



12358 - IR Grism L-Flat Correction and Independent 2-D Wavelength Solution

Cycle: 18, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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Dr. Norbert Pirzkal (CoI)	Space Telescope Science Institute	npirzkal@stsci.edu

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	(1) NGC7789-S7840	WFC3/IR	3	30-Sep-2010 21:05:28.0	yes
02	(2) NGC7789-S5237	WFC3/IR	1	30-Sep-2010 21:05:48.0	yes

4 Total Orbits Used

ABSTRACT

A star cluster containing K-giants will be observed in a grid of positions within the IR field of view using each of the IR G102 and G141 grisms. These data will be used to provide both an L-flat correction for the IR grism modes and a more highly refined 2-d wavelength solution that what was derived in Cy17 from observations of a planetary nebula. Photometric analysis of the stellar spectra as a function of field position will determine the L-flat. Fitting models to the observed spectra will determine the 2-d wavelength solution.

OBSERVING DESCRIPTION

An open cluster known to contain K-giant stars will be observed at a total of 13 positions within the IR field of view, using 3x3 and 2x2 grids. The grid of observations will be used to map spatial variations in the grism mode throughput and establish a low-order flat-field for the grisms, as well as to map out any 2-d variations in the spectral line spread function (LSF). Each pair of dispersed exposures will be preceded by a direct image, in

order to establish the wavelength zero-point for the dispersed exposures. The F130N filter will be used for the accompanying direct exposures. A narrow-band filter is needed to prevent saturation of these bright targets in the minimum available full-frame readout time. The number of FPA readouts (nsamp) is minimized for each exposure in order to avoid as much visibility time lost to buffer dumps as possible. POSTARGs are used to produce the 13-point exposure patterns within the FOV. POSTARGs are also used to provide small dither steps between the two grism exposures that are taken at each field position.

CALIBRATION JUSTIFICATION

Large-scale variations in overall instrument sensitivity over the field of view must be calibrated by mapping the variations in grism flux calibration over the FOV. This is vital for calibrating multi-object spectroscopic (MOS) observations, where targets of interest are distributed over the entire FOV. Measured variations in the G102 and G141 spectra of the same K-giant stars observed at different places within the FOV will produce the spectroscopic equivalent of a low-order flat field, which is used to correct science observations for variations in throughput across the field. This L-flat will be used within the aXe spectral extraction and calibration software to place all WFC3 IR grism observations on a proper absolute flux scale. The goal is to calibrate the G102 and G141 L-flat behavior to <5% (1 sigma) over the wavelength ranges in which the grism throughputs are more than 10% of their maxima in the +1st spectral order.

The complete set of calibration observations for each grism will be executed once in Cycle 18. Additional monitoring of the grism flux calibration will be obtained by observing a flux standard at a single field position in the Cycle 18 calibration program 12333, "UVIS & IR Zeropoint Stability Monitor".

Calibration products: The L-flat data for each grism will be used within the aXe spectral extraction software.

Proposal 12358 (STScI Edit Number: 0, Created: Thursday, September 30, 2010 8:05:52 PM EST) - Overview

Visit	Proposal 12358, Visit 01 Fri Oct 01 01:05:53 GMT 2010 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 0.0D TO 25.0 D; ORIENT 75.0D TO 115.0 D; ORIENT 165.0D TO 205.0 D; ORIENT 255.0D TO 295.0 D; ORIENT 345.0D TO 359.9 D <i>Comments: This visit is centered on a known K star, in a field somewhat off-center of the cluster, in order to avoid crowding. We get direct and grism exposures at a total of 13 field positions: an large 3x3 grid, and an inner 2x2 grid. Need to avoid orients of 50 and 230 degrees, due to fainter nearby companion of primary target, and also avoid 140 and 320 degrees, due to very bright stars further across the field.</i>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		NGC7789-S7840	RA: 23 57 19.3000 (359.3304167d) Dec: +56 40 51.50 (56.68097d) Equinox: J2000		V=12.8 K=9.8	Reference Frame: ICRS

Proposal 12358 (STScI Edit Number: 0, Created: Thursday, September 30, 2010 8:05:52 PM EST) - Overview

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Center Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -20.0,0.0		[==>]	[1]
2	Center G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -20.0,0.0		[==>]	[1]
3	Center G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -20.0,0.0		[==>]	[1]
4	Center G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -21.0,1.0		[==>]	[1]
5	Center G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -21.0,1.0		[==>]	[1]
6	Upper Left Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,+45.0		[==>]	[1]
7	Upper Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -50.0,45.0		[==>]	[1]
8	Upper Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -50.0,45.0		[==>]	[1]
9	Upper Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -51.0,46.0		[==>]	[1]
10	Upper Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -51.0,46.0		[==>]	[1]
11	Upper Center Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -20.0,+45.0		[==>]	[1]
12	Upper Center G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -20.0,45.0		[==>]	[1]
13	Upper Center G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -20.0,45.0		[==>]	[1]
14	Upper Center G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -21.0,46.0		[==>]	[1]
15	Upper Center G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -21.0,46.0		[==>]	[1]
16	Upper Right Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG +23.0,+45.0		[==>]	[1]

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17	Upper Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 23.0,45. 0	[==>]	[1]
18	Upper Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 23.0,45. 0	[==>]	[1]
19	Upper Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 22.0,46. 0	[==>]	[1]
20	Upper Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 22.0,46. 0	[==>]	[1]
21	Middle Left Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,0. 0	[==>]	[2]
22	Middle Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -50.0,0. 0	[==>]	[2]
23	Middle Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -50.0,0. 0	[==>]	[2]
24	Middle Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -51.0,1. 0	[==>]	[2]
25	Middle Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -51.0,1. 0	[==>]	[2]
26	Middle Right Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23.0,0	[==>]	[2]
27	Middle Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 23,0	[==>]	[2]
28	Middle Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 23,0	[==>]	[2]
29	Middle Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 22.0,1.0	[==>]	[2]
30	Middle Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 22.0,1.0	[==>]	[2]
31	Lower Left Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,-4 5.0	[==>]	[2]
32	Lower Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -50.0,-4 5.0	[==>]	[2]

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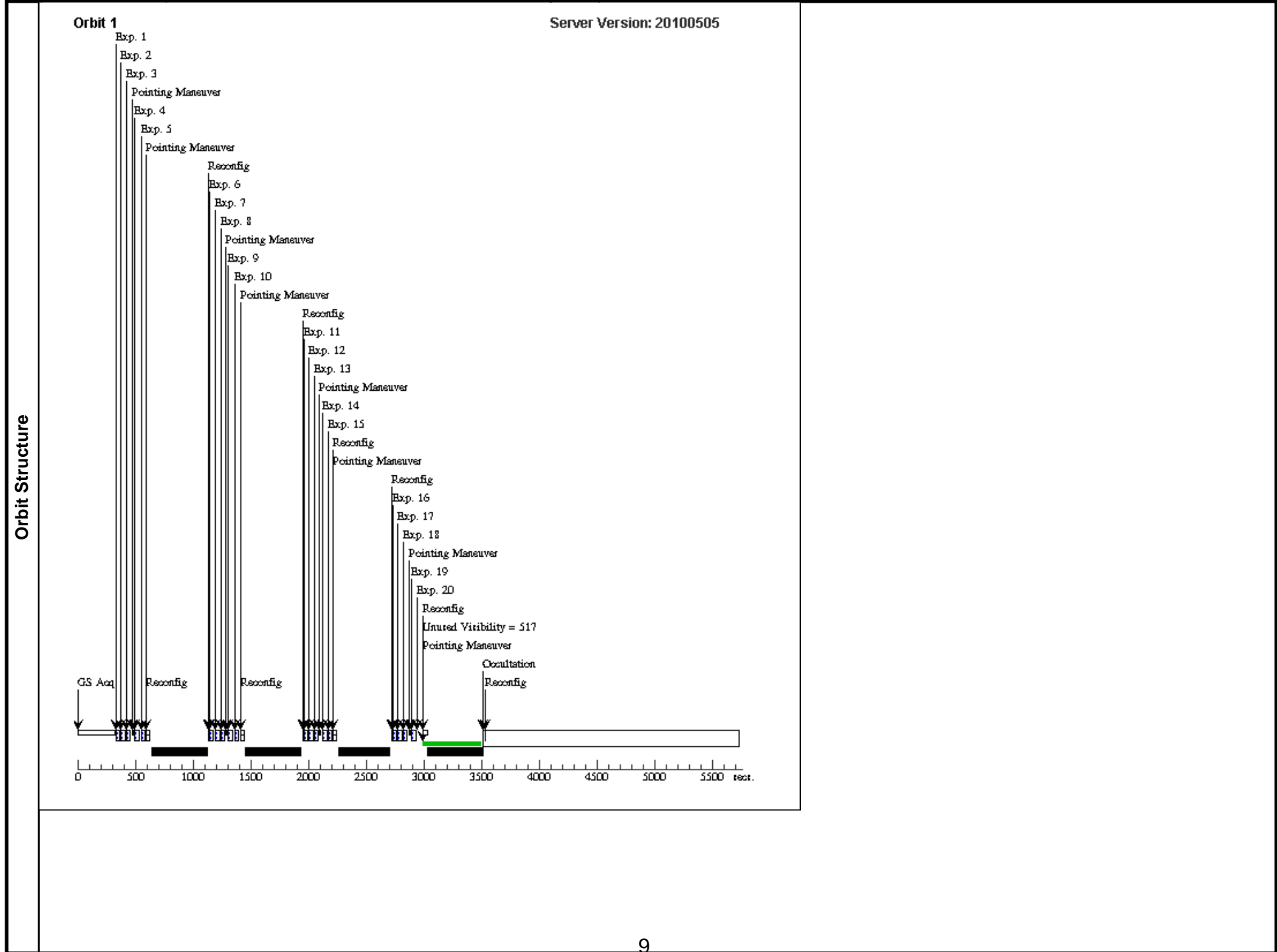
33	Lower Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -50.0,-4 5.0	[==>]	[2]
34	Lower Left G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -51.0,-4 4.0	[==>]	[2]
35	Lower Left G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -51.0,-4 4.0	[==>]	[2]
36	Lower Cente r Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -20.0,-4 5.0	[==>]	[2]
37	Lower Cente r G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -20.0,-4 5.0	[==>]	[2]
38	Lower Cente r G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -20.0,-4 5.0	[==>]	[2]
39	Lower Cente r G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -21.0,-4 4.0	[==>]	[2]
40	Lower Cente r G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -21.0,-4 4.0	[==>]	[2]
41	Lower Right Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23,-45.0	[==>]	[2]
42	Lower Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 23,-45.0	[==>]	[2]
43	Lower Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 23,-45.0	[==>]	[2]
44	Lower Right G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 22.0,-44 .0	[==>]	[3]
45	Lower Right G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 22.0,-44 .0	[==>]	[3]
46	UL Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -35.0,22 .0	[==>]	[3]
47	UL G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -35.0,22 .0	[==>]	[3]
48	UL G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -35.0,22 .0	[==>]	[3]

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49	UL G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -36.0,23 .0	[==>]	[3]
50	UL G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -36.0,23 .0	[==>]	[3]
51	UR Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 1.0,22.0	[==>]	[3]
52	UR G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 1.0,22.0	[==>]	[3]
53	UR G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 1.0,22.0	[==>]	[3]
54	UR G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 0.0,23.0	[==>]	[3]
55	UR G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0.0,23.0	[==>]	[3]
56	LR Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 1.0,-22. 0	[==>]	[3]
57	LR G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 1.0,-22. 0	[==>]	[3]
58	LR G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 1.0,-22. 0	[==>]	[3]
59	LR G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 0.0,-21. 0	[==>]	[3]
60	LR G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG 0.0,-21. 0	[==>]	[3]
61	LL Direct	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -35.0,-2 2.0	[==>]	[3]
62	LL G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -35.0,-2 2.0	[==>]	[3]
63	LL G141	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -35.0,-2 2.0	[==>]	[3]
64	LL G102	(1) NGC7789-S7840	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -36.0,-2 1.0	[==>]	[3]

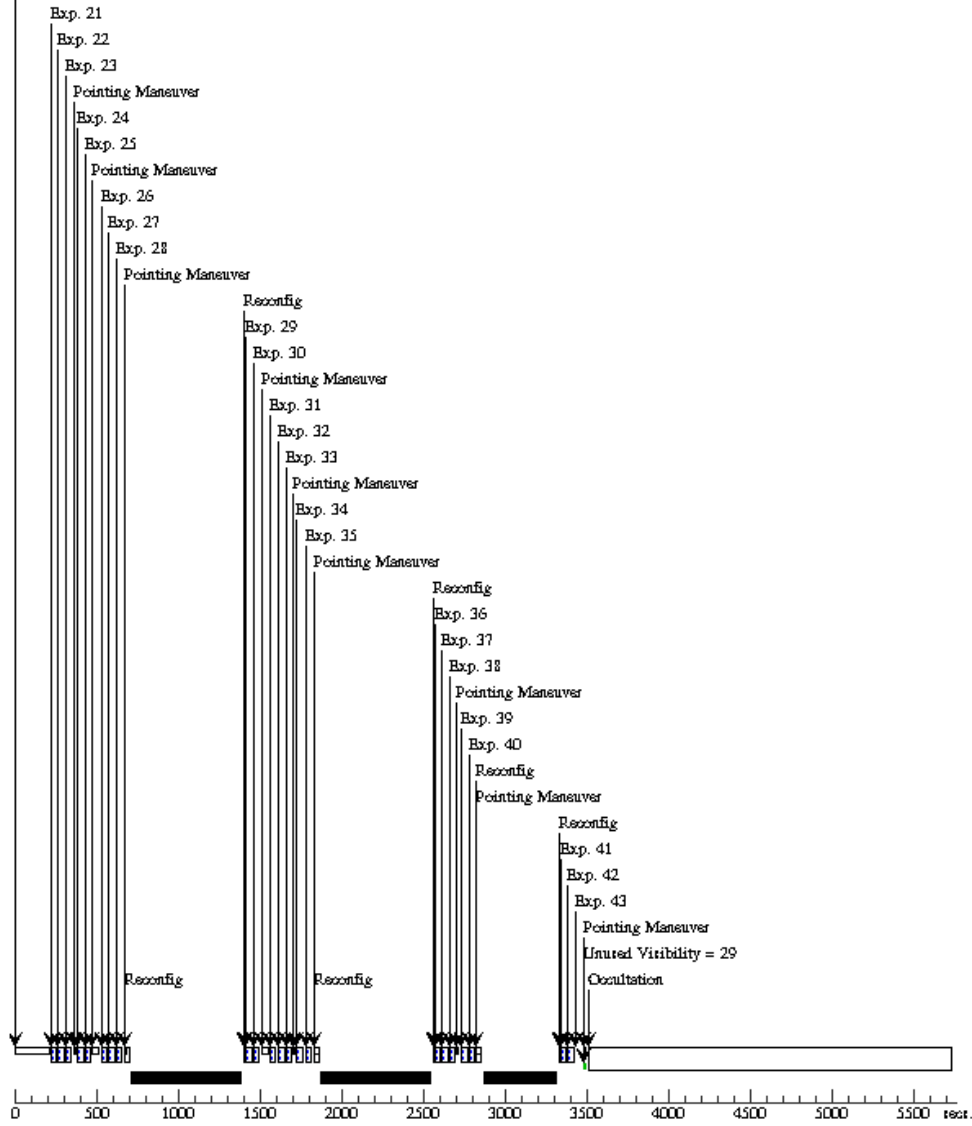
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65	LL G141	(1) NGC7789-S7840 WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=3	POS TARG -36.0,-2 1.0	[==>]	[3]
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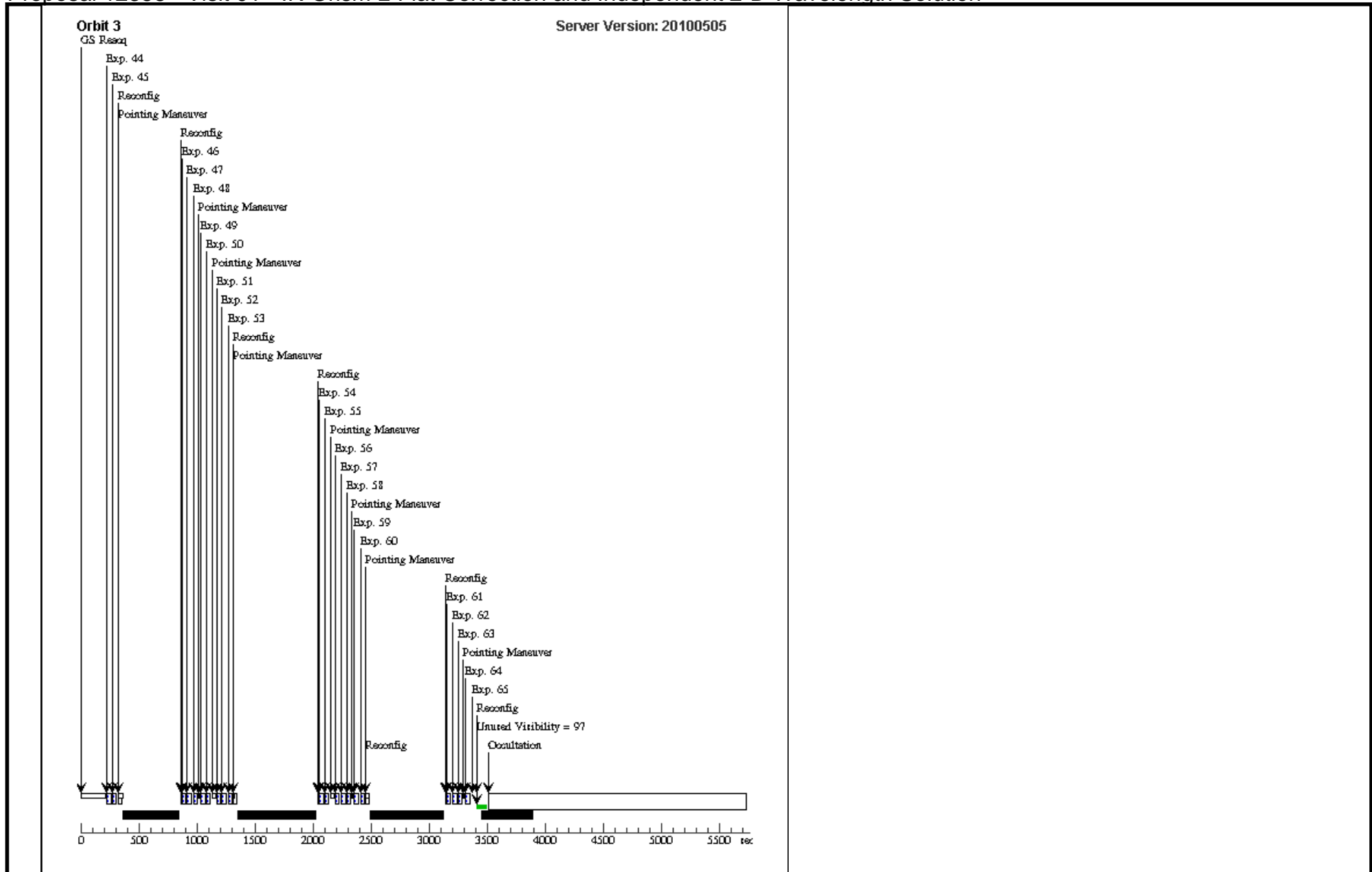


Orbit 2
GS Reaq

Server Version: 20100505



Proposal 12358 - Visit 01 - IR Grism L-Flat Correction and Independent 2-D Wavelength Solution



Proposal 12358 - Visit 01 - IR Grism L-Flat Correction and Independent 2-D Wavelength Solution

Fri Oct 01 01:05:57 GMT 2010

Visit	Proposal 12358, Visit 02 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: ORIENT 0.0D TO 65.0 D; ORIENT 115.0D TO 245.0 D; ORIENT 295.0D TO 359.9 D <i>Comments: This visit is centered on another known K star, but even further away from the center of the cluster to reduce crowding even more. Only the 4 outer corner positions of the FoV are used. Need to avoid orients of 90 and 270, due to nearby companion of main target.</i>					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(2)		NGC7789-S5237	RA: 23 56 50.6000 (359.2108333d) Dec: +56 49 20.90 (56.82247d) Equinox: J2000		V=12.8 K=9.9	Reference Frame: ICRS

Proposal 12358 - Visit 01 - IR Grism L-Flat Correction and Independent 2-D Wavelength Solution

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Upper Left Direct	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,+4 5.0		[==>]	[1]
2	Upper Left G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -50.0,45 .0		[==>]	[1]
3	Upper Left G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -50.0,45 .0		[==>]	[1]
4	Upper Left G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -51.0,46 .0		[==>]	[1]
5	Upper Left G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -51.0,46 .0		[==>]	[1]
6	Upper Right Direct	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG +23.0,+ 45.0		[==>]	[1]
7	Upper Right G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 23.0,45. 0		[==>]	[1]
8	Upper Right G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 23.0,45. 0		[==>]	[1]
9	Upper Right G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 22.0,46. 0		[==>]	[1]
10	Upper Right G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 22.0,46. 0		[==>]	[1]
11	Lower Left Direct	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,-4 5.0		[==>]	[1]
12	Lower Left G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -50.0,-4 5.0		[==>]	[1]
13	Lower Left G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -50.0,-4 5.0		[==>]	[1]
14	Lower Left G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG -51.0,-4 4.0		[==>]	[1]
15	Lower Left G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG -51.0,-4 4.0		[==>]	[1]
16	Lower Right Direct	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, G102-REF	F130N	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23,-45.0		[==>]	[1]

Exposures

Proposal 12358 - Visit 01 - IR Grism L-Flat Correction and Independent 2-D Wavelength Solution

17	Lower Right G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 23,-45.0	[==>]	[1]
18	Lower Right G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 23,-45.0	[==>]	[1]
19	Lower Right G102	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G102	SAMP-SEQ=RAPID ; NSAMP=5	POS TARG 22.0,-44 .0	[==>]	[1]
20	Lower Right G141	(2) NGC7789-S5237	WFC3/IR, MULTIACCUM, IR	G141	SAMP-SEQ=RAPID ; NSAMP=4	POS TARG 22.0,-44 .0	[==>]	[1]

