10533 - The IMF in NGC6611: the environmental influence on the formation of low-mass stars and brown dwarfs

Cycle: 14, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
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VISITS

Visit	*Targets*	*Configurations*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) NGC6611-ACS	ACS/WFC	2	25-Aug-2005 21:19:01.0	yes
02	(2) NGC6611-NIC13	NIC2	5	25-Aug-2005 21:21:49.0	yes

7 Total Orbits Used

ABSTRACT

We propose to use HST with ACS and NICMOS to survey the central area of the young (2 Myr) cluster NGC6611 in the Eagle Nebula, with the goal of constructing the low-mass and substellar Initial Mass Function (IMF). We plan to obtain deep images in I (F775W) and Z (F850LP) with ACS/WFC, and deep images in J (F110W) and H (F160W) for 25 NICMOS/NIC2 fields within the

202" x 202" ACS/WFC field. Using a proven technique based on the use of IZJH color-magnitude and color-color diagrams to identify and determine the masses of the low-mass pre-main sequence cluster members, we are thus able to construct the IMF down to masses of 0.02-0.03 Msun. With an intense ionizing radiation field but a relatively low density, NGC6611 provides a unique laboratory in which to test the importance of photoevaporation and density on the formation of low-mass stars and brown dwarfs, through comparison with the IMFs determined for the different environments in the Orion Nebular Cluster, Taurus and IC348. This will not only offer substantial new insight into the physics of star formation, but also have important ramifications for estimating the global star formation rates at high redshift, the efficiency of galactic chemical evolution and the contribution of sub-stellar mass objects to the baryonic dark matter content of the Universe.

OBSERVING DESCRIPTION

This program is made of two parts: i) ACS/WFC F775 (I) and F850 (Z) observations of one field; ii) NICMOS/NIC2 F110 (J) and F160 (H) observations of 25 fields within the area imaged with ACS/WFC. A total of 7 orbits were allocated distributed as follows: 2 orbits with ACS/WFC, one for each filter; 5 orbits with NICMOS/NIC2. These orbits are distributed over 2 visits.
The targets are fields of stars, not individual objects. The position of the fields was checked on GSC SURVEY PLATE 064B.

- We observe a single ACS/WFC field in I and Z.
- The total exposure time per filter is 2000s, split into 4 dithered

exposures of 500s.
- The dithering pattern chosen is DITHER-LINE (4 points, 3.011 arcsec spacing) and the aims of the strategy are: remove blemishes and hot pixels, cosmic ray hit rejection and bridge the 2.5 arcsec interchip gap. As we are performing a dithering pattern, it is not necessary to do a cr_split (cr_split=no).
- We choose to operate with gain=2 because it completely samples the full well depth --- with only marginally larger readout noise than gain=1. This is important in our observations, as the field includes targets with a large range of magnitudes.
- These observations occupy 2 orbits, one per filter, that are performed on the same visit. This visit has no orient requirements.
- These exposures allow us to compute (I-Z) colours with 10 per cent accuracy, at a magnitude limit of I=25 mag.

- We observe 25 NIC2 fields in J and H to form a continuous mosaic covering ~2.5 arcmin squared.
- The total exposure time per field per filter is 128s, split into 4 dithered exposures (samp-seq=step8, nsamp=9).
- The dithering pattern chosen is SPIRAL-DITH (4 points, 1 arcsec spacing) and the aims of the strategy are: remove grot and bad pixels, sensitivity variations and the image of the coronagraphic hole, and create some overlap between the fields in the mosaic.
- At each dither position, exposures are taken in both filters, before the telescope moves to the next position, in order to minimize overheads.
- The mosaic is constructed by using the POS-TARG feature and Special Target (position) Requirements. This guarantees that the orient will be fixed and the x- and y-axis of the different tiles will align.
- In each orbit, 5 fields are observed in both filters; all 5 orbits are

grouped in the same visit. GS acquisitions are performed both in the first and fifth orbit.
- The orient of this visit is restricted to the interval 260-280, to make sure the mosaic falls on the desired area in the sky. This does not greatly affect the visits's schedulability.
- These exposures allow us to compute (J-H) colours with 10 per cent accuracy, at a magnitude limit of J=21.5 mag.

REAL TIME JUSTIFICATION

Visit 01 has no orient constrains.
The orient of Visit 02 is restricted to the interval 260-280, to make sure the mosaic falls on the desired area in the sky. This does not greatly affect the visit's schedulability.

Visit

Proposal 10533, Visit 01

Fri Aug 26 01:22:24 GMT 2005

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=4 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false		(1), (2)

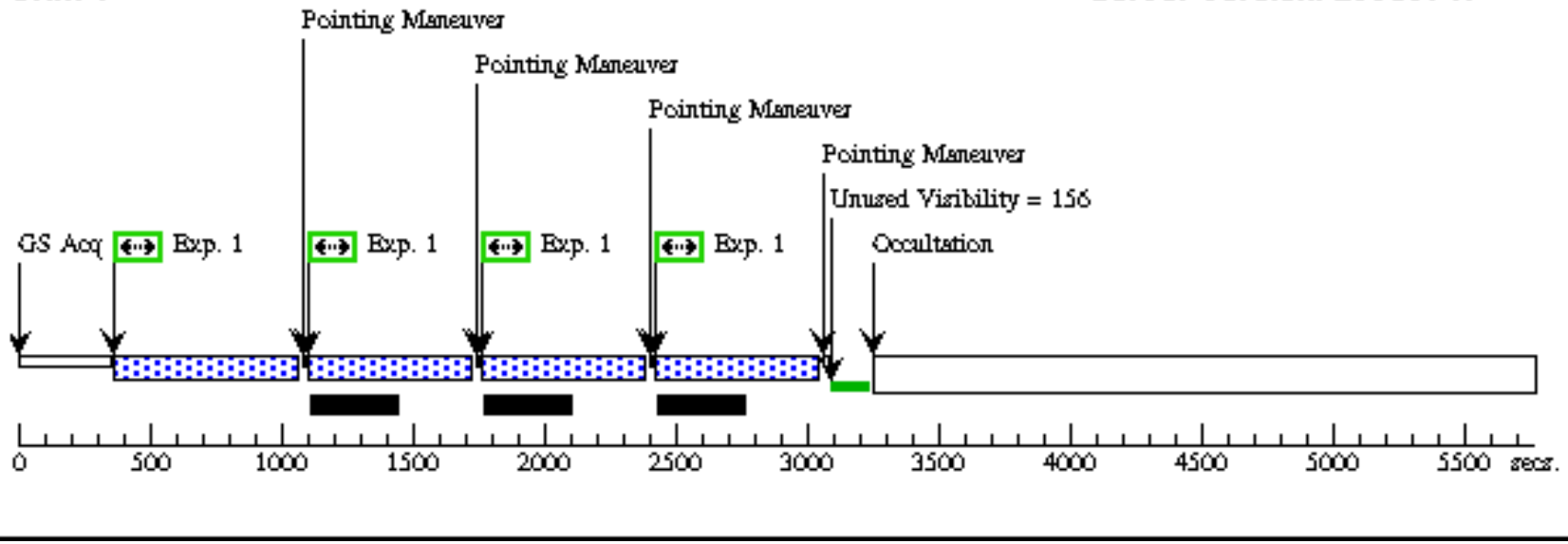
Fixed Targets

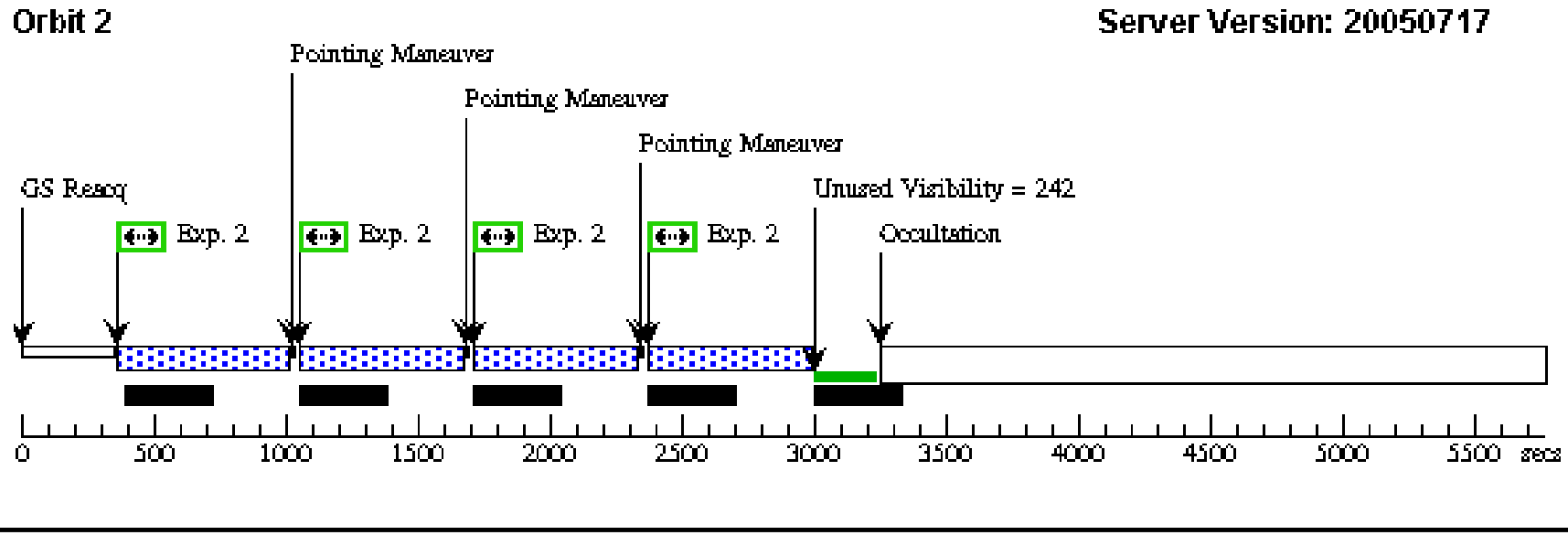
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC6611-ACS Alt Name1: M16 Alt Name2: EAGLE-NEBULA	RA: 18 18 41.7161 (274.6738171d) Dec: -13 47 40.00 (-13.79444d) Equinox: J2000 Plate Id: 064B		V=(?) Desired magnitudes limits: I = 25, Z= 24.5, J= 21.5, H= 20.5 (standard filters)	Coordinate Source: GSC_SURVEY_PLATE

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	ACS-I	(1) NGC6611-ACS	ACS/WFC, ACCUM, WFCENTER	F775W	CR-SPLIT=NO; GAIN=2		Pattern 1-1 (1)	500.0 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	ACS-Z	(1) NGC6611-ACS	ACS/WFC, ACCUM, WFCENTER	F850LP	CR-SPLIT=NO; GAIN=2		Pattern 2-2 (1)	500.0 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***

Orbit Structure





Visit

Proposal 10533, Visit 02 — Fri Aug 26 01:22:24 GMT 2005

Diagnostic Status: Warning

Scientific Instruments: NIC2

Special Requirements: ORIENT 260.0D TO 280.0 D

Diagnostics

(Visit 02) Warning: PATTERN POSITION OUTSIDE APERTURE
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Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=NIC-SPIRAL-DITH Purpose=DITHER Number Of Points=4 Point Spacing=1 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=0 Angle Between Sides= Center Pattern=false		(1-2), (3-4), (5-6), (7-8), (9-10), (11-12), (13-14), (15-16), (17-18), (19-20), (21-22), (23-24), (25-26), (27-28), (29-30), (31-32), (33-34), (35-36), (37-38), (39-40), (41-42), (43-44), (45-46), (47-48), (49-50)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	NGC6611-NIC13 Alt Name1: M16 Alt Name2: EAGLE-NEBULA	RA: 18 18 40.7700 (274.6698750d) Dec: -13 47 51.53 (-13.79765d) Equinox: J2000 Plate Id: 064B		V=(?) Desired magnitudes limits: I = 25, Z= 24.5, J= 21.5, H= 20.5 (standard filters)	Coordinate Source: GSC_SURVEY_PLATE

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	NIC21_J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 19.2,19.2; GS ACQ SCENARIO BASE1TNS	Pattern 1-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	NIC21-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 19.2,19.2	Pattern 1-2 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
3	NIC16-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 19.2,0	Pattern 3-4 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4	NIC16-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 19.2,0	Pattern 3-4 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
5	NIC15-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 38.4,-19.2	Pattern 5-6 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
6	NIC15-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 38.4,-19.2	Pattern 5-6 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
7	NIC12-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 19.2,-19.2	Pattern 7-8 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
8	NIC12-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 19.2,-19.2	Pattern 7-8 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
9	NIC13-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9		Pattern 9-10 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
10	NIC13-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8		Pattern 9-10 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
11	NIC9-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 0,-19.2	Pattern 11-12 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
12	NIC9-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 0,-19.2	Pattern 11-12 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
13	NIC8-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 19.2,-38.4	Pattern 13-14 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
14	NIC8-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 19.2,-38.4	Pattern 13-14 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
15	NIC5-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 0,-38.4	Pattern 15-16 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
16	NIC5-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 0,-38.4	Pattern 15-16 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
17	NIC1-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8 ; NSAMP=9	POS TARG 0,-57.6	Pattern 17-18 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
18	NIC1-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 0,-57.6	Pattern 17-18 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
19	NIC2-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8 ; NSAMP=9	POS TARG -19.2,-38.4	Pattern 19-20 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
20	NIC2-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -19.2,-38.4	Pattern 19-20 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[2]***
21	NIC6-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8 ; NSAMP=9	POS TARG -19.2,-19.2	Pattern 21-22 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
22	NIC6-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -19.2,-19.2	Pattern 21-22 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
23	NIC3-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8 ; NSAMP=9	POS TARG -38.4,-19.2	Pattern 23-24 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
24	NIC3-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -38.4,-19.2	Pattern 23-24 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
25	NIC4-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -57.6,0	Pattern 25-26 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
26	NIC4-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -57.6,0	Pattern 25-26 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
27	NIC7-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -38.4,0	Pattern 27-28 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
28	NIC7-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -38.4,0	Pattern 27-28 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
29	NIC10-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -19.2,0	Pattern 29-30 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
30	NIC10-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -19.2,0	Pattern 29-30 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[3]***
31	NIC11-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -38.4,19.2	Pattern 31-32 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
32	NIC11-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -38.4,19.2	Pattern 31-32 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
33	NIC14-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -19.2,19.2	Pattern 33-34 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
34	NIC14-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -19.2,19.2	Pattern 33-34 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
35	NIC18-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG -19.2,38.4	Pattern 35-36 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
36	NIC18-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG -19.2,38.4	Pattern 35-36 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
37	NIC22-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 0,38.4	Pattern 37-38 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
38	NIC22-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 0,38.4	Pattern 37-38 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
39	NIC17-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 0,19.2	Pattern 39-40 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***

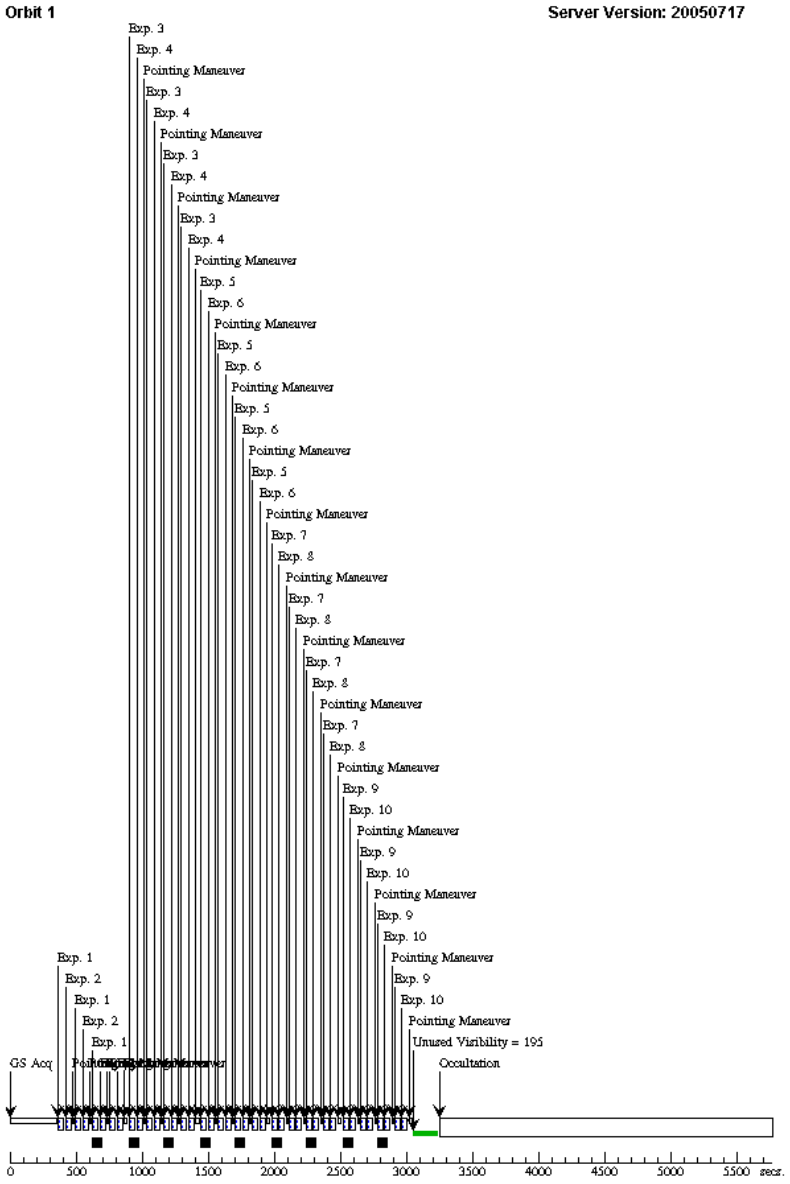
Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
40	NIC17-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 0,19.2	Pattern 39-40 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[4]***
41	NIC23-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 76.8,-19.2	Pattern 41-42 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
42	NIC23-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 76.8,-19.2	Pattern 41-42 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
43	NIC19-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 57.6,-19.2	Pattern 43-44 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
44	NIC19-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 57.6,-19.2	Pattern 43-44 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
45	NIC20-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 38.4,0	Pattern 45-46 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
46	NIC20-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 38.4,0	Pattern 45-46 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
47	NIC24-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8; NSAMP=9	POS TARG 57.6,0	Pattern 47-48 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***

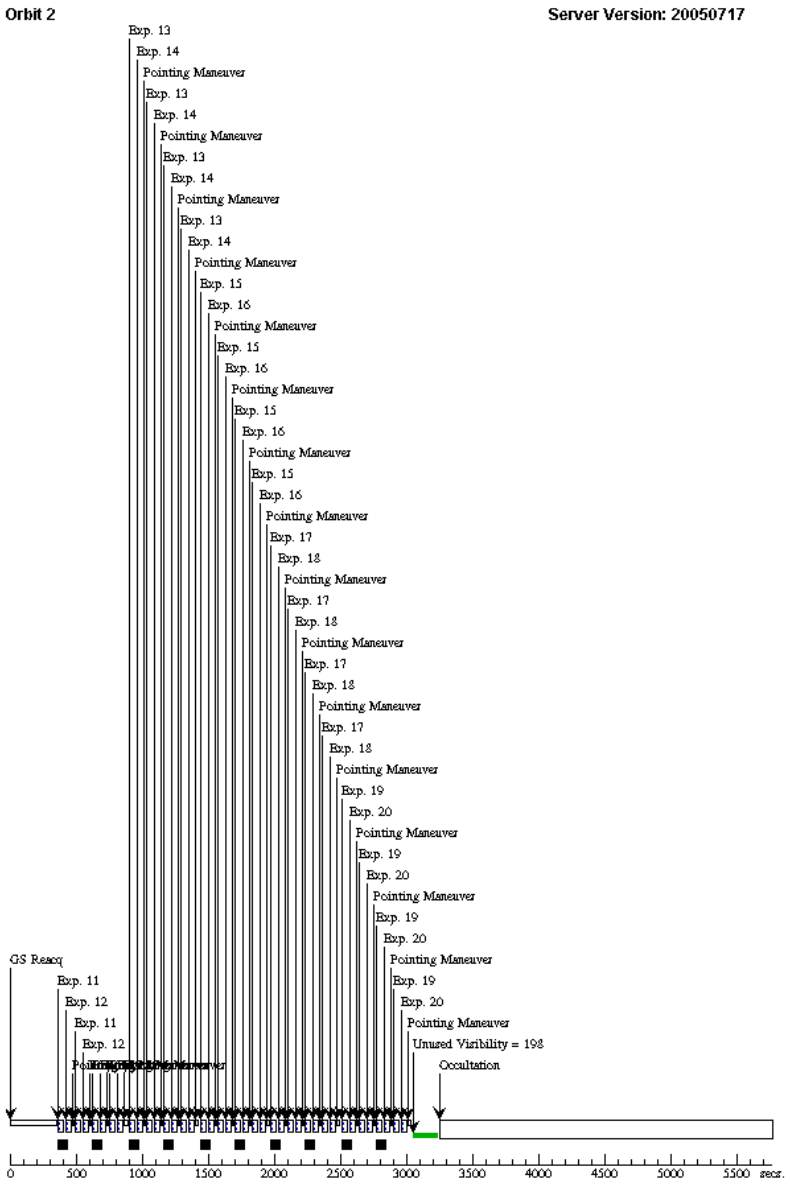
Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
48	NIC24-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 57.6,0	Pattern 47-48 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
49	NIC25-J	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F110W	SAMP-SEQ=STEP8 ; NSAMP=9	POS TARG 76.8,0	Pattern 49-50 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***
50	NIC25-H	(2) NGC6611-NIC13	NIC2, MULTIACCUM, NIC2-FIX	F160W	NSAMP=9; SAMP-SEQ=STEP8	POS TARG 76.8,0	Pattern 49-50 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[5]***

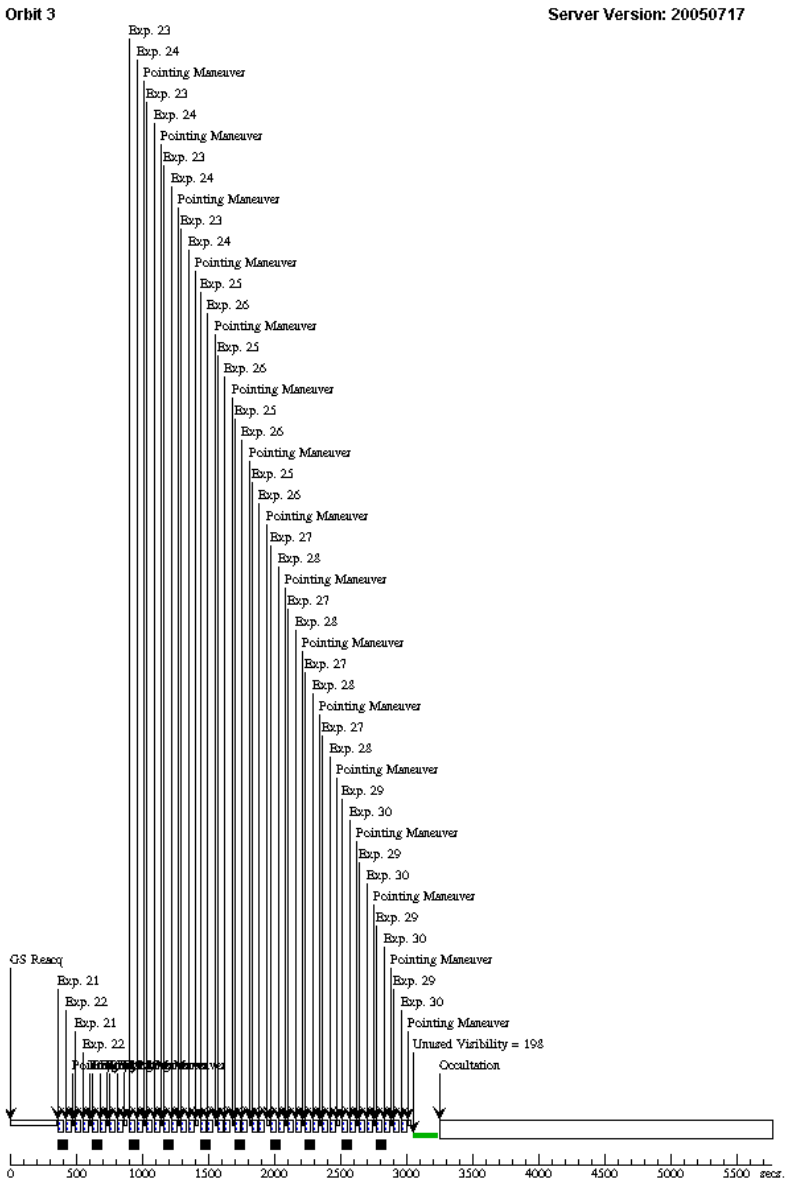
Orbit Structure



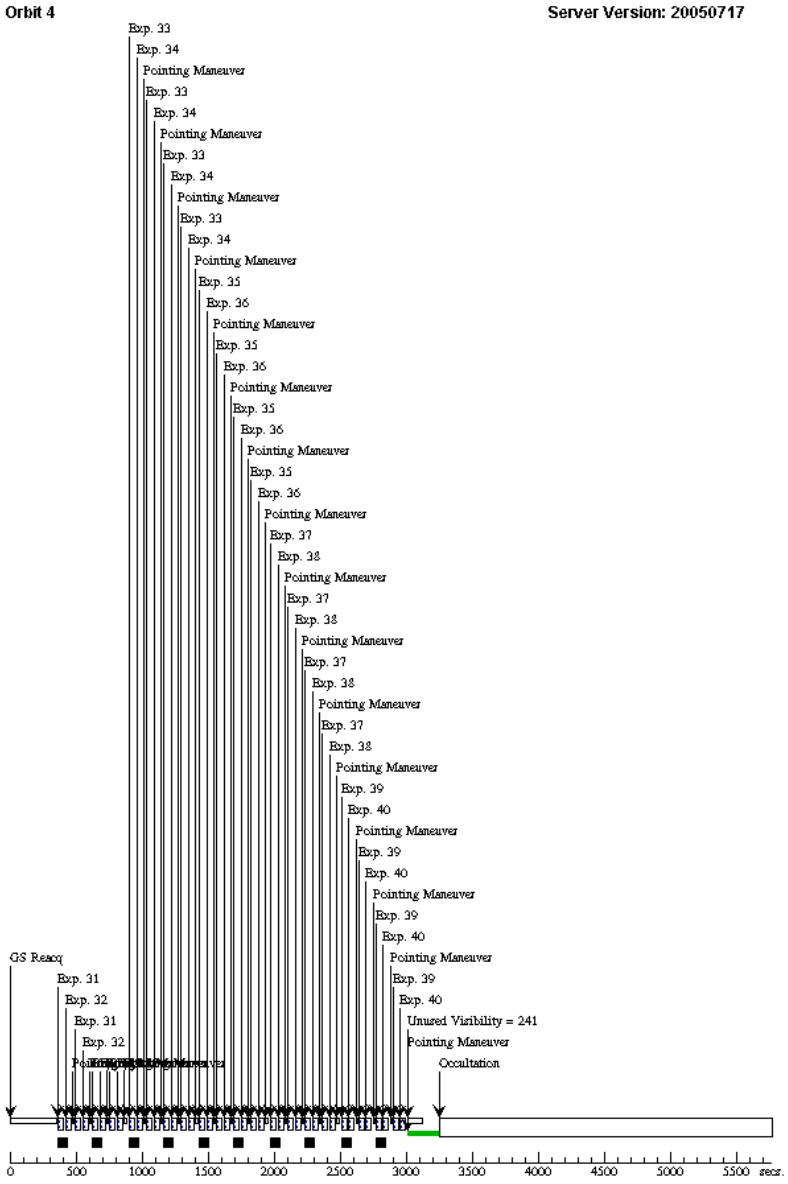
Orbit Structure (continued)



Orbit Structure (continued)



Orbit Structure (continued)



Orbit Structure (continued)