



12703 - IR Grisms: Wavelength Calibration & Stability

Cycle: 19, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
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Mr. Bryan Hilbert (CoI)	Space Telescope Science Institute	hilbert@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) VY2-2-COPY	WFC3/IR	4	23-Jan-2012 21:49:17.0	yes
03	(1) VY2-2-COPY	WFC3/IR	4	23-Jan-2012 21:50:08.0	yes

8 Total Orbits Used

ABSTRACT

We observe VY22 in 16 different positions using the G102 and G141 IR Grisms. The pointings will repeat 4 previously observed positions and add 12 new positions to better sample the 2D variability wavelength dispersion relations of the 2 Grisms. This is a continuation of programs 11937, 12355 and 12356.

OBSERVING DESCRIPTION

Pairs of direct images and G102 are taken in different part of the field, forming a grid pattern. Same is then done using the G141 grism and broad band filters. The broad band filters, taken just prior to grism observations serve as reference points for the grism extraction and calibration.

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Visit	Proposal 12703, Visit 01, implementation Tue Jan 24 02:50:20 GMT 2012 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
	(1)	VY2-2-COPY Alt Name1: PK045-02D1	RA: 19 24 22.2300 (291.0926250d) Dec: +09 53 56.66 (9.89907d) Equinox: J2000		V=13.8	Reference Frame: ICRS

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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	Upper Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,+4 5.0		[==>]	[1]
2	Upper Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,45 .0		[==>]	[1]
3	Upper Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,45 .0		[==>]	[1]
4	Mid Upper Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,+2 2		[==>]	[1]
5	Mid Upper Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,22		[==>]	[1]
6	Mid Upper Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,22		[==>]	[1]
7	Middle Top Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,15		[==>]	[1]
8	Middle Top Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,15		[==>]	[1]
9	Middle Top Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,15		[==>]	[1]
10	Center Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,00		[==>]	[1]
11	Center Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,0		[==>]	[1]
12	Center Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,0		[==>]	[1]
13	Middle Bottom Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-1 5		[==>]	[1]
14	Middle Bottom Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,-1 5		[==>]	[1]
15	Middle Bottom Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,-1 5		[==>]	[1]
16	Mid Lower Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-2 2		[==>]	[1]

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17	Mid Lower Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,-2 2	[==>]	[1]
18	Mid Lower Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG -50.0,-2 2	[==>]	[1]
19	Lower Left F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-4 5.0	[==>]	[2]
20	Lower Left F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG -50.0,-4 5.0	[==>]	[2]
21	Lower Left G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG -50.0,-4 5.0	[==>]	[2]
22	Upper Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,+ 45.0	[==>]	[2]
23	Upper Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23.0,45. 0	[==>]	[2]
24	Upper Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23.0,45. 0	[==>]	[2]
25	Mid Upper Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,2 2	[==>]	[2]
26	Mid Upper Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23.0,22	[==>]	[2]
27	Mid Upper Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23.0,22	[==>]	[2]
28	Middle Top Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23.0,15	[==>]	[2]
29	Middle Top Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23,15	[==>]	[2]
30	Middle Top Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23,15	[==>]	[2]
31	Center Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,0	[==>]	[2]
32	Center Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID ; NSAMP=1	POS TARG 23.0,0	[==>]	[2]

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33	Center Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG 23.0,0 25; NSAMP=5	[==>]	[2]
34	Middle Bottom Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG 23.0,-15 ; NSAMP=2	[==>]	[2]
35	Middle Bottom Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG 23,-15 ; NSAMP=1	[==>]	[2]
36	Middle Bottom Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG 23,-15 25; NSAMP=5	[==>]	[2]
37	Mid Lower Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG +23.0,-2 2 NSAMP=2	[==>]	[2]
38	Mid Lower Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG 23.0,-22 ; NSAMP=1	[==>]	[2]
39	Mid Lower Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG 23.0,-22 25; NSAMP=5	[==>]	[3]
40	Lower Right F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG 23,-45.0 ; NSAMP=2	[==>]	[3]
41	Lower Right F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG 23,-45.0 ; NSAMP=1	[==>]	[3]
42	Lower Right G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG 23,-45.0 25; NSAMP=5	[==>]	[3]
43	Upper Center 1 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,+45.0 0 NSAMP=2	[==>]	[3]
44	Upper Center 1 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,45.0 ; NSAMP=1	[==>]	[3]
45	Upper Center 1 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,45.0 25; NSAMP=5	[==>]	[3]
46	Mid Upper Center F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,+22 ; NSAMP=2	[==>]	[3]
47	Mid Upper Center F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,22 ; NSAMP=1	[==>]	[3]
48	Mid Upper Center G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,22 25; NSAMP=5	[==>]	[3]

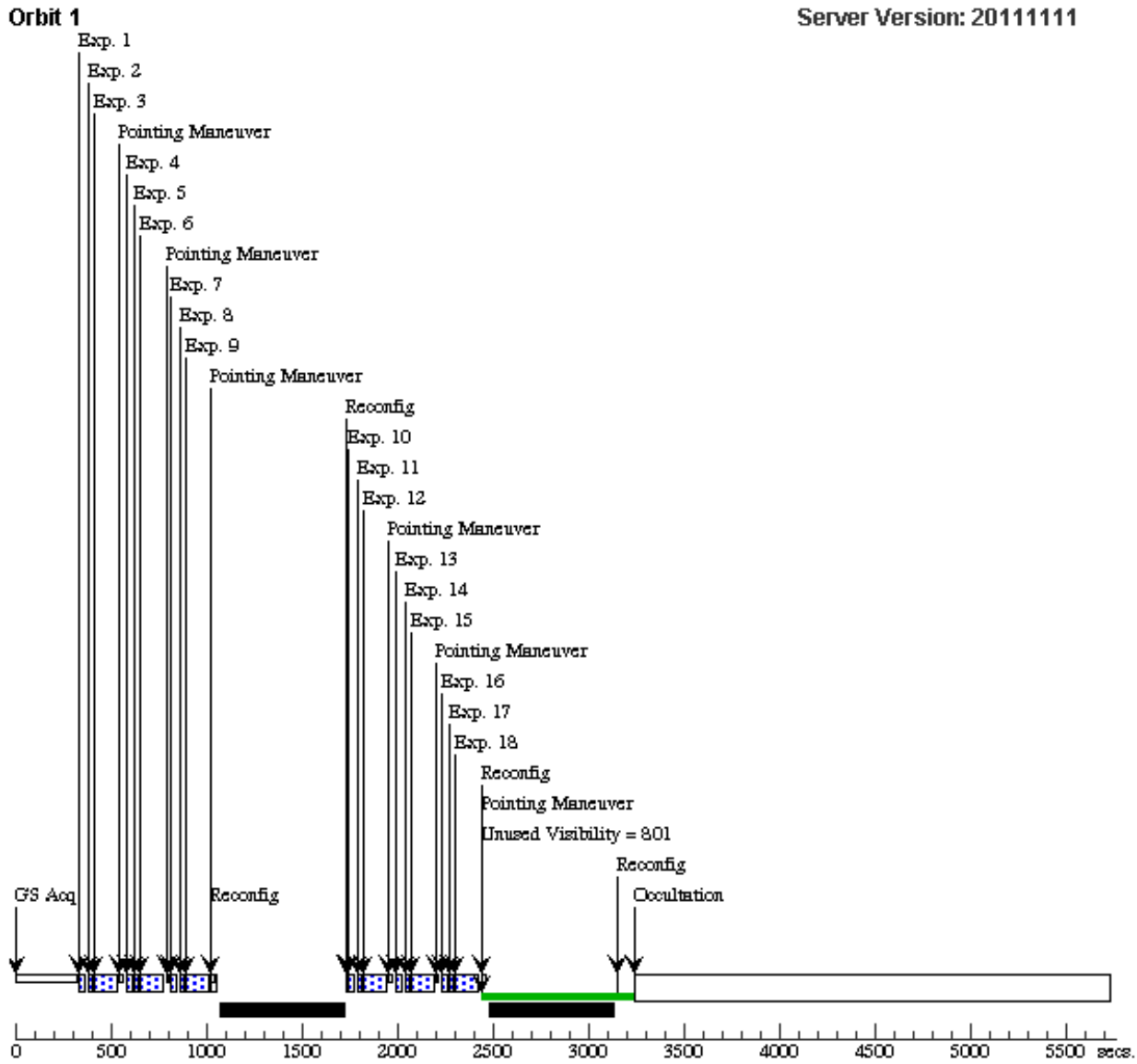
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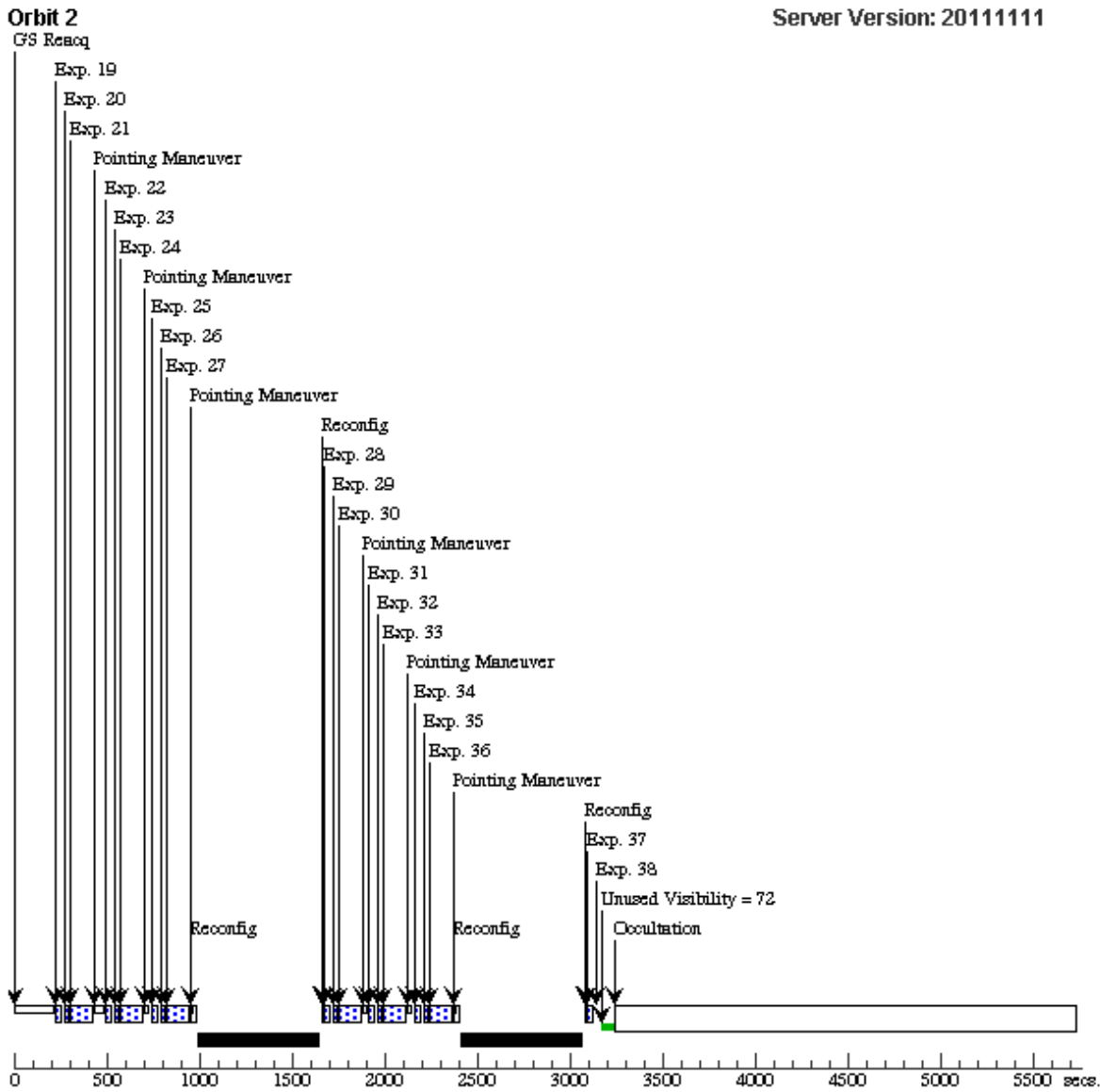
49	Middle Top Middle 1 F0 98M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,15 ; NSAMP=2	[==>]	[3]
50	Middle Top Middle 1 F1 05W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,15 ; NSAMP=1	[==>]	[3]
51	Middle Top Middle 1 G1 02	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,15 25; NSAMP=5	[==>]	[3]
52	Center Cent er F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,0 ; NSAMP=2	[==>]	[3]
53	Center Cent er F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,0 ; NSAMP=1	[==>]	[3]
54	Center Cent er G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,0 25; NSAMP=5	[==>]	[3]
55	Middle Bott om Middle 1 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,-15 ; NSAMP=2	[==>]	[3]
56	Middle Bott om Middle 1 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,-15 ; NSAMP=1	[==>]	[3]
57	Middle Bott om Middle 1 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,-15 25; NSAMP=5	[==>]	[3]
58	Mid Lower Center F098 M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30,-22 ; NSAMP=2	[==>]	[4]
59	Mid Lower Center F10 5W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30,-22 ; NSAMP=1	[==>]	[4]
60	Mid Lower Center G10 2	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30,-22 25; NSAMP=5	[==>]	[4]
61	Lower Cente r 1 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -30.0,-4 5.0 ; NSAMP=2	[==>]	[4]
62	Lower Cente r 1 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -30.0,-4 5.0 ; NSAMP=1	[==>]	[4]
63	Lower Cente r 1 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -30.0,-4 25; 5.0 NSAMP=5	[==>]	[4]
64	Upper Cente r 2 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -10,+45. 0 ; NSAMP=2	[==>]	[4]

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65	Upper Center 2 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -10,45.0 ; NSAMP=1	[==>]	[4]
66	Upper Center 2 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -10,45.0 25 ; NSAMP=5	[==>]	[4]
67	Middle Top Middle 2 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -10,15 ; NSAMP=2	[==>]	[4]
68	Middle Top Middle 2 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -10,15 ; NSAMP=1	[==>]	[4]
69	Middle Top Middle 2 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -10,15 25 ; NSAMP=5	[==>]	[4]
70	Middle Bottom Middle 2 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -10,-15 ; NSAMP=2	[==>]	[4]
71	Middle Bottom Middle 2 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -10,-15 ; NSAMP=1	[==>]	[4]
72	Middle Bottom Middle 2 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -10,-15 25 ; NSAMP=5	[==>]	[4]
73	Lower Center 2 F098M	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID POS TARG -10.0,-4 5.0 ; NSAMP=2	[==>]	[4]
74	Lower Center 2 F105W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID POS TARG -10.0,-4 5.0 ; NSAMP=1	[==>]	[4]
75	Lower Center 2 G102	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS POS TARG -10.0,-4 5.0 25 ; NSAMP=5	[==>]	[4]

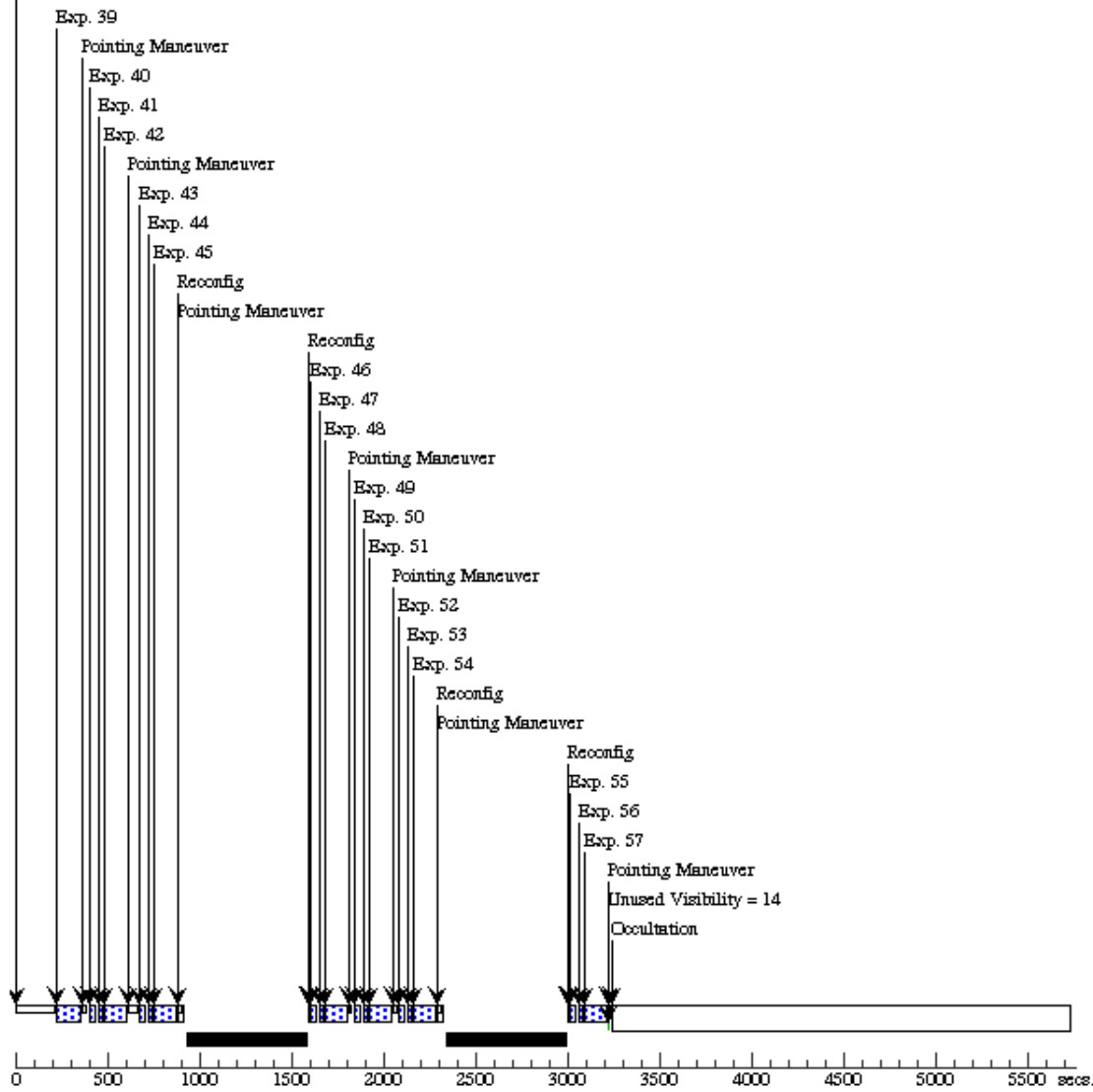
Orbit Structure

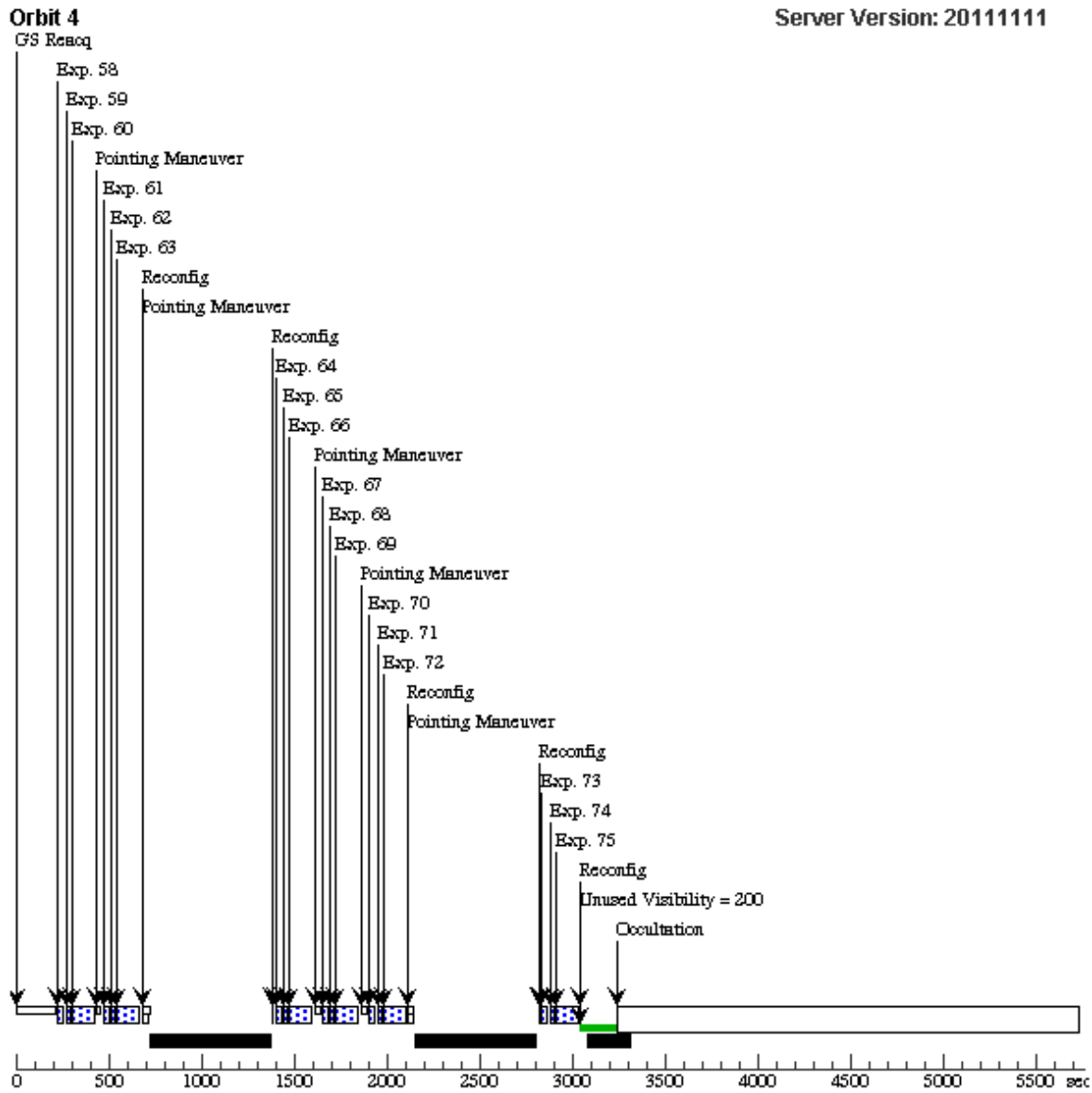




Orbit 3

GS Reacq





Proposal 12703 - Visit 03 - IR Grisms: Wavelength Calibration & Stability

Visit	Proposal 12703, Visit 03, implementation Tue Jan 24 02:50:25 GMT 2012 Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/IR Special Requirements: (none)					
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes
(1)		VY2-2-COPY Alt Name1: PK045-02D1	RA: 19 24 22.2300 (291.0926250d) Dec: +09 53 56.66 (9.89907d) Equinox: J2000		V=13.8	Reference Frame: ICRS

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Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	Upper Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,+4 5.0		[==>]	[1]
	2	Upper Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,45 .0		[==>]	[1]
	3	Upper Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,45 .0		[==>]	[1]
	4	Mid Upper Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,+2 2		[==>]	[1]
	5	Mid Upper Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,22		[==>]	[1]
	6	Mid Upper Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,22		[==>]	[1]
	7	Middle Top Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,15		[==>]	[1]
	8	Middle Top Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,15		[==>]	[1]
	9	Middle Top Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,15		[==>]	[1]
	10	Center Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,00		[==>]	[1]
	11	Center Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,0		[==>]	[1]
	12	Center Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,0		[==>]	[1]
	13	Middle Bottom Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-1 5		[==>]	[1]
	14	Middle Bottom Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-1 5		[==>]	[1]
	15	Middle Bottom Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25 ; NSAMP=5	POS TARG -50.0,-1 5		[==>]	[1]
16	Mid Lower Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-2 2		[==>]	[1]	

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17	Mid Lower Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-2 2	[==>]	[1]
18	Mid Lower Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG -50.0,-2 2	[==>]	[1]
19	Lower Left F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-4 5.0	[==>]	[2]
20	Lower Left F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG -50.0,-4 5.0	[==>]	[2]
21	Lower Left G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG -50.0,-4 5.0	[==>]	[2]
22	Upper Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,+ 45.0	[==>]	[2]
23	Upper Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23.0,45. 0	[==>]	[2]
24	Upper Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23.0,45. 0	[==>]	[2]
25	Mid Upper Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,2 2	[==>]	[2]
26	Mid Upper Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23.0,22	[==>]	[2]
27	Mid Upper Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23.0,22	[==>]	[2]
28	Middle Top Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23.0,15	[==>]	[2]
29	Middle Top Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23,15	[==>]	[2]
30	Middle Top Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5	POS TARG 23,15	[==>]	[2]
31	Center Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG +23.0,0	[==>]	[2]
32	Center Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID ; NSAMP=2	POS TARG 23.0,0	[==>]	[2]

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33	Center Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG 23.0,0 25; NSAMP=5	[==>]	[2]
34	Middle Bottom Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG 23.0,-15 ; NSAMP=2	[==>]	[2]
35	Middle Bottom Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG 23,-15 ; NSAMP=2	[==>]	[2]
36	Middle Bottom Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG 23,-15 25; NSAMP=5	[==>]	[2]
37	Mid Lower Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG +23.0,-2 2 NSAMP=2	[==>]	[3]
38	Mid Lower Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG 23.0,-22 ; NSAMP=2	[==>]	[3]
39	Mid Lower Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG 23.0,-22 25; NSAMP=5	[==>]	[3]
40	Lower Right F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG 23,-45.0 ; NSAMP=2	[==>]	[3]
41	Lower Right F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG 23,-45.0 ; NSAMP=2	[==>]	[3]
42	Lower Right G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG 23,-45.0 25; NSAMP=5	[==>]	[3]
43	Upper Center F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,+45.0 0 NSAMP=2	[==>]	[3]
44	Upper Center F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,45.0 ; NSAMP=2	[==>]	[3]
45	Upper Center G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,45.0 25; NSAMP=5	[==>]	[3]
46	Mid Upper Center F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,+22 ; NSAMP=2	[==>]	[3]
47	Mid Upper Center F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,22 ; NSAMP=2	[==>]	[3]
48	Mid Upper Center G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,22 25; NSAMP=5	[==>]	[3]

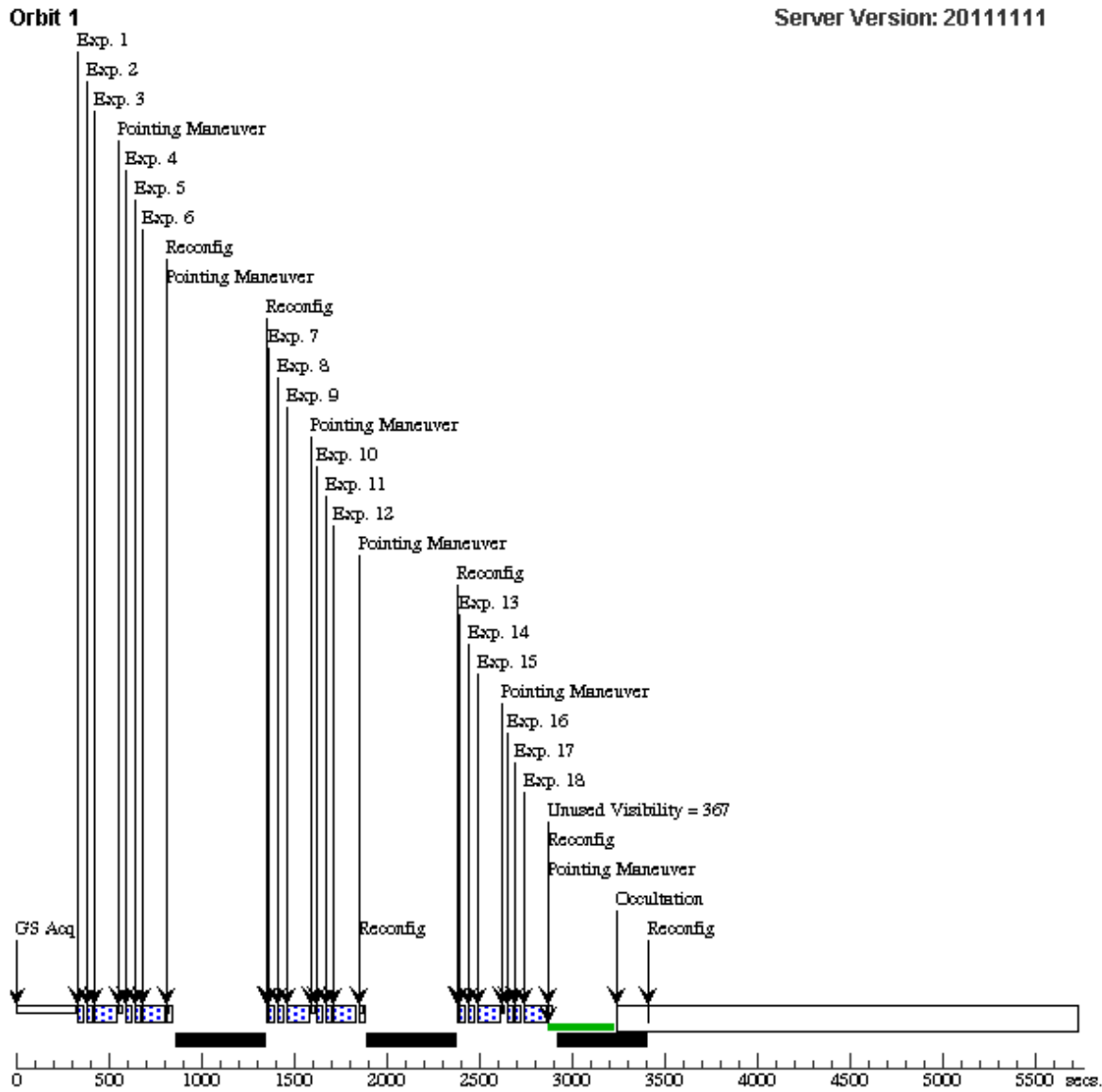
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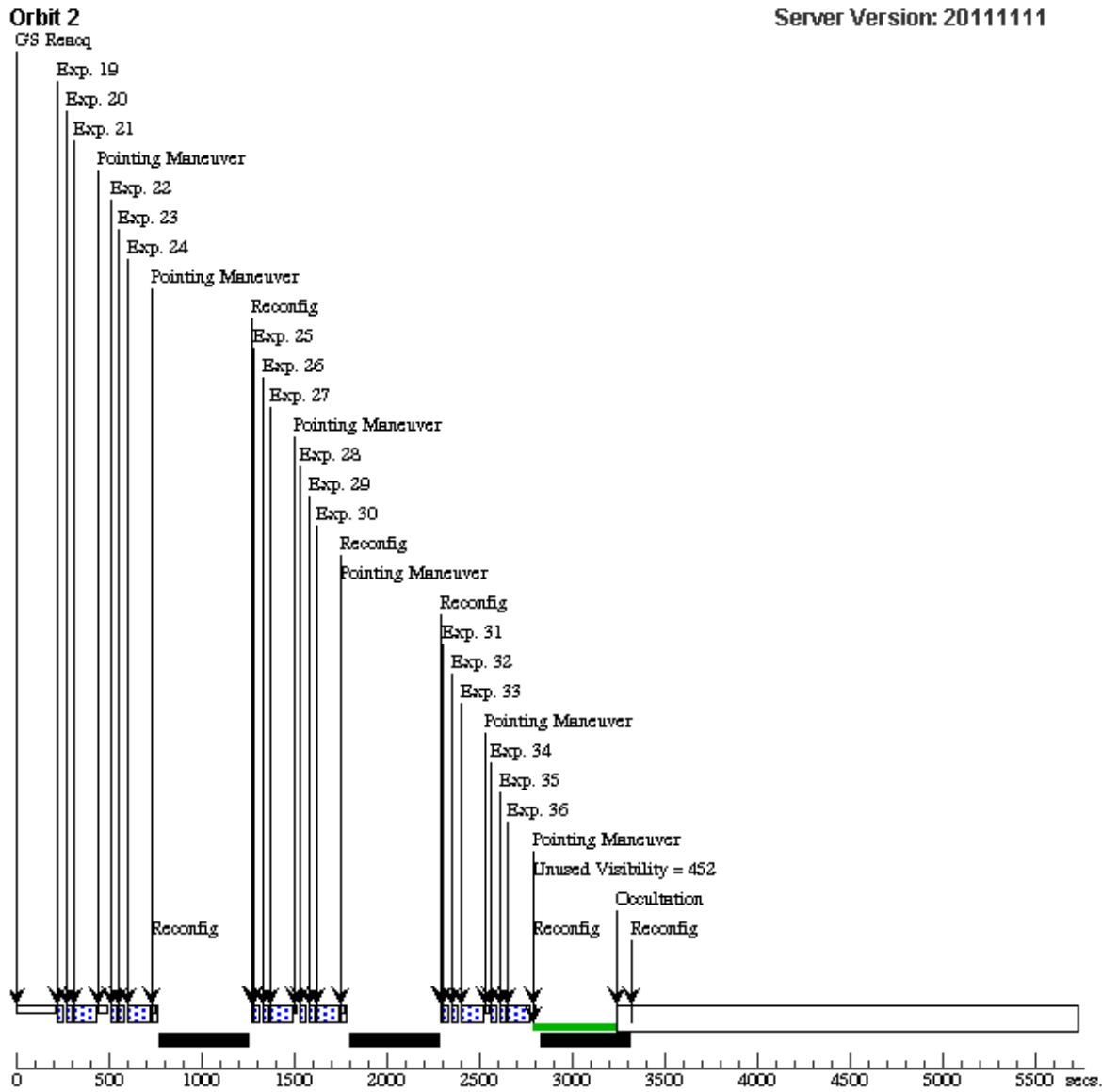
49	Middle Top Middle 1 F1 40W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,15 ; NSAMP=2	[==>]	[3]
50	Middle Top Middle 1 F1 60W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,15 ; NSAMP=2	[==>]	[3]
51	Middle Top Middle 1 G1 41	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,15 25; NSAMP=5	[==>]	[3]
52	Center Cent er F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,0 ; NSAMP=2	[==>]	[3]
53	Center Cent er F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,0 ; NSAMP=2	[==>]	[3]
54	Center Cent er G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,0 25; NSAMP=5	[==>]	[3]
55	Middle Bott om Middle 1 F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,-15 ; NSAMP=2	[==>]	[4]
56	Middle Bott om Middle 1 F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,-15 ; NSAMP=2	[==>]	[4]
57	Middle Bott om Middle 1 G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,-15 25; NSAMP=5	[==>]	[4]
58	Mid Lower Center F140 W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30,-22 ; NSAMP=2	[==>]	[4]
59	Mid Lower Center F16 0W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30,-22 ; NSAMP=2	[==>]	[4]
60	Mid Lower Center G14 1	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30,-22 25; NSAMP=5	[==>]	[4]
61	Lower Cente r 1 F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -30.0,-4 5.0 ; NSAMP=2	[==>]	[4]
62	Lower Cente r 1 F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -30.0,-4 5.0 ; NSAMP=2	[==>]	[4]
63	Lower Cente r 1 G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -30.0,-4 25; 5.0 NSAMP=5	[==>]	[4]
64	Upper Cente r 2 F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -10,+45. 0 ; NSAMP=2	[==>]	[4]

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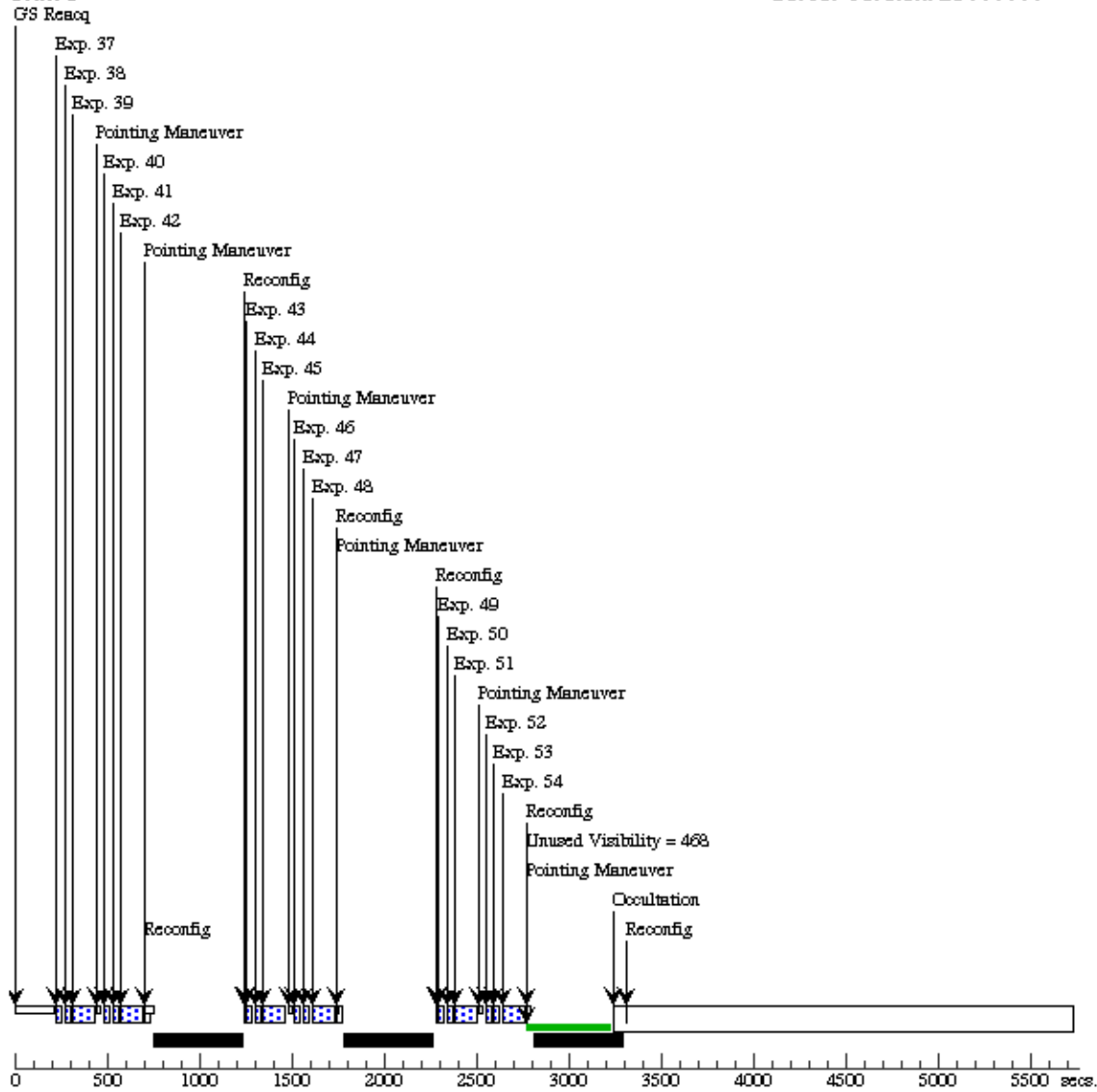
65	Upper Center 2 F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -10,45.0 ; NSAMP=2	[==>]	[4]
66	Upper Center 2 G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -10,45.0 25 ; NSAMP=5	[==>]	[4]
67	Middle Top Middle 2 F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -10,15 ; NSAMP=2	[==>]	[4]
68	Middle Top Middle 2 F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -10,15 ; NSAMP=2	[==>]	[4]
69	Middle Top Middle 2 G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -10,15 25 ; NSAMP=5	[==>]	[4]
70	Middle Bottom Middle 2 F140W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID POS TARG -10,-15 ; NSAMP=2	[==>]	[4]
71	Middle Bottom Middle 2 F160W	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID POS TARG -10,-15 ; NSAMP=2	[==>]	[4]
72	Middle Bottom Middle 2 G141	(1) VY2-2-COPY	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS POS TARG -10,-15 25 ; NSAMP=5	[==>]	[4]

Orbit Structure





Orbit 3



Orbit 4

