16772 - They Pack a Punch: Mechanical Feedback by the Lowest-Luminosity AGNs

Cycle: 29, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) NGC-1097	STIS/CCD	1	13-Aug-2024 11:00:41.0	yes
02	(2) M-84	STIS/CCD	3	13-Aug-2024 11:00:42.0	yes
03	(2) M-84	STIS/CCD	2	13-Aug-2024 11:00:43.0	yes
04	(3) M-89	STIS/CCD	3	13-Aug-2024 11:00:45.0	yes
05	(4) M-104	STIS/CCD	2	13-Aug-2024 11:00:46.0	yes
06	(5) M-94	STIS/CCD	3	13-Aug-2024 11:00:47.0	yes
07	(5) M-94	STIS/CCD	2	13-Aug-2024 11:00:48.0	yes
08	(6) NGC-3507	STIS/CCD	3	13-Aug-2024 11:00:49.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
09	(7) NGC-3607	STIS/CCD	3	13-Aug-2024 11:00:50.0	yes
10	(7) NGC-3607	STIS/CCD	2	13-Aug-2024 11:00:51.0	yes
11	(8) NGC-4438	STIS/CCD	3	13-Aug-2024 11:00:52.0	yes
12	(8) NGC-4438	STIS/CCD	2	13-Aug-2024 11:00:53.0	yes
13	(9) NGC-4457	STIS/CCD	3	13-Aug-2024 11:00:54.0	yes
14	(9) NGC-4457	STIS/CCD	2	13-Aug-2024 11:00:55.0	yes
15	(2) M-84	STIS/CCD	3	13-Aug-2024 11:00:56.0	yes
18	(2) M-84	STIS/CCD	3	13-Aug-2024 11:00:57.0	yes
16	(7) NGC-3607	STIS/CCD	2	13-Aug-2024 11:00:58.0	yes
17	(7) NGC-3607	STIS/CCD	2	13-Aug-2024 11:00:59.0	yes
19	(2) M-84	STIS/CCD	1	13-Aug-2024 11:00:59.0	yes

45 Total Orbits Used

ABSTRACT

LINER nuclei, the long-lived, low-accretion-rate states of supermassive black holes, are critical for understanding the AGN phenomenon in the context of galaxy evolution. Observations have established the presence of black-hole related activity in most LINERs. But, we have also learned that the line emission on ~1" (~100 pc) scales, used for LINER classification with ground-based data, is not balanced by the radiative energy output of the nucleus alone. Another, unknown power source provides most of the power on these scales. The leading candidate is centrally-driven outflows of gas that carry at least as much power as the radiative luminosity of the AGN and produce optical emission lines through shock heating. Past HST case studies of four LINERs have spatially resolved the line-emitting regions, suggested a transition from photoionization on scales of tens of pc to shock excitation on larger scales, and allowed estimates of the kinetic power. Thus, LINERs may be signposts of feedback from the AGN onto the host galaxy. As such, they help us understand more distant, important objects. But a larger, truly representative sample, spanning a wider range of LINER AGN properties, is needed to test and generalize those results. We propose optical spectroscopy, spatially resolving ~0.1 arcsec scales, for a diverse and representative sample of 15 LINERs. We have designed an economical observing program by exploiting spectra available in the archive for a large fraction of the targets. We will carry out the first comprehensive mapping and exploration of the excitation of LINER gas using multi-dimensional line-ratio diagrams on scales of ~10 pc.

OBSERVING DESCRIPTION

PRACTICAL GOALS AND GENERAL SCIENTIFIC STRATEGY

This program will study a sample of 15 galaxies with LINER nuclei using archival and new STIS spectra. The primary scientific goal is to test models for the excitation of line-emitting gas. For each object we need STIS long-slit spectra with the G430L and G750M gratings in order to measure a variety of emission-line ratios along the slit as a function of distance from the nucleus. This means that the slit orientation must be the same (modulo 180 deg) for the G430L and G750M observations. Moreover, we need the slit to be narrow (0.1-0.2 arcsec) so as to get the best possible spatial resolution.

For the sample of 15 galaxies, the right combination of STIS spectra exists in the archive for 6 cases (no new observations are needed for these 6 objects). There are 5 other cases for which we will obtain either G430L or G750M spectra along a slit direction that matches an observation already in the archive (for these 5 objects we need to place the slit at a specific position angle, modulo 180 deg). For the remaining 4 objects no suitable data are available in the archive so we will get a complete set of G430L and G750M spectra (for these 4 objects any slit position angle is fine as long as it is the same for the G430L and G750M observations).

SCIENCE EXPOSURE TIMES

To estimate science exposure times we used measurements from published papers and archival spectra. We assumed that the Balmer line strengths decline by factors of 10 and 100 at 12 and 40pc from the nucleus, respectively, and set the nuclear strengths according to the G750M H-alpha flux of each galaxy; for galaxies without a G750M spectrum, we normalized first to a galaxy that had one and then according to the ground-based measurement of H-alpha. We assumed typical ratios of H-alpha/H-beta~3 and [SII]/H-alpha>0.6 (essential in testing shock models). We took archival spectra as templates and scaled them according to the above. With the STIS ETC we found the exposure times needed to achieve a S/N=60 at the peak H-beta in nuclear spectra (continuum included), giving S/N=20 in the integrated H-beta flux after continuum subtraction at 12pc from the nucleus (or S/N=5 at 40pc). The S/N in the [OII]3727 line will be similar or higher, while that of [OIII]5007 will depend on how steeply its strength declines with distance from the nucleus. Past studies show that upper limits on weak lines are still quite useful for the proposed tests.

TARGET COORDINATES

Since 7 of the 9 targets in this program have been observed before with STIS (long-slit spectroscopy) we looked up the coordinates from those observations in the HST archive, checked them, and then adopted them. To vet the coordinates we examined the observing sequences and phase II proposals of those past programs as well as the archival spectra themselves. We selected the coordinates corresponding to the science exposure that followed acquisition, checking for any slit offsets. In one case (M84) the slit was offset by 0.1 arcsec from the target after acquisition (perpendicular to its direction) so we are adopting the same offset here to match the slit position exactly. We documented the program numbers and other relevant details in the visit notes for each object.

For two targets (NGC4438 and NGC4457) we did not find any past HST observations that we could use so we turned to other sources for the coordinates. For NGC4438 we adopted the coordinates of the compact nuclear radio core detected with the VLA (this coincides with a resolved H-alpha source detected with WFC3 imaging at FWHM=0.3 arcsec). For NGC 4457 we adopted the coordinates of the galaxy nucleus from SDSS DR13, which agree to 0.2 arctic with the 2MASS coordinates and to 0.04 arcsec with the coordinates of the unresolved nuclear X-ray source detected by Chandra. We documented all the relevant details and references to relevant published papers in the visit notes of these two objects. As a last step we examined finding charts of the targets made with the APT target confirmation tool.

SLIT POSITION ANGLE

For 5 targets in our program we are obtaining a new G430L or G750M long-slit spectrum to complement an archival spectrum. In these cases we need the same slit width as the archival observation. We also need the slit position angle in the new observation to match that of the archival observation to +/- 3 degrees. If this tolerance is exceeded the slit positions will not overlap at distances < 5 arcsec from the galaxy nucleus, which will compromise our ability to compare spectra from different observations. We thus determine the ORIENT parameter for the new observation following the instructions in section 6.2.2 in the Phase II Proposal Instructions. We document these requirements and our calculation of the ORIENT parameter in the visit notes as appropriate.

TARGET ACQUISITION AND DITHERING

Since 7 of the 9 targets in this program have been observed before with STIS (long-slit spectroscopy) we looked up the acquisition procedures used by those programs and adopted them or adapted them. The target acquisitions are carried out with the MIRROR+F28X50LP. The targets are elliptical galaxies or bulges of spirals but a few of them have prominent nuclear point sources (the others also have bright centers because of

centrally-concentrated line emission). For 3 targets (NGC1097, M84, M104) that are known to have a nuclear point source we use ACQTYPE=POINT. For all other targets we use ACQTYPE=DIFFUSE with CHECKBOX=3 and FLUX-CENTROID.

For 3 targets (M89, M104, M94) we are using the 0.1 arcsec slit in order to match the archival observation, hence we must follow the initial acquisition with a peak-up acquisition. For the other targets a peak-up acquisition is not needed since we are using the 0.2 arcsec slit.

We also looked up the acquisition exposure times for the previously observed targets and compared them with new estimates we made with the acquisition ETC in order to determine suitable acquisition exposure times for this program. In our ETC calculations we assumed a spectrum of an elliptical galaxy (since most of our targets are ellipticals and the others are bulges of spirals) and we scaled it according to the flux density measured in past STIS observations. In the calculations for ACQTYPE=DIFFUSE we assumed a source size of 2 arcsec. For 2 targets that do not have archival STIS spectra we scaled the flux densities of published, ground-based spectra using scale factors determined from objects that have both ground-based and STIS spectra available. In most cases we found that, the acquisition exposure times from the ETC were longer than that those in the archival observations. We always adopted the longer of the two exposure times and made sure that they are very far from the saturation limits returned by the ETC.

To mitigate the effects of charge-transfer inefficiency, we place the galaxy nucleus at the recommended E1 aperture position at 5 arcsec from the end of the slit.

To mitigate the high rate of hot pixels in the STIS CCD we will dither the exposures along the slit. We adopt a 3-step dither pattern with 0.15 arcsec per step, which we have used successfully in the past in program 12595, that was very similar to this program.

DISTRIBUTION OF EXPOSURES INTO ORBITS AND VISITS

We constructed visits of 3 orbits or less.

For 3 targets (NGC3607, NGC4438, NGC4457) for which we are taking both G430L and G750M (3 and 2 orbits, respectively) we have broken up the observations with different gratings into separate visits. But these visits require the same slit position angle, hence they can be combined into a single visit, if that is more convenient.

For 2 objects (M84 and M95) we have broken up long, 5-orbit exposures with the same grating into two separate visits. These visits can be executed at any time as long as they have the same slit position angle. The can be combined into single visits, if that is more convenient.

IMPACT OF REDUCED-GYRO OPERATIONS

Reduced-gyro operations will primarily impact the schedulability of our observations. Since 5 of our 9 targets need to be observed with a particular slit position angle, the number of available observing windows is limited. To help with the scheduling flexibility, we have constructed visits that are 1-3 orbits in duration. We also note that variability of the spectra is not a cause for concern for this program, since we are observing regions with a large physical size. Therefore, the visits can be spread out over a long period of time and they need not be carried out in any particular order (although different visits of the same target should have the same slit position angle).

DUPLICATIONS

We will get a duplicate G430L spectrum of NGC 4374. The new spectrum will have the same slit position angle as the existing G750M spectrum of this object and a much higher S/N, as needed for our goals.

Similarly we will get a duplicate G430L spectrum of NGC3507 because the existing spectrum has a very poor S/N that is not adequate for our goals. The requested exposures are >3 times longer than the archival ones.

We will also get duplicate G750M spectrum of NGC1097. Although there are G750M spectra in the archive, these were taken with the slit at a different position angle than the existing G430L spectrum. Although a G750L observation at the same slit position angle as the G430L observation does exist in the archive, it has very low spectral resolution and the lines of interest (H-alpha+[NII] and the [SII] doublet) are blended together. The new G750M observation will match the slit position angle of the archival G430L observation and will have a high enough spectral resolution to resolve and separate the emission lines of interest.

Visit

Proposal 16772, N1097 (01), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; ORIENT 81.1D TO 87.1 D; ORIENT 261.1D TO 267.1 D

Comments: NGC1097 with STIS+G750M+52x0.2E1.

Need slit PA=39.1 (+/- 3) deg to match an archival G430L observation from program 8684. Hence we calculate ORIENT = 81.1 to 87.1 and 261.1 to 267.1 (180 deg off).

Using same target coordinates and acquisition method as program 8684, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2 arcsec slit)
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(N1097 (01)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(N1097 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

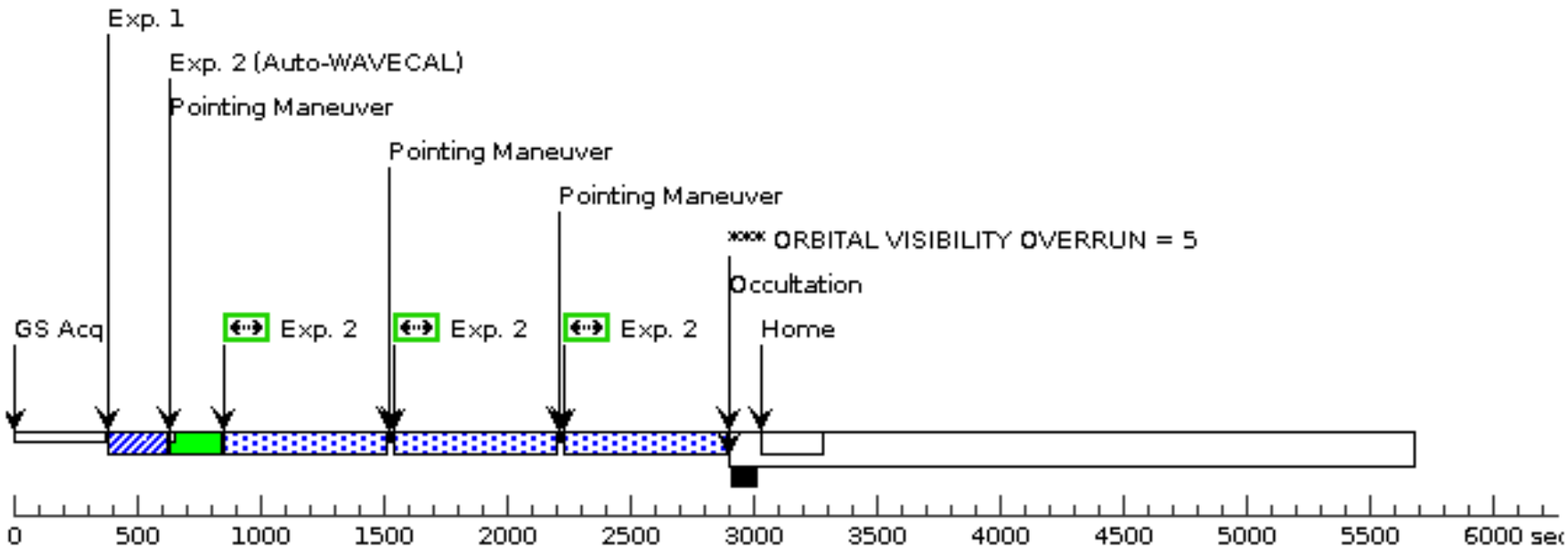
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	NGC-1097	RA: 02 46 18.9100 (41.5787917d) Dec: -30 16 28.77 (-30.27466d) Equinox: J2000	Redshift: 0.004	V=9.48+/-0.08	Reference Frame: ICRS

Comments: This object was generated by the target selector and retrieved from the SIMBAD database.
Coordinates taken from archival HST observation of object, program 8684.
Category=GALAXY
Description=[LINER, NUCLEUS, SEYFERT, SPIRAL]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1530378)	(1) NGC-1097	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			3 Secs (3 Secs) *[==>]*	***[1]***
Comments: Duplicating the acquisition method from program 8684.									
2	SciExp-1	(1) NGC-1097	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in N1097 (01) (1)	500 Secs (1863 Secs) *[==>621.0 Secs (Pattern 1)]* *[==>621.0 Secs (Pattern 2)]* *[==>621.0 Secs (Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 16772, M84-v1 (02), failed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; ORIENT 146.0D TO 152.0 D; ORIENT 326.0D TO 332.0 D

Comments: M84 (a.k.a. NGC4274) with STIS+GG430L+52x0.2E1.

Need slip PA=104.0 (+/- 3) deg to match archival G750M observation from program 7124. Hence we calculate ORIENT = 146.0 to 152.0 and 326.0 to 332.0 (180 deg off)

Using same target coordinates and acquisition method as program 7124, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2" slit). But note that after the target acquisition we need an offset of POS-TARG +0.1, 0 (i.e., 0.1" offset along +X, perpendicular to slit) to match the slit position of that program.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M84-v1 (02)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M84-v1 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M84-v1 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

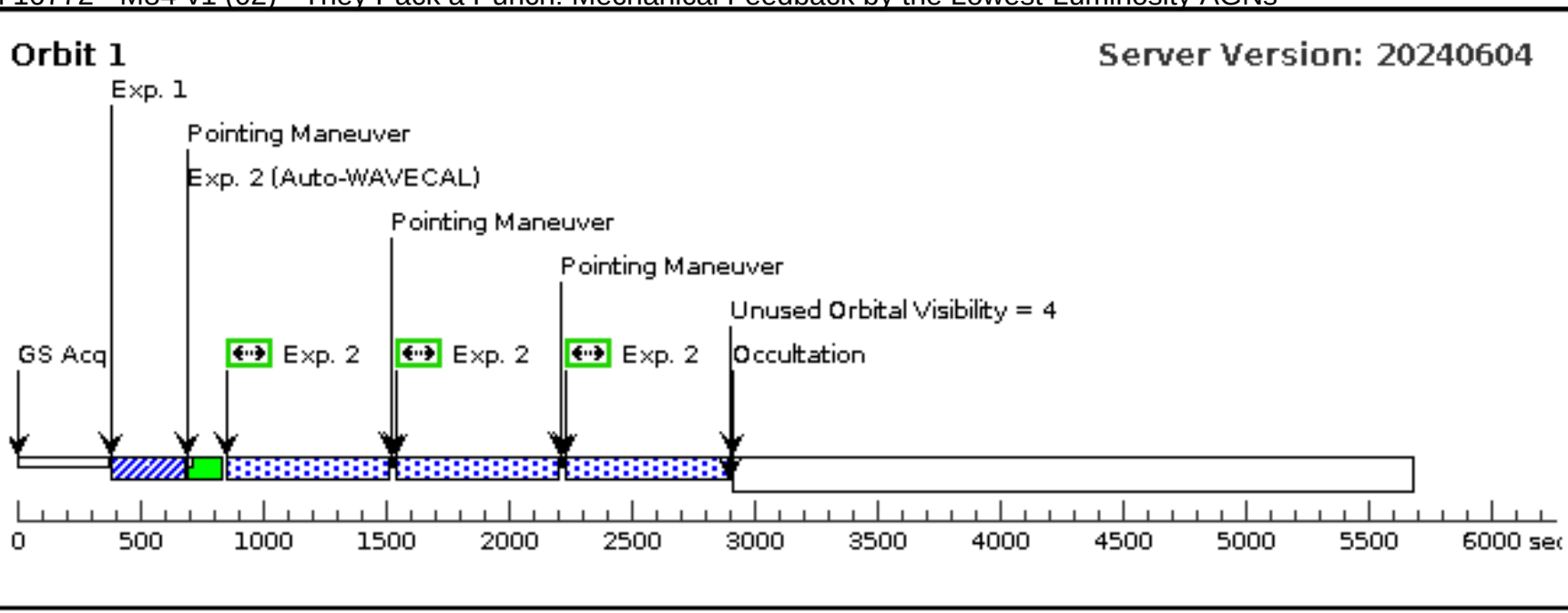
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M-84	RA: 12 25 3.6480 (186.2652000d)		V=11.03+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4374	Dec: +12 53 14.10 (12.88725d)			
		Equinox: J2000			

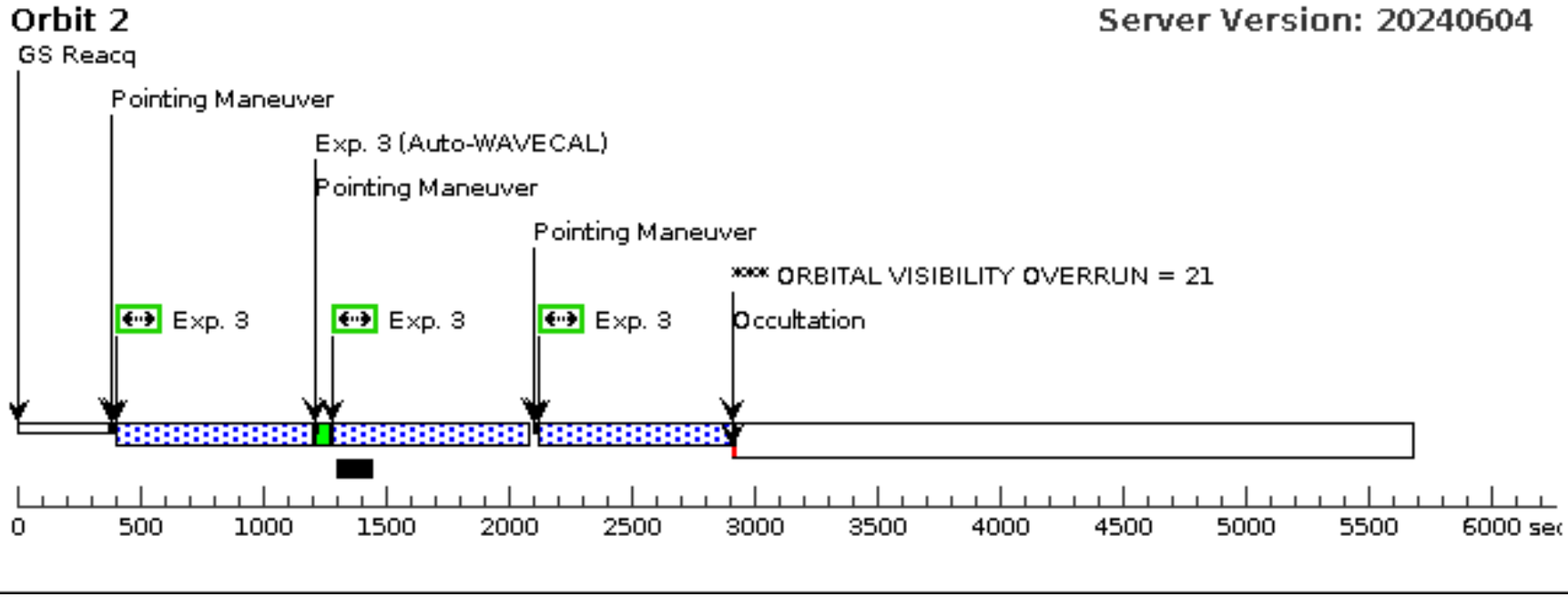
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7124
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS, RADIO GALAXY]
Extended=YES

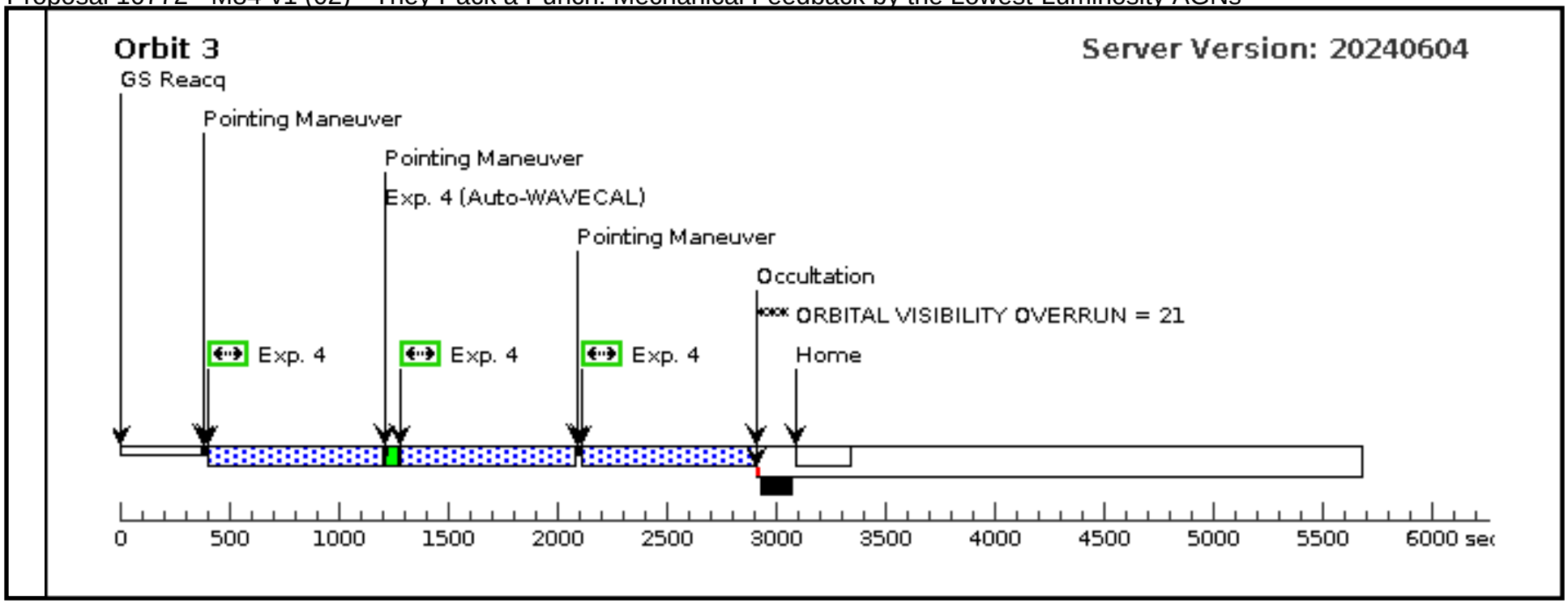
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530380)	(2) M-84	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			19 Secs (19 Secs) *[==>]*	*[1]*
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 2-2 in M84-v1 (02) (1)	500 Secs (1869 Secs) *[==>623.0 Secs (Pattern 1)]* *[==>623.0 Secs (Pattern 2)]* *[==>623.0 Secs (Pattern 3)]*	*[1]*
3	SciExp-2	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 3-3 in M84-v1 (02) (1)	500 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	*[2]*
4	SciExp-3	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 4-4 in M84-v1 (02) (1)	500 Secs (2289 Secs) *[==>763.0 Secs (Pattern 1)]* *[==>763.0 Secs (Pattern 2)]* *[==>763.0 Secs (Pattern 3)]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
Occultation
**** ORBITAL VISIBILITY OVERRUN = 21
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, M84-v2 (03), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; SAME ORIENT AS 02

Comments: M84 (a.k.a. NGC4274) with STIS+GG430L+52x0.2E1.

As in the previous visit, we need sli PA=104.0 (+/- 3) deg to match archival G750M observation from program 7124. Hence we calculate ORIENT = 146.0 to 152.0 and 326.0 to 332.0 (180 deg off).

Using same target coordinates and acquisition method as program 7124, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2" slit). But note that after the target acquisition we need an offset of POS-TARG +0.1, 0 (i.e., 0.1" offset along +X, perpendicular to slit) to match the slit position of that program.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M84-v2 (03)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M84-v2 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

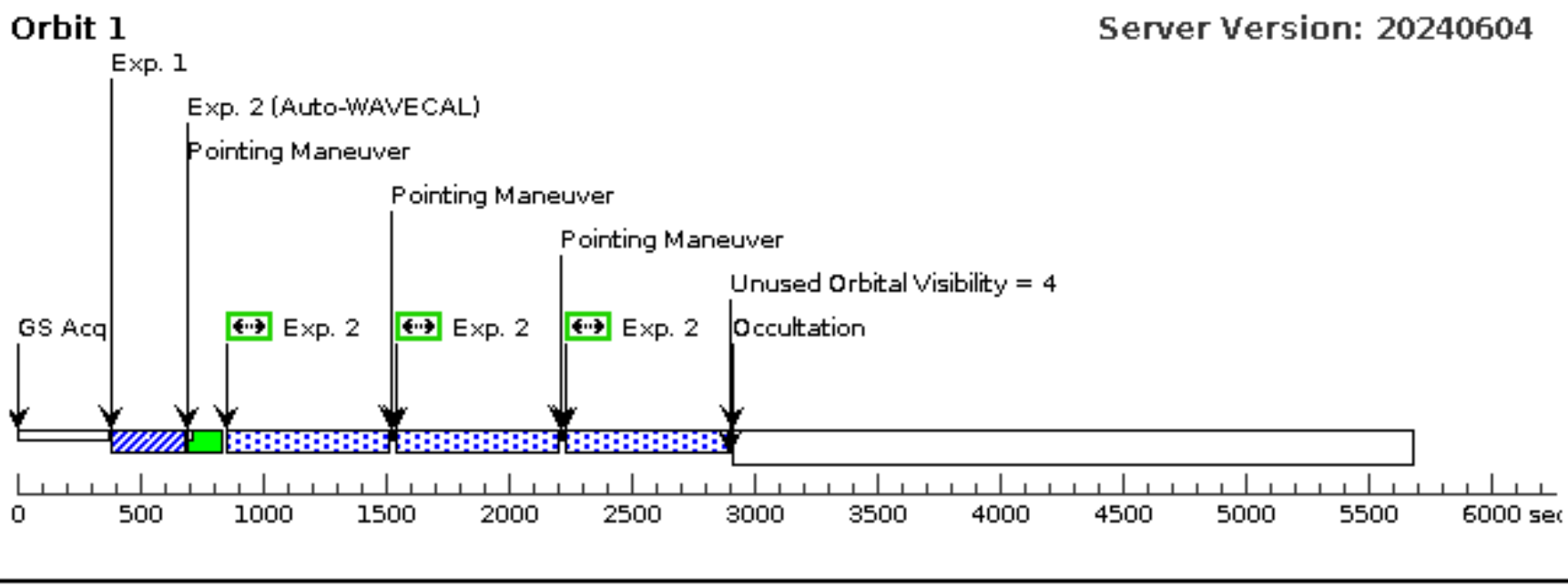
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M-84	RA: 12 25 3.6480 (186.2652000d)		V=11.03+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4374	Dec: +12 53 14.10 (12.88725d)			
		Equinox: J2000			

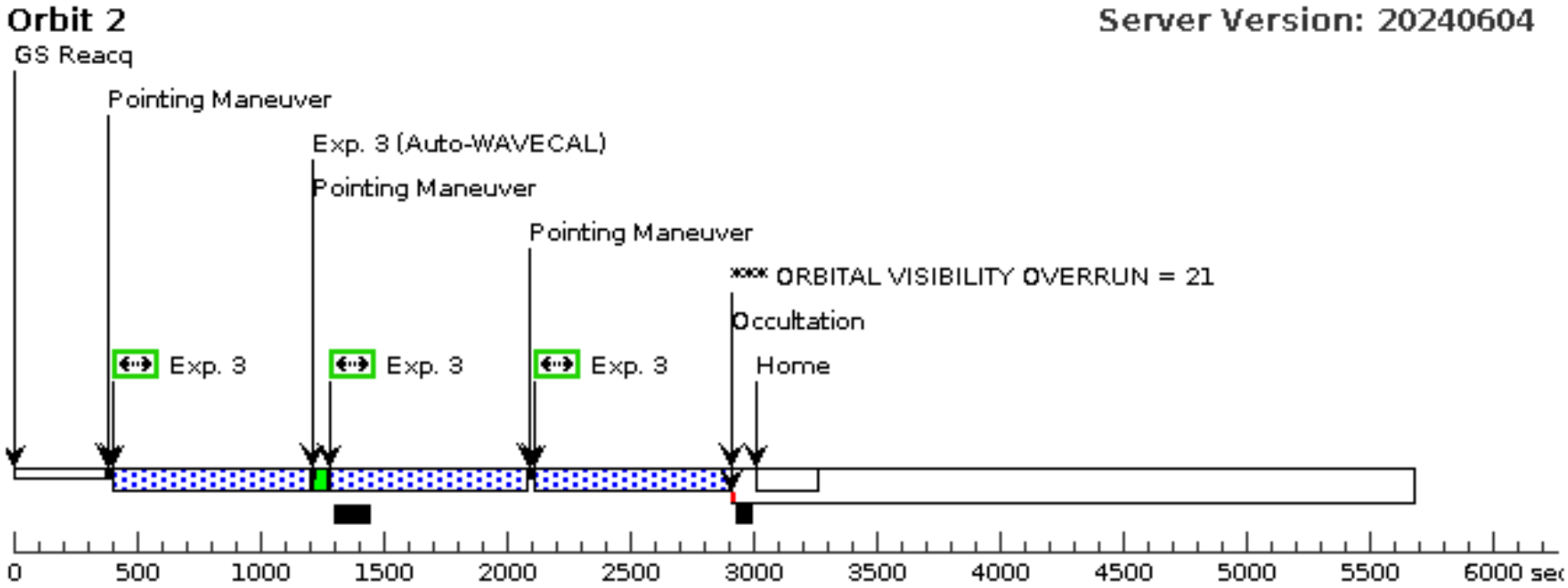
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7124
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS, RADIO GALAXY]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530380)	(2) M-84	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			19 Secs (19 Secs) *[==>]*	*[1]*
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 2-2 in M84-v2 (03) (1)	500 Secs (1869 Secs) *[==>623.0 Secs (Pattern 1)]* *[==>623.0 Secs (Pattern 2)]* *[==>623.0 Secs (Pattern 3)]*	*[1]*
3	SciExp-2	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 3-3 in M84-v2 (03) (1)	500 Secs (2289 Secs) *[==>763.0 Secs (Pattern 1)]* *[==>763.0 Secs (Pattern 2)]* *[==>763.0 Secs (Pattern 3)]*	*[2]*

Orbit Structure





Visit

Proposal 16772, M89 (04), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; ORIENT 120.0D TO 126.0 D; ORIENT 300.0D TO 306.0 D

Comments: M89 (a.ka. NGC4552) with STIS+G430L+52x0.1E1.

Need slit PA=78.0 (+/- 3) deg to match archival G750M observation from program 8472. Hence we calculate ORIENT = 120.0 to 126.0 and 300.0 to 306.0 (180 deg off)

Using same target coordinates and acquisition method as program 8472: ACQTYPE=DIFFUSE and CHECKBOX=3, followed by ACK/PEAK since we are using the 0.1" slit.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M89 (04)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M89 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M89 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(3), (4), (5)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

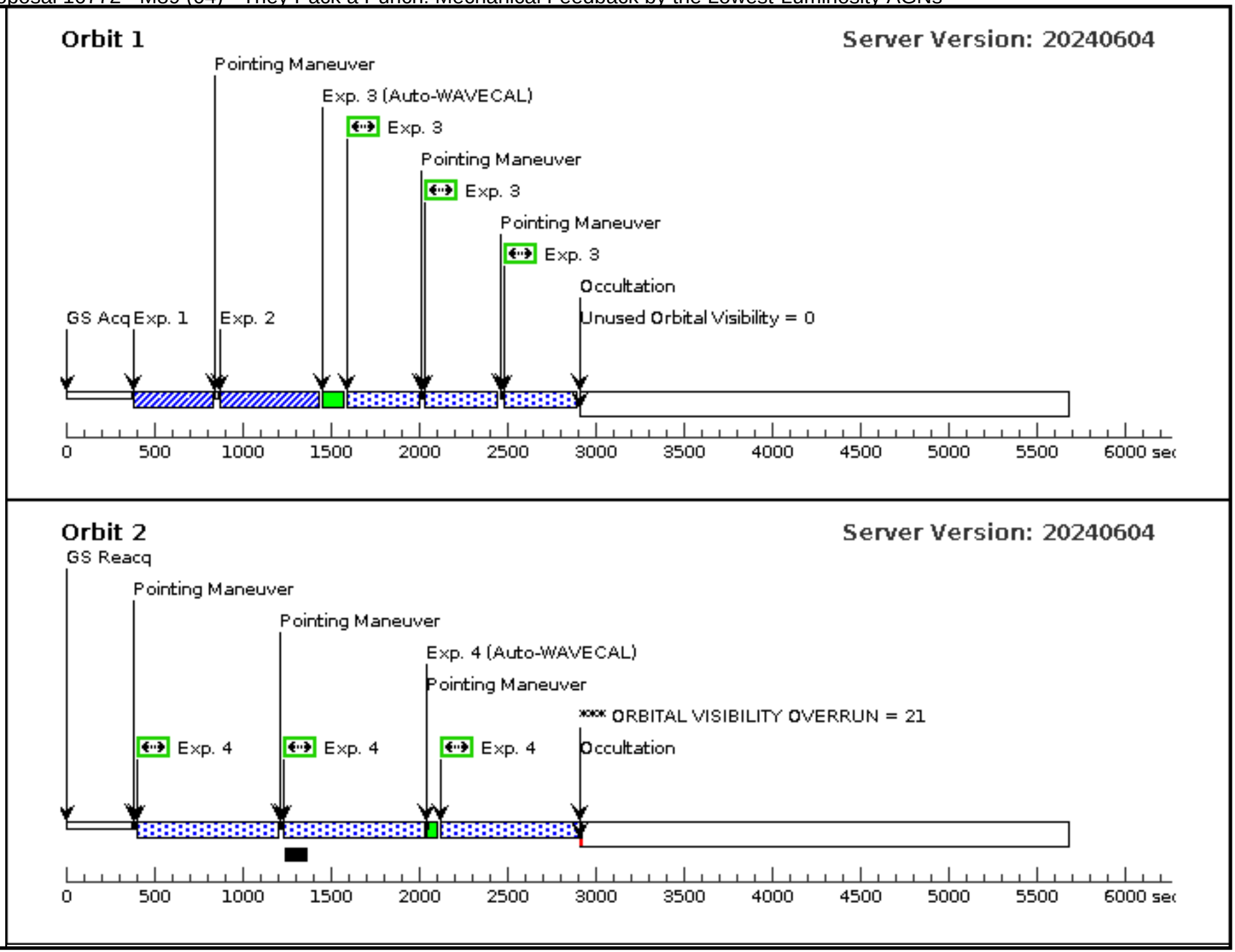
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	M-89	RA: 12 35 39.6850 (188.9153542d)		V=10.73+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4552	Dec: +12 33 23.62 (12.55656d)			
		Equinox: J2000			

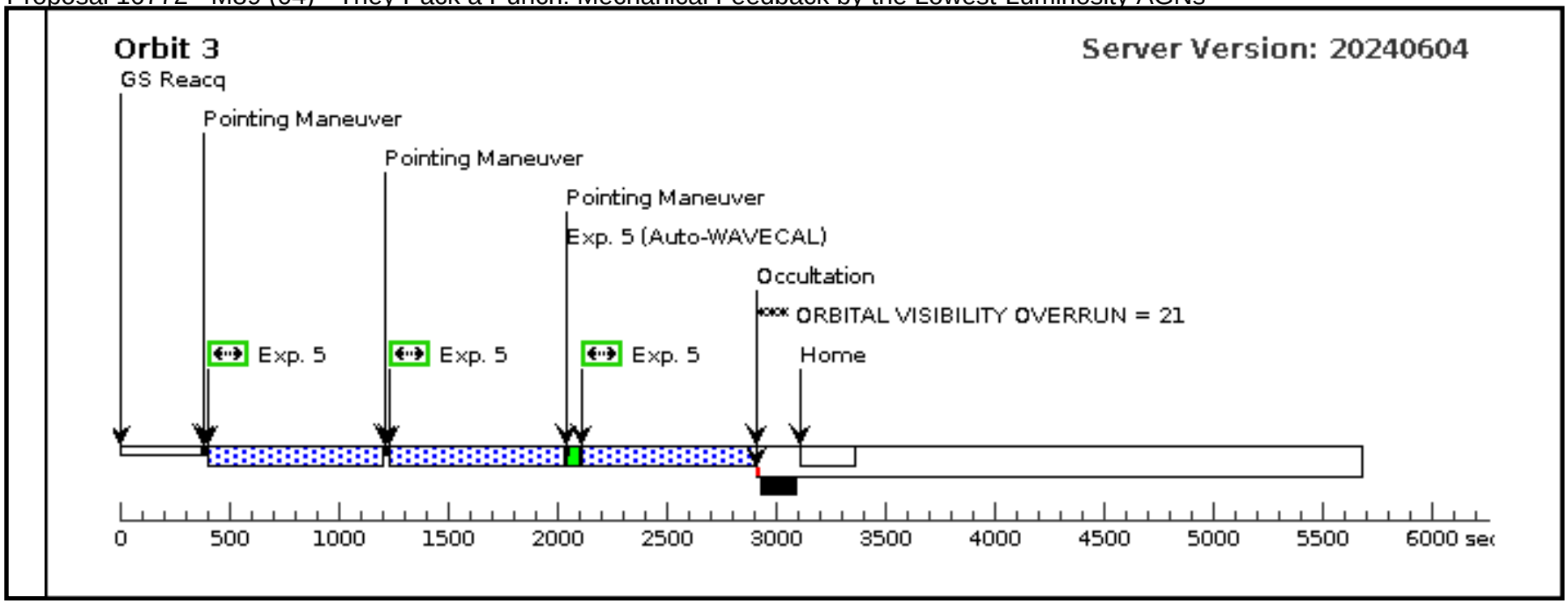
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 8472
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530398)	(3) M-89	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			55 Secs (55 Secs) *[==>]*	***[1]***
	Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.								
2	Acq/peak-1 (STIS.ta.1530396)	(3) M-89	STIS/CCD, ACQ/PEAK, 52X0.1E1	MIRROR				29 Secs (29 Secs) *[==>]*	***[1]***
	Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.								
3	SciExp-1	(3) M-89	STIS/CCD, ACCUM, 52X0.1E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in M89 (04) (1)	500 Secs (1131 Secs) *[==>377.0 Secs (Pattern 1)]* *[==>377.0 Secs (Pattern 2)]* *[==>377.0 Secs (Pattern 3)]*	***[1]***
4	SciExp-2	(3) M-89	STIS/CCD, ACCUM, 52X0.1E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in M89 (04) (1)	500 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	***[2]***
5	SciExp-3	(3) M-89	STIS/CCD, ACCUM, 52X0.1E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 5-5 in M89 (04) (1)	500 Secs (2289 Secs) *[==>763.0 Secs (Pattern 1)]* *[==>763.0 Secs (Pattern 2)]* *[==>763.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure




Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Exp. 5 (Auto-WAVECAL)
Occultation
**** ORBITAL VISIBILITY OVERRUN = 21
Exp. 5
Exp. 5
Exp. 5
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, M104 (05), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%

Comments: M104 (a.k.a. NGC4594) with STIS+G750M+52x0.2E1. and STIS+G430L+52x0.2E1.

Using same target coordinates as program 7354.

Any ORIENT is fine for this visit as all exposures are done at the same ORIENT.

Using ACQTYPE=POINT, but no ACK/PEAK since we are using the 0.2" slit.

Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M104 (05)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M104 (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

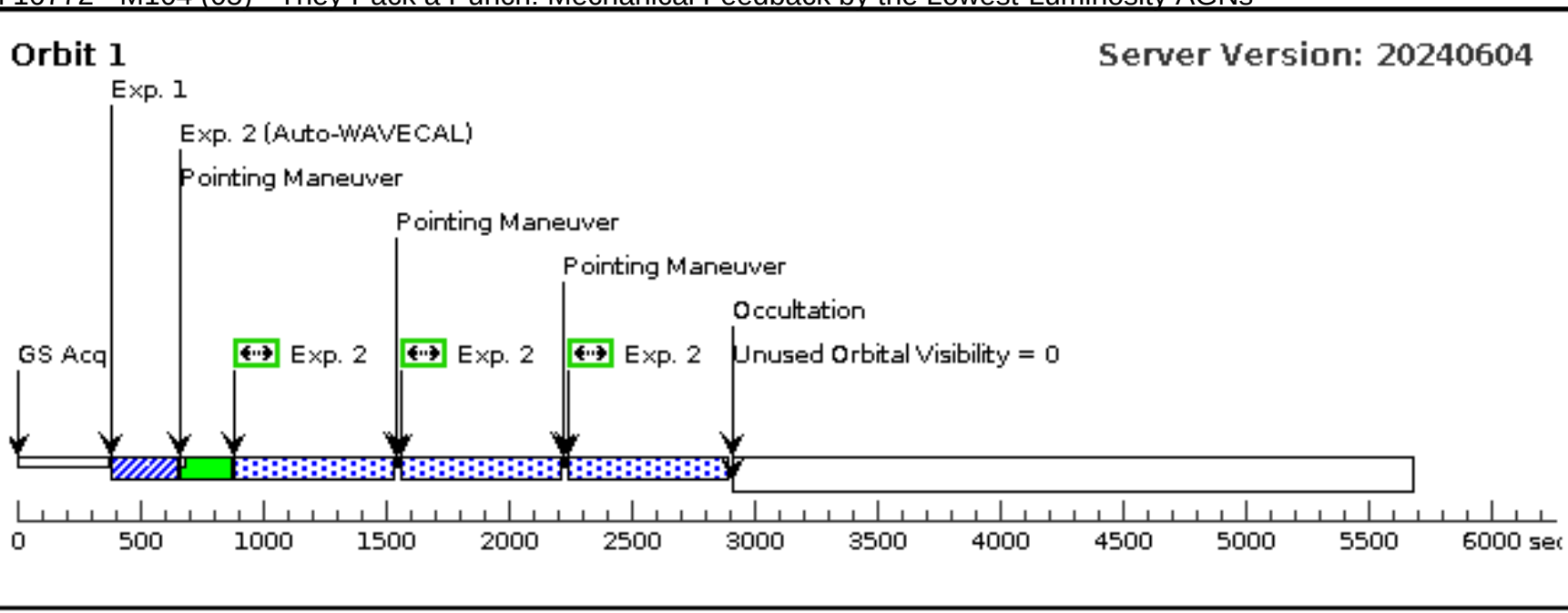
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	M-104	RA: 12 39 59.4500 (189.9977083d)		V=8.0+/-0.06	Reference Frame: ICRS
	Alt Name1: NGC-4594	Dec: -11 37 22.80 (-11.62300d)			
		Equinox: J2000			

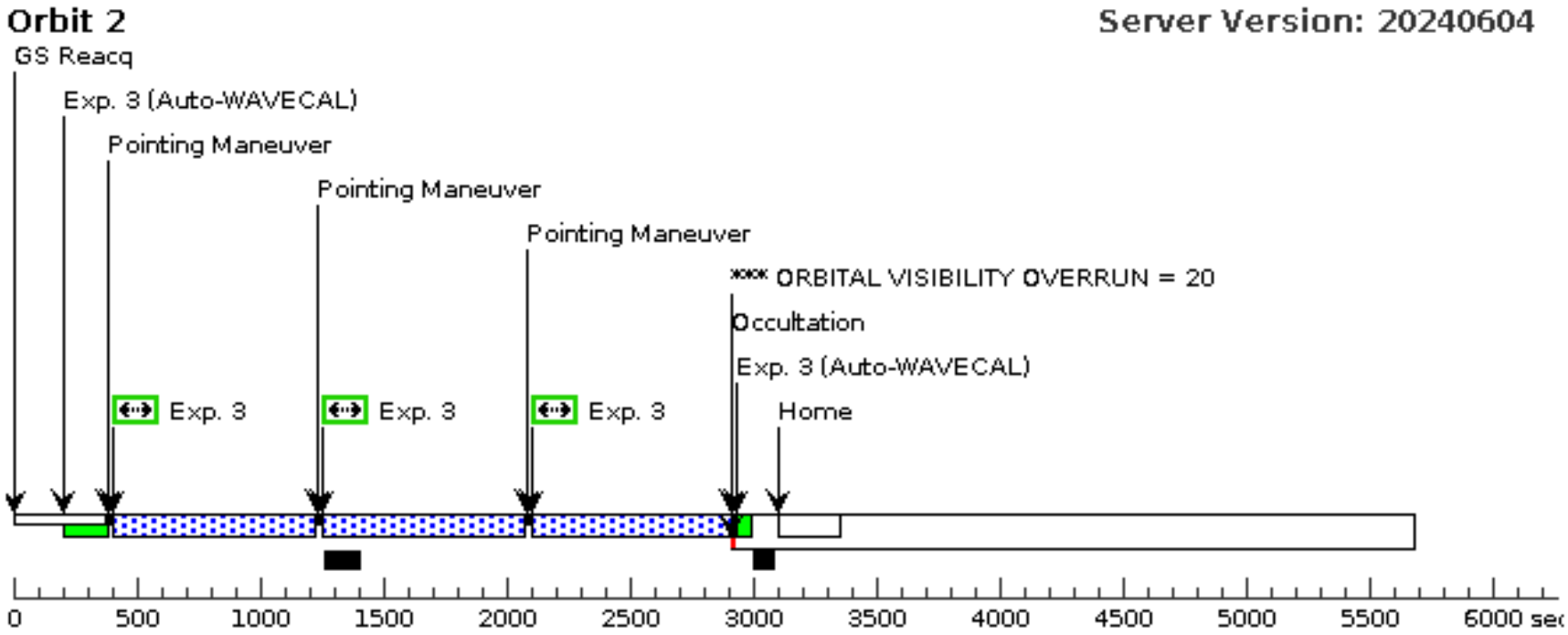
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7354
Category=GALAXY
Description=[DUST LANE, LINER, NUCLEUS, SPIRAL]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530389)	(4) M-104	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			10 Secs (10 Secs) *[==>]*	***[1]***
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(4) M-104	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in M104 (05) (1)	500 Secs (1836 Secs) *[==>612.0 Secs (Pattern 1)]* *[==>612.0 Secs (Pattern 2)]* *[==>612.0 Secs (Pattern 3)]*	***[1]***
3	SciExp-1	(4) M-104	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in M104 (05) (1)	500 Secs (2343 Secs) *[==>781.0 Secs (Pattern 1)]* *[==>781.0 Secs (Pattern 2)]* *[==>781.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, M94-G430L (06), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%

Comments: M94 (a.k.a. NGC4736) with STIS+G430L+52x0.2E1.

Using same target coordinates and acquisition method as program 8591: ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M94-G430L (06)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M94-G430L (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M94-G430L (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M94-G430L (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

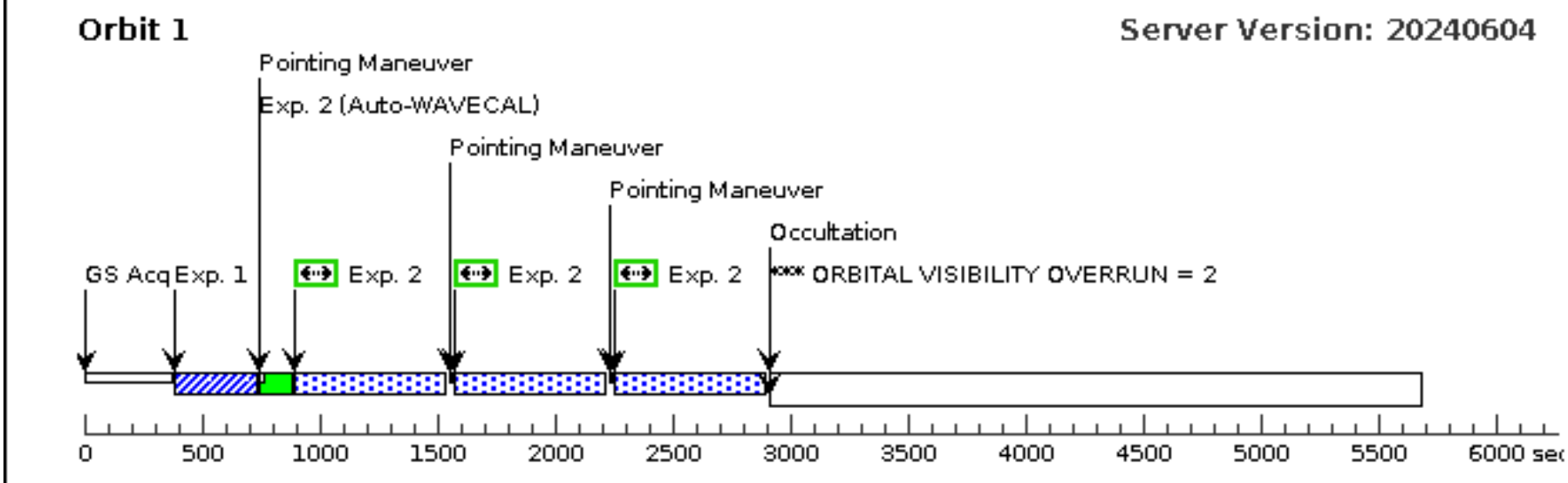
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	M-94	RA: 12 50 53.2000 (192.7216667d)		V=8.24+/-0.13	Reference Frame: ICRS
	Alt Name1: NGC-4736	Dec: +41 07 13.40 (41.12039d)			
		Equinox: J2000			

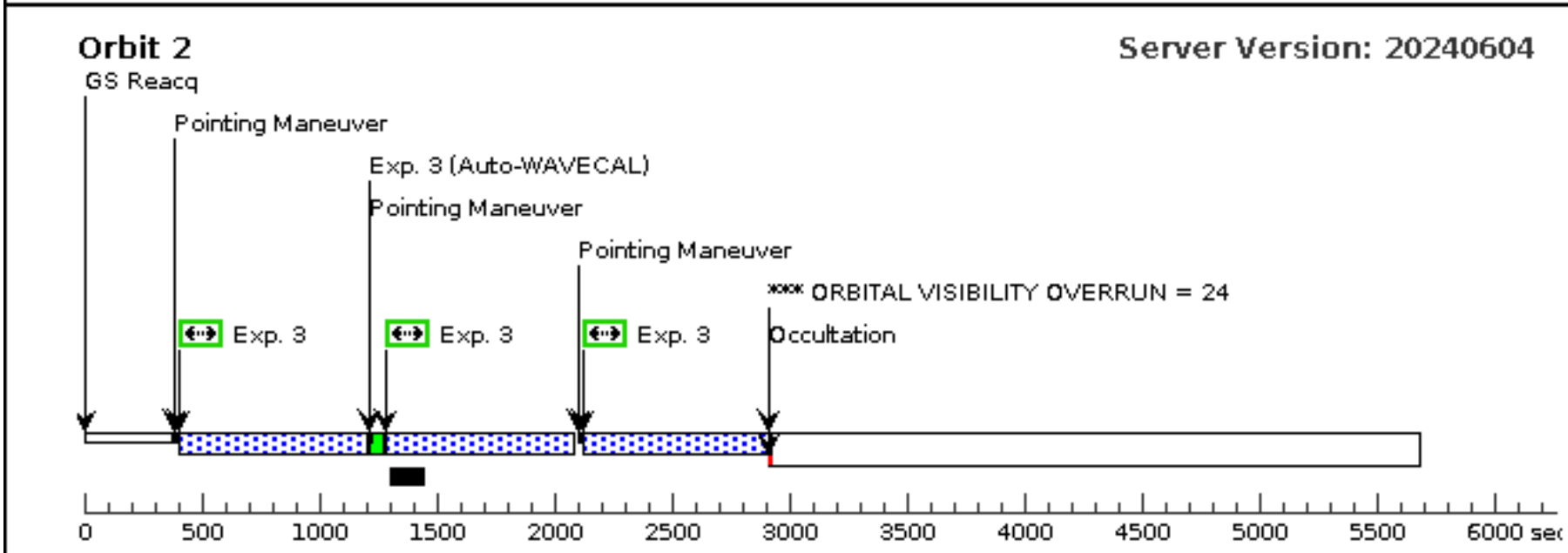
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 8591
Category=GALAXY
Description=[LINER, NUCLEUS, RING, SPIRAL]
Extended=YES

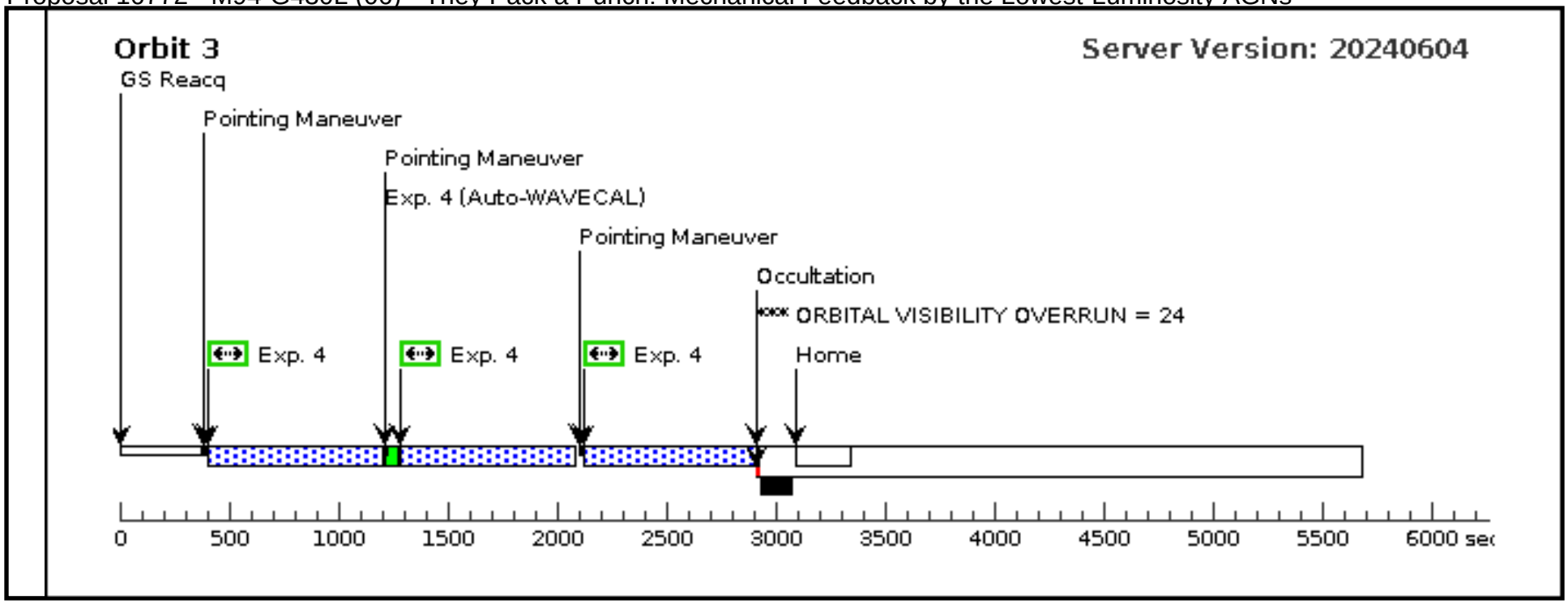
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530399)	(5) M-94	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			30 Secs (30 Secs) *[==>]*	***[1]***
	Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.								
2	SciExp-1	(5) M-94	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in M94-G430L (06) (1)	550 Secs (1827 Secs) *[==>609.0 Secs (Pattern 1)]* *[==>609.0 Secs (Pattern 2)]* *[==>609.0 Secs (Pattern 3)]*	***[1]***
3	SciExp-2	(5) M-94	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in M94-G430L (06) (1)	650 Secs (2295 Secs) *[==>765.0 Secs (Pattern 1)]* *[==>765.0 Secs (Pattern 2)]* *[==>765.0 Secs (Pattern 3)]*	***[2]***
4	SciExp-3	(5) M-94	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in M94-G430L (06) (1)	650 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
Occultation
**** ORBITAL VISIBILITY OVERRUN = 24
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, M94-G750M (07), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; SAME ORIENT AS 06

Comments: M94(a.k.a. NGC4736) with STIS+G750M+52x0.2E1.

Need same ORTIENT as previous visit so that the slit will cover the same portion of the galaxy and we can then combine the G430L and G750M spectra

Using same target coordinates and acquisition method as program 8591: ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M94-G750M (07)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M94-G750M (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M94-G750M (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

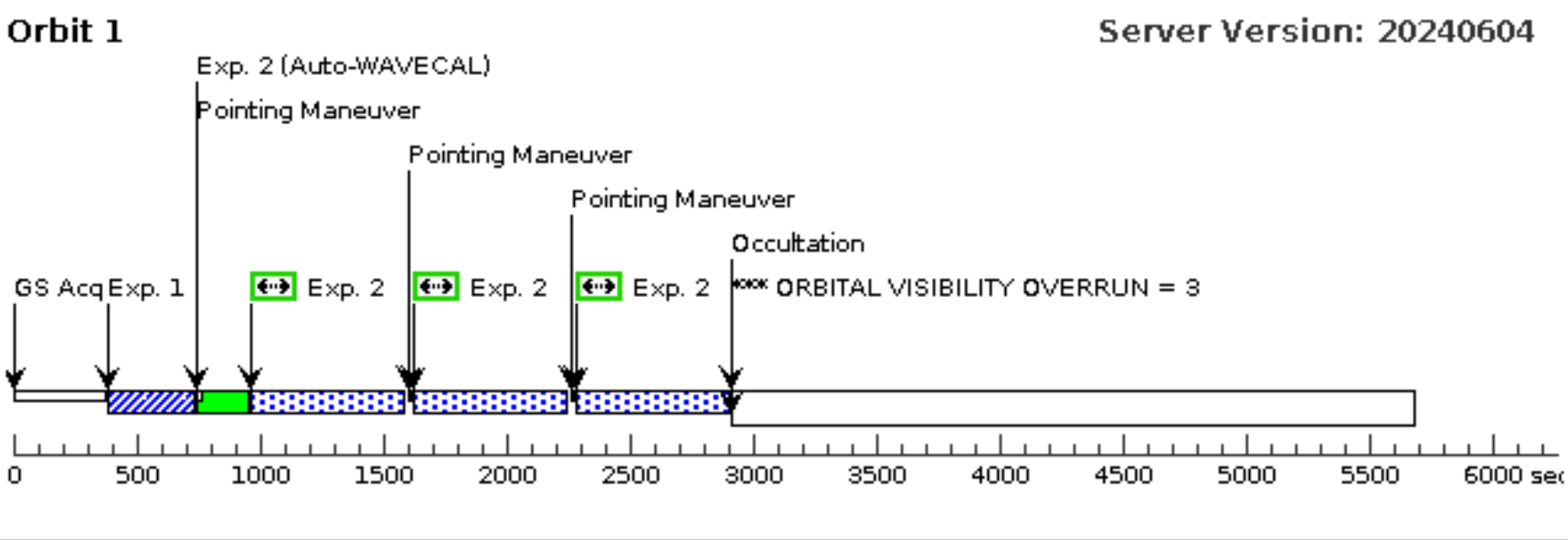
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	M-94	RA: 12 50 53.2000 (192.7216667d)		V=8.24+/-0.13	Reference Frame: ICRS
	Alt Name1: NGC-4736	Dec: +41 07 13.40 (41.12039d)			
		Equinox: J2000			

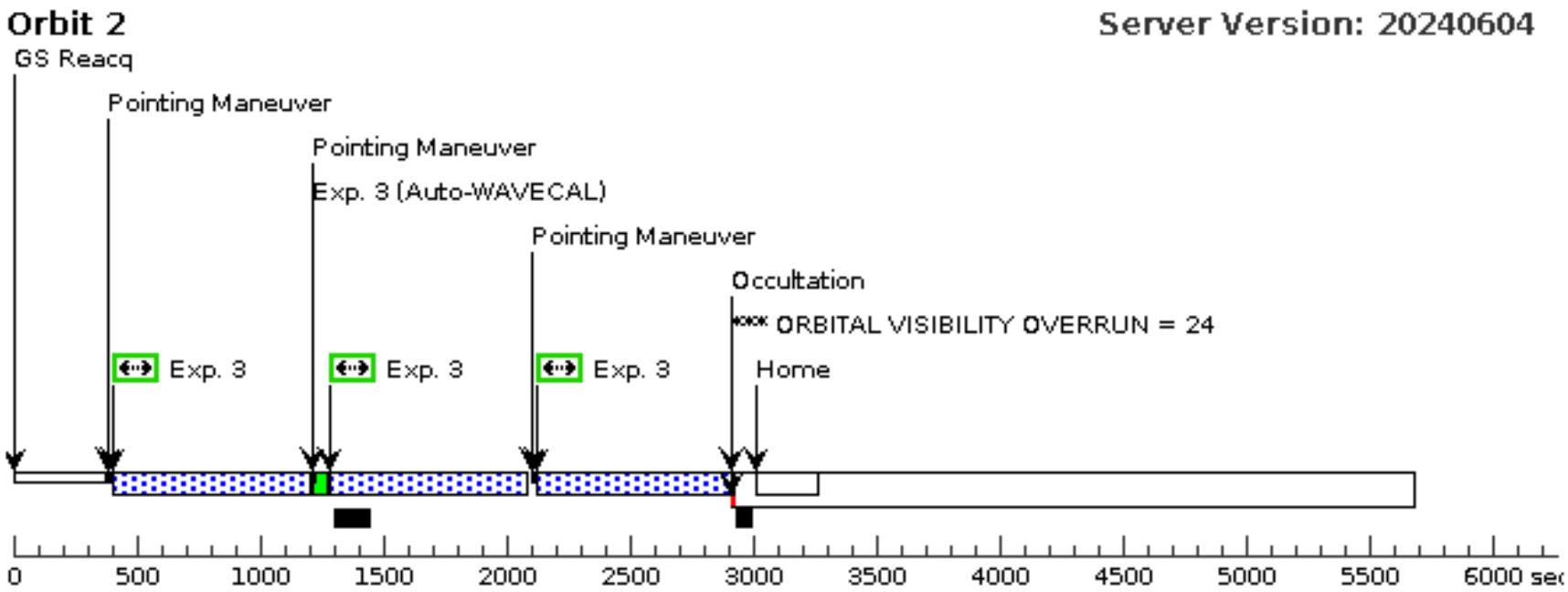
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 8591
Category=GALAXY
Description=[LINER, NUCLEUS, RING, SPIRAL]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530399)	(5) M-94	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			30 Secs (30 Secs) *[==>]*	*[1]*
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(5) M-94	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in M94-G750M (07) (1)	500 Secs (1758 Secs) *[==>586.0 Secs (Pattern 1)]* *[==>586.0 Secs (Pattern 2)]* *[==>586.0 Secs (Pattern 3)]*	*[1]*
3	SciExp-2	(5) M-94	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in M94-G750M (07) (1)	500 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	*[2]*

Orbit Structure





Visit

Proposal 16772, NGC3507 (08), completed Tue Aug 13 15:01:00 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"

Comments: NGC3507 STIS+G430L+52x0.2E1 followed by STIS+G750M+52x0.2E1

Any ORIENT is fine for this visit as long as all exposures are done at the same ORIENT.

Using the same coordinates and acquisition method as a previous STIS observation from program 7357. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2" slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC3507 (08)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC3507 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3507 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3507 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

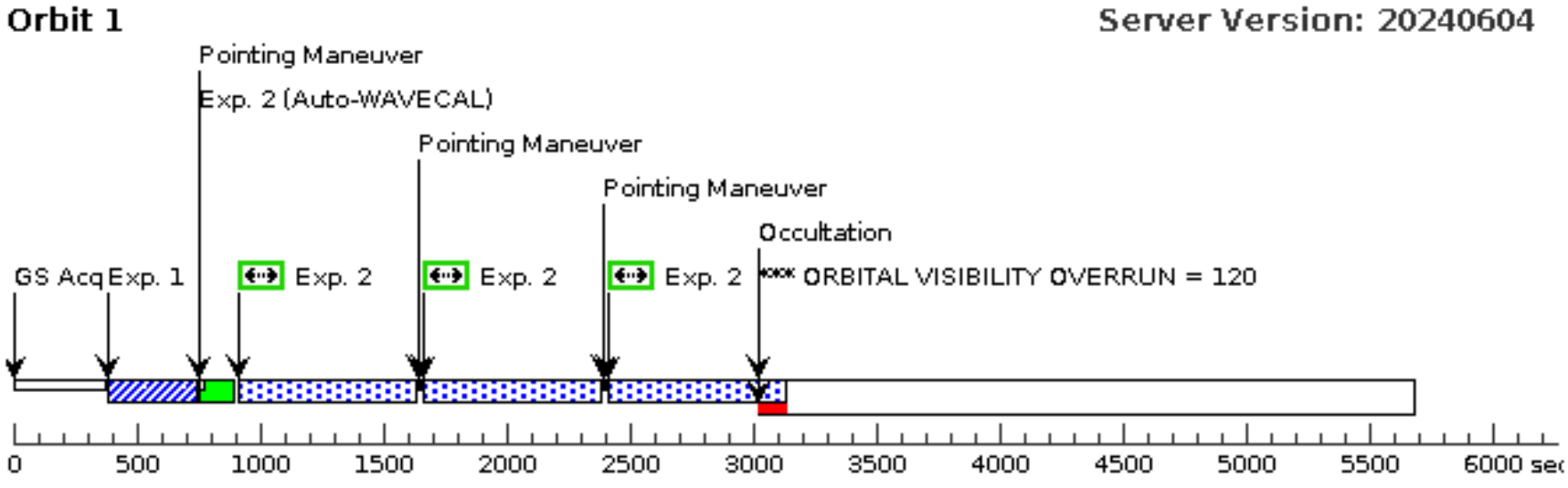
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	NGC-3507	RA: 11 03 25.3980 (165.8558250d)		V=13.2+/-0.04	Reference Frame: ICRS
		Dec: +18 08 7.25 (18.13535d)			
		Equinox: J2000			

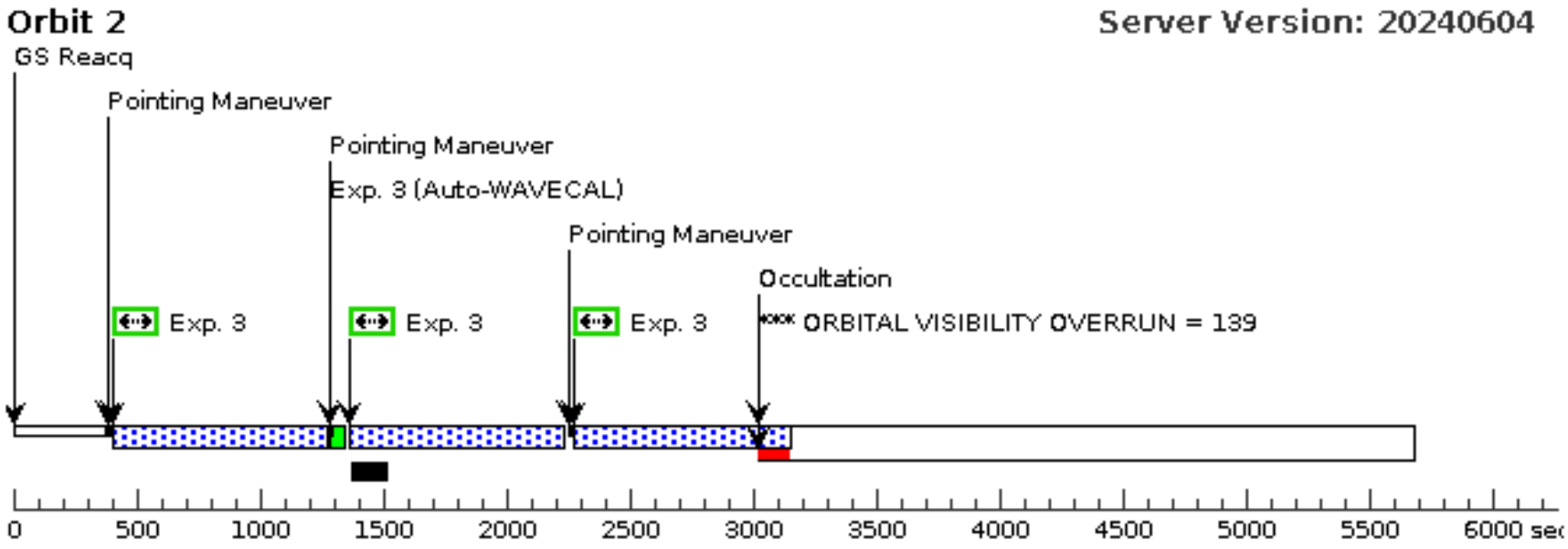
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7357.
Category=GALAXY
Description=[LINER, NUCLEUS, SPIRAL]
Extended=YES

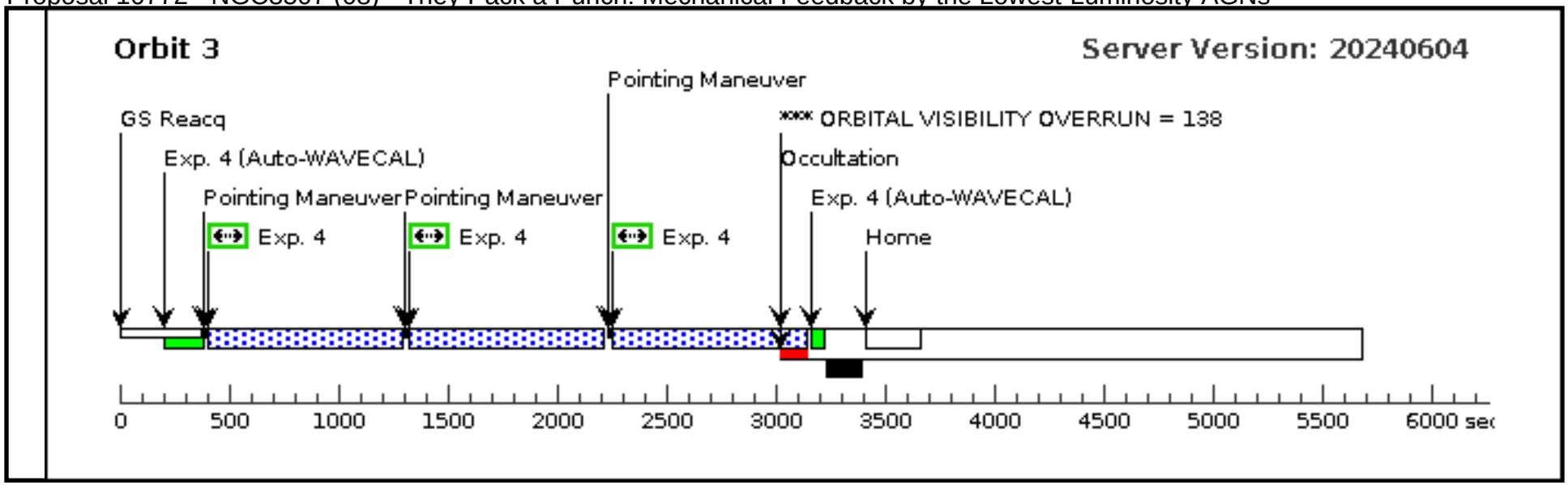
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530404)	(6) NGC-3507	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			33 Secs (33 Secs) *[==>]*	***[1]***
2	Sci-G430L-1	(6) NGC-3507	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC3507 (08) (1)	600 Secs (2043 Secs) *[==>681.0 Secs (Pattern 1)]* *[==>681.0 Secs (Pattern 2)]* *[==>681.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G430L-2	(6) NGC-3507	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC3507 (08) (1)	600 Secs (2517 Secs) *[==>839.0 Secs (Pattern 1)]* *[==>839.0 Secs (Pattern 2)]* *[==>839.0 Secs (Pattern 3)]*	***[2]***
4	Sci-G750M-1	(6) NGC-3507	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in NGC3507 (08) (1)	600 Secs (2571 Secs) *[==>857.0 Secs (Pattern 1)]* *[==>857.0 Secs (Pattern 2)]* *[==>857.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
Pointing Maneuver
GS Reacq
*** ORBITAL VISIBILITY OVERRUN = 138
Exp. 4 (Auto-WAVECAL)
Occultation
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, NGC3607-G430L (09), failed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"

Comments: 8. NGC3607-G430L
NGC3607+G430L+52x0.2E1
Any ORIENT is fine for this visit but the next visit with G750M will have to match the same ORIENT (or 180 deg off).
Using the same coordinates and almost same acquisition method as a previous STIS observation from program 9107. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC3607-G430L (09)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC3607-G430L (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3607-G430L (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3607-G430L (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

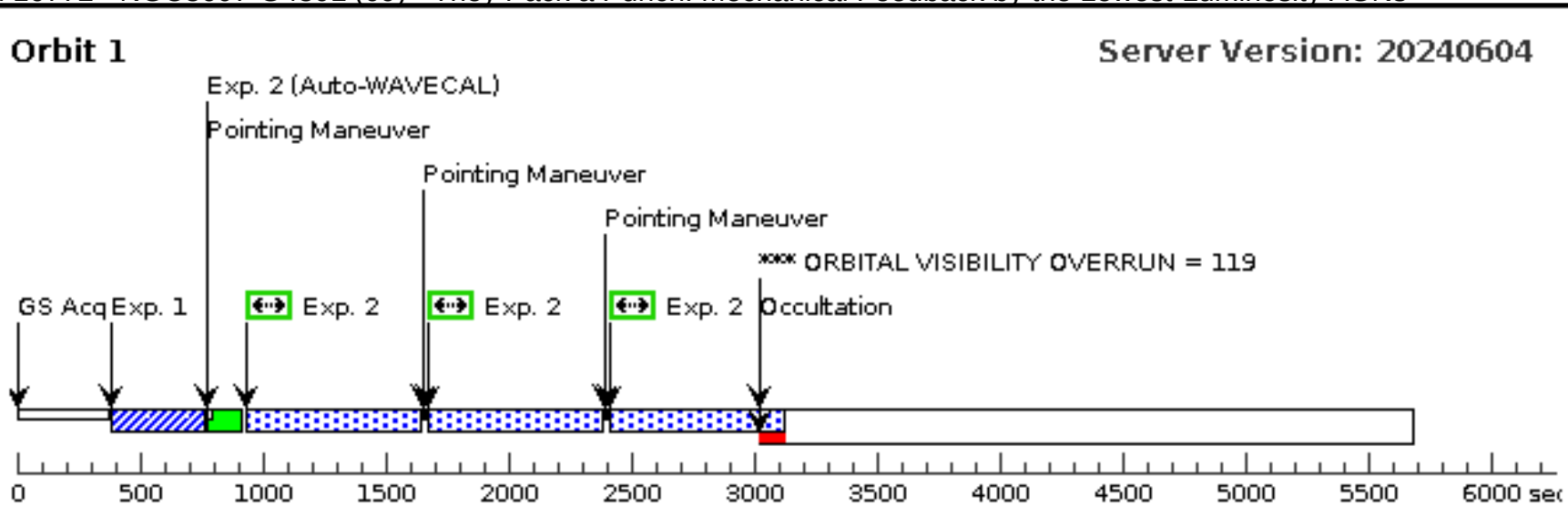
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	NGC-3607	RA: 11 16 54.6300 (169.2276250d)		V=10.85+/-0.02	Reference Frame: ICRS
		Dec: +18 03 5.70 (18.05158d)			
		Equinox: J2000			

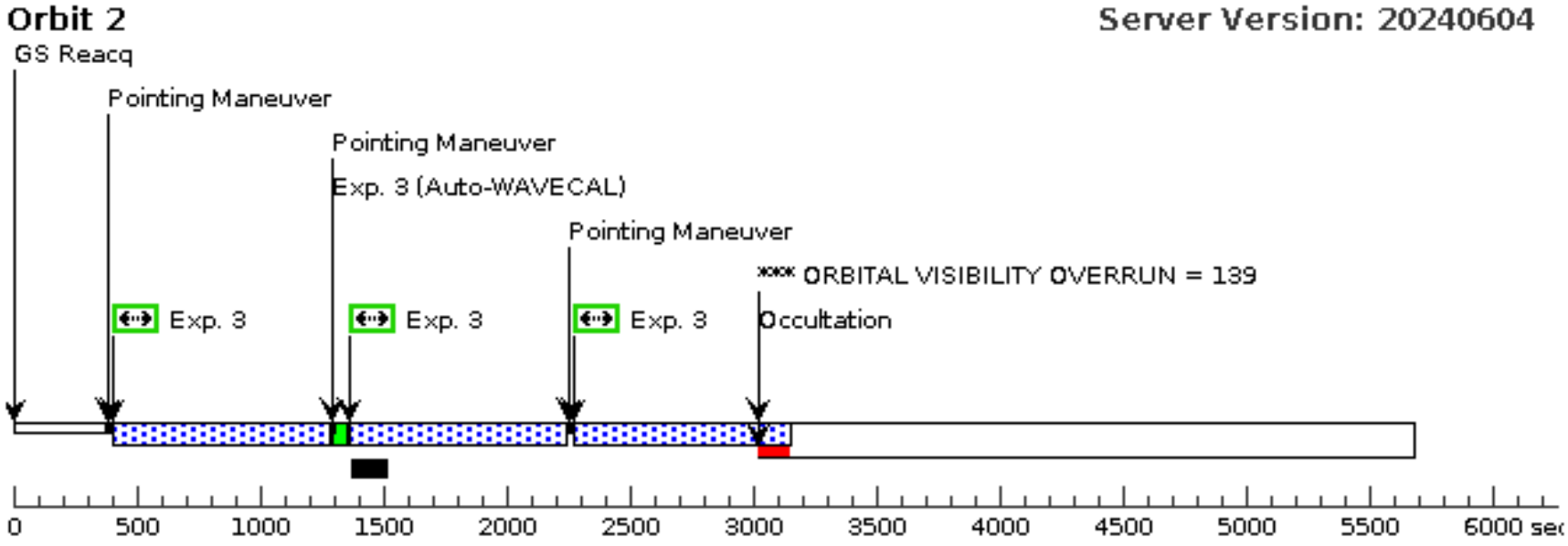
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from program 9107.
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS]
Extended=YES

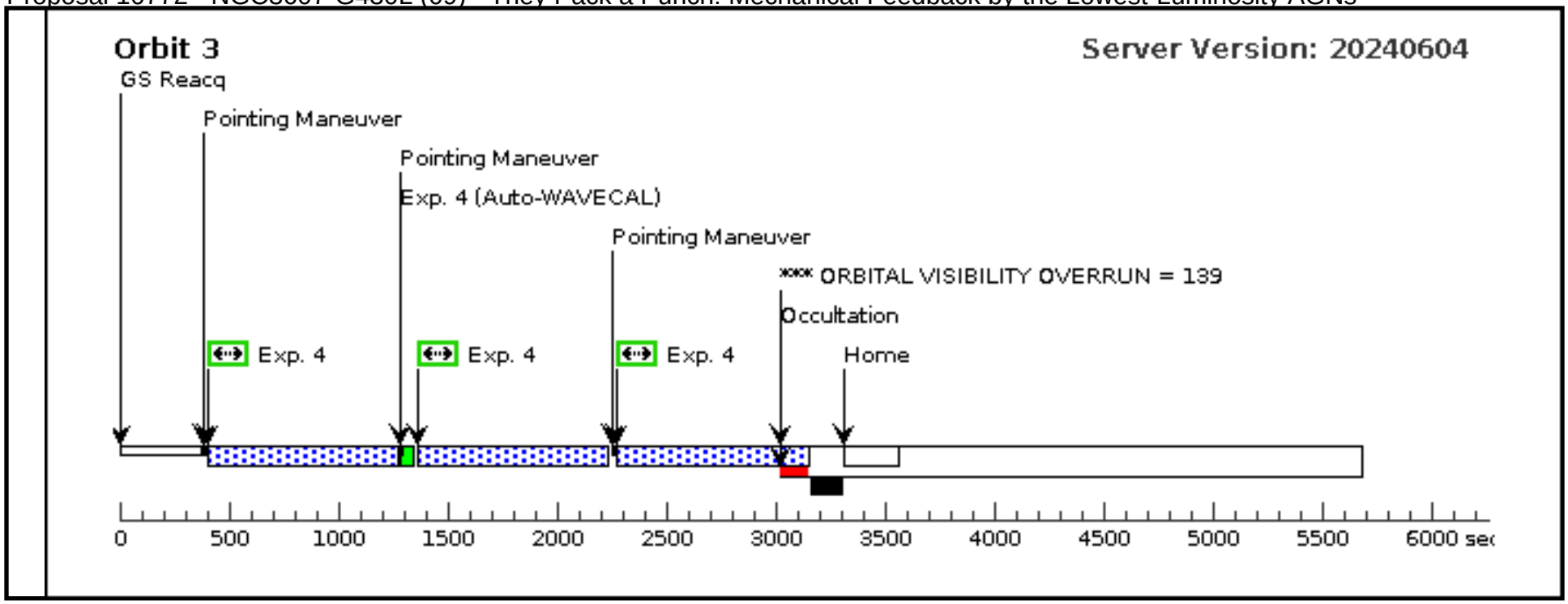
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530413)	(7) NGC-3607	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			38 Secs (38 Secs) *[==>]*	***[1]***
2	Sci-G430L-1	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC3607-G430L (09) (1)	600 Secs (2022 Secs) *[==>674.0 Secs (Pattern 1)]* *[==>674.0 Secs (Pattern 2)]* *[==>674.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G430L-2	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC3607-G430L (09) (1)	600 Secs (2520 Secs) *[==>840.0 Secs (Pattern 1)]* *[==>840.0 Secs (Pattern 2)]* *[==>840.0 Secs (Pattern 3)]*	***[2]***
4	Sci-G2430L-3	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in NGC3607-G430L (09) (1)	600 Secs (2517 Secs) *[==>839.0 Secs (Pattern 1)]* *[==>839.0 Secs (Pattern 2)]* *[==>839.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 139
Occultation
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, NGC3607-G750M (10), failed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SAME ORIENT AS 09

Comments: NGC3607+G750M+52x0.2E1
Need to match the same ORIENT as previous visit of same object with G430L (or 180 deg off).
Using the same coordinates and almost same acquisition method as a previous STIS observation from program 9107. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC3607-G750M (10)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC3607-G750M (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3607-G750M (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

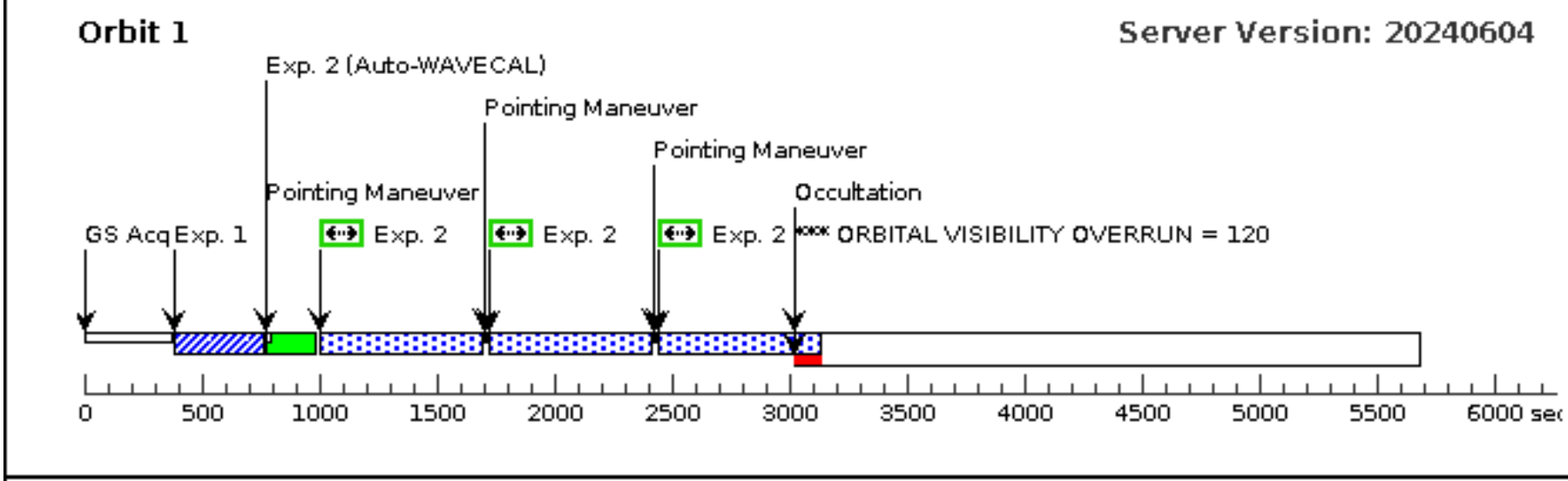
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	NGC-3607	RA: 11 16 54.6300 (169.2276250d) Dec: +18 03 5.70 (18.05158d) Equinox: J2000		V=10.85+/-0.02	Reference Frame: ICRS

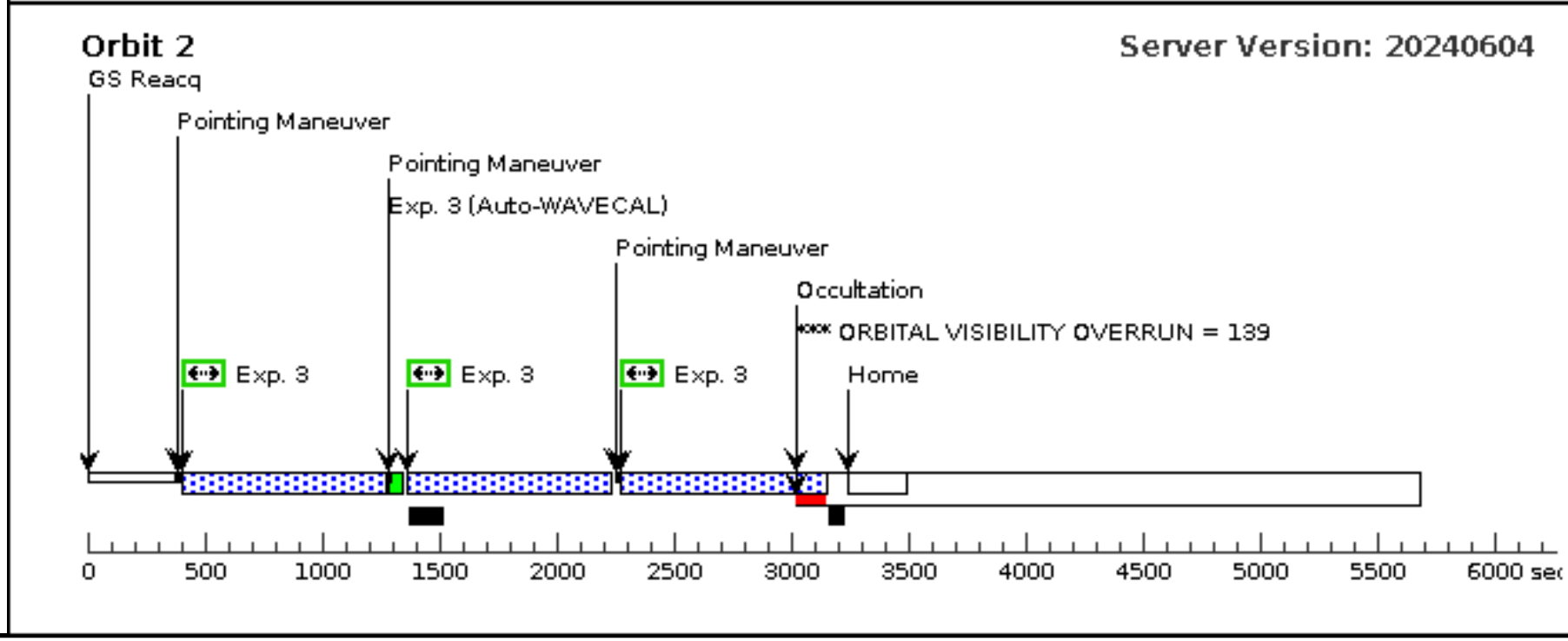
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from program 9107.
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530413)	(7) NGC-3607	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			38 Secs (38 Secs) *[==>]*	***[1]***
2	Sci-G750M-1	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC3607-G750M (10) (1)	600 Secs (1953 Secs) *[==>651.0 Secs (Pattern 1)]* *[==>651.0 Secs (Pattern 2)]* *[==>651.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G750M-2	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC3607-G750M (10) (1)	600 Secs (2517 Secs) *[==>839.0 Secs (Pattern 1)]* *[==>839.0 Secs (Pattern 2)]* *[==>839.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, NGC4438-G430L (11), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"

Comments: NGC4438+G430L+52x0.2E1
The coordinates are the of the nuclear radio core (detected with the VLA by Hota et al. 2007, MNRAS, 380, 1009). There is also a strong H-alpha source (resolved with WFC3 at FWHM 0.3 arcsec; see Kenney & Yale 2002, ApJ, 567, 865)
Any ORIENT is fine for this visit but the next visit with G750M will have to match the same ORIENT (or 180 deg off).
Using diffuse acquisition since we do not know if there is a prominent optical point source in this galaxy ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID). No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC4438-G430L (11)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC4438-G430L (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4438-G430L (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4438-G430L (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

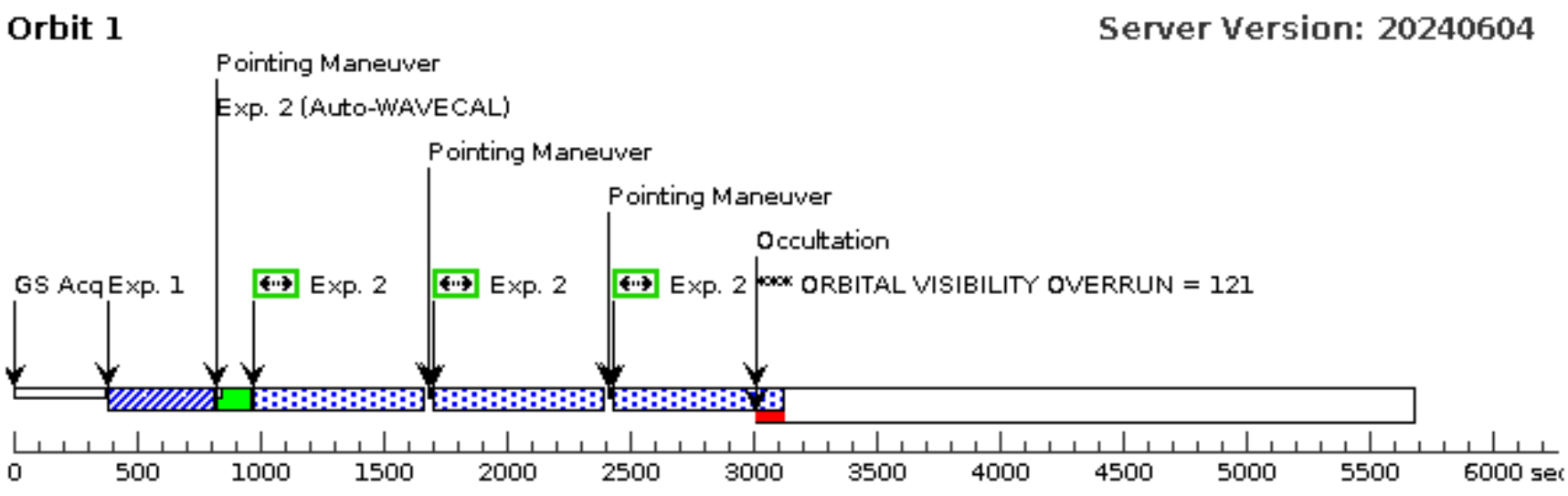
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	NGC-4438	RA: 12 27 45.6700 (186.9402917d)		V=10.17+/-0.07	Reference Frame: ICRS
		Dec: +13 00 31.54 (13.00876d)			
		Equinox: J2000			

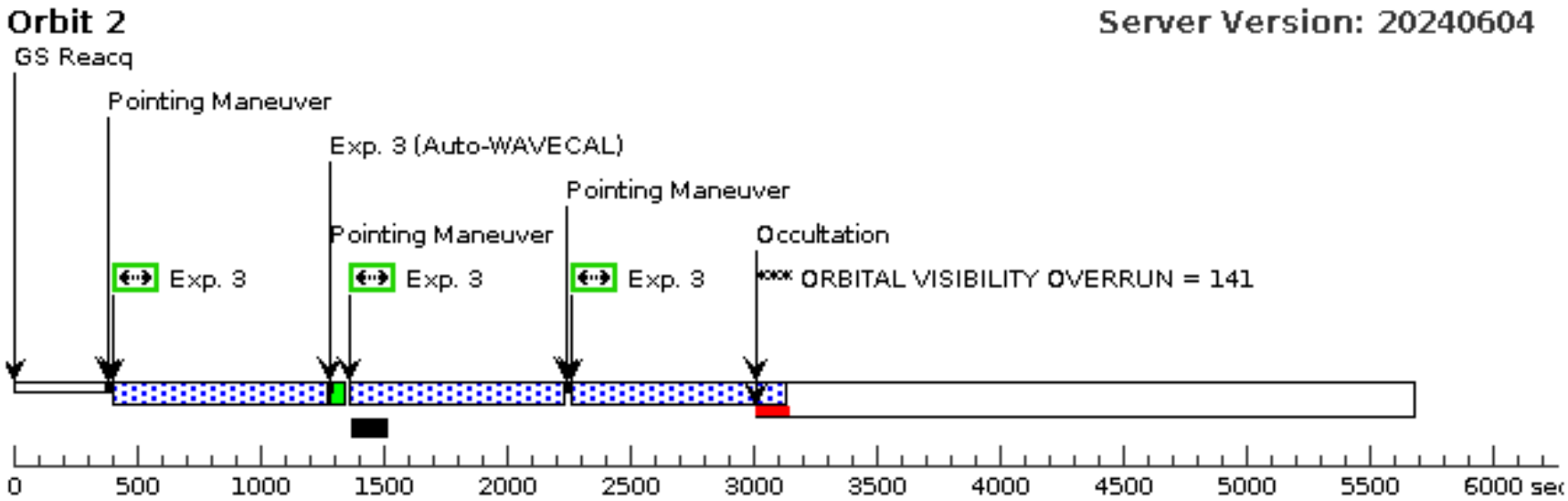
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[DISK, DUST LANE, LINER, NUCLEUS]
Extended=YES

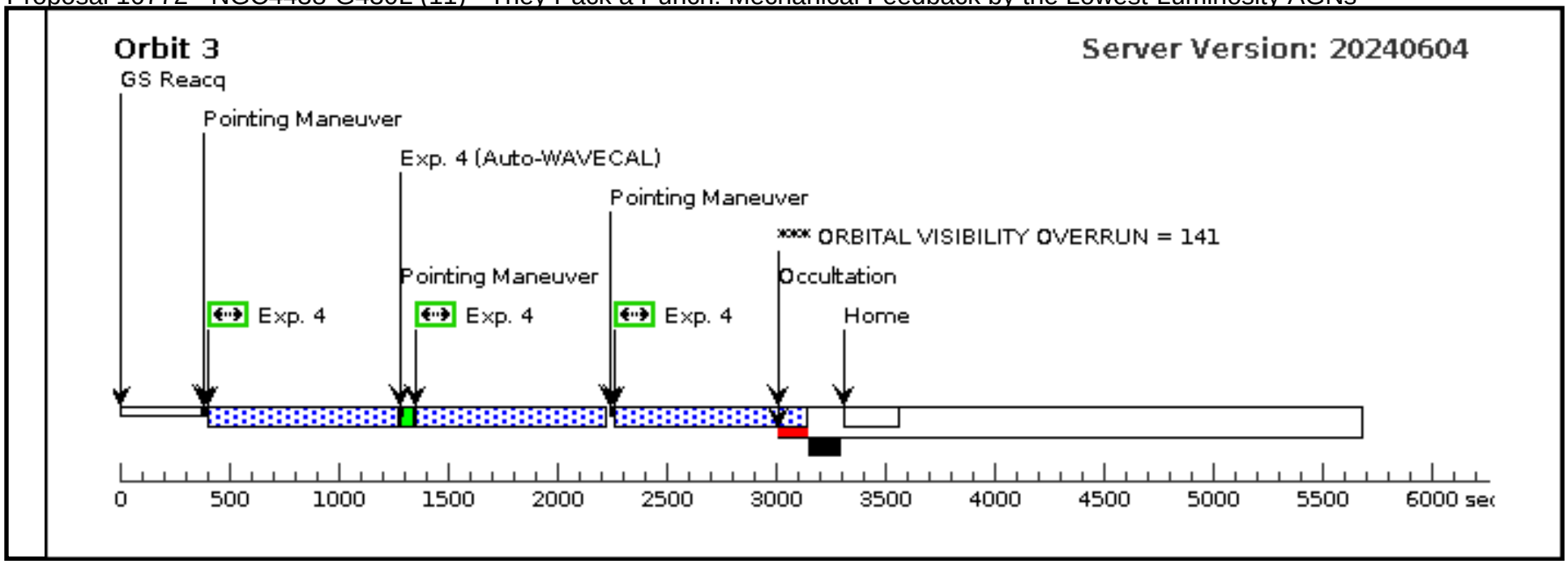
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530417)	(8) NGC-4438	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			50 Secs (50 Secs) *[==>]*	***[1]***
2	Sci-G430L-1	(8) NGC-4438	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC4438-G430L (11) (1)	600 Secs (1968 Secs) *[==>656.0 Secs (Pattern 1)]* *[==>656.0 Secs (Pattern 2)]* *[==>656.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G430L-2	(8) NGC-4438	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC4438-G430L (11) (1)	600 Secs (2514 Secs) *[==>838.0 Secs (Pattern 1)]* *[==>838.0 Secs (Pattern 2)]* *[==>838.0 Secs (Pattern 3)]*	***[2]***
4	Sci-G2430L-3	(8) NGC-4438	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in NGC4438-G430L (11) (1)	600 Secs (2511 Secs) *[==>837.0 Secs (Pattern 1)]* *[==>837.0 Secs (Pattern 2)]* *[==>837.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 141
Pointing Maneuver
Occultation
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, NGC4438-G750M (12), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SAME ORIENT AS 11

Comments: NGC4438+G750M+52x0.2E1
Need to match the same ORIENT as previous visit of same object with G430L (or 180 deg off).
Using the same coordinates acquisition method as the previous visit of the same object. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC4438-G750M (12)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC4438-G750M (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4438-G750M (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

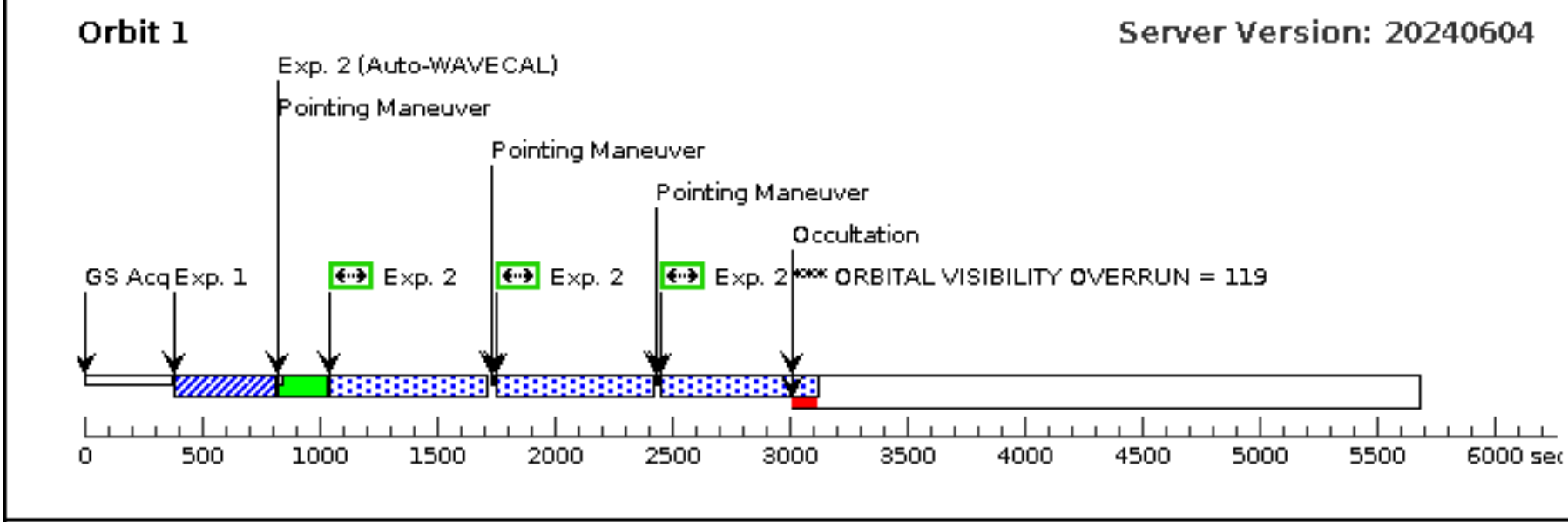
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	NGC-4438	RA: 12 27 45.6700 (186.9402917d) Dec: +13 00 31.54 (13.00876d) Equinox: J2000		V=10.17+/-0.07	Reference Frame: ICRS

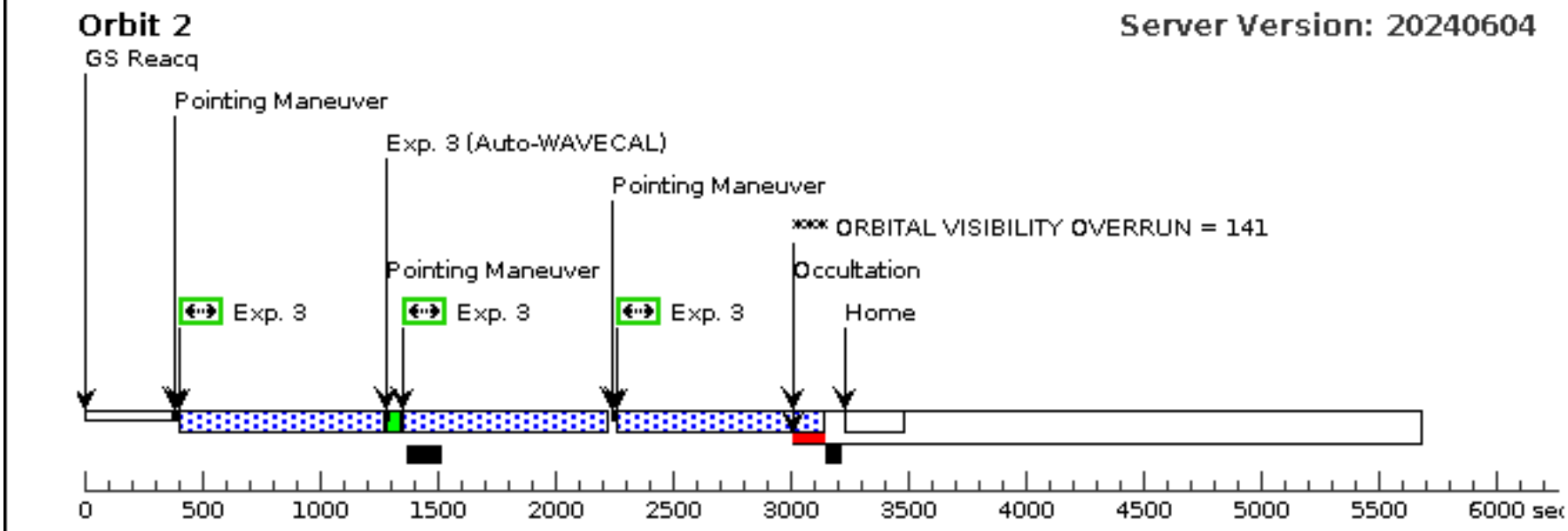
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[DISK, DUST LANE, LINER, NUCLEUS]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530417)	(8) NGC-4438	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			50 Secs (50 Secs) *[==>]*	***[1]***
2	Sci-G750M-1	(8) NGC-4438	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC4438-G750M (12) (1)	600 Secs (1896 Secs) *[==>632.0 Secs (Pattern 1)]* *[==>632.0 Secs (Pattern 2)]* *[==>632.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G750M-2	(8) NGC-4438	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC4438-G750M (12) (1)	600 Secs (2511 Secs) *[==>837.0 Secs (Pattern 1)]* *[==>837.0 Secs (Pattern 2)]* *[==>837.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, NGC4457-G430L (13), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"

Comments: NGC4457+G430L+52x0.2E1
The coordinates of the galaxy nucleus from SDSS DR13. They agree to 0.2" with 2MASS coordinates (reported on NED). They also agree to 0.04" with the coordinates of the nuclear X-ray source detected by Chandra (reported in Liu 2011, ApJS, 192, 10).
Any ORIENT is fine for this visit but the next visit with G750M will have to match the same ORIENT (or 180 deg off).
Using diffuse acquisition since we do not know if there is a prominent optical point source in this galaxy ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID). No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC4457-G430L (13)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC4457-G430L (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4457-G430L (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4457-G430L (13)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

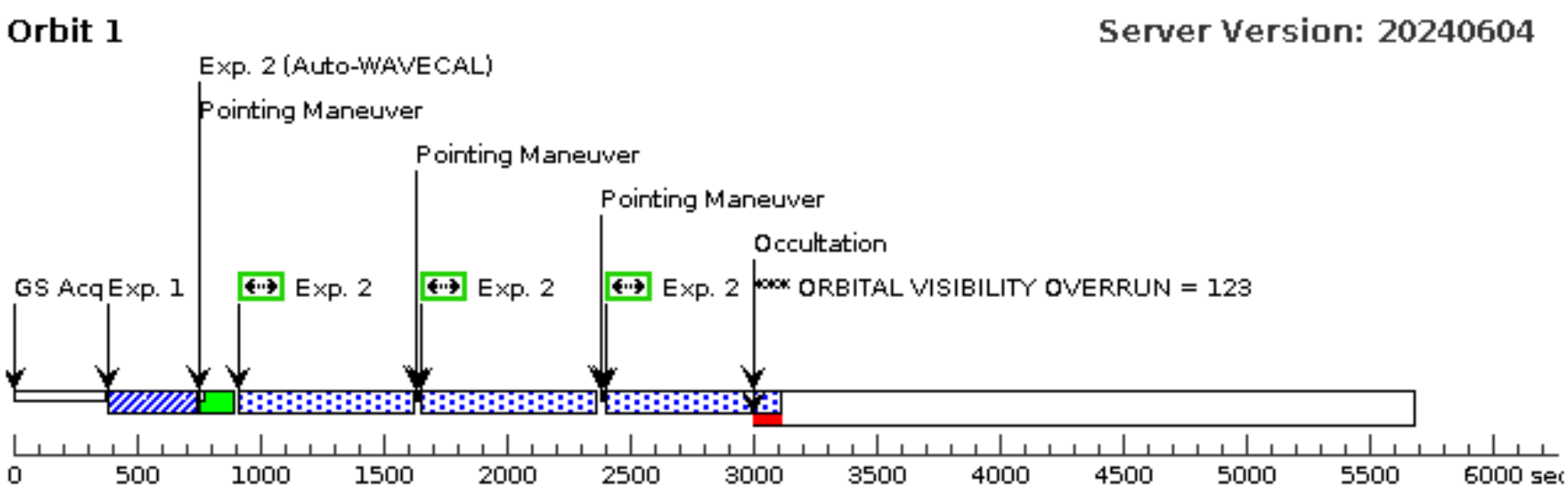
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	NGC-4457	RA: 12 28 59.0400 (187.2460000d)		V=10.91+/-0.16	Reference Frame: ICRS
		Dec: +03 34 14.27 (3.57063d)			
		Equinox: J2000			

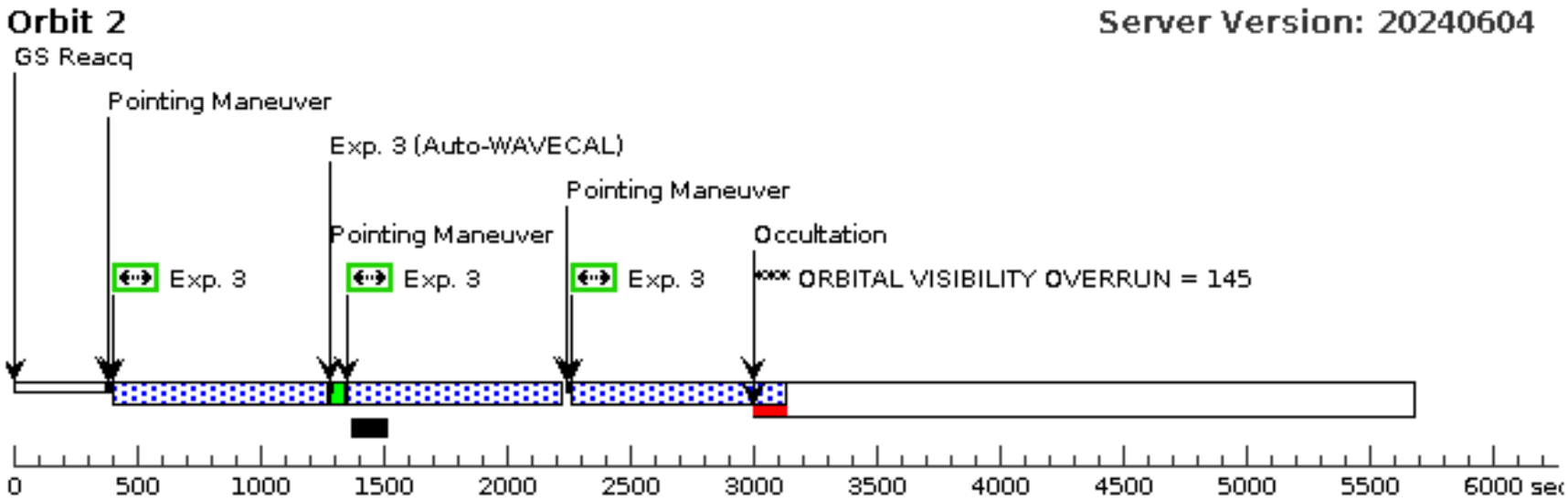
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[LINER, NUCLEUS, SPIRAL]
Extended=YES

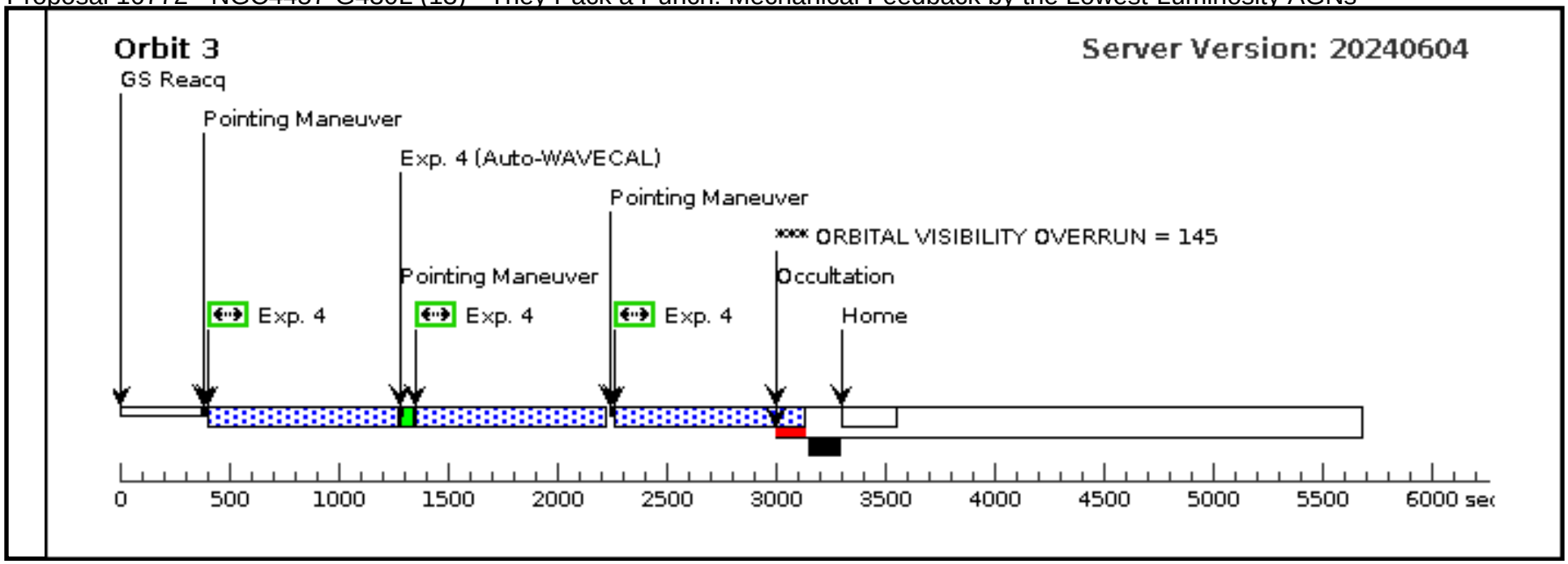
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530404)	(9) NGC-4457	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			33 Secs (33 Secs) *[==>]*	***[1]***
2	Sci-G430L-1	(9) NGC-4457	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC4457-G430L (13) (1)	600 Secs (2028 Secs) *[==>676.0 Secs (Pattern 1)]* *[==>676.0 Secs (Pattern 2)]* *[==>676.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G430L-2	(9) NGC-4457	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC4457-G430L (13) (1)	600 Secs (2508 Secs) *[==>836.0 Secs (Pattern 1)]* *[==>836.0 Secs (Pattern 2)]* *[==>836.0 Secs (Pattern 3)]*	***[2]***
4	Sci-G2430L-3	(9) NGC-4457	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 4-4 in NGC4457-G430L (13) (1)	600 Secs (2505 Secs) *[==>835.0 Secs (Pattern 1)]* *[==>835.0 Secs (Pattern 2)]* *[==>835.0 Secs (Pattern 3)]*	***[3]***

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 145
Pointing Maneuver
Occultation
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, NGC4457-G750M (14), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SAME ORIENT AS 13

Comments: NGC4457+G750M+52x0.2E1
Need to match the same ORIENT as previous visit of same object with G430L (or 180 deg off).
Using the same coordinates acquisition method as the previous visit of the same object. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC4457-G750M (14)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC4457-G750M (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC4457-G750M (14)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

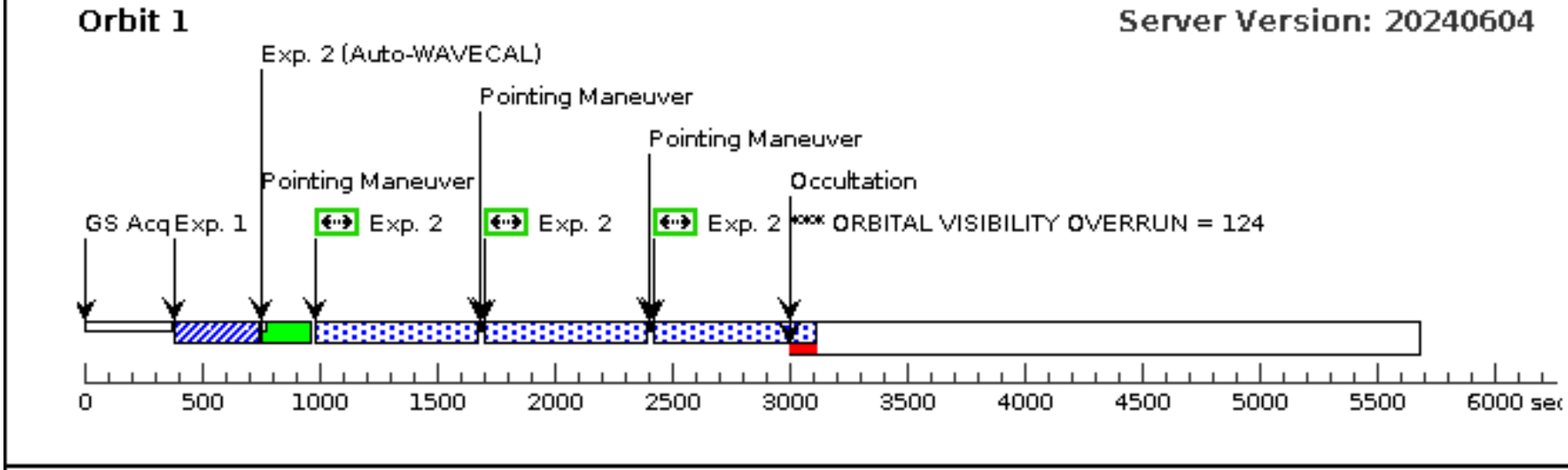
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	NGC-4457	RA: 12 28 59.0400 (187.2460000d) Dec: +03 34 14.27 (3.57063d) Equinox: J2000		V=10.91+/-0.16	Reference Frame: ICRS

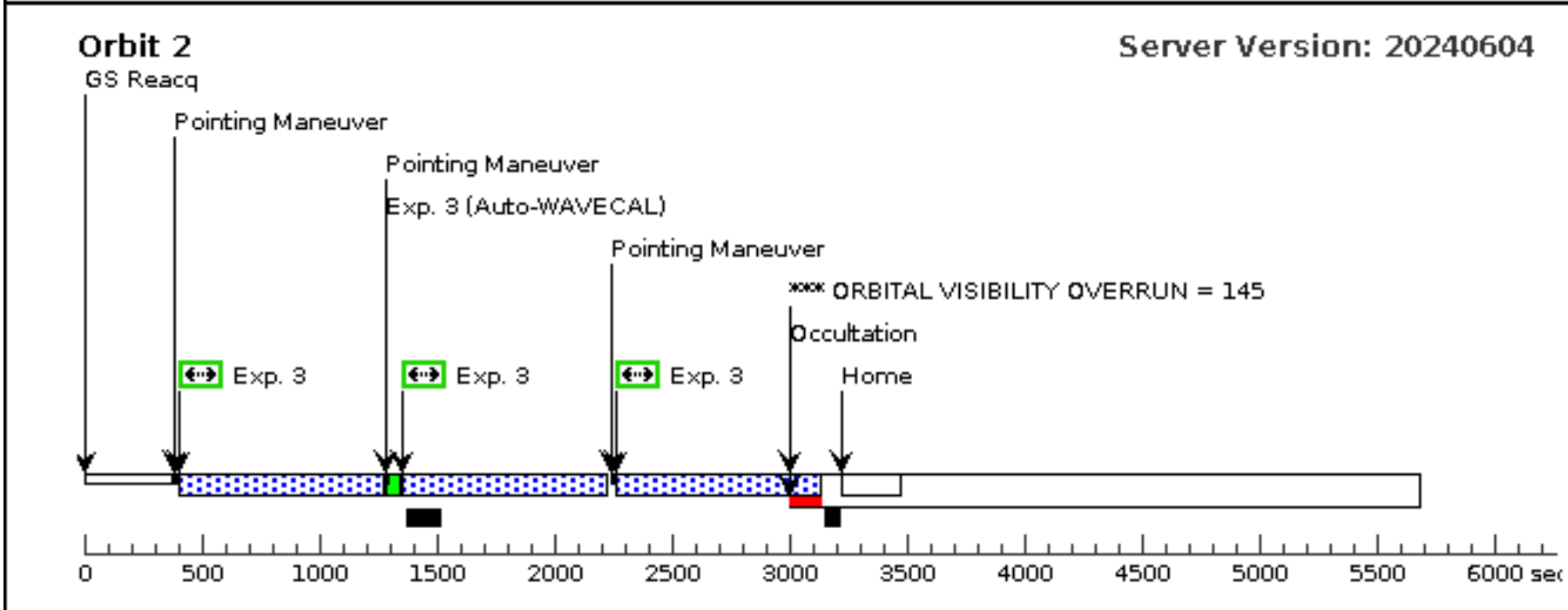
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Category=GALAXY
Description=[LINER, NUCLEUS, SPIRAL]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530404)	(9) NGC-4457	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			33 Secs (33 Secs) *[==>]*	***[1]***
2	Sci-G750M-1	(9) NGC-4457	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC4457-G750M (14) (1)	600 Secs (1959 Secs) *[==>653.0 Secs (Pattern 1)]* *[==>653.0 Secs (Pattern 2)]* *[==>653.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G750M-2	(9) NGC-4457	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC4457-G750M (14) (1)	600 Secs (2505 Secs) *[==>835.0 Secs (Pattern 1)]* *[==>835.0 Secs (Pattern 2)]* *[==>835.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, M84-v1-repeat.v02_full (15), failed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; SAME ORIENT AS 03

Comments: M84 (a.k.a. NGC4274) with STIS+GG430L+52x0.2E1.

Need slip PA=104.0 (+/- 3) deg to match archival G750M observation from program 7124. Hence we calculate ORIENT = 146.0 to 152.0 and 326.0 to 332.0 (180 deg off)

Using same target coordinates and acquisition method as program 7124, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2" slit). But note that after the target acquisition we need an offset of POS-TARG +0.1, 0 (i.e., 0.1" offset along +X, perpendicular to slit) to match the slit position of that program.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M84-v1-repeat.v02_full (15)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M84-v1-repeat.v02_full (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M84-v1-repeat.v02_full (15)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

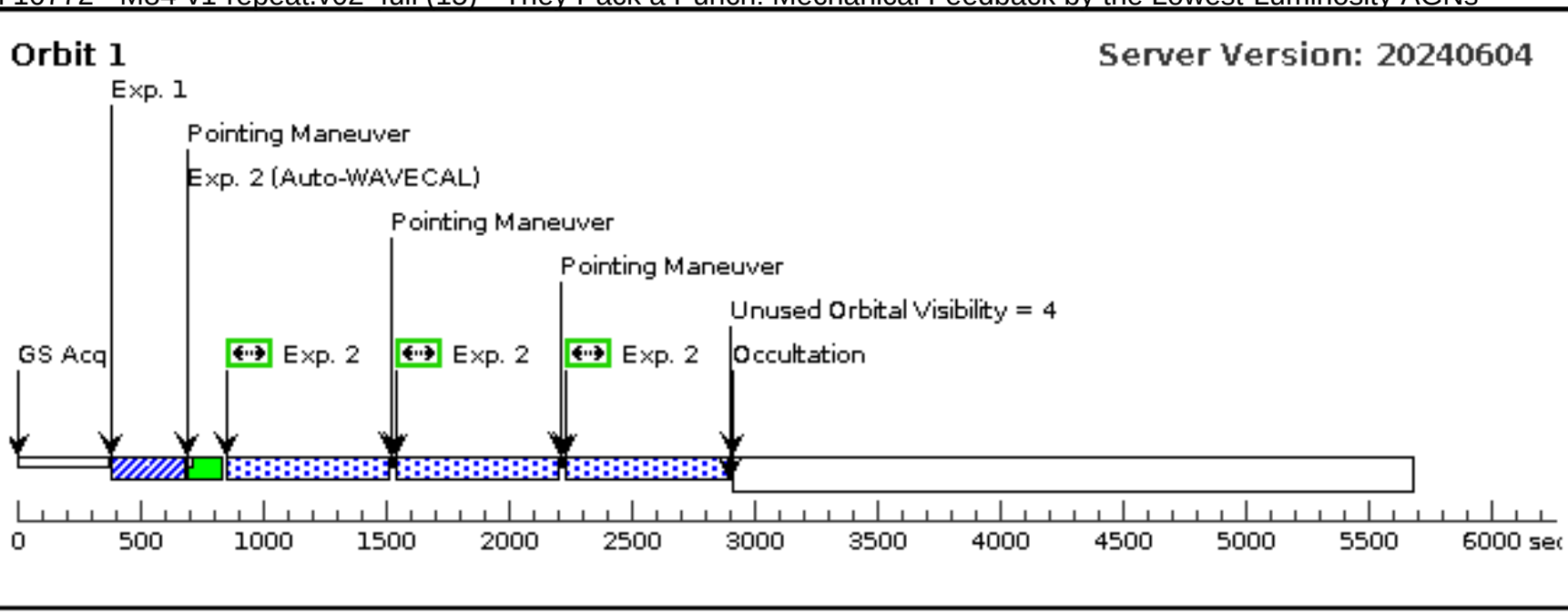
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M-84	RA: 12 25 3.6480 (186.2652000d)		V=11.03+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4374	Dec: +12 53 14.10 (12.88725d)			
		Equinox: J2000			

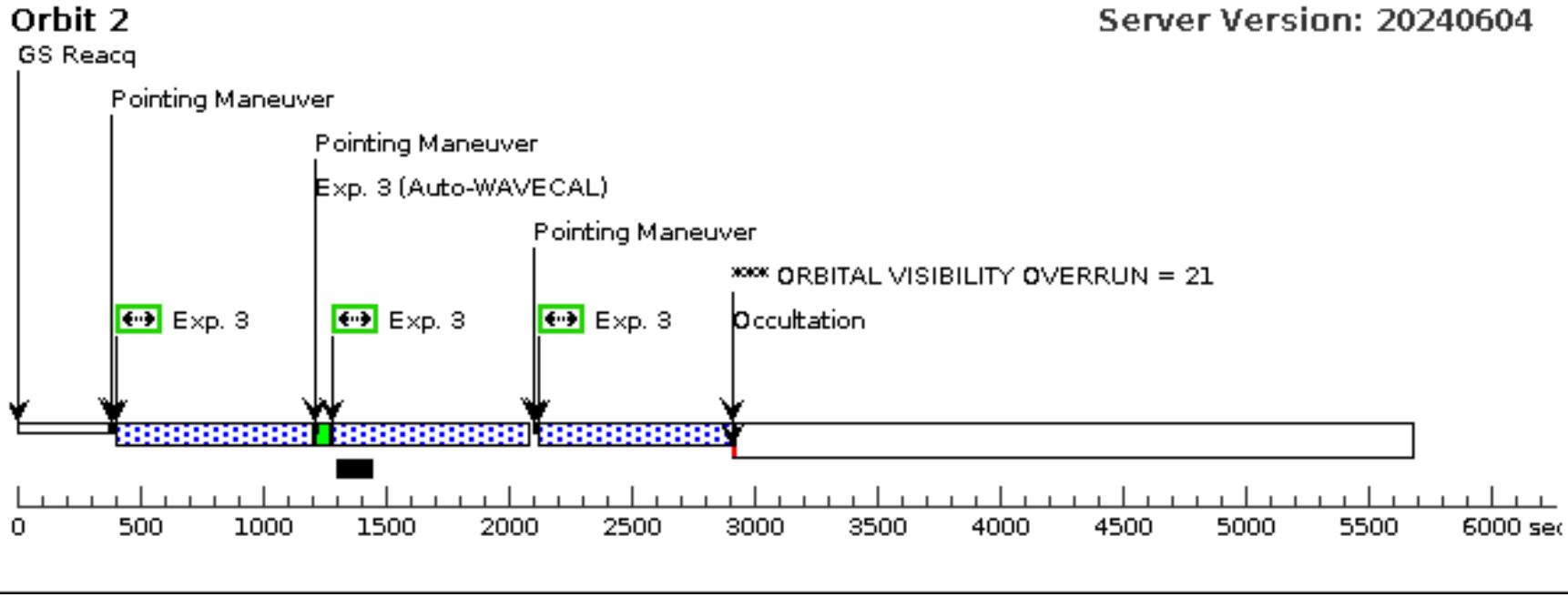
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7124
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS, RADIO GALAXY]
Extended=YES

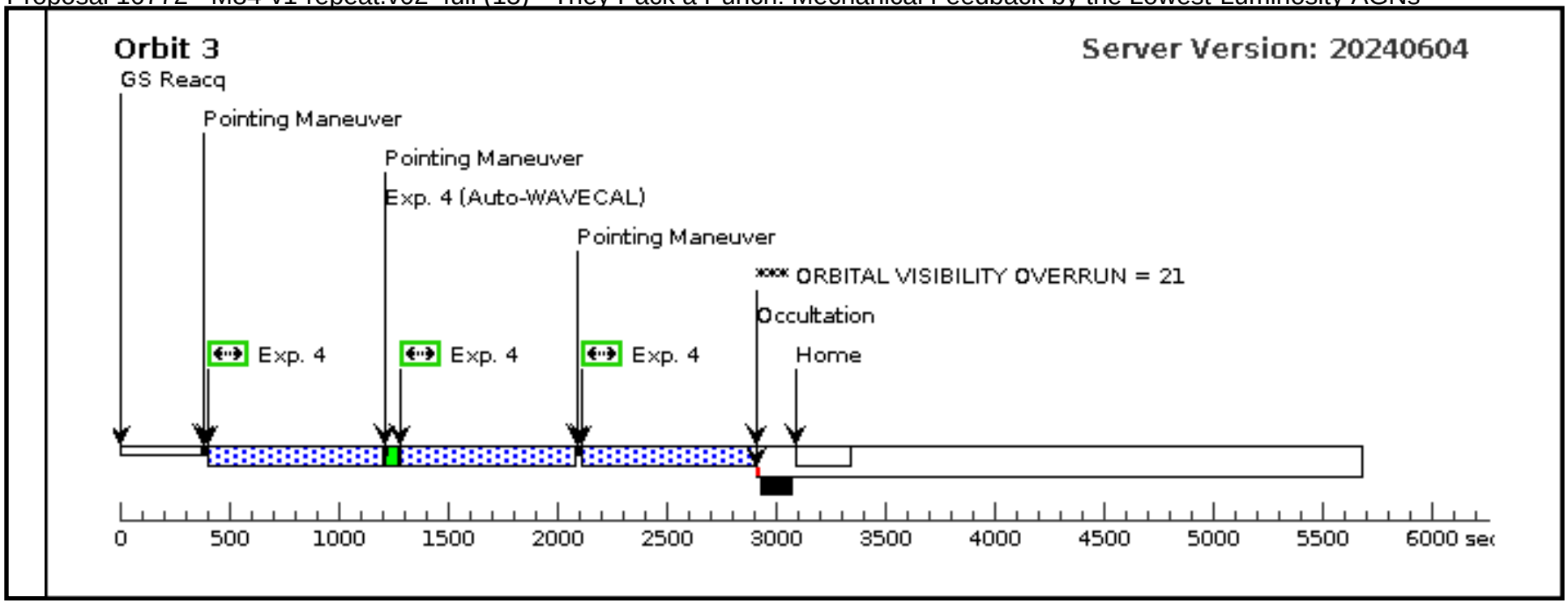
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530380)	(2) M-84	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			19 Secs (19 Secs) *[==>]*	*[1]*
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 2-2 in M84-v1-repeat.v02_full (15) (1)	500 Secs (1869 Secs) *[==>623.0 Secs (Pattern 1)]* *[==>623.0 Secs (Pattern 2)]* *[==>623.0 Secs (Pattern 3)]*	*[1]*
3	SciExp-2	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 3-3 in M84-v1-repeat.v02_full (15) (1)	500 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	*[2]*
4	SciExp-3	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 4-4 in M84-v1-repeat.v02_full (15) (1)	500 Secs (2289 Secs) *[==>763.0 Secs (Pattern 1)]* *[==>763.0 Secs (Pattern 2)]* *[==>763.0 Secs (Pattern 3)]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 21
Occultation
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, M84-v1-repeat.v02_full (18), failed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SCHED 100%; SAME ORIENT AS 03

Comments: M84 (a.k.a. NGC4274) with STIS+GG430L+52x0.2E1.
HOPR copy of visit 15
Need slip PA=104.0 (+/- 3) deg to match archival G750M observation from program 7124. Hence we calculate ORIENT = 146.0 to 152.0 and 326.0 to 332.0 (180 deg off)

Using same target coordinates and acquisition method as program 7124, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2" slit). But note that after the target acquisition we need an offset of POS-TARG +0.1, 0 (i.e., 0.1" offset along +X, perpendicular to slit) to match the slit position of that program.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(M84-v1-repeat.v02_full (18)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(M84-v1-repeat.v02_full (18)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(M84-v1-repeat.v02_full (18)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3), (4)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

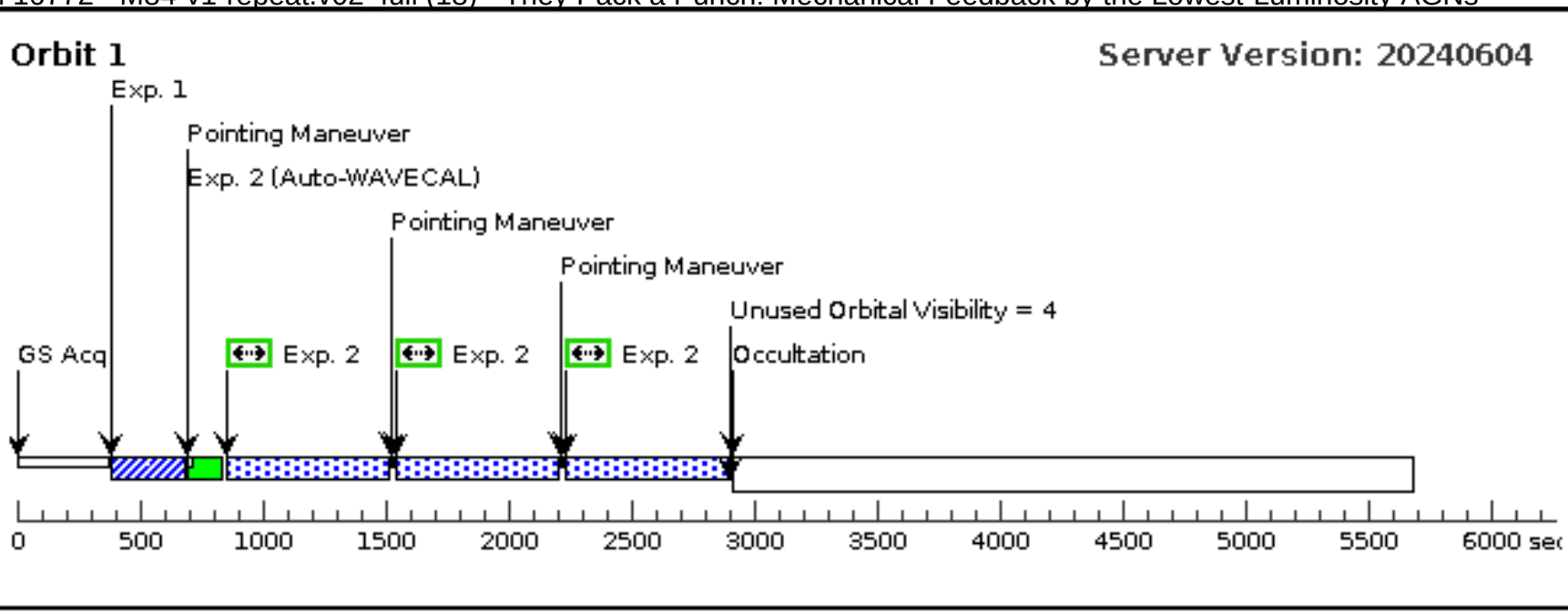
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M-84	RA: 12 25 3.6480 (186.2652000d)		V=11.03+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4374	Dec: +12 53 14.10 (12.88725d)			
		Equinox: J2000			

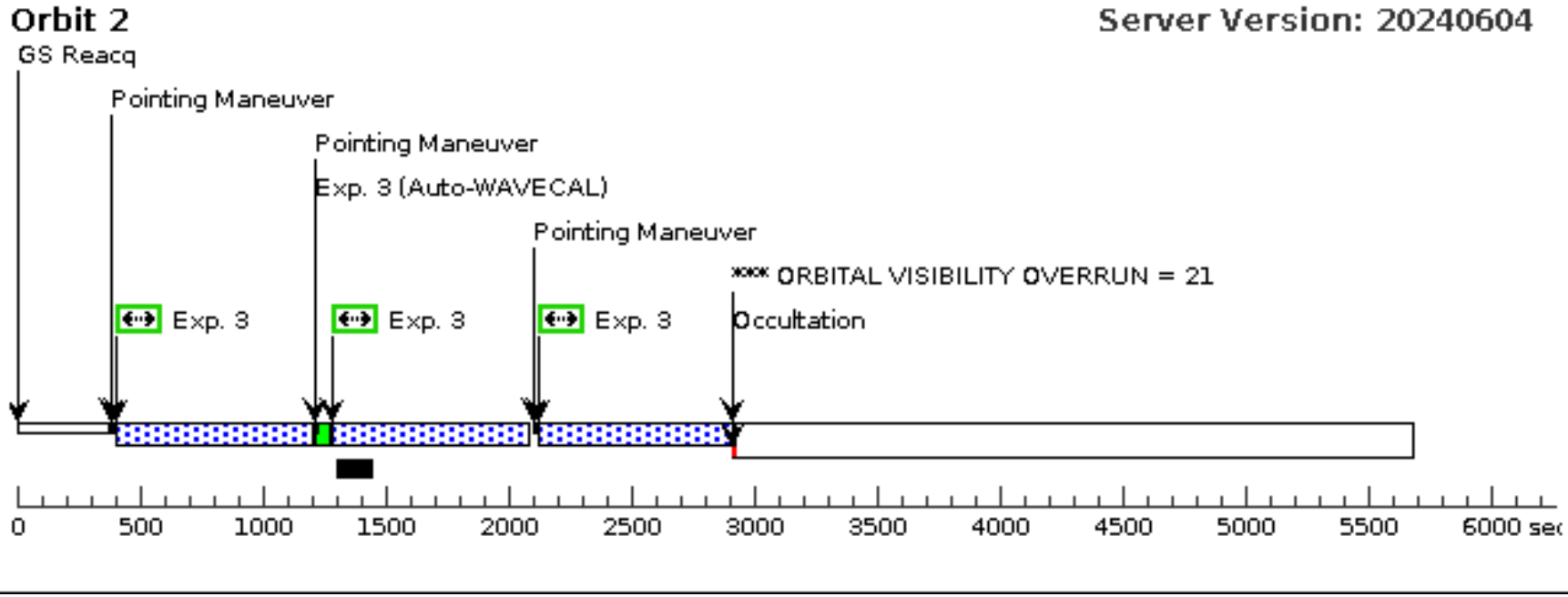
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7124
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS, RADIO GALAXY]
Extended=YES

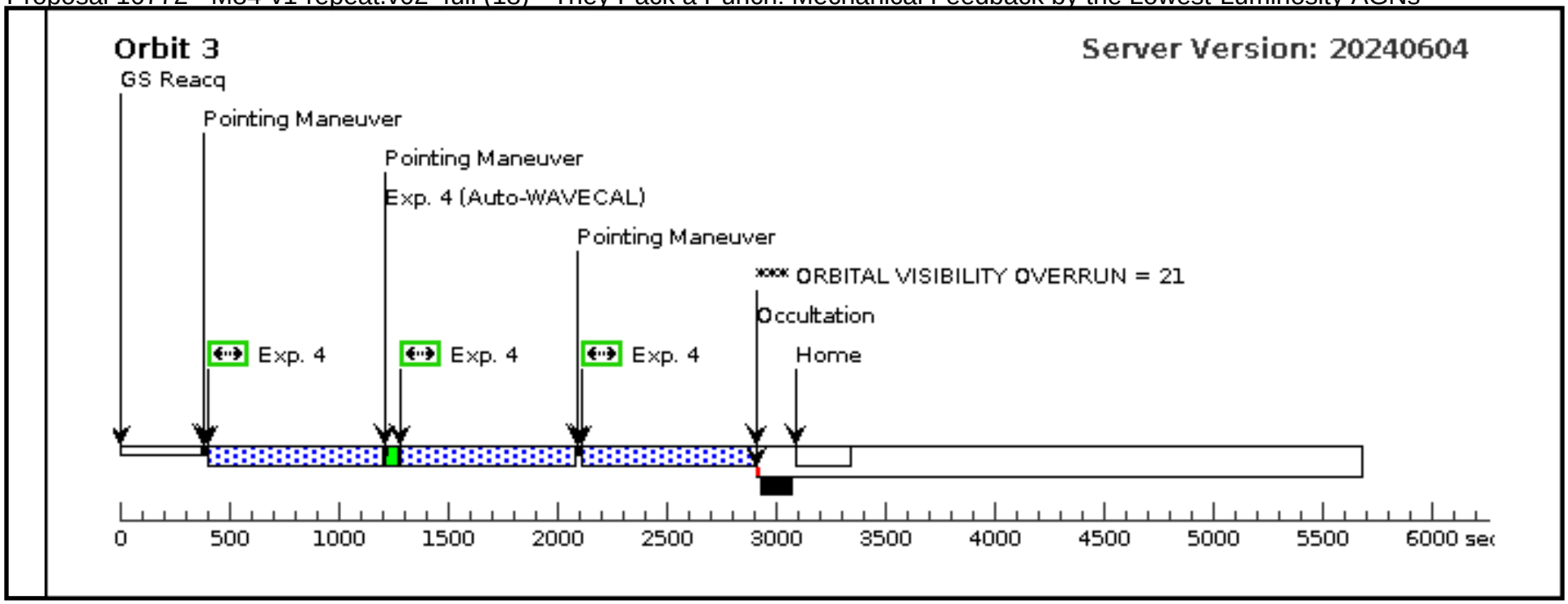
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530380)	(2) M-84	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			19 Secs (19 Secs) *[==>]*	*[1]*
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 2-2 in M84-v1-repeat.v02_full (18) (1)	500 Secs (1869 Secs) *[==>623.0 Secs (Pattern 1)]* *[==>623.0 Secs (Pattern 2)]* *[==>623.0 Secs (Pattern 3)]*	*[1]*
3	SciExp-2	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 3-3 in M84-v1-repeat.v02_full (18) (1)	500 Secs (2292 Secs) *[==>764.0 Secs (Pattern 1)]* *[==>764.0 Secs (Pattern 2)]* *[==>764.0 Secs (Pattern 3)]*	*[2]*
4	SciExp-3	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 4-4 in M84-v1-repeat.v02_full (18) (1)	500 Secs (2289 Secs) *[==>763.0 Secs (Pattern 1)]* *[==>763.0 Secs (Pattern 2)]* *[==>763.0 Secs (Pattern 3)]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20240604
GS Reacq
Pointing Maneuver
Pointing Maneuver
Exp. 4 (Auto-WAVECAL)
Pointing Maneuver
**** ORBITAL VISIBILITY OVERRUN = 21
Occultation
Exp. 4
Exp. 4
Exp. 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 16772, NGC3607-G430L-repeat.v09_orbs2-3 (16), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SAME ORIENT AS 09

Comments: 8. NGC3607-G430L
NGC3607+G430L+52x0.2E1
Any ORIENT is fine for this visit but the next visit with G750M will have to match the same ORIENT (or 180 deg off).
Using the same coordinates and almost same acquisition method as a previous STIS observation from program 9107. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC3607-G430L-repeat.v09_orbs2-3 (16)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC3607-G430L-repeat.v09_orbs2-3 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3607-G430L-repeat.v09_orbs2-3 (16)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

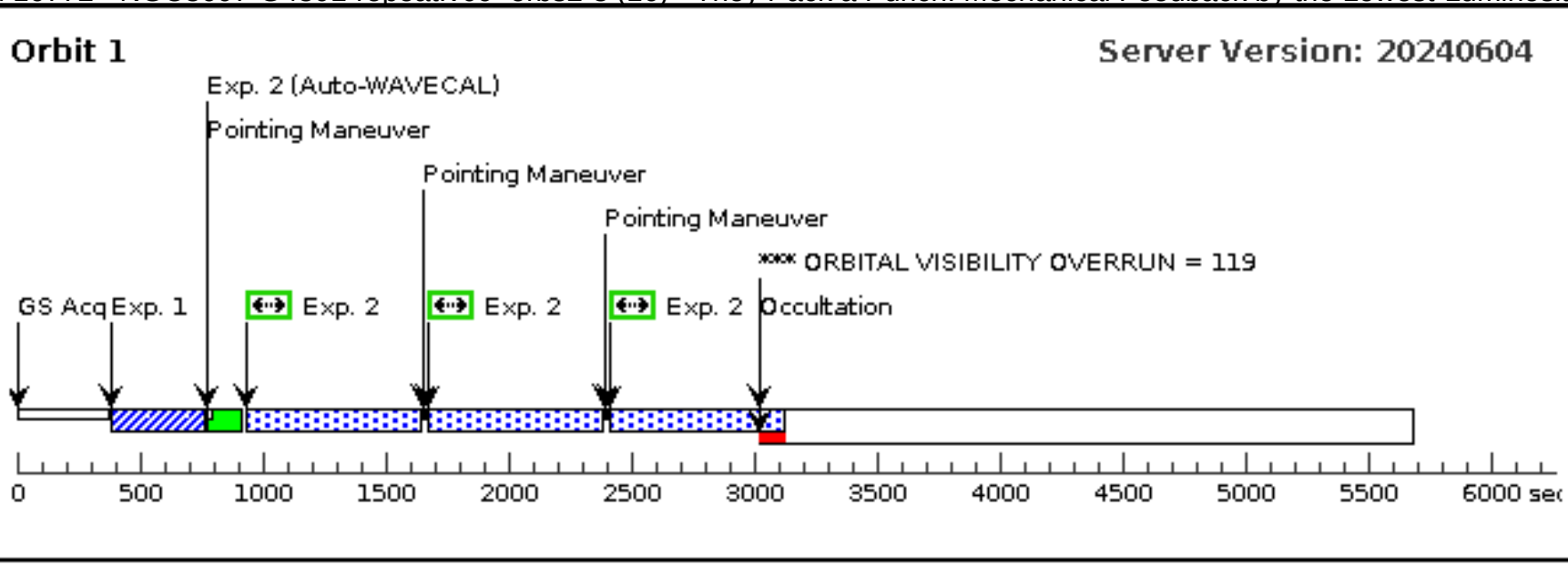
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	NGC-3607	RA: 11 16 54.6300 (169.2276250d) Dec: +18 03 5.70 (18.05158d) Equinox: J2000		V=10.85+/-0.02	Reference Frame: ICRS

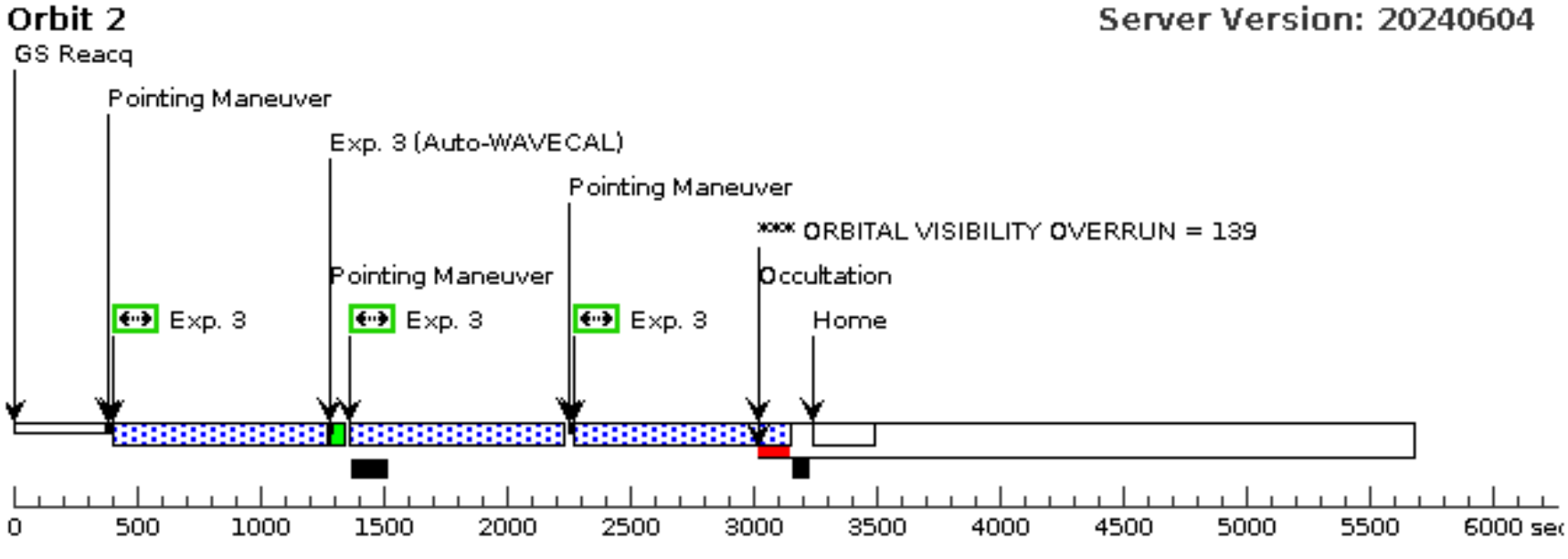
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from program 9107.
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530413)	(7) NGC-3607	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			38 Secs (38 Secs) *[==>]*	***[1]***
2	Sci-G430L-1	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC3607-G430L-repeat.v09_orbs2-3 (16) (1)	600 Secs (2022 Secs) *[==>674.0 Secs (Pattern 1)]* *[==>674.0 Secs (Pattern 2)]* *[==>674.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G430L-2	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC3607-G430L-repeat.v09_orbs2-3 (16) (1)	600 Secs (2517 Secs) *[==>839.0 Secs (Pattern 1)]* *[==>839.0 Secs (Pattern 2)]* *[==>839.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, NGC3607-G750M-repeat.v10_full (17), completed Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: Error

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.1"; SAME ORIENT AS 09

Comments: NGC3607+G750M+52x0.2E1
Need to match the same ORIENT as previous visit of same object with G430L (or 180 deg off).
Using the same coordinates and almost same acquisition method as a previous STIS observation from program 9107. ACQTYPE=DIFFUSE (CHECKBOX=3, FLUX-CENTROID).
No ACK/PEAK needed since we are using the 0.2 arcsec slit
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Diagnostics

(NGC3607-G750M-repeat.v10_full (17)) Error (Form): Guiding Tolerance is not allowed when Gyro Mode is not a 3-Gyro mode (3GFHST or 3GOBAD).

(NGC3607-G750M-repeat.v10_full (17)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NGC3607-G750M-repeat.v10_full (17)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2), (3)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

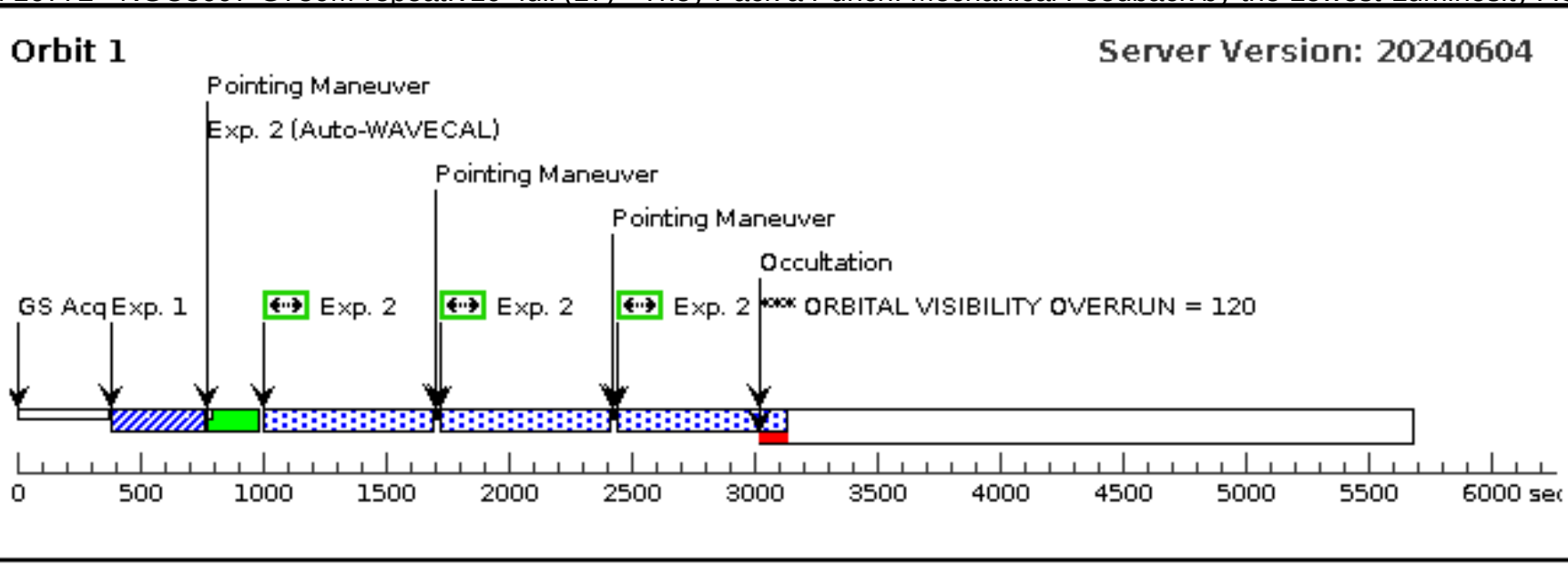
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	NGC-3607	RA: 11 16 54.6300 (169.2276250d) Dec: +18 03 5.70 (18.05158d) Equinox: J2000		V=10.85+/-0.02	Reference Frame: ICRS

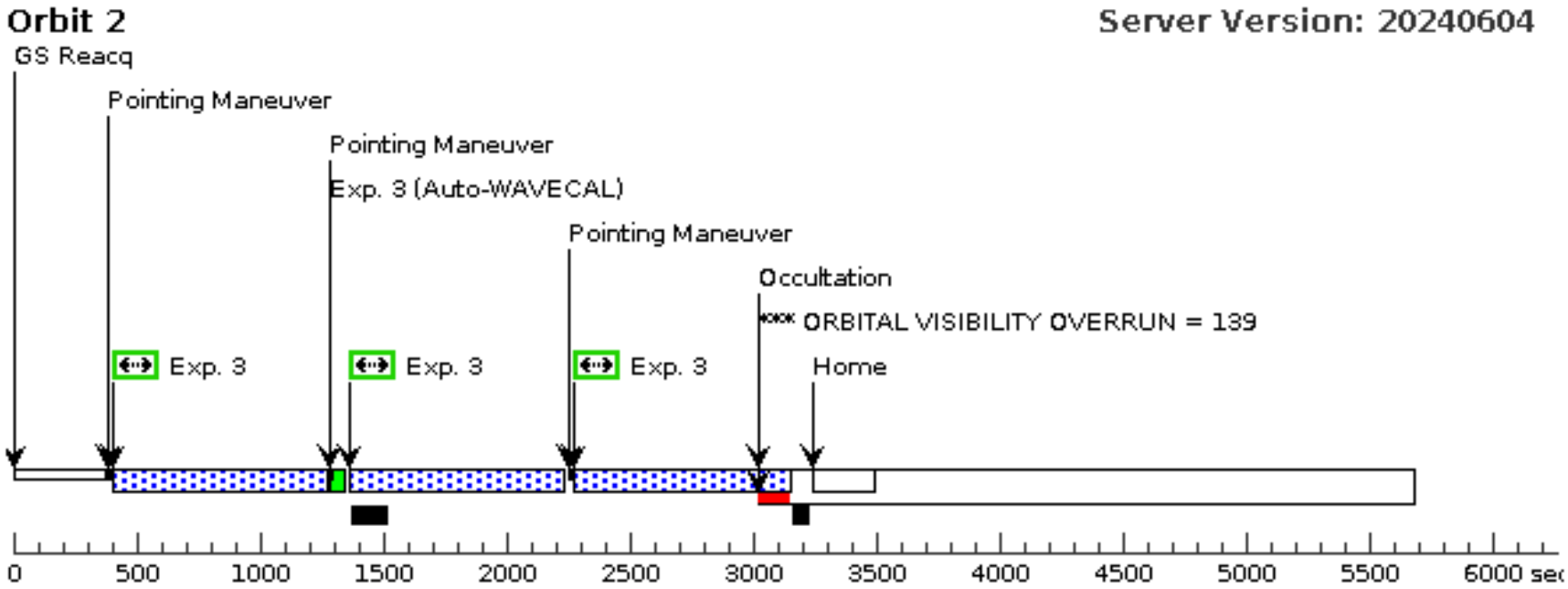
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from program 9107.
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530413)	(7) NGC-3607	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=DIFFUSE; CHECKBOX=3; DIFFUSE-CENTER=FLUX-CENTROID			38 Secs (38 Secs) *[==>]*	***[1]***
2	Sci-G750M-1	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 2-2 in NGC3607-G750M-repeat.v10_full (17) (1)	600 Secs (1953 Secs) *[==>651.0 Secs (Pattern 1)]* *[==>651.0 Secs (Pattern 2)]* *[==>651.0 Secs (Pattern 3)]*	***[1]***
3	Sci-G750M-2	(7) NGC-3607	STIS/CCD, ACCUM, 52X0.2E1	G750M 6581 A	CR-SPLIT=NO		Pattern 1, Exps 3-3 in NGC3607-G750M-repeat.v10_full (17) (1)	600 Secs (2517 Secs) *[==>839.0 Secs (Pattern 1)]* *[==>839.0 Secs (Pattern 2)]* *[==>839.0 Secs (Pattern 3)]*	***[2]***

Orbit Structure





Visit

Proposal 16772, M84-v1-repeat_1orbit (19), implementation Tue Aug 13 15:01:01 GMT 2024

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; SCHED 100%; SAME ORIENT AS 02

Comments: M84 (a.k.a. NGC4274) with STIS+GG430L+52x0.2E1.
HOPR 92866: copy of first orbit of visit 18
Need slip PA=104.0 (+/- 3) deg to match archival G750M observation from program 7124. Hence we calculate ORIENT = 146.0 to 152.0 and 326.0 to 332.0 (180 deg off)

Using same target coordinates and acquisition method as program 7124, since galaxy is known to have a point source at the nucleus. ACQTYPE=POINT without ACQ/PEAK (since we are using 0.2" slit). But note that after the target acquisition we need an offset of POS-TARG +0.1, 0 (i.e., 0.1" offset along +X, perpendicular to slit) to match the slit position of that program.
Using 3-point dither pattern along slit and setting CR-SPLIT=NO in the individual sub-exposures.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=STIS-ALONG-SLIT	Coordinate Frame=POS-TARG		(2)
	Purpose=DITHER	Pattern Orientation=90.0		
	Number Of Points=3	Angle Between Sides=		
	Point Spacing=0.15	Center Pattern=false		
	Line Spacing=			

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M-84	RA: 12 25 3.6480 (186.2652000d)		V=11.03+/-0.02	Reference Frame: ICRS
	Alt Name1: NGC-4374	Dec: +12 53 14.10 (12.88725d)			
		Equinox: J2000			

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Coordinates taken from HST program 7124
Category=GALAXY
Description=[ELLIPTICAL, LINER, NUCLEUS, RADIO GALAXY]
Extended=YES

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq-1 (STIS.ta.1530380)	(2) M-84	STIS/CCD, ACQ, F28X50LP	MIRROR	ACQTYPE=POINT			19 Secs (19 Secs) *[==>]*	 ***[1]***
Comments: we are duplicating the acquisition method (including exposurte time) from program 8684.									
2	SciExp-1	(2) M-84	STIS/CCD, ACCUM, 52X0.2E1	G430L 4300 A	CR-SPLIT=NO	POS TARG 0.1,0	Pattern 1, Exps 2-2 in M84-v1-repeat_1orbit (19) (1)	500 Secs (1869 Secs) *[==>623.0 Secs (Pattern 1)]* *[==>623.0 Secs (Pattern 2)]* *[==>623.0 Secs (Pattern 3)]*	 ***[1]***

Orbit Structure