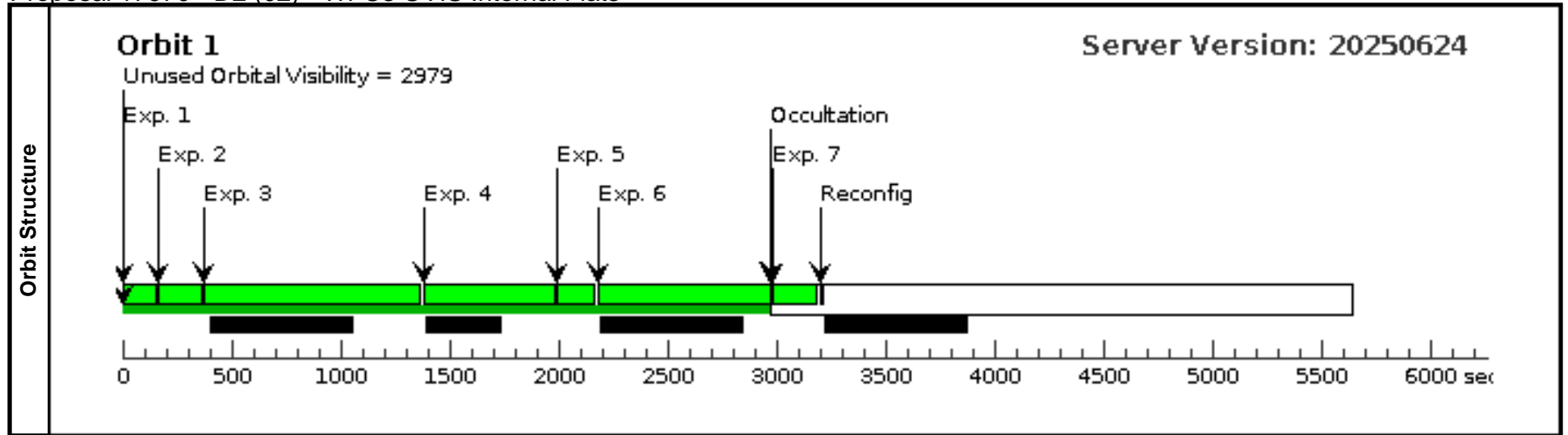
Visit	<b>Proposal 17970, D2 (01)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-DEC-2025:00:00:00 AND 01-FEB-2026:00:00:00: GROUP 01,02,03 WITHIN 30D									
Diagnostics	(D2 (01)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT (D2 - Flat #1 F343N (01.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F275W (01.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 FQ387N (01.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F225W (01.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F395N (01.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 FQ232N (01.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F390W (01.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	D2 - Flat #1 F343N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F343N	CURRENT=MEDIU M			139.0 Secs (139 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-D2</i>										
2	D2 - Flat #1 F275W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F275W	CURRENT=MEDIU M			34.7 Secs (34.7 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-D2</i>										
3	D2 - Flat #1 FQ387N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ387N	CURRENT=MEDIU M			860.0 Secs (860 Secs) [==>]	[1]	
<i>Comments: #1 of 3 exp in set A-D2, 3 exp per flat</i>										
4	D2 - Flat #1 F225W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F225W	CURRENT=MEDIU M			16.6 Secs (16.6 Secs) [==>]	[1]	
<i>Comments: #1 of 2 flats in set A-D2</i>										
5	D2 - Flat #1 F395N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F395N	CURRENT=MEDIU M			664.0 Secs (664 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-D2</i>										
6	D2 - Flat #1 FQ232N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ232N	CURRENT=MEDIU M			475.0 Secs (475 Secs) [==>]	[1]	
<i>Comments: #1 of 3 exp in set A-D2, 3 exp per flat, but longer than others</i>										
7	D2 - Flat #1 F390W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F390W	CURRENT=MEDIU M			56.0 Secs (56 Secs) [==>]	[1]	
<i>Comments: #1 of 2 flats in set A-D2</i>										



Proposal 17970 - D2 (02) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

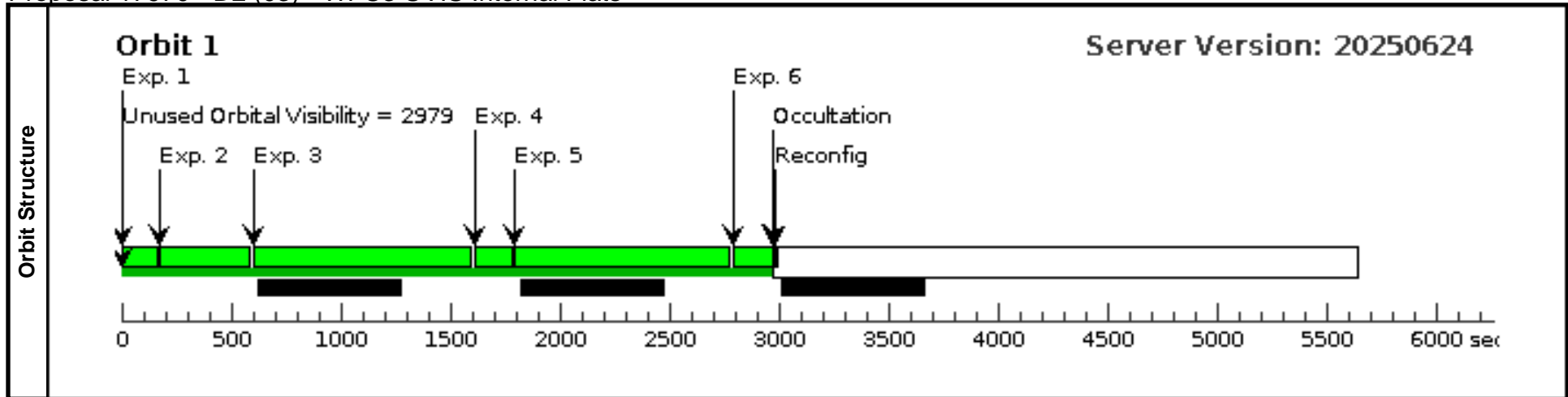
Visit	<b>Proposal 17970, D2 (02)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: (none)																																																																																																																																																															
Diagnostics	(D2 (02)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT (D2 (02)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED (D2 (02)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED (D2 - Flat #1 F200LP (02.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #2 F390W (02.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #2 FQ387N (02.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #2 FQ232N (02.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #2 F275W (02.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F373N (02.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F336W (02.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser																																																																																																																																																															
Exposures	<table border="1"> <thead> <tr> <th>#</th> <th>Label</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time (Total)/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>D2 - Flat #1 F200LP</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>F200LP</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>3.4 Secs (3.4 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #1 of 1 flats in set A-D2</i></td> </tr> <tr> <td>2</td> <td>D2 - Flat #2 F390W</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>F390W</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>56.0 Secs (56 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #2 of 2 flats in set A-D2</i></td> </tr> <tr> <td>3</td> <td>D2 - Flat #2 FQ387N</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS-QUAD</td> <td>FQ387N</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>860.0 Secs (860 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #2 of 3 exp in set A-D2, 3 exp per flat</i></td> </tr> <tr> <td>4</td> <td>D2 - Flat #2 FQ232N</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS-QUAD</td> <td>FQ232N</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>475.0 Secs (475 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #2 of 3 exp in set A-D2, 3 exp per flat</i></td> </tr> <tr> <td>5</td> <td>D2 - Flat #2 F275W</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>F275W</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>34.7 Secs (34.7 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #1 of 1 flats in set A-D2</i></td> </tr> <tr> <td>6</td> <td>D2 - Flat #1 F373N</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>F373N</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>664.0 Secs (664 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #1 of 2 flats in set A-D2, but shorter than other</i></td> </tr> <tr> <td>7</td> <td>D2 - Flat #1 F336W</td> <td>DEUTERIUM</td> <td>WFC3/UVIS, ACCUM, UVIS</td> <td>F336W</td> <td>CURRENT=MEDIU M</td> <td></td> <td></td> <td>58.8 Secs (58.8 Secs) [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"><i>Comments: #1 of 2 flats in set A-D2</i></td> </tr> </tbody> </table>										#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	D2 - Flat #1 F200LP	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F200LP	CURRENT=MEDIU M			3.4 Secs (3.4 Secs) [==>]	[1]	<i>Comments: #1 of 1 flats in set A-D2</i>										2	D2 - Flat #2 F390W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F390W	CURRENT=MEDIU M			56.0 Secs (56 Secs) [==>]	[1]	<i>Comments: #2 of 2 flats in set A-D2</i>										3	D2 - Flat #2 FQ387N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ387N	CURRENT=MEDIU M			860.0 Secs (860 Secs) [==>]	[1]	<i>Comments: #2 of 3 exp in set A-D2, 3 exp per flat</i>										4	D2 - Flat #2 FQ232N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ232N	CURRENT=MEDIU M			475.0 Secs (475 Secs) [==>]	[1]	<i>Comments: #2 of 3 exp in set A-D2, 3 exp per flat</i>										5	D2 - Flat #2 F275W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F275W	CURRENT=MEDIU M			34.7 Secs (34.7 Secs) [==>]	[1]	<i>Comments: #1 of 1 flats in set A-D2</i>										6	D2 - Flat #1 F373N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F373N	CURRENT=MEDIU M			664.0 Secs (664 Secs) [==>]	[1]	<i>Comments: #1 of 2 flats in set A-D2, but shorter than other</i>										7	D2 - Flat #1 F336W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F336W	CURRENT=MEDIU M			58.8 Secs (58.8 Secs) [==>]	[1]	<i>Comments: #1 of 2 flats in set A-D2</i>									
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																																																																																																																																																							
1	D2 - Flat #1 F200LP	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F200LP	CURRENT=MEDIU M			3.4 Secs (3.4 Secs) [==>]	[1]																																																																																																																																																							
<i>Comments: #1 of 1 flats in set A-D2</i>																																																																																																																																																																
2	D2 - Flat #2 F390W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F390W	CURRENT=MEDIU M			56.0 Secs (56 Secs) [==>]	[1]																																																																																																																																																							
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6	D2 - Flat #1 F373N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F373N	CURRENT=MEDIU M			664.0 Secs (664 Secs) [==>]	[1]																																																																																																																																																							
<i>Comments: #1 of 2 flats in set A-D2, but shorter than other</i>																																																																																																																																																																
7	D2 - Flat #1 F336W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F336W	CURRENT=MEDIU M			58.8 Secs (58.8 Secs) [==>]	[1]																																																																																																																																																							
<i>Comments: #1 of 2 flats in set A-D2</i>																																																																																																																																																																



Proposal 17970 - D2 (03) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

Visit	<b>Proposal 17970, D2 (03)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Diagnostics	(D2 (03)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT (D2 (03)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED (D2 - Flat #1 F300X (03.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F390M (03.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #3 FQ387N (03.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F218W (03.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #1 F280N (03.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (D2 - Flat #2 F336W (03.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser									
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	D2 - Flat #1 F300X	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F300X	CURRENT=MEDIUM			16.8 Secs (16.8 Secs) [==>]	[1]
	<i>Comments: #1 of 1 flats in set A-D2</i>									
	2	D2 - Flat #1 F390M	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F390M	CURRENT=MEDIUM			271.0 Secs (271 Secs) [==>]	[1]
	<i>Comments: #1 of 1 flats in set A-D2</i>									
	3	D2 - Flat #3 FQ387N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ387N	CURRENT=MEDIUM			860.0 Secs (860 Secs) [==>]	[1]
	<i>Comments: #1 of 3 exp in set A-D2, 3 exp per flat</i>									
4	D2 - Flat #1 F218W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F218W	CURRENT=MEDIUM			35.0 Secs (35 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-D2</i>										
5	D2 - Flat #1 F280N	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F280N	CURRENT=MEDIUM			845.0 Secs (845 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-D2</i>										
6	D2 - Flat #2 F336W	DEUTERIUM	WFC3/UVIS, ACCUM, UVIS	F336W	CURRENT=MEDIUM			58.8 Secs (58.8 Secs) [==>]	[1]	
<i>Comments: #2 of 2 flats in set A-D2</i>										



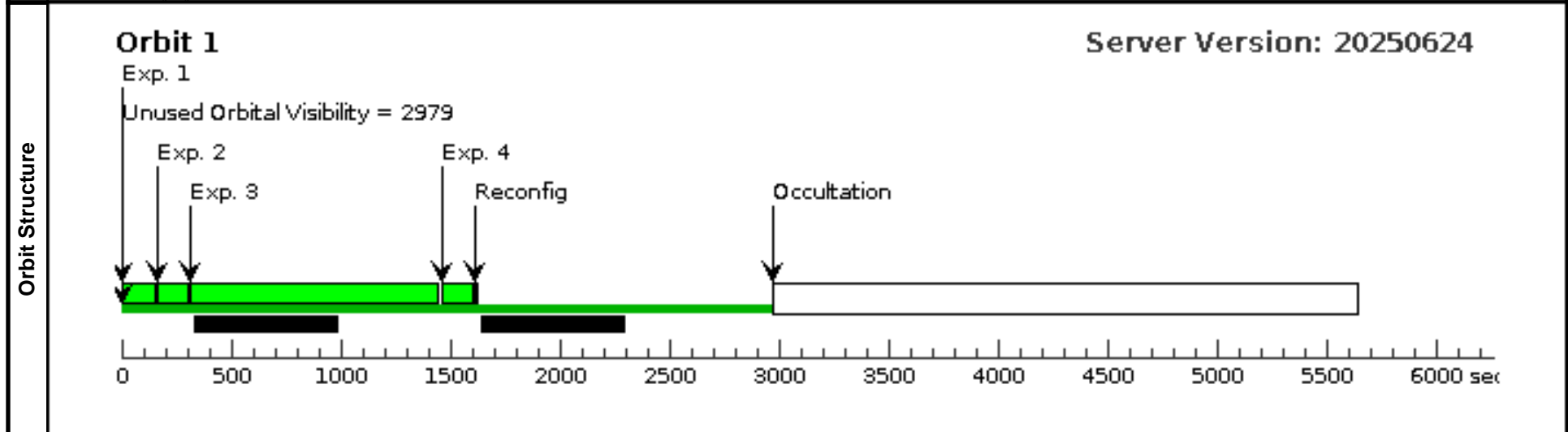
Proposal 17970 - Tu (04) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (04)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00
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<b>Diagnostics</b>	(Tu (04)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT
	(Tu (04)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu (04)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu - Flat #1 F350LP (04.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F600LP (04.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F469N (04.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
<b>Exposures</b>	1	Tu - Flat #1 F350LP	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F350LP			1.2 Secs (1.2 Secs) [==>]	[1]
	<i>Comments: #1 of 1 flats in set A-Tu</i>								
	2	Tu - Flat #1 F600LP	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F600LP			1.3 Secs (1.3 Secs) [==>]	[1]
	<i>Comments: #1 of 1 flats in set A-Tu</i>								
3	Tu - Flat #1 F469N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F469N			1000 Secs (1000 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-Tu</i>									
4	Tu - Flat #1 F200LP	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F200LP			1.4 Secs (1.4 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-Tu</i>									



Proposal 17970 - Tu (05) - WFC3 UVIS Internal Flats

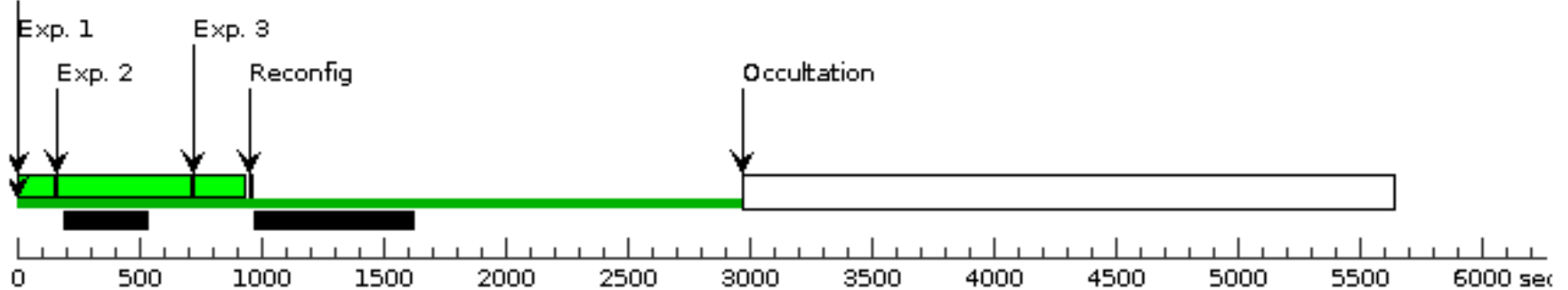
Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (05)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00									
	<b>Diagnosics</b> (Tu - Flat #1 F763M (05.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Tu - Flat #1 F467M (05.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser (Tu - Flat #1 F953N (05.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser									
<b>Exposures</b>	<b>#</b>	<b>Label</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time (Total)/[Actual Dur.]</b>	<b>Orbit</b>
	1	Tu - Flat #1 F763M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F763M				5.9 Secs (5.9 Secs) [==>]	[1]
	<i>Comments: #1 of 1 flats in set A-Tu</i>									
	2	Tu - Flat #1 F467M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F467M				409.0 Secs (409 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>										
3	Tu - Flat #1 F953N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F953N				74.0 Secs (74 Secs) [==>]	[1]	
<i>Comments: #1 of 1 flats in set A-Tu</i>										

**Orbit 1**

Unused Orbital Visibility = 2979

Server Version: 20250624



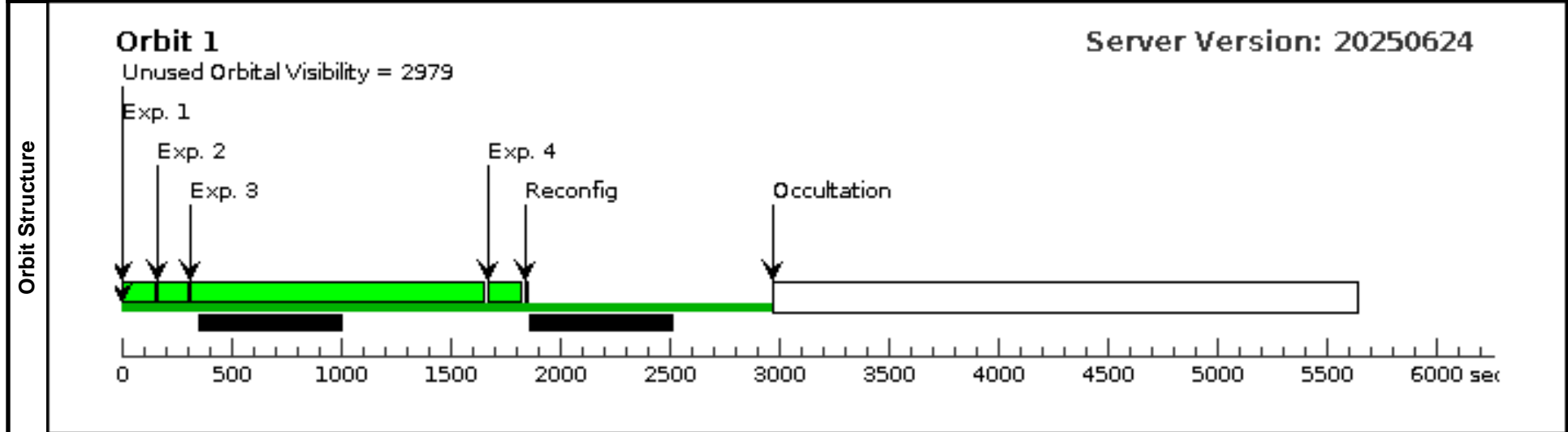
Proposal 17970 - Tu (06) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

**Visit**  
**Proposal 17970, Tu (06)**  
**Diagnostic Status: Warning**  
 Scientific Instruments: WFC3/UVIS  
 Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00

**Diagnostics**  
 (Tu (06)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT  
 (Tu - Flat #1 F625W (06.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 F689M (06.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 F410M (06.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 F555W (06.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 F625W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F625W				5.9 Secs (5.9 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
2	Tu - Flat #1 F689M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F689M				8.5 Secs (8.5 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
3	Tu - Flat #1 F410M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F410M				1200 Secs (1200 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
4	Tu - Flat #1 F555W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F555W				14.4 Secs (14.4 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



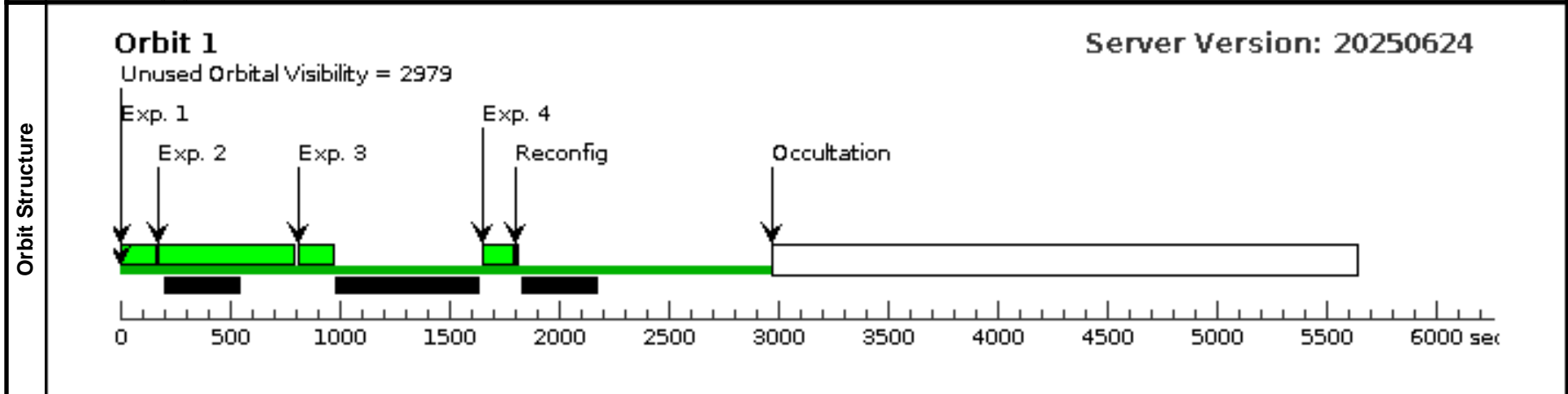
Proposal 17970 - Tu (07) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (07)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00
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<b>Diagnostics</b>	(Tu (07)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT
	(Tu (07)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu (07)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu - Flat #1 F621M (07.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 FQ508N (07.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 F621M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F621M				14.8 Secs (14.8 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
2	Tu - Flat #1 FQ508N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ508N				490.2 Secs (490.2 Secs) [==>]	[1]
<i>Comments: #1 of 1 exp in set A-Tu, 2 exp per flat</i>									
3	Tu - Flat #1 F475X	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F475X				15.6 Secs (15.6 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
4	Tu - Flat #1 F845M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F845M				5.2 Secs (5.2 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



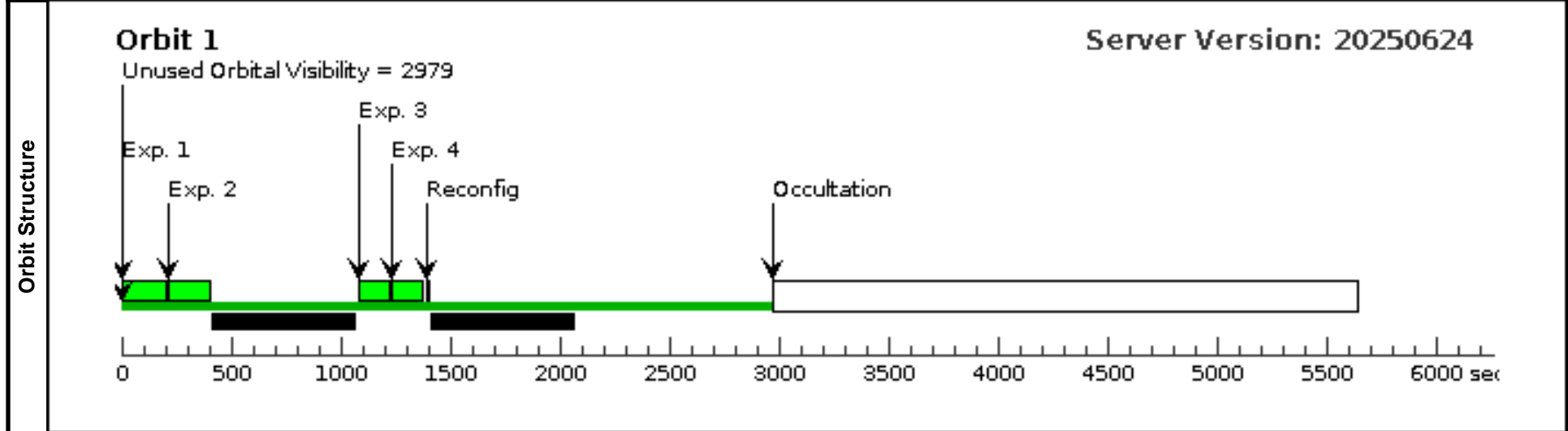
Proposal 17970 - Tu (08) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (08)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00
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<b>Diagnostics</b>	(Tu (08)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT
	(Tu (08)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu - Flat #1 F665N (08.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F673N (08.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F775W (08.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 F665N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F665N				52.4 Secs (52.4 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
2	Tu - Flat #1 F673N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F673N				54.5 Secs (54.5 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
3	Tu - Flat #1 F775W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F775W				3.1 Secs (3.1 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
4	Tu - Flat #1 F850LP	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F850LP				3.6 Secs (3.6 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



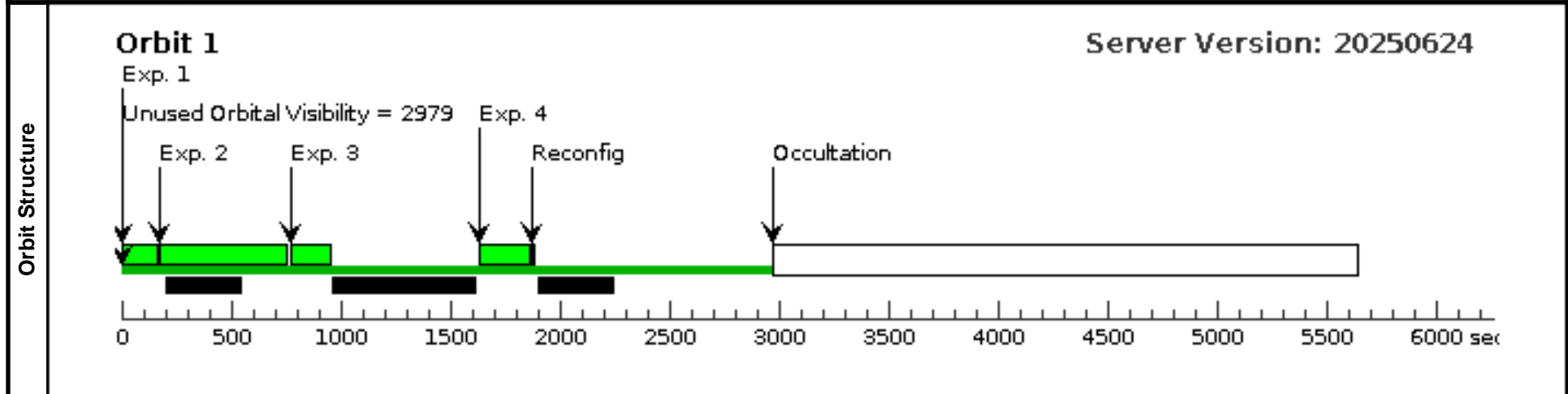
Proposal 17970 - Tu (09) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (09)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00
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<b>Diagnostics</b>	(Tu (09)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT
	(Tu (09)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu (09)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu - Flat #1 F680N (09.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F656N (09.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F547M (09.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(Tu - Flat #1 F645N (09.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser	

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 F680N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F680N				15.7 Secs (15.7 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
2	Tu - Flat #1 F656N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F656N				444.0 Secs (444 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
3	Tu - Flat #1 F547M	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F547M				37.5 Secs (37.5 Secs) [==>]	[1]
<i>Comments: #1 of 3 flats in set A-Tu</i>									
4	Tu - Flat #1 F645N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F645N				99.6 Secs (99.6 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



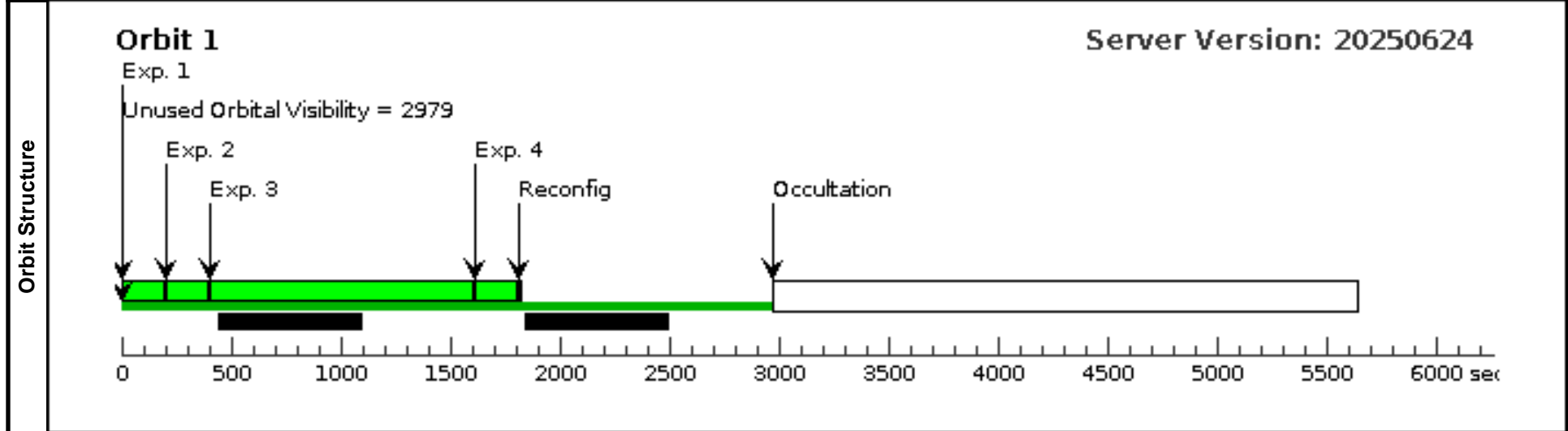
Proposal 17970 - Tu (10) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

**Visit**  
**Proposal 17970, Tu (10)**  
**Diagnostic Status: Warning**  
 Scientific Instruments: WFC3/UVIS  
 Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00

**Diagnostics**  
 (Tu (10)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT  
 (Tu (10)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED  
 (Tu - Flat #1 F475W (10.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 F657N (10.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 F487N (10.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat #1 FQ889N (10.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 F475W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F475W				42.7 Secs (42.7 Secs) [==>]	[1]
<i>Comments: #1 of 3 flats in set A-Tu</i>									
2	Tu - Flat #1 F657N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F657N				57.2 Secs (57.2 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
3	Tu - Flat #1 F487N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F487N				1052.6 Secs (1052.6 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
4	Tu - Flat #1 FQ889N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ889N				57.5 Secs (57.5 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



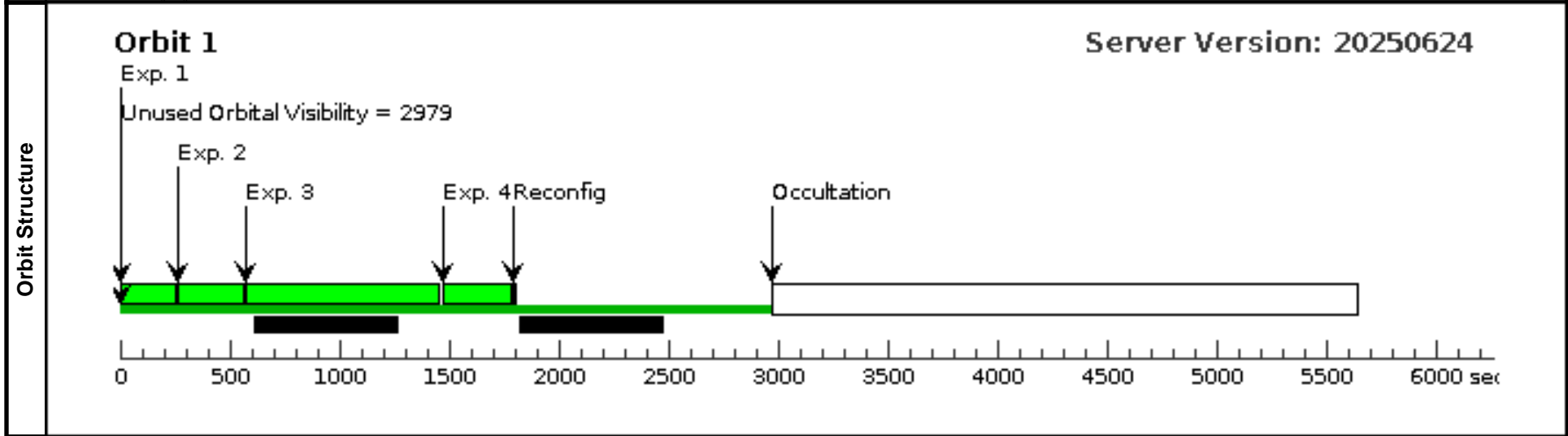
Proposal 17970 - Tu (11) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu (11)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-MAR-2026:00:00:00 AND 30-APR-2026:00:00:00
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<b>Diagnostics</b>	(Tu (11)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT
	(Tu (11)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu (11)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu (11)) Warning (Orbit Planner): WFC3 EXPOSURE TIME ADJUSTED
	(Tu - Flat #1 FQ619N (11.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F631N (11.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
	(Tu - Flat #1 F502N (11.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat #1 FQ619N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS-QUAD	FQ619N				101.3 Secs (101.3 Secs) [==>]	[1]
<i>Comments: #2 of 2 exp in set A-Tu, 2 exp per flat</i>									
2	Tu - Flat #1 F631N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F631N				161.6 Secs (161.6 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									
3	Tu - Flat #1 F502N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F502N				742.1 Secs (742.1 Secs) [==>]	[1]
<i>Comments: #1 of 3 flats in set A-Tu</i>									
4	Tu - Flat #1 F658N	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F658N				173.2 Secs (173.2 Secs) [==>]	[1]
<i>Comments: #1 of 1 flats in set A-Tu</i>									



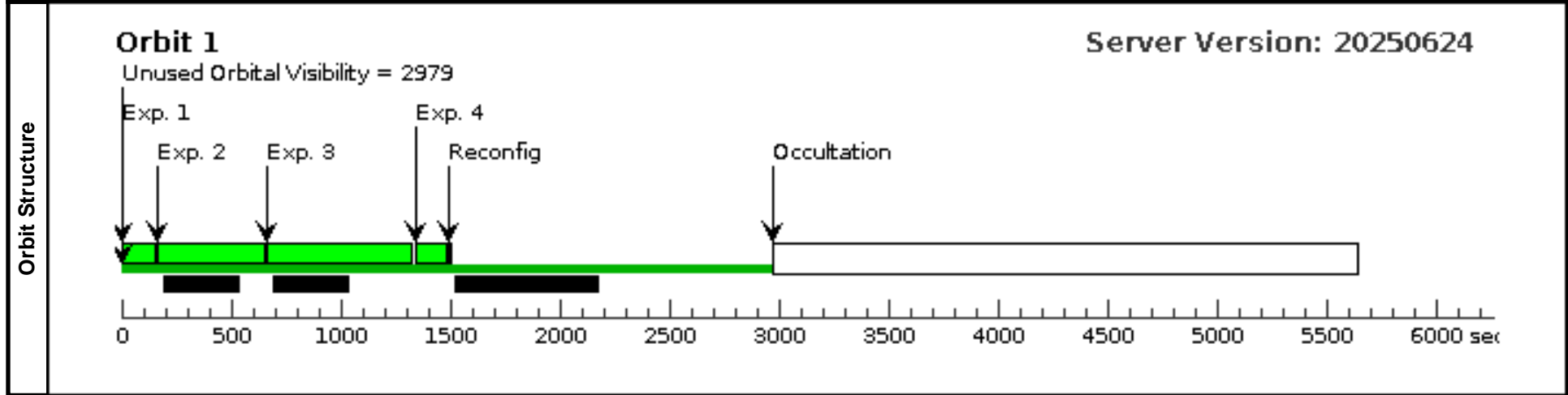
Proposal 17970 - Tu early (12) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu early (12)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-DEC-2025:00:00:00 AND 01-JAN-2026:00:00:00
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**Diagnosics**  
 (Tu early (12)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT  
 (Tu - Flat F606W (12.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F438W (12.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F390W (12.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F814W (12.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat F606W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F606W				4.9 Secs (4.9 Secs) [==>]	[1]
<i>Comments: #1 of 4 flats in set A-Tu</i>									
2	Tu - Flat F438W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F438W				350 Secs (350 Secs) [==>]	[1]
3	Tu - Flat F390W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F390W				525 Secs (525 Secs) [==>]	[1]
4	Tu - Flat F814W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F814W				2.0 Secs (2 Secs) [==>]	[1]
<i>Comments: #1 of 4 flats in set A-Tu</i>									



Proposal 17970 - Tu late (13) - WFC3 UVIS Internal Flats

Wed Jul 16 21:00:35 GMT 2025

<b>Visit</b>	<b>Proposal 17970, Tu late (13)</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: WFC3/UVIS Special Requirements: BETWEEN 01-JUN-2026:00:00:00 AND 01-JUL-2026:00:00:00
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**Diagnosics**  
 (Tu late (13)) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB VISIT  
 (Tu - Flat F606W (13.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F438W (13.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F390W (13.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser  
 (Tu - Flat F814W (13.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Tu - Flat F606W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F606W				4.9 Secs (4.9 Secs) [=>]	[1]
<i>Comments: #1 of 4 flats in set A-Tu</i>									
2	Tu - Flat F438W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F438W				350 Secs (350 Secs) [=>]	[1]
3	Tu - Flat F390W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F390W				525 Secs (525 Secs) [=>]	[1]
4	Tu - Flat F814W	TUNGSTEN	WFC3/UVIS, ACCUM, UVIS	F814W				2.0 Secs (2 Secs) [=>]	[1]
<i>Comments: #1 of 4 flats in set A-Tu</i>									

