17091 - Compact oddballs in COSMOS: The Faint End of the z>6 Quasar Luminosity Function and the Growth of Ionized Bubbles

Cycle: 30, 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	(3) 298988	ACS/WFC	1	14-Apr-2023 16:00:14.0	yes
02	(3) 298988	ACS/WFC	1	14-Apr-2023 16:00:15.0	yes
03	(4) 303826	ACS/WFC	1	14-Apr-2023 16:00:15.0	yes
04	(4) 303826	ACS/WFC	1	14-Apr-2023 16:00:16.0	yes
05	(5) 342154	ACS/WFC	1	14-Apr-2023 16:00:17.0	yes
06	(5) 342154	ACS/WFC	1	14-Apr-2023 16:00:18.0	yes
07	(8) 622752	ACS/WFC	1	14-Apr-2023 16:00:18.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
08	(8) 622752	ACS/WFC	1	14-Apr-2023 16:00:19.0	yes
09	(9) 667155	ACS/WFC	1	14-Apr-2023 16:00:20.0	yes
10	(9) 667155	ACS/WFC	1	14-Apr-2023 16:00:20.0	yes
11	(11) 747548	ACS/WFC	1	14-Apr-2023 16:00:21.0	yes
12	(11) 747548	ACS/WFC	1	14-Apr-2023 16:00:22.0	yes
13	(12) 772319	ACS/WFC	1	14-Apr-2023 16:00:23.0	yes
14	(12) 772319	ACS/WFC	1	14-Apr-2023 16:00:23.0	yes
63	(12) 772319	ACS/WFC	1	14-Apr-2023 16:00:24.0	yes
64	(12) 772319	ACS/WFC	1	14-Apr-2023 16:00:25.0	yes

16 Total Orbits Used

ABSTRACT

Finding galaxies with an active galactic nucleus (AGN), or quasars, in the early Universe is the forefront of today's astronomical research. While luminous quasars have been well characterized, the number density of low-luminosity (<1E45 erg/s) quasars at z>6 is still uncertain. Constraining their numbers will tremendously advance our understanding of the processes which lead to the reionization of our Universe as well as the formation of the first supermassive black holes.

Through stringent selection criteria including color and size, we have identified a complete sample of 7 low-luminosity quasar candidates in the 1.64 deg2 COSMOS field.

Here we propose to use ACS/G800L slitless spectroscopy to confirm their redshifts via Ly-alpha and to study the spatial morphology of the emission. We will use the power of the grism to simultaneously measure Ly-alpha emission from color-selected star-forming galaxies within the ionized bubble of the quasar.

This will allow us to

(i) place the first constraints on the faint end of the quasar luminosity function at z>6,

(ii) quantify the importance of low-luminosity quasars in the reionization process and place constraints on models of early supermassive black hole

formation,

(iii) study the relationship between Ly-alpha sizes and UV luminosities of low-luminosity quasars, a tracer of the size of the ionized bubbles and the clumping factor of the gas and

(iv) measure star-formation in smaller halos in the local neighborhood of the quasars and statistically the Ly-alpha emitter density in the bubbles, compared to the field to further constrain the interplay between low-mass and high-mass halos in the growth of large scale structure.

OBSERVING DESCRIPTION

There are no significant modifications of the observing strategy compare to Phase 1 submission. Below, we add more details in addition to the methods outlined in the proposal.

We use G800L grism observations to confirm the redshifts of 7 low-luminosity quasar candidtes via Ly-alpha emission, as well as to study the environment around these galaxies.

For each of the targets, we require 2 orbits, which are split in two visits. For each orbit, we require a 180s auto-image in F814W. We then can fit four 430 second exposures in G800L. We dither each of these observations within one orbit using the default ACS-WFC-DITHER-BOX dither pattern with POS-TARG pairs (0",0"), (0.247",0.094"), (0.124",0.232"), and (0.124",0.138") for optimal half-pixel sampling in both x and y, with overall dimensions large enough to help reject the larger detector artifacts.
Furthermore, we place the targets in the 1/3 closest to the chip gap. We do this to avoid edge-effects but at the same time to put the target as central as possible to study the surrounding environment at an even radius.

We split the observation of each target in two visits to be able to take two spectra (of 1 orbit) at different ORIENT angles to mitigate the issue of potential overlapping dispersions. For most of the target, we use the ORIENT angles of 80-90 degrees and 110-120 degrees. These angles provide enough difference and at the same time fall into favorable ORIENT angles for efficient observations of the COSMOS field.
For three targets (667155, 747548, 772319), we restrict the ORIENT angles more significantly in order to avoid overlap with the dispersion from nearby bright targets.

Visit

Proposal 17091, Visit 01, completed Fri Apr 14 20:00:25 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 80D TO 90 D

Fixed Targets

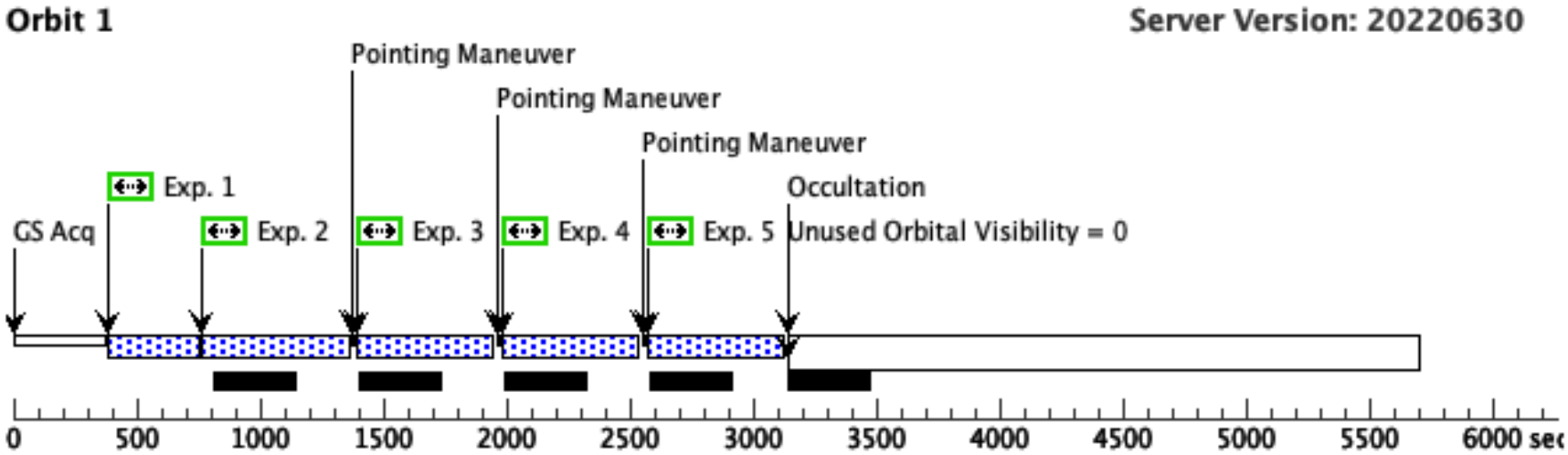
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	298988	RA: 10 01 37.3461 (150.4056088d) Dec: +02 44 47.70 (2.74658d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

Comments: 10 01 37.8461
+02 44 47.70
offset -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) 298988	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	 ***[1]***
Comments: ACS/F814 manual autoimage									
2		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	 ***[1]***
3		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	 ***[1]***
4		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	 ***[1]***
5		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 02, completed Fri Apr 14 20:00:25 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 120 D

Fixed Targets

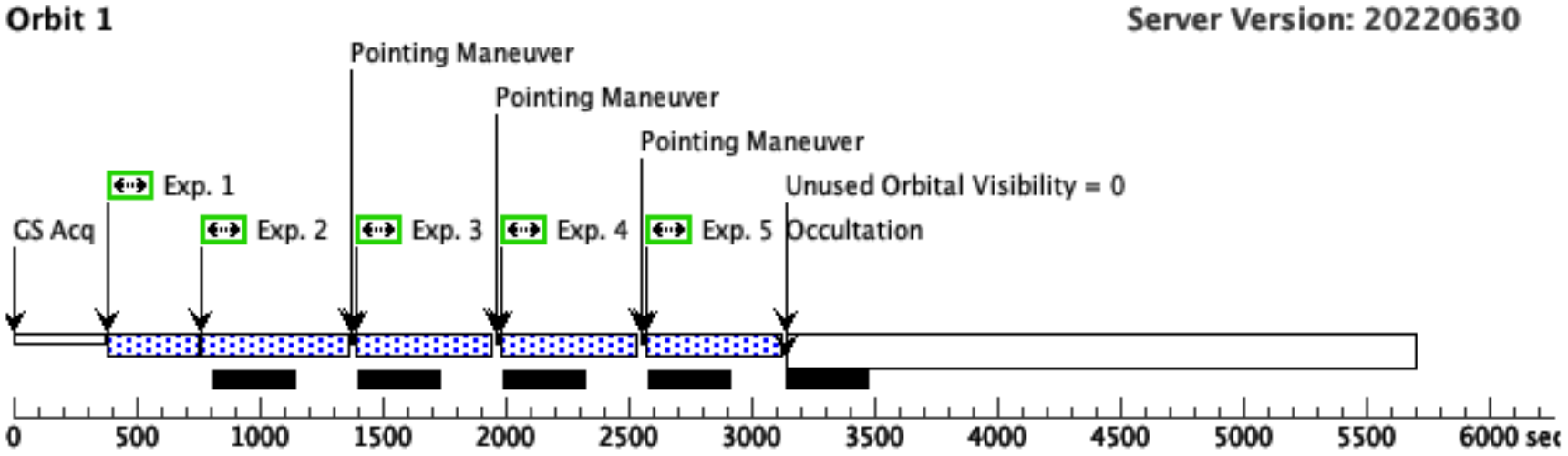
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	298988	RA: 10 01 37.3461 (150.4056088d) Dec: +02 44 47.70 (2.74658d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

Comments: 10 01 37.8461
+02 44 47.70
offset -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(3) 298988	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814 manual autoimage									
2		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(3) 298988	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 03, completed Fri Apr 14 20:00:25 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 80D TO 100 D

Fixed Targets

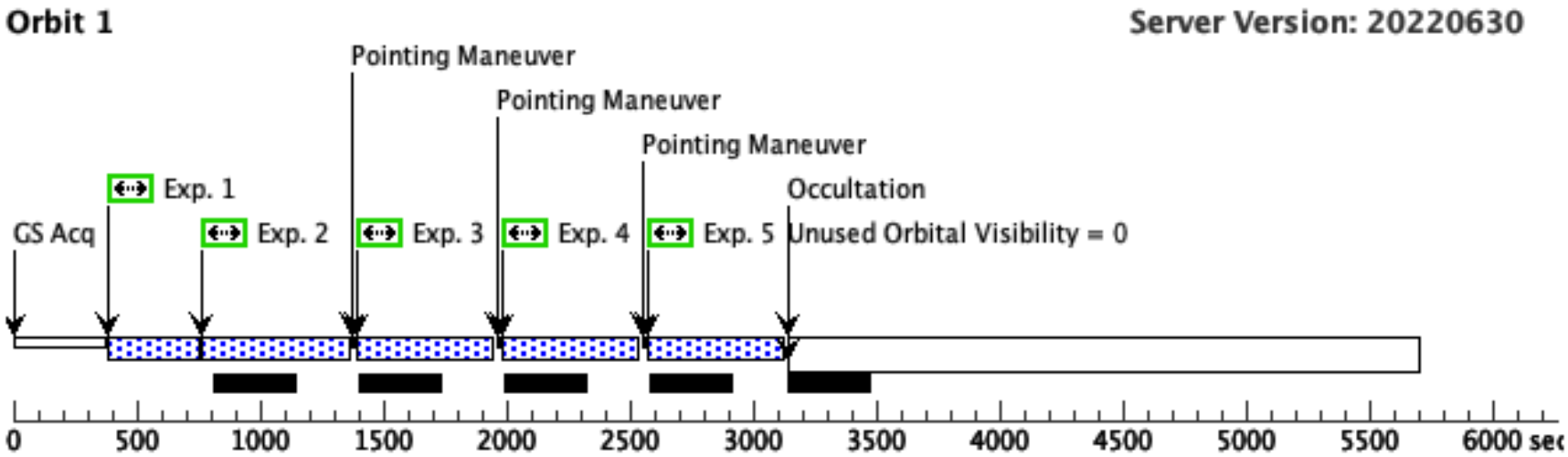
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	303826	RA: 10 01 25.0142 (150.3542258d) Dec: +02 45 33.34 (2.75926d) Equinox: J2000		V=(?) F814W magnitude: 25.3 AB	Reference Frame: ICRS

Comments: 10 01 25.5142
+02 45 33.34
offset -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) 303826	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	*[1]*
Comments: ACS/F814W manual autoimage									
2		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	*[1]*
3		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	*[1]*
4		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	*[1]*
5		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 17091, Visit 04, completed Fri Apr 14 20:00:25 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 120 D

Fixed Targets

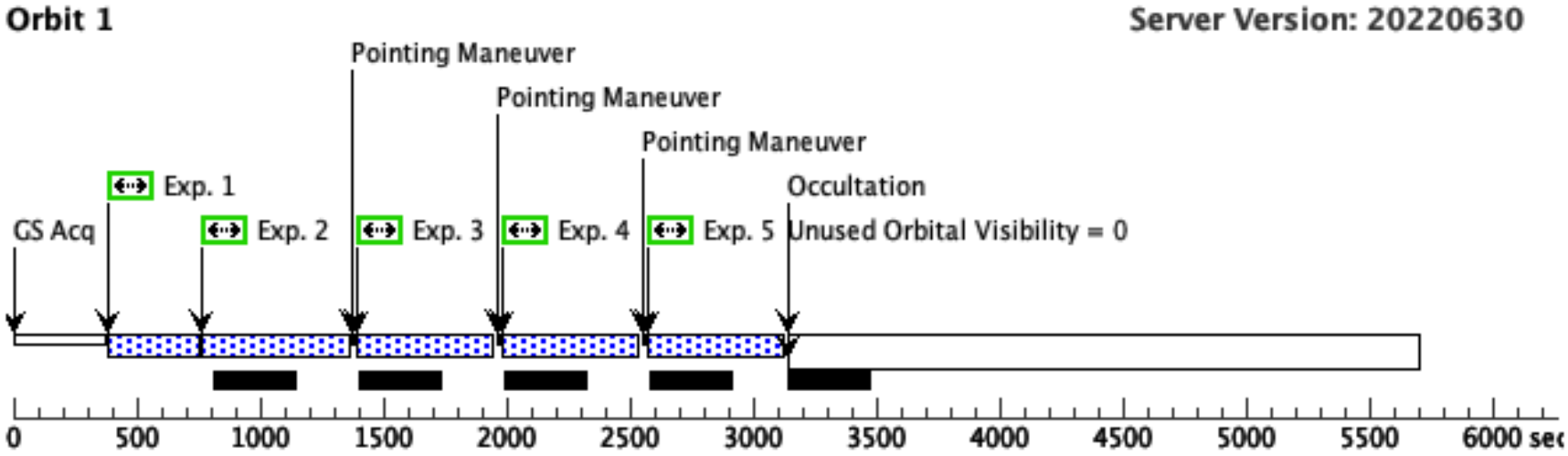
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	303826	RA: 10 01 25.0142 (150.3542258d) Dec: +02 45 33.34 (2.75926d) Equinox: J2000		V=(?) F814W magnitude: 25.3 AB	Reference Frame: ICRS

Comments: 10 01 25.5142
+02 45 33.34
offset -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) 303826	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(4) 303826	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 05, scheduled Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 80D TO 90 D

Fixed Targets

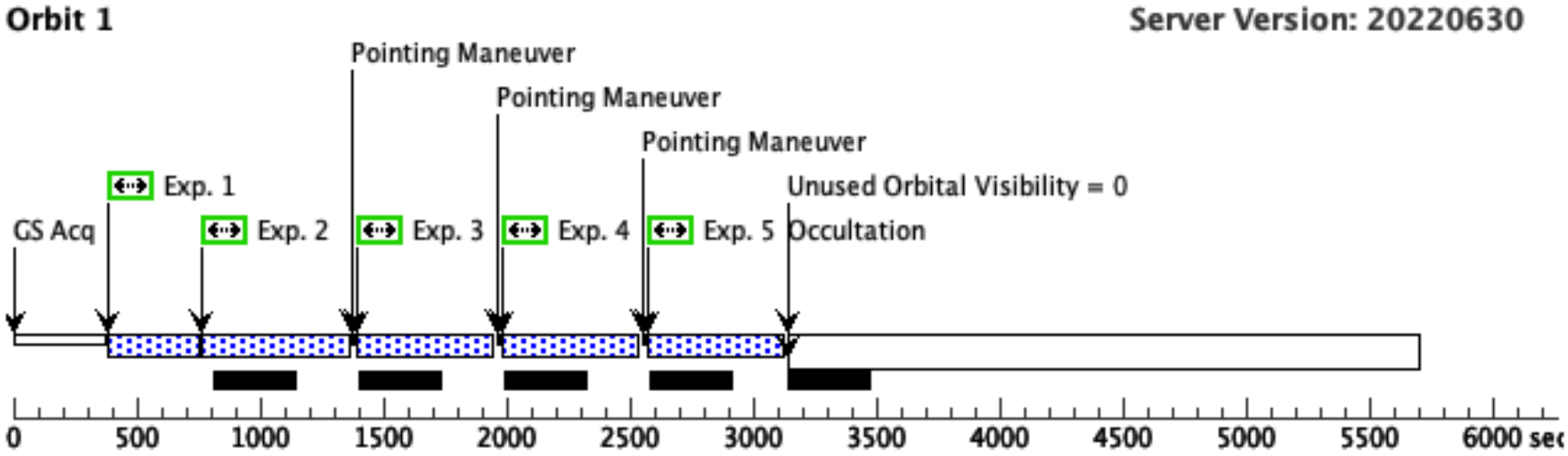
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	342154	RA: 10 00 46.7067 (150.1946112d) Dec: +02 02 2.17 (2.03394d) Equinox: J2000		V=(?) F814W magnitude: 25.4 AB	Reference Frame: ICRS

Comments: 10 00 47.2067
+02 02 2.17
offset of -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) 342154	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 06, completed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 120 D

Fixed Targets

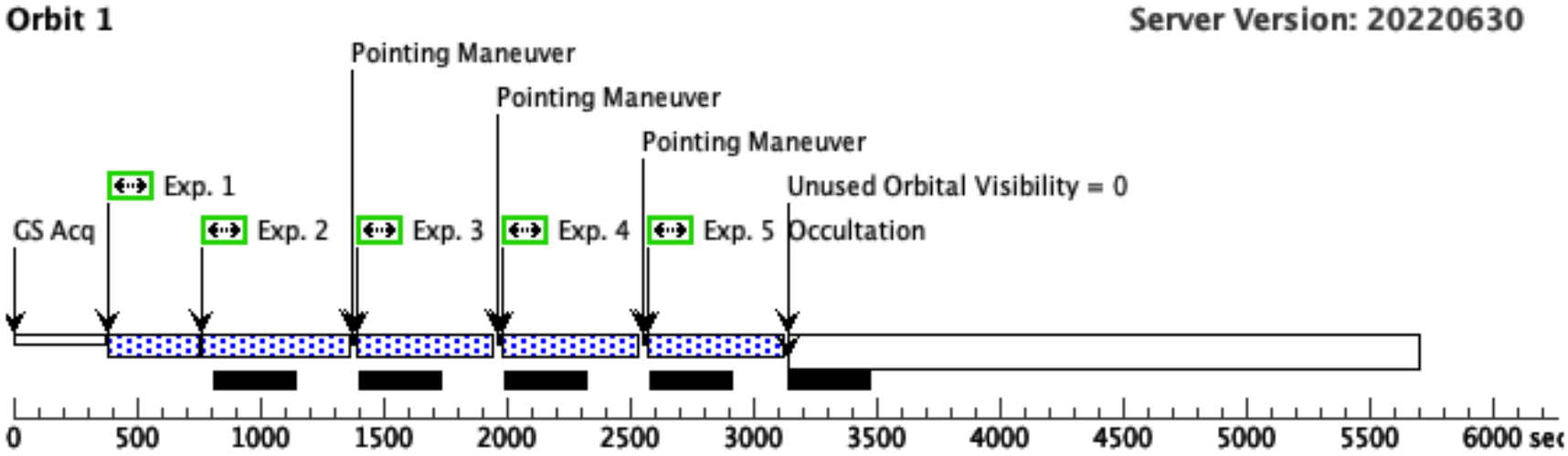
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	342154	RA: 10 00 46.7067 (150.1946112d) Dec: +02 02 2.17 (2.03394d) Equinox: J2000		V=(?) F814W magnitude: 25.4 AB	Reference Frame: ICRS

Comments: 10 00 47.2067
+02 02 2.17
offset of -0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(5) 342154	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(5) 342154	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 07, scheduled Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 80D TO 90 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	622752	RA: 09 59 7.7437 (149.7822654d) Dec: +01 43 0.72 (1.71687d) Equinox: J2000		V=(?) F814W magnitude: 25.2 AB	Reference Frame: ICRS

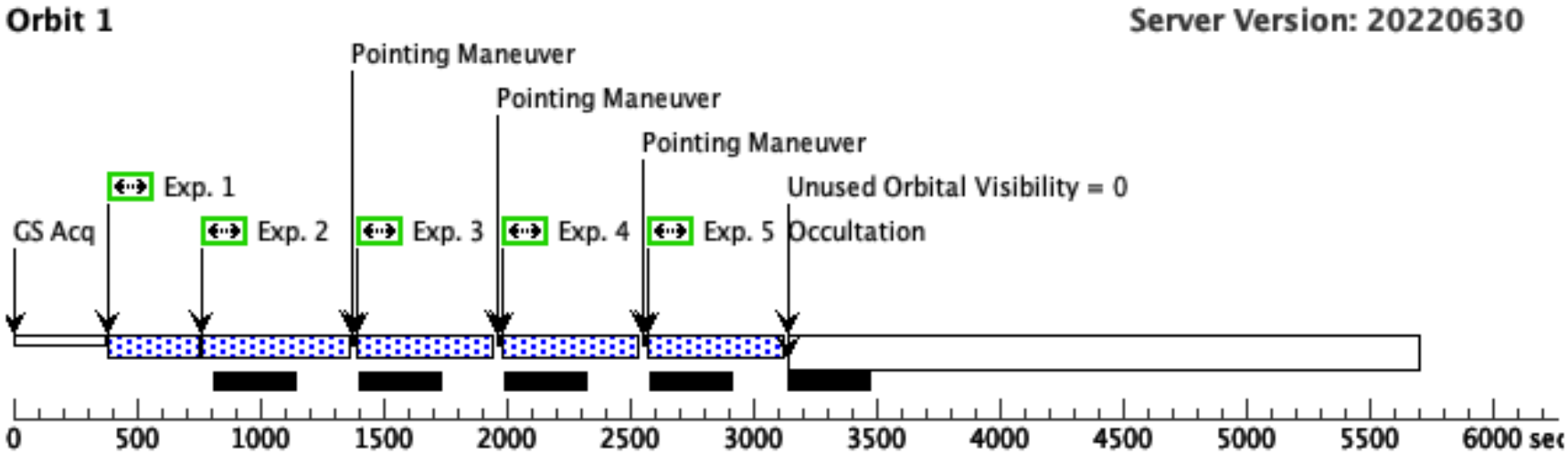
Comments: 09 59 8.2437 +01 43 0.72

offset 0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(8) 622752	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 08, completed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 120 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	622752	RA: 09 59 7.7437 (149.7822654d) Dec: +01 43 0.72 (1.71687d) Equinox: J2000		V=(?) F814W magnitude: 25.2 AB	Reference Frame: ICRS

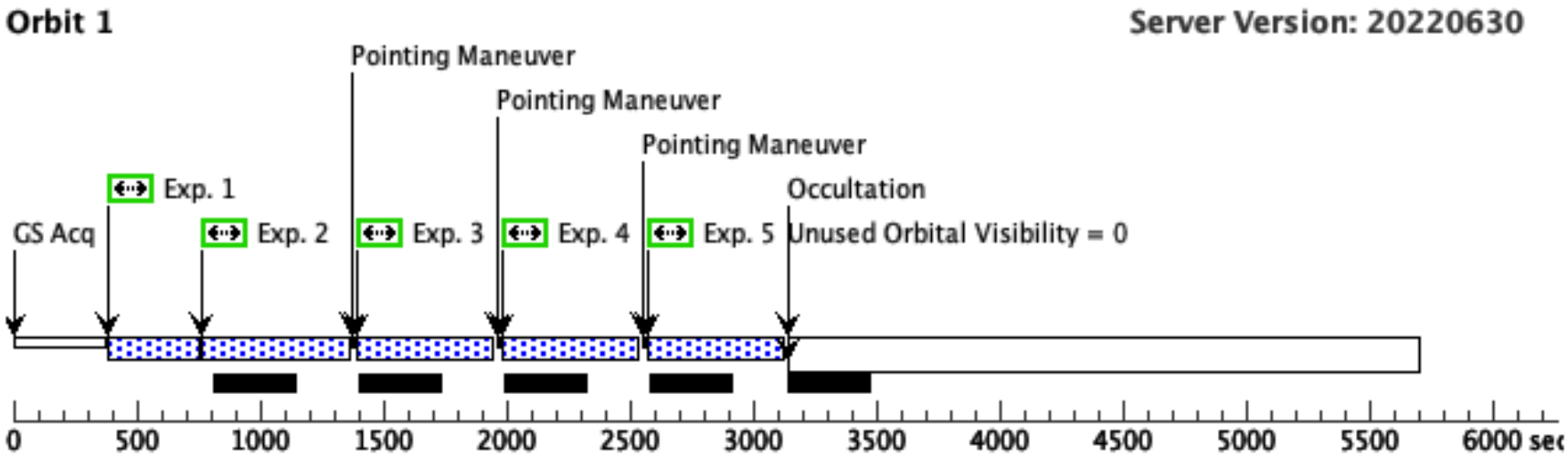
Comments: 09 59 8.2437 +01 43 0.72

offset 0.5" in RA
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(8) 622752	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(8) 622752	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 09, completed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 110D TO 115 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	667155	RA: 09 58 30.5377 (149.6272404d) Dec: +02 14 50.63 (2.24740d) Equinox: J2000		V=(?) F814W magnitude: 25.6 AB	Reference Frame: ICRS

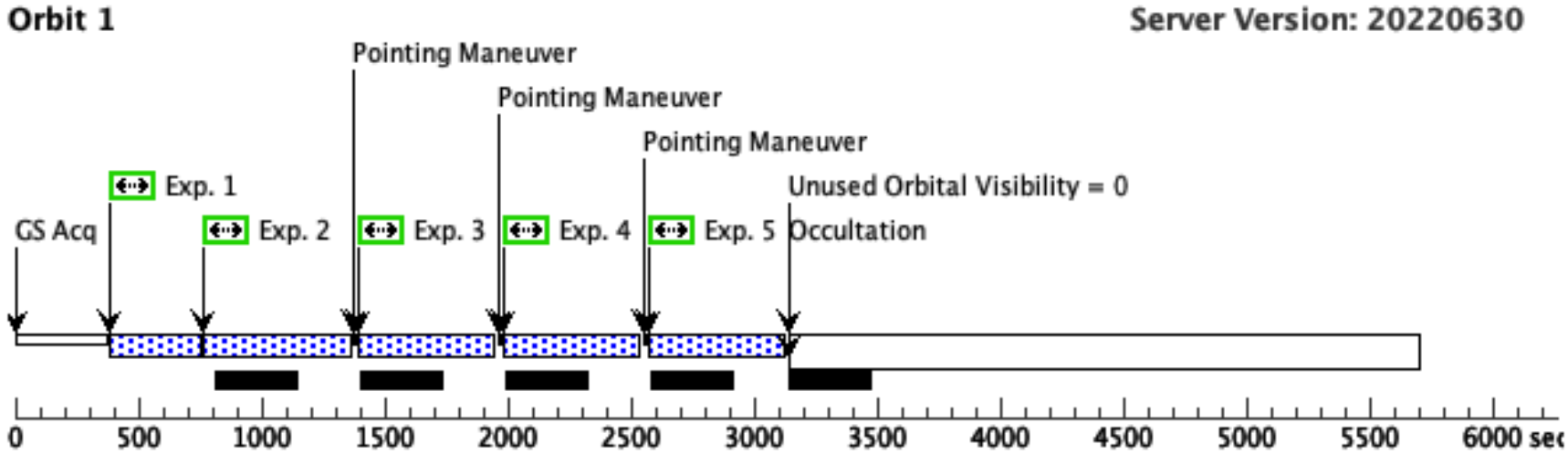
Comments: 09 58 31.0377
+02 14 50.63
offset 0.5" in RA

This source is close to a brighter source in the south, therefore the ORIENT values are different than for the other sources as well as tighter constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(9) 667155	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 10, completed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 120D TO 125 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	667155	RA: 09 58 30.5377 (149.6272404d) Dec: +02 14 50.63 (2.24740d) Equinox: J2000		V=(?) F814W magnitude: 25.6 AB	Reference Frame: ICRS

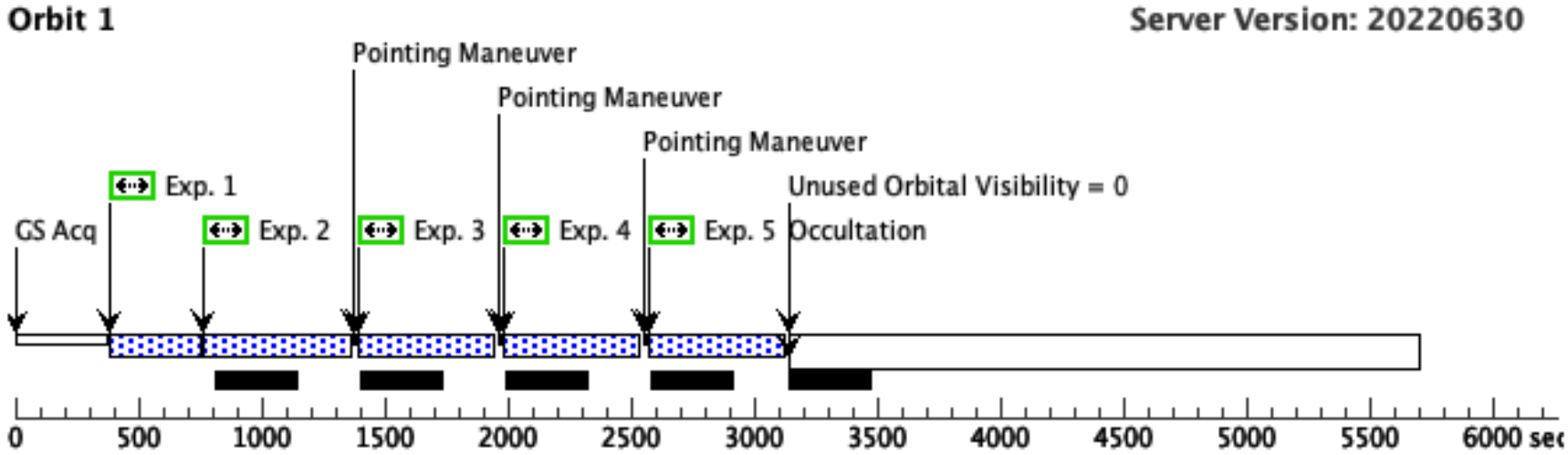
Comments: 09 58 31.0377
+02 14 50.63
offset 0.5" in RA

This source is close to a brighter source in the south, therefore the ORIENT values are different than for the other sources as well as tighter constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(9) 667155	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(9) 667155	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 11, completed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 70D TO 75 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	747548	RA: 09 58 10.1045 (149.5421021d) Dec: +02 16 31.83 (2.27551d) Equinox: J2000		V=(?) F814W magnitude: 25.6 AB	Reference Frame: ICRS

Comments: 09 58 10.6045 +02 16 31.83

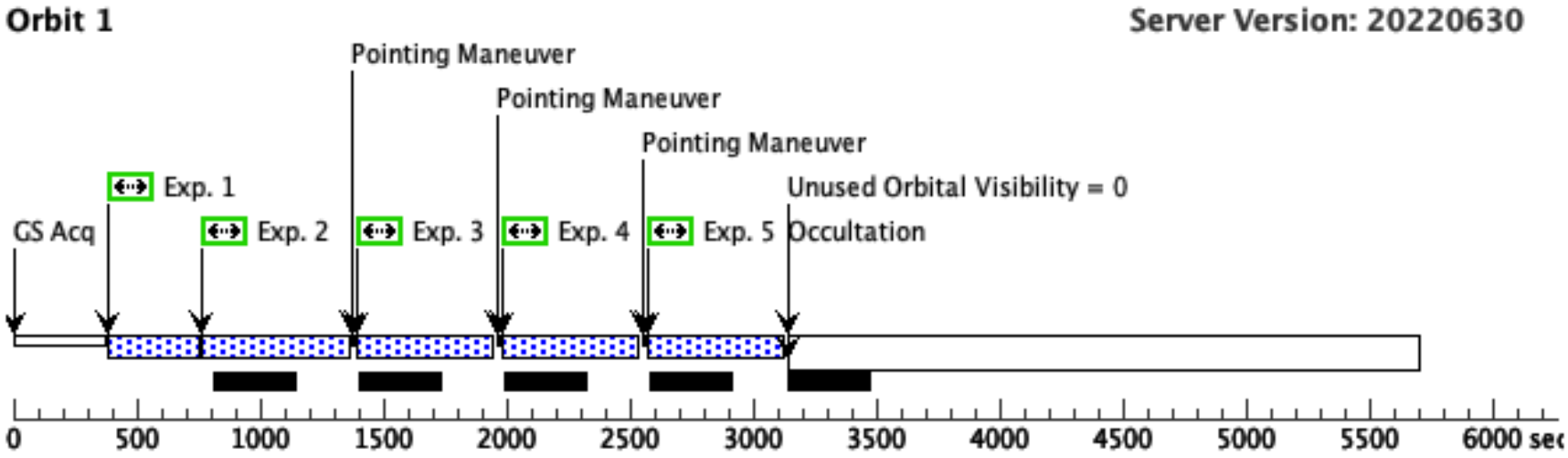
offset -0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(11) 747548	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	*[1]*
Comments: ACS/F814W manual autoimage									
2		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	*[1]*
3		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	*[1]*
4		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	*[1]*
5		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 17091, Visit 12, scheduling Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 125D TO 130 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	747548	RA: 09 58 10.1045 (149.5421021d) Dec: +02 16 31.83 (2.27551d) Equinox: J2000		V=(?) F814W magnitude: 25.6 AB	Reference Frame: ICRS

Comments: 09 58 10.6045 +02 16 31.83

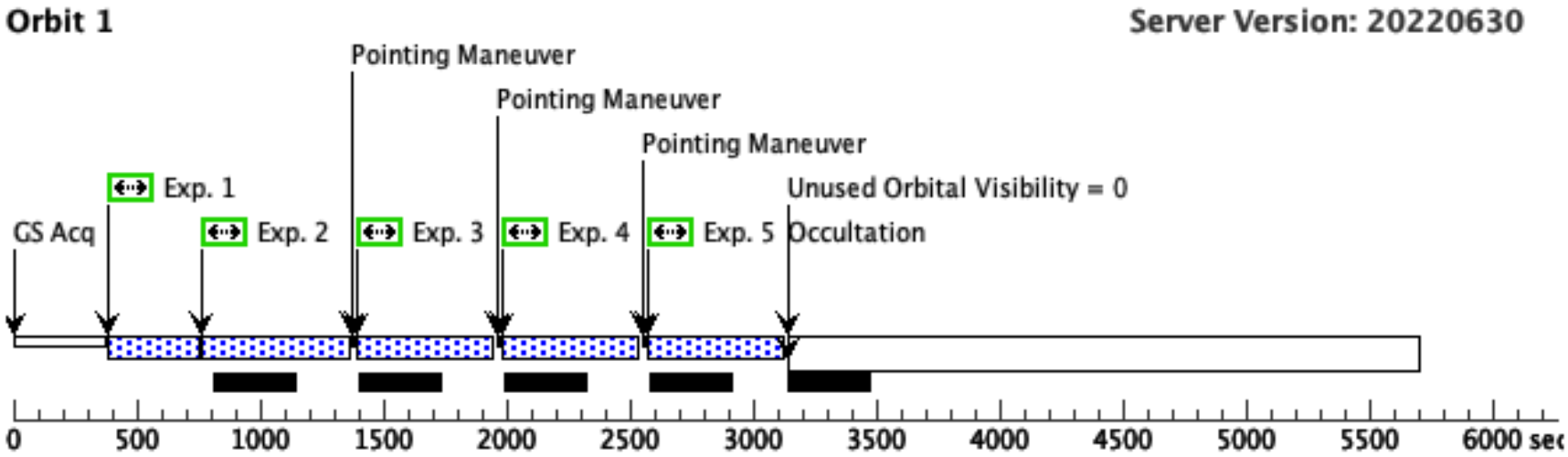
offset -0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(11) 747548	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2		156 Secs (156 Secs)	
								[==>]	***[1]***
Comments: ACS/F814W manual autoimage									
2		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs)	
								[==>]	***[1]***
3		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs)	
								[==>]	***[1]***
4		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs)	
								[==>]	***[1]***
5		(11) 747548	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs)	
								[==>]	***[1]***

Orbit Structure



Visit

Proposal 17091, Visit 13, failed Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 100D TO 105 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	772319	RA: 09 57 47.3332 (149.4472217d) Dec: +02 31 24.32 (2.52342d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

Comments: 09 57 47.8332 +02 31 24.32

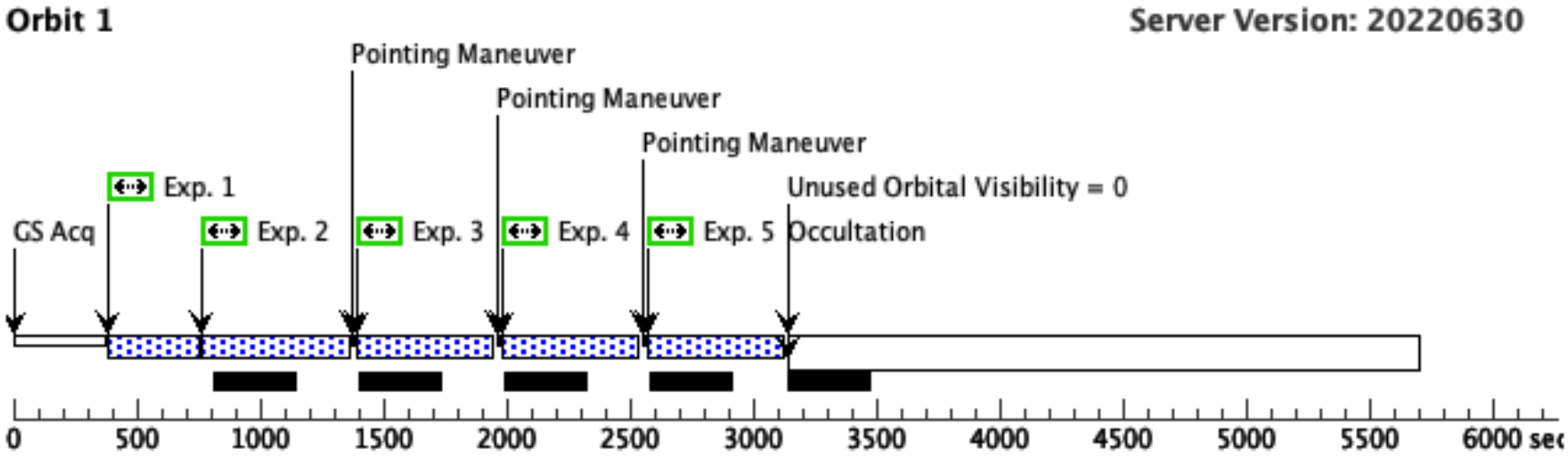
offset 0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) 772319	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	*[1]*
Comments: ACS/F814W manual autoimage									
2		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	*[1]*
3		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	*[1]*
4		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	*[1]*
5		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 17091, Visit 14, failed

Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 120D TO 125 D

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	772319	RA: 09 57 47.3332 (149.4472217d) Dec: +02 31 24.32 (2.52342d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

Comments: 09 57 47.8332 +02 31 24.32

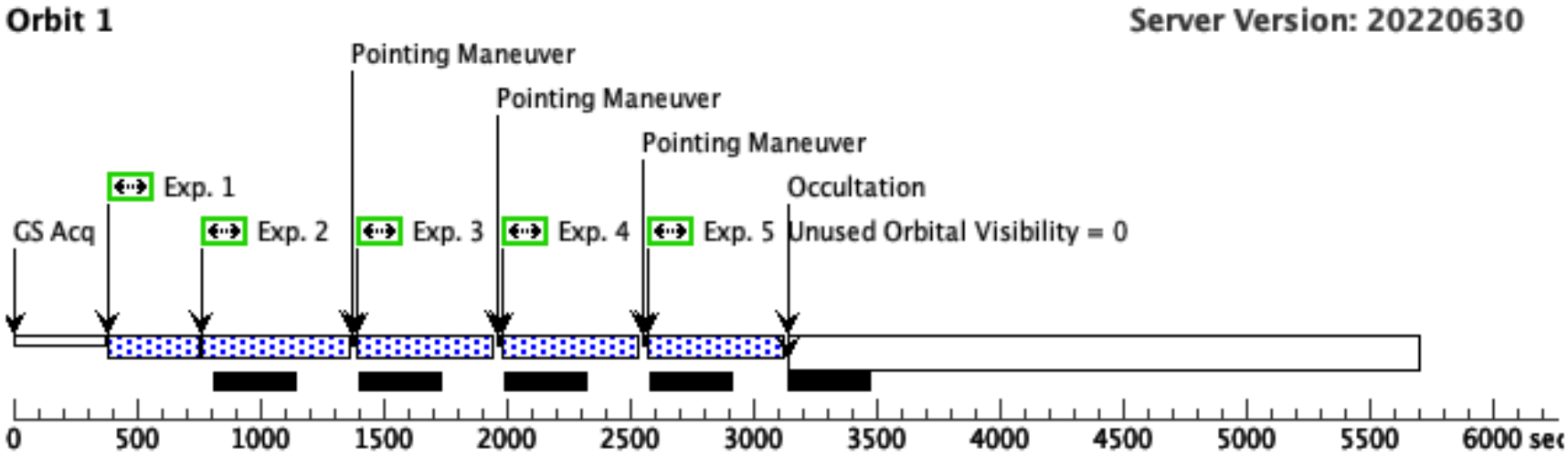
offset 0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) 772319	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	*[1]*
Comments: ACS/F814W manual autoimage									
2		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	*[1]*
3		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	*[1]*
4		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	*[1]*
5		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 17091, Visit 63

Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 100D TO 105 D

Comments: Duplicate of visit 13 which failed due to guiding error.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	772319	RA: 09 57 47.3332 (149.4472217d) Dec: +02 31 24.32 (2.52342d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

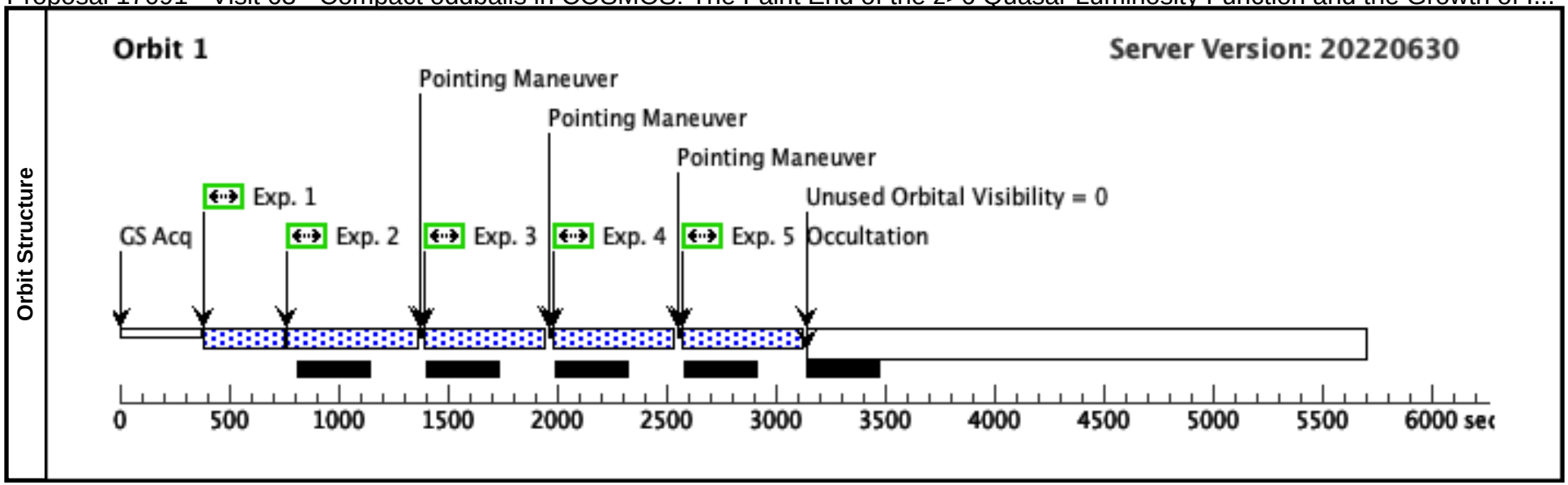
Comments: 09 57 47.8332
+02 31 24.32

offset 0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) 772319	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	 ***[1]***
Comments: ACS/F814W manual autoimage									
2		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	 ***[1]***
3		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	 ***[1]***
4		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	 ***[1]***
5		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20220630
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Exp. 1
Unused Orbital Visibility = 0
GS Acq
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec

Visit

Proposal 17091, Visit 64

Fri Apr 14 20:00:26 GMT 2023

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: ORIENT 120D TO 125 D

Comments: Duplicate of visit 14 which failed due to guiding error.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	772319	RA: 09 57 47.3332 (149.4472217d) Dec: +02 31 24.32 (2.52342d) Equinox: J2000		V=(?) F814W magnitude: 25.7 AB	Reference Frame: ICRS

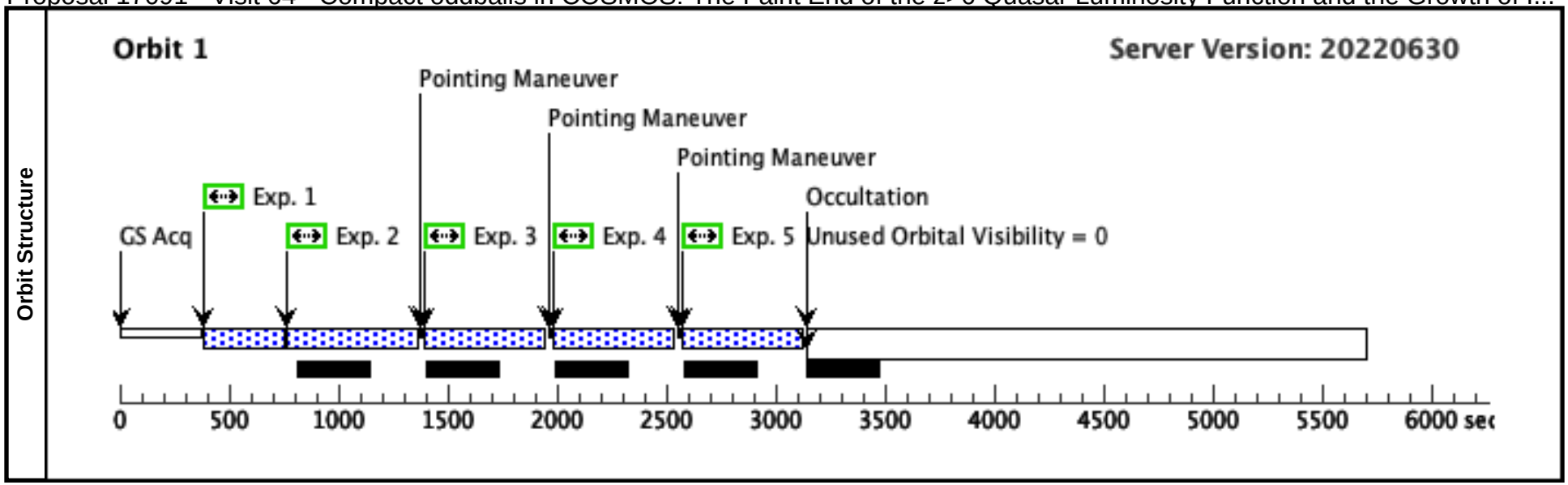
Comments: 09 57 47.8332
+02 31 24.32

offset 0.5" in RA

Some bright objects nearby, therefore ORIENT is different compared to other sources and also more constrained.
Category=GALAXY
Description=[QUASAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) 772319	ACS/WFC, ACCUM, WFC	F814W		SAME POS AS 2; GS ACQ SCENARIO BASE1B3		156 Secs (156 Secs) *[==>]*	 ***[1]***
Comments: ACS/F814W manual autoimage									
2		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0,0		430 Secs (430 Secs) *[==>]*	 ***[1]***
3		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.247,0.094		430 Secs (430 Secs) *[==>]*	 ***[1]***
4		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG 0.124,0.232		430 Secs (430 Secs) *[==>]*	 ***[1]***
5		(12) 772319	ACS/WFC, ACCUM, WFC	G800L	AUTOIMAGE=NO	POS TARG -0.124,0.138		430 Secs (430 Secs) *[==>]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20220630
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Occultation
Exp. 1
GS Acq
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Unused Orbital Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000 sec