



## 12947 - determination of the line-spread function of the E140H grating with the 0.2 x 0.5 slit

Cycle: 20, Proposal Category: GO

(Calibration)

(Availability Mode: AVAILABLE)

### INVESTIGATORS

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### 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	NONE	STIS/FUV-MAMA	2	12-Jul-2012 21:27:35.0	yes

2 Total Orbits Used

### ABSTRACT

We propose to take an E140H observation of the 0.2" x 0.5" slit illuminated by one calibration lamp, in order to determine the line-spread function (LSF). Almost 50 archival observations will benefit from this LSF, so there will be an immediate return for the scientific community. There will be a direct application for Ly observations of the interplanetary hydrogen. Moreover any future observation will also benefit of this lamp observation.

**OBSERVING DESCRIPTION**

We will take an E140H observation of the 0.2" x 0.5" slit with HITM2, one of the three hollow cathode Pt/Cr-Ne arc lamps. This lamp exposure will provide a thinner emission line and a better estimate of the LSF for archival or future STIS observations.

A previous lamp exposure with HITM2 (OBL601010) used the E140H grating with the 0.2" x 0.09" slit, yielding a maximal count rate lower than 0.07 counts/sec/pixel. With the 0.2" x 0.5", the maximal count rate should be lower than 0.42 counts/sec/pixel, so well below the bright object limit for the FUV-MAMA (75 counts/sec/pixel).

The exposure will be as long as possible. The full orbit, if possible.

Proposal 12947 - Visit 01 - determination of the line-spread function of the E140H grating with the 0.2 x 0.5 slit

Fri Jul 13 01:27:42 GMT 2012

<b>Visit</b>	<p><b>Proposal 12947, Visit 01, implementation</b></p> <p><b>Diagnostic Status: Error</b></p> <p>Scientific Instruments: STIS/FUV-MAMA</p> <p>Special Requirements: (none)</p> <p><i>Comments: The lamp will be HITM2</i></p>																													
	<b>Diagnostics</b>	<p>(Exposure 1 (Visit 01)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=LAMP The combination of attributes chosen is illegal.</p> <p>(Exposure 1 (Visit 01)) Error (Form): This attribute cannot have this value due to other choices: Optional_Parameter=LAMP=LINE The combination of attributes chosen is illegal.</p> <p>(Exposure 1 (Visit 01)) Error (Form): Target NONE is no longer a valid selection</p> <p>(Exposure 1 (Visit 01)) Error (Form): This attribute cannot have this value due to other choices: Calibration_Target=NONE Calibration Target 'NONE' only allowed in engineering proposals unless LAMP is TUNGSTEN</p> <p>(Exposure 1 (Visit 01)) Error (Form): LAMP is not a valid selection</p> <p>(Visit 01) Warning (Orbit Planner): MAXIMUM DURATION EXCEEDED FOR INTERNAL OR EARTH CALIB SU</p> <p>(Exposure 1 (Visit 01)) Warning (Form): Illegal STIS LAMP and EXP TIME</p>																												
<b>Exposures</b>		<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/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td></td> <td>NONE</td> <td>STIS/FUV-MAMA, TIME-TAG, 0.2X0.2</td> <td>E140H 1234 A</td> <td>BUFFER-TIME=25 00; LAMP=LINE</td> <td>QESIPARM TARG TYPE HITM2; QELOGSHEET AP_ 1 S200X500</td> <td></td> <td>5137 Secs [==&gt;]</td> <td>[1]</td> </tr> </tbody> </table> <p><i>Comments: For the previous exposure with the HITM2 lamp and the 0.2" x 0.09" slit (OBL601010), the global count rate was about 41 counts/sec. So with the 0.2" x 0.5", the global count rate should be about 250 counts/sec. According to the criteria in the instrument handbook (page 235), the buffer time can be taken as half of the exposure time, so we are taking 2500 sec.</i></p>										#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1		NONE	STIS/FUV-MAMA, TIME-TAG, 0.2X0.2	E140H 1234 A	BUFFER-TIME=25 00; LAMP=LINE	QESIPARM TARG TYPE HITM2; QELOGSHEET AP_ 1 S200X500		5137 Secs [==>]
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