



16258 - The Environment of the most distant Radio Loud Quasar

Cycle: 28, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) PSO172+18	ACS/WFC	3	21-Dec-2021 13:00:14.0	yes
02	(1) PSO172+18	ACS/WFC	3	21-Dec-2021 13:00:15.0	yes
03	(1) PSO172+18	ACS/WFC	1	21-Dec-2021 13:00:16.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
25	(1) PSO172+18	WFC3/IR	1	21-Dec-2021 13:00:16.0	yes
26	(1) PSO172+18	WFC3/IR	1	21-Dec-2021 13:00:17.0	yes
27	(1) PSO172+18	WFC3/IR	1	21-Dec-2021 13:00:17.0	yes
10	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:17.0	yes
11	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:18.0	yes
12	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:18.0	yes
13	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:18.0	yes
14	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:19.0	yes
15	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:19.0	yes
16	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:19.0	yes
17	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:20.0	yes
18	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:20.0	yes
19	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:20.0	yes
20	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:21.0	yes
21	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:21.0	yes
22	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:21.0	yes
23	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:22.0	yes
24	(1) PSO172+18	WFC3/UVIS	1	21-Dec-2021 13:00:22.0	yes

25 Total Orbits Used

ABSTRACT

High-redshift luminous QSOs ($z \sim 6$) already host billion solar masses black holes in their centers, and are predicted to live in high-density peaks of the dark matter distribution, surrounded by overdensities of galaxies. Previous searches for Lyman Alpha Emitters (LAEs) with narrow-band (NB) imaging around radio-quiet high- z QSOs did not recover such overdensities. These QSOs redshifts were determined only via broad, high-ionization emission lines in the rest-frame UV, often strongly shifted with respect to the systemic redshifts.

Alternatively, radio-loud sources have been commonly found in rich environments, pinpointing the first protoclusters in the universe.

Here, we propose HST imaging observations to search for LAEs in the field of PSO172+18, the most distant radio source and the radio loudest QSO at $z > 6$, using a suite of narrow and broad band filters with WFC3 and ACS/WFC. The systemic redshift of PSO172+18, $z = 6.823 \pm 0.002$, is accurately measured from observations of the narrow MgII emission line, and precisely locate the Lyman Alpha emission line in the response of the narrow band filter F953N, uniquely available on board HST.

Additionally, we will detect (or derive tight constraints on) the stellar emission of the QSO host galaxy, and search for any potential close (-kpc scale) companion.

OBSERVING DESCRIPTION

We will use four filters, *i*775 (F775W) and *z*850 (F850LP) with the ACS/WFC instrument, *J* (F125W) with the WFC3/IR camera, and the narrow band F953N with WFC3/UVIS.

We calculate the exposure time using the WFC3/UVIS, WFC3/IR and ACS/WFC online Exposure Time Calculators.

We will be able to reach our science goals with observations of ~ 29000 s in the F953N filter, with a 3sigma limit magnitude of 25.4 (AB mag). This is accomplished in 15 orbits.

On the other hand, we aim to achieve a depth of $z850 = 26.6$ AB mag at $S/N \sim 5$. This is achievable in 3 orbits.

Additionally, we plan to reach a depth $i775 = 27.6$ AB mag. We can do this, at $S/N \sim 5$, requiring 4 orbits.

Finally, we ask for 3 orbits for *J* (F125W) observations at a depth comparable to *i*775 ($F125W = 27.5$ AB mag).

We will perform dithering observations in order to cover the regions between the fields of view of WFC3/IR and WFC3/UVIS, using the dithering pattern WFC3-IR-DITHER-BOX-UVIS for WFC3/IR. In order to better sample the PSF in the IR, we also implement a sub-pattern WFC3-IR-DITHER-LINE-3PT for WFC3/IR

Dithering will also allow us to cover the gap between the two WFC CCDs, and to better treat bad pixels and cosmic rays.

Since we need to cover the same region with all the observations and all the filters with WFC3 and with ACS separately, we restrict the visits with the same cameras to have the same orientation.

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On the other hand, given the comparable fields of view, leaving free the relative orientation of WFC3 and ACS will only lead to a loss of a maximum of <10% of field of view coverage (in the worst case scenario of a 45deg orientation).

This change with respect to Phase 1 was approved by the Telescope Time Review Board following the Change Request 91796 on July 7th 2020. In practice, we achieve our goal for ACS by constraining visits (02) and (03) to have the SAME ORIENT as PSO172_ACS_z1_1 (01); for WFC3/UVIS and WFC3/IR by requiring visits (05) - (09) to have the SAME ORIENT as PSO172_WFC3IR_J (04).

As suggested by the Instrument Handbook and by recent documentations (ISR 2020-08), we aim to reach a background level of $\sim 20e^-$ in each WFC3/UVIS F953N observations (to better deal with CTE issues).

In order to do this, we opt for one exposure per orbit ($t_{exp} = 2765s$), which produces $\sim 7.8e^-$ of natural background (as per ETC calculations). In order to reach the recommended background level of $\sim 20e^-$, we also add POSTFLASH=15,

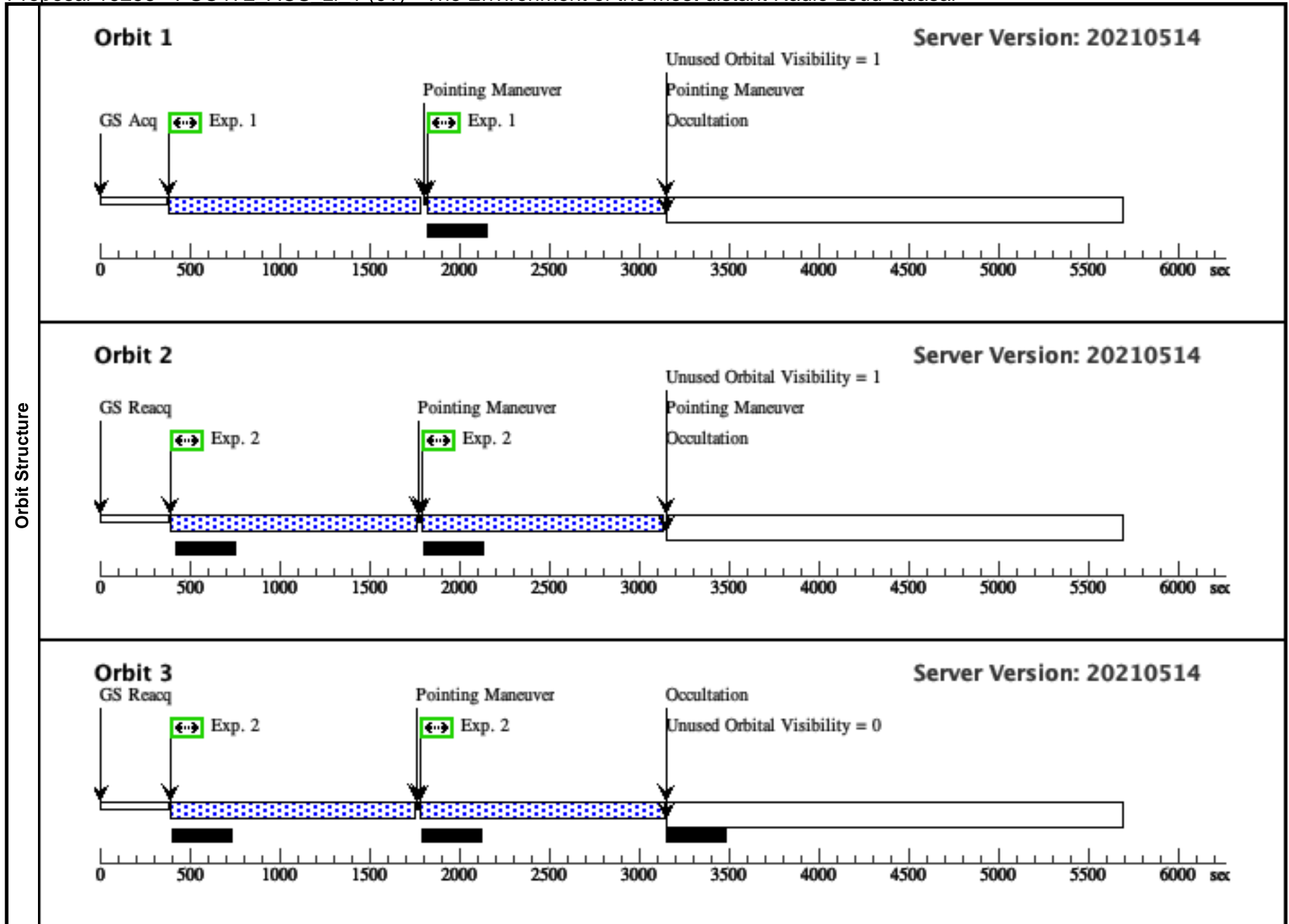
[2021-12]: Following problems with scheduling the WFC3 observations due to lack of guiding stars, we have created new visits to replace old visits (4) - (9). We created visits (10) - (24) with WFC3-UVIS F953N filter with only one orbit per visit. We used a WFC3-UVIS-DITHER-LINE pattern, with two exposures per orbit (i.e. per visit). In order to reach a background level of $\sim 20e^-$ in each F953N observations, we add POSTFLASH=17. The natural background with new $t_{exp}=1313$ is indeed $\sim 4.1e^-$ (see linked ETC calculation). To ensure the same orientation as the observations in WFC3-IR, we linked each visit (10) - (24) to have the SAME ORIENT as visit (25).

We distribute the observations with WFC3-IR in 3 visits (one orbit per visit), (25) - (27). We link all visits to have the SAME ORIENT as visit (25). We use the new pattern WFC3-IR-DITHER-BOX-UVIS, with no sub-pattern.

[2021-12-21]: Following further suggestions by support, we made the following changes. We added WFC3-IR-DITHER-LINE-3PT dither pattern to the IR observations on top of the already used WFC3-IR-DITHER-BOX-UVIS pattern. This was done using the POS-TARG values for the WFC3-IR-DITHER-LINE-3PT pattern (with POS-TARG=(0.00,0.00),(0.451, 0.403),(0.902, 0.806)) on each orbit/visit such that each IR orbit/visit executes at one of the locations of the WFC3-IR-DITHER-LINE-3PT pattern. Each IR orbit/visit continues to use the WFC3-IR-DITHER-BOX-UVIS pattern. We added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern ((0.00,0.00), (0.092, 0.098), (0.185, 0.197)) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. We slightly increase the exposure time of F953N from 1313s to 1398s, to reduce the unused orbit time. In order to reach a background level of $\sim 20e^-$ in each F953N observations, we add POSTFLASH=17. The natural background with new $t_{exp}=1359$ is indeed $\sim 4.3e^-$ (see linked ETC calculation).

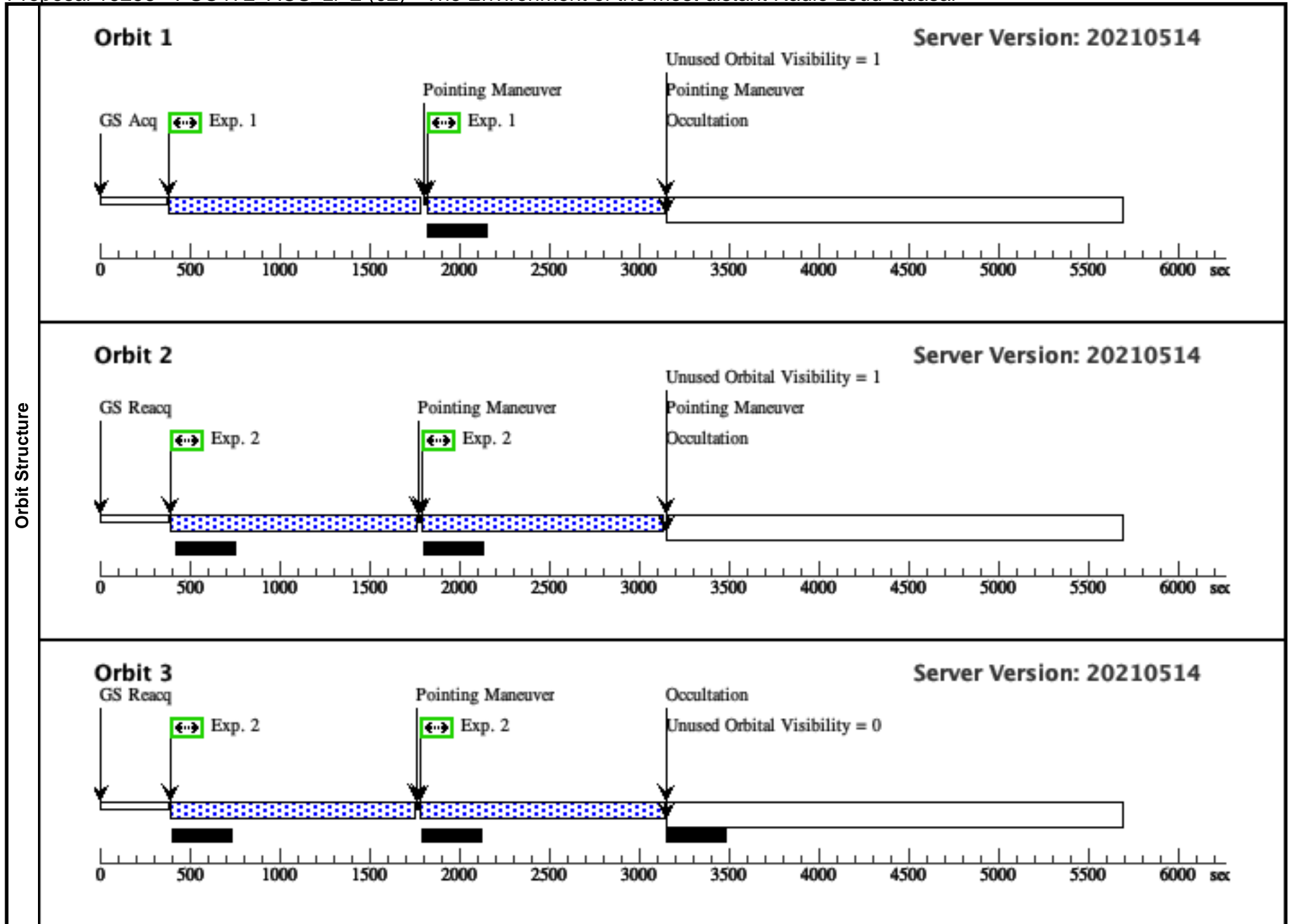
Proposal 16258 - PSO172 ACS zi 1 (01) - The Environment of the most distant Radio Loud Quasar

Visit	Proposal 16258, PSO172_ACS_zi_1 (01), completed Tue Dec 21 18:00:22 GMT 2021 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.17 Angle Between Sides= Center Pattern=false		(1)					
(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.262 Line Spacing=0.192	Coordinate Frame=POS-TARG Pattern Orientation=18.39 Angle Between Sides=68.14 Center Pattern=false		(2)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS				
Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24). Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F850LP (ACS.im.14 46725)	(1) PSO172+18	ACS/WFC, ACCUM, WFCENTER	F850LP		POS TARG 0.05781 833,-6.62532482	Pattern 1, Exps 1-1 in PSO172_ACS_zi_1 (01) (1)	1247 Secs (2394 Secs)	
									[==>1197.0 Secs (Pattern 1)]	[1]
									[==>1197.0 Secs (Pattern 2)]	
2	F775W (ACS.im.14 46724)	(1) PSO172+18	ACS/WFC, ACCUM, WFCENTER	F775W		POS TARG 0.05781 833,-6.6253248277	Pattern 2, Exps 2-2 in PSO172_ACS_zi_1 (01) (2)	1100 Secs (4910 Secs)		
								[==>1221.0 Secs (Pattern 1)]	[2]	
								[==>1221.0 Secs (Pattern 2)]		
								[==>1234.0 Secs (Pattern 3)]	[3]	
								[==>1234.0 Secs (Pattern 4)]		



Proposal 16258 - PSO172 ACS zi 2 (02) - The Environment of the most distant Radio Loud Quasar

Visit	Proposal 16258, PSO172_ACS_zi_2 (02), completed Tue Dec 21 18:00:23 GMT 2021 Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: SAME ORIENT AS 01 <i>Comments: This ACS visit has the same ORIENT as PSO172 ACS zi 1 (01).</i>									
	Patterns	#	Primary Pattern	Secondary Pattern	Exposures					
		(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=47.17 Angle Between Sides= Center Pattern=false	(1)					
	(2)	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.262 Line Spacing=0.192	Coordinate Frame=POS-TARG Pattern Orientation=18.39 Angle Between Sides=68.14 Center Pattern=false	(2)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS				
<i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i> Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F850LP (ACS.im.14 46725)	(1) PSO172+18	ACS/WFC, ACCUM, WFCENTER	F850LP		POS TARG 0.05781 833,-6.62532482	Pattern 1, Exps 1-1 in PSO172_ACS_zi_2 (02) (1)	1247 Secs (2394 Secs) [==>1197.0 Secs (Pattern 1)] [==>1197.0 Secs (Pattern 2)]	[1]
2	F775W (ACS.im.14 46724)	(1) PSO172+18	ACS/WFC, ACCUM, WFCENTER	F775W		POS TARG 0.05781 833,-6.62532482	Pattern 2, Exps 2-2 in PSO172_ACS_zi_2 (02) (2)	1100 Secs (4910 Secs) [==>1221.0 Secs (Pattern 1)] [==>1221.0 Secs (Pattern 2)] [==>1234.0 Secs (Pattern 3)] [==>1234.0 Secs (Pattern 4)]	[2] [3]	



Proposal 16258 - PSO172 ACS z (03) - The Environment of the most distant Radio Loud Quasar

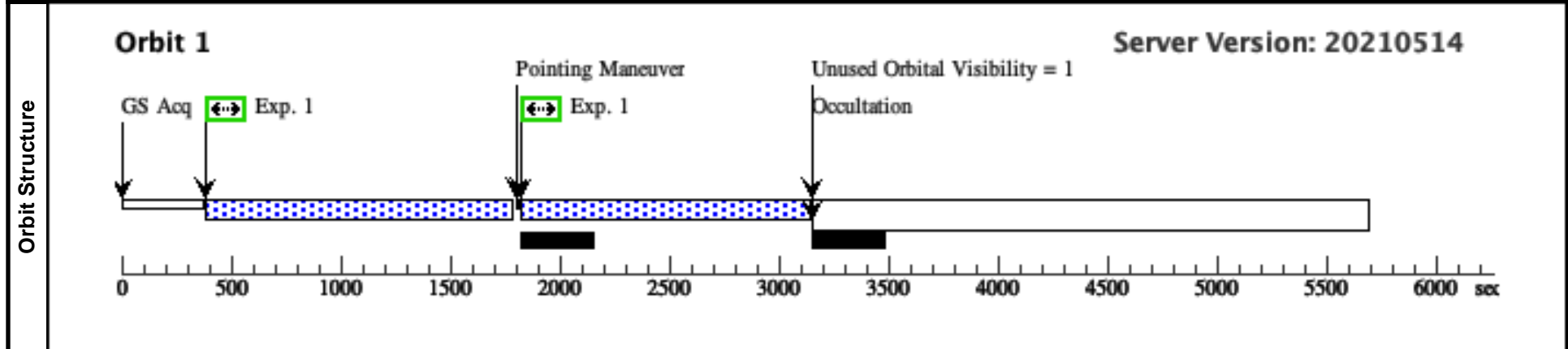
Tue Dec 21 18:00:23 GMT 2021

Visit	Proposal 16258, PSO172_ACS_z (03), completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: SAME ORIENT AS 01 <i>Comments: This ACS visit has the same ORIENT as PSO172 ACS zi 1 (01).</i>		

Patterns	#	Primary Pattern	Secondary Pattern	Exposures
	(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.146 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=47.17 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS
	<i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i> Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]					

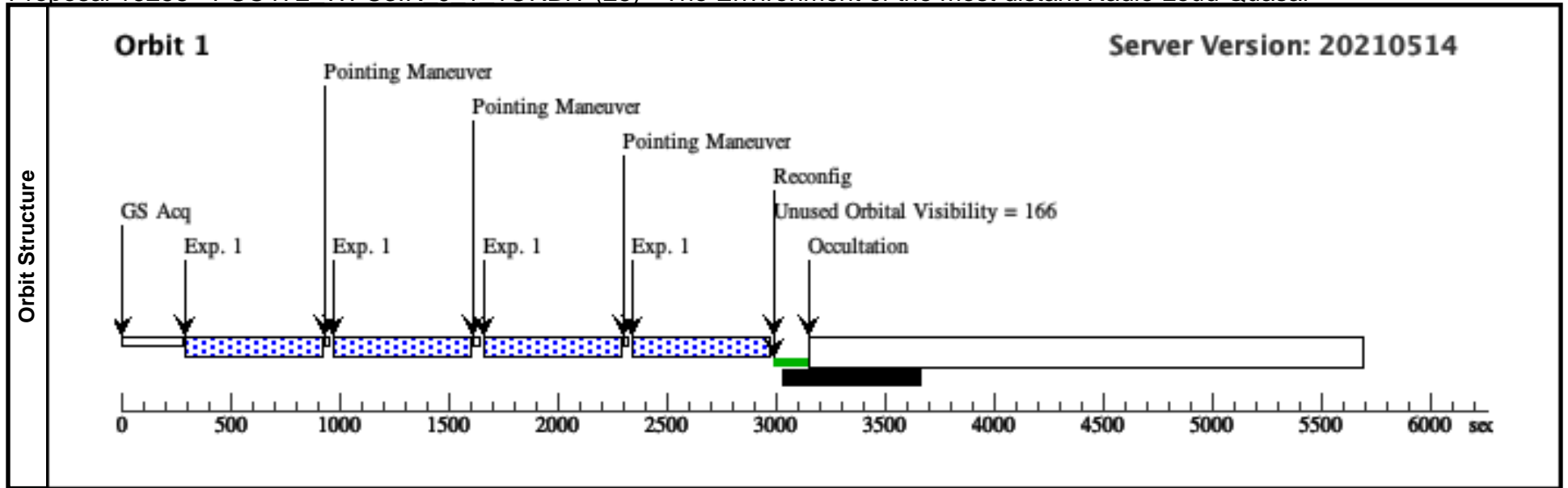
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F850LP (ACS.im.14 46725)	(1) PSO172+18	ACS/WFC, ACCUM, WFCENTER	F850LP		POS TARG 0.05781 833,-6.62532482	Pattern 1, Exps 1-1 in PSO172_ACS_z (03) (1)	1247 Secs (2394 Secs) [=>1197.0 Secs (Pattern 1)] [=>1197.0 Secs (Pattern 2)]	[1]



Proposal 16258 - PSO172 WFC3IR J 1 1ORBIT (25) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

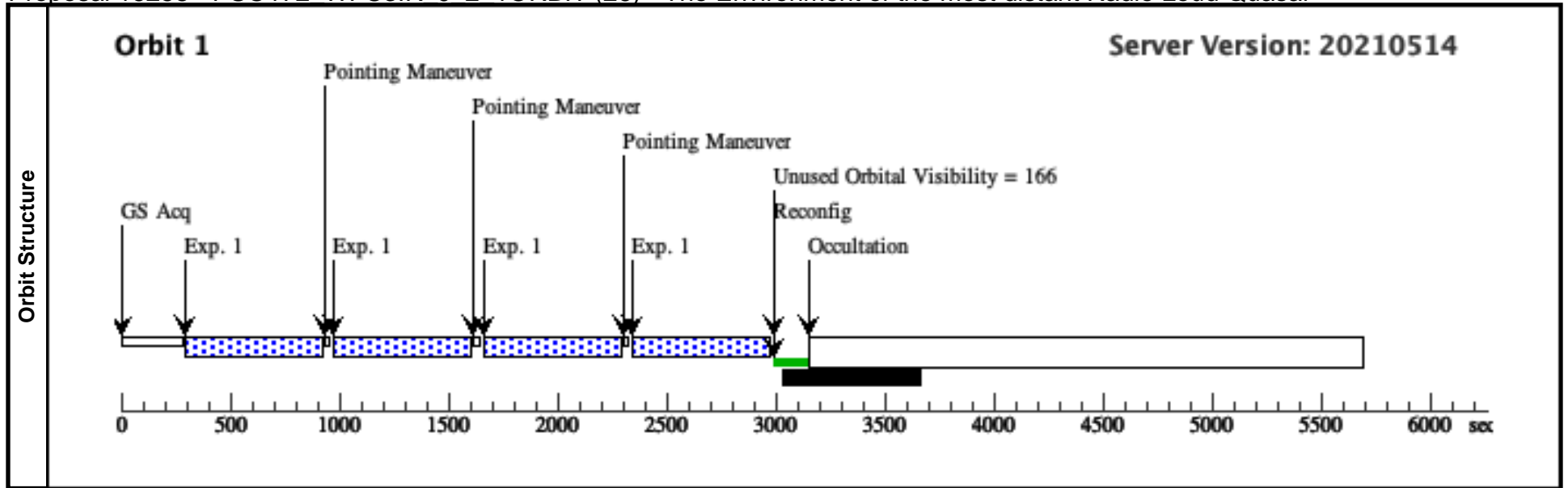
Visit	Proposal 16258, PSO172_WFC3IR_J_1_1ORBIT (25), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: (none) <i>Comments: [Suggestion on 2021-12-21] Added WFC3-IR-DITHER-LINE-3PT dither pattern to the IR observations on top of the already used WFC3-IR-DITHER-BOX-UVIS pattern. This was done using the POS-TARG values for the WFC3-IR-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each IR orbit/visit executes at one of the locations of the WFC3-IR-DITHER-LINE-3PT pattern. Each IR orbit/visit continues to use the WFC3-IR-DITHER-BOX-UVIS pattern.</i> <i>This orbit/visit uses POS-TARGs: (0.00, 0.00)</i>									
	(F125W (25.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(7)	Pattern Type=WFC3-IR-DITHER-BOX-UVIS Purpose=DITHER Number Of Points=4 Point Spacing=23.02 Line Spacing=35.212	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides=89.287 Center Pattern=true		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS				
<i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24). Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W (WFC3IR.im.1446714)	(1) PSO172+18	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS100	POS TARG 0.00,0.00; GS ACQ SCENARIOS SINGLE	Pattern 7, Exps 1-1 in PSO172_WFC3IR_J_1_1ORBIT (25) (7)	602.934229 Secs (2411.737 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]	[1]



Proposal 16258 - PSO172 WFC3IR J 2 1ORBIT (26) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

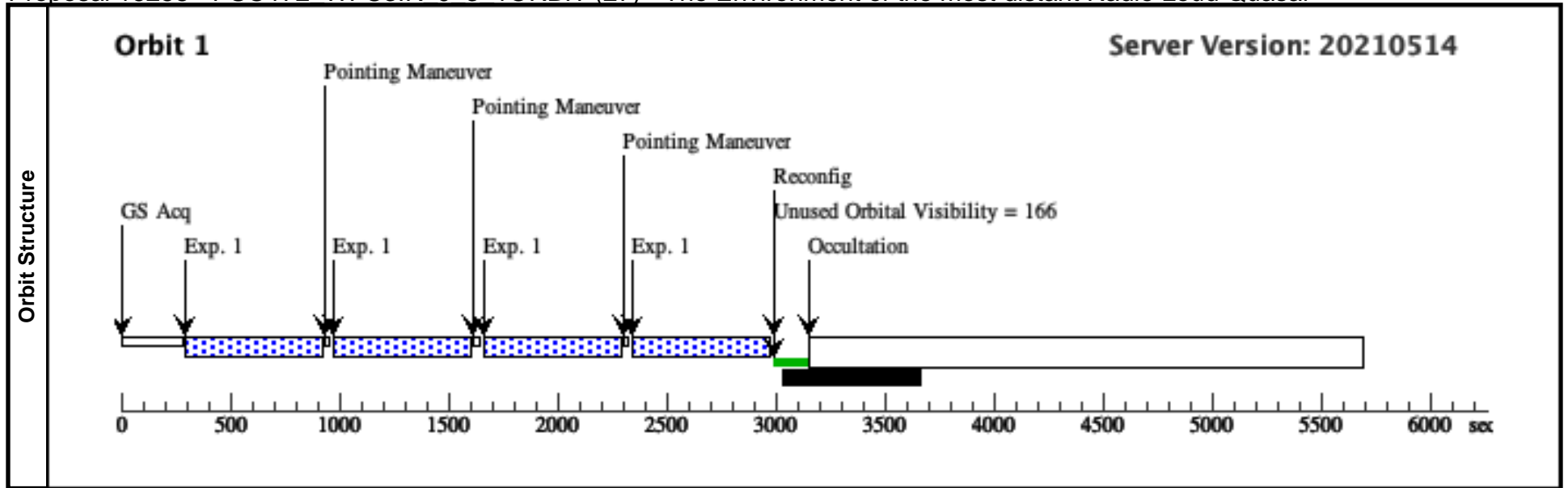
Visit	Proposal 16258, PSO172_WFC3IR_J_2_1ORBIT (26), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: SAME ORIENT AS 25 <i>Comments: This WFC3/IR visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i> <i>Added WFC3-IR-DITHER-LINE-3PT dither pattern to the IR observations on top of the already used WFC3-IR-DITHER-BOX-UVIS pattern. This was done using the POS-TARG values for the WFC3-IR-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each IR orbit/visit executes at one of the locations of the WFC3-IR-DITHER-LINE-3PT pattern. Each IR orbit/visit continues to use the WFC3-IR-DITHER-BOX-UVIS pattern.</i> <i>This orbit/visit uses POS-TARGs: (0.451, 0.403)</i>									
	(F125W (26.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(7)	Pattern Type=WFC3-IR-DITHER-BOX-UVIS Purpose=DITHER Number Of Points=4 Point Spacing=23.02 Line Spacing=35.212	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides=89.287 Center Pattern=true		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS				
<i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24). Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i>										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W (WFC3IR.im.1446714)	(1) PSO172+18	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS100	POS TARG 0.451,0.403; GS ACQ SCENARIO SINGLE	Pattern 7, Exps 1-1 in PSO172_WFC3IR_J_2_1ORBIT (26) (7)	602.934229 Secs (2411.737 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 16258 - PSO172 WFC3IR J 3 1ORBIT (27) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	Proposal 16258, PSO172_WFC3IR_J_3_1ORBIT (27), implementation Diagnostic Status: Warning Scientific Instruments: WFC3/IR Special Requirements: SAME ORIENT AS 25 Comments: This WFC3/IR visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25). Added WFC3-IR-DITHER-LINE-3PT dither pattern to the IR observations on top of the already used WFC3-IR-DITHER-BOX-UVIS pattern. This was done using the POS-TARG values for the WFC3-IR-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each IR orbit/visit executes at one of the locations of the WFC3-IR-DITHER-LINE-3PT pattern. Each IR orbit/visit continues to use the WFC3-IR-DITHER-BOX-UVIS pattern. This orbit/visit uses POS-TARGs: (0.902, 0.806)									
	(F125W (27.001) special requirements) Warning (Form): Be very careful mixing POS TARG and Center_Pattern = Yes									
Diagnosics										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures						
	(7)	Pattern Type=WFC3-IR-DITHER-BOX-UVIS Purpose=DITHER Number Of Points=4 Point Spacing=23.02 Line Spacing=35.212	Coordinate Frame=POS-TARG Pattern Orientation=0.713 Angle Between Sides=89.287 Center Pattern=true		(1)					
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS				
Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24). Category=GALAXY Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]										
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	F125W (WFC3IR.im.1446714)	(1) PSO172+18	WFC3/IR, MULTIACCUM, IR-UVIS-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS100	POS TARG 0.902,0.806; GS ACQ SCENARIO SINGLE	Pattern 7, Exps 1-1 in PSO172_WFC3IR_J_3_1ORBIT (27) (7)	602.934229 Secs (2411.737 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]



Proposal 16258 - PSO172 WFC3UVIS NB 1 1ORBIT (10) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_1_1ORBIT (10), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.00, 0.00)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_1_1ORBIT (10) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram shows a horizontal timeline from 0 to 6000 seconds. Key events are marked with arrows: GS Acq at ~100s, Exp. 1 (green box) at ~250s, Pointing Maneuver at ~1600s, another Exp. 1 (green box) at ~1750s, another Pointing Maneuver at ~3000s, Overhead at ~3100s, Occultation (black bar) from ~3100s to ~3800s, and another Overhead at ~3100s. A blue hatched bar represents the observation period from ~250s to ~3000s. A label 'Unused Orbital Visibility = 93' is placed above the occultation period.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 2 1ORBIT (11) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_2_1ORBIT (11), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.092, 0.098)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.092,0.098; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_2_1ORBIT (11) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram illustrates the timing of an orbit. The x-axis represents time in seconds from 0 to 6000. Key events are marked: GS Acq (Green Start Acquisition) at approximately 200s, Pointing Maneuver (PM) at approximately 1600s, and Occultation (black bar) starting at approximately 3100s. Two exposure events (Exp. 1) are shown as green boxes with double-headed arrows, occurring between 200s-400s and 1600s-1800s. Overhead periods are indicated by vertical arrows. A large white bar represents the total orbit duration, and a smaller white bar indicates the unused orbital visibility of 93 seconds.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 3 1ORBIT (12) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_3_1ORBIT (12), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.185, 0.197)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.168038 5)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_3_1ORBIT (12) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram shows a horizontal timeline from 0 to 6000 seconds. Key events are marked with arrows and boxes: 'GS Acq' at ~200s, 'Exp. 1' (green box) at ~300s, 'Overhead' at ~1600s, 'Pointing Maneuver' at ~1700s, 'Exp. 1' (green box) at ~1800s, 'Overhead' at ~3100s, and 'Occultation' (black bar) from ~3100s to ~3800s. A blue checkered bar spans from ~300s to ~3100s. A label 'Unused Orbital Visibility = 93' is placed above the occultation period.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 4 1ORBIT (13) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Proposal 16258, PSO172_WFC3UVIS_NB_4_1ORBIT (13), implementation

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS
 Special Requirements: SAME ORIENT AS 25
 Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).

Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; <https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns>) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.

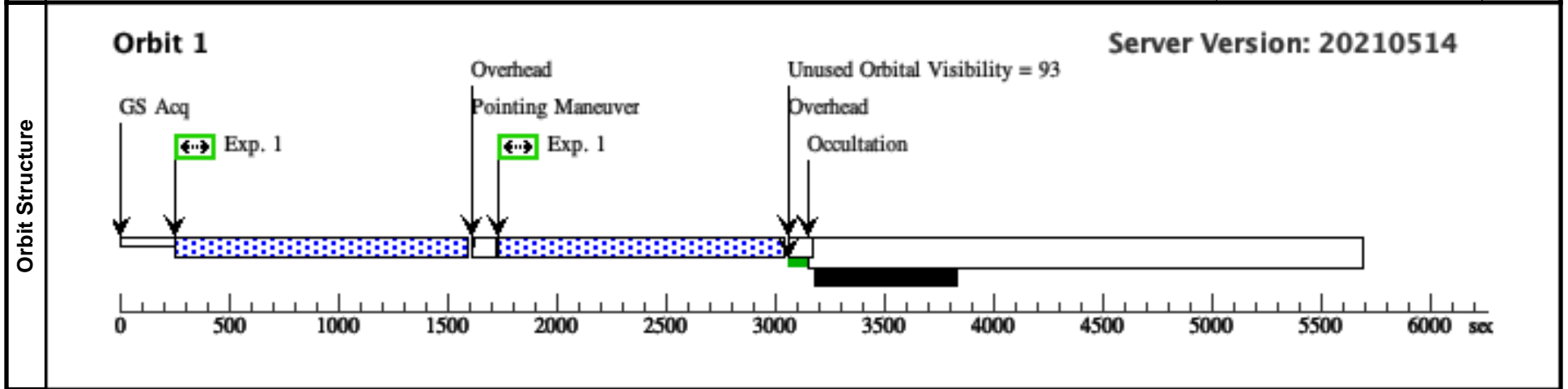
This orbit/visit uses POS-TARGs: (0.00, 0.00)

#	Primary Pattern	Secondary Pattern	Exposures
(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS

Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).
 Category=GALAXY
 Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_4_1ORBIT (13) (6)	1313 Secs (2626 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]



Proposal 16258 - PSO172 WFC3UVIS NB 5 1ORBIT (14) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_5_1ORBIT (14), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.092, 0.098)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.092,0.098; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_5_1ORBIT (14) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram illustrates the timing of the orbit. It shows a sequence of events: GS Acq, followed by an exposure (Exp. 1) with a green double-headed arrow. This is followed by an Overhead period, then a Pointing Maneuver, another exposure (Exp. 1) with a green double-headed arrow, another Overhead period, and finally an Occultation period. The total duration of the orbit is 6000 seconds, with 93 seconds of unused orbital visibility. The x-axis is labeled 'sec' and ranges from 0 to 6000 with major ticks every 500 seconds.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 6 1ORBIT (15) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_6_1ORBIT (15), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.185, 0.197)</i></p>																								
	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Pattern</th> <th>Secondary Pattern</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>(6)</td> <td> Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= </td> <td> Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false </td> <td>(1)</td> </tr> </tbody> </table>					#	Primary Pattern	Secondary Pattern	Exposures	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(1)												
#	Primary Pattern	Secondary Pattern	Exposures																						
(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false	(1)																						
Patterns	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>PSO172+18</td> <td> RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000 </td> <td></td> <td> V=24 J(AB) = 20.91 +- 0.11 </td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS								
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																			
(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS																				
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time (Total)/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F953N (WFC3UVIS.im.1680385)</td> <td>(1) PSO172+18</td> <td>WFC3/UVIS, ACCUM, UVIS-FIX</td> <td>F953N</td> <td>FLASH=17.0</td> <td> POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE </td> <td> Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_6_1ORBIT (15) (6) </td> <td> 1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)] </td> <td>[1]</td> </tr> </tbody> </table>					#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_6_1ORBIT (15) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit															
1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_6_1ORBIT (15) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]																
Exposures	<p>Orbit 1</p> <p style="text-align: right;">Server Version: 20210514</p>																								
	Orbit Structure																								

Proposal 16258 - PSO172 WFC3UVIS NB 7 1ORBIT (16) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_7_1ORBIT (16), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.00, 0.00)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.168038 5)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_7_1ORBIT (16) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram illustrates the timing of the observation sequence. It starts with 'GS Acq' at approximately 200s, followed by 'Exp. 1' (a green box with a double-headed arrow) at approximately 300s. This is followed by a long 'Overhead' period (a blue checkered bar) until approximately 1600s. At 1600s, a 'Pointing Maneuver' occurs, followed by another 'Exp. 1' at approximately 1700s. This is followed by another 'Overhead' period until approximately 3000s. At 3000s, 'Occultation' begins, and the observation ends at approximately 3100s. The remaining time until 6000s is labeled as 'Unused Orbital Visibility = 93'.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 8 1ORBIT (17) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_8_1ORBIT (17), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.092, 0.098)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.092,0.098; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_8_1ORBIT (17) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 9 1ORBIT (18) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_9_1ORBIT (18), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.185, 0.197)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)						
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.168038 5)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_9_1ORBIT (18) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p> <p>The diagram illustrates the timing of the observation on Orbit 1. The x-axis represents time in seconds from 0 to 6000. Key events include: GS Acq (Green System Acquisition) at approximately 200s, Exp. 1 (Exposure 1) at approximately 300s, Pointing Maneuver at approximately 1600s, another Overhead period at approximately 1700s, and Exp. 1 at approximately 1800s. A large Occultation period occurs between approximately 3100s and 3800s. The total observation time is approximately 5600s, with 93 seconds of unused orbital visibility.</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 10 1ORBIT (19) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_10_1ORBIT (19), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.00, 0.00)</i></p>																								
	<table border="1"> <thead> <tr> <th>#</th> <th>Primary Pattern</th> <th>Secondary Pattern</th> <th>Exposures</th> </tr> </thead> <tbody> <tr> <td>(6)</td> <td> Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false </td> <td></td> <td>(1)</td> </tr> </tbody> </table>					#	Primary Pattern	Secondary Pattern	Exposures	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)												
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(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)																						
Patterns	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>PSO172+18</td> <td> RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000 </td> <td></td> <td> V=24 J(AB) = 20.91 +- 0.11 </td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>					#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS								
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(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS																				
Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time (Total)/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>F953N (WFC3UVIS.im.1680385)</td> <td>(1) PSO172+18</td> <td>WFC3/UVIS, ACCUM, UVIS-FIX</td> <td>F953N</td> <td>FLASH=17.0</td> <td> POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE </td> <td> Pattern 6, Exps 1-1 in n PSO172_WFC3UVIS_NB_10_1ORBIT (19) (6) </td> <td> 1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)] </td> <td>[1]</td> </tr> </tbody> </table>					#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in n PSO172_WFC3UVIS_NB_10_1ORBIT (19) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]
	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit															
1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in n PSO172_WFC3UVIS_NB_10_1ORBIT (19) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]																
Exposures	<p>Orbit 1</p> <p>Server Version: 20210514</p>																								
	Orbit Structure																								

Proposal 16258 - PSO172 WFC3UVIS NB 11 1ORBIT (20) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_11_1ORBIT (20), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.092, 0.098)</i></p>										
Patterns	#	Primary Pattern	Secondary Pattern	Exposures							
	(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)							
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous					
	(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS					
<p><i>Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).</i></p> <p><i>Category=GALAXY</i></p> <p><i>Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]</i></p>											
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit	
	1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.092,0.098; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_11_1ORBIT (20) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20210514</p>										

Proposal 16258 - PSO172 WFC3UVIS NB 12 1ORBIT (21) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit

Proposal 16258, PSO172_WFC3UVIS_NB_12_1ORBIT (21), implementation

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: SAME ORIENT AS 25

Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25)

Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; <https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns>) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.

This orbit/visit uses POS-TARGs: (0.185, 0.197)

Patterns

#	Primary Pattern	Secondary Pattern	Exposures
(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing= Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

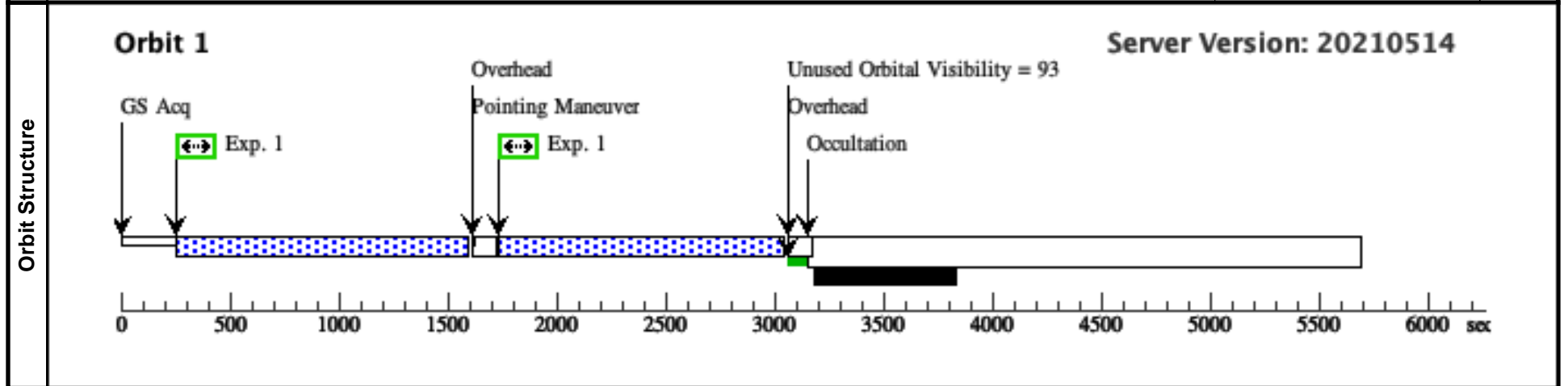
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS

Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).
 Category=GALAXY
 Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.185,0.197; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in n PSO172_WFC3UVIS_NB_12_1ORBIT (21) (6)	1313 Secs (2626 Secs) [==>(Pattern 1)] [==>(Pattern 2)]	[1]



Proposal 16258 - PSO172 WFC3UVIS NB 13 1ORBIT (22) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit

Proposal 16258, PSO172_WFC3UVIS_NB_13_1ORBIT (22), implementation

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: SAME ORIENT AS 25

Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).

Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; <https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns>) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.

This orbit/visit uses POS-TARGs: (0.00, 0.00)

Patterns

#	Primary Pattern	Secondary Pattern	Exposures
(6)	Pattern Type=WFC3-UVIS-DITHER-LINE Coordinate Frame=POS-TARG Pattern Orientation=46.84 Purpose=DITHER Angle Between Sides= Number Of Points=2 Center Pattern=false Point Spacing=0.145 Line Spacing=		(1)

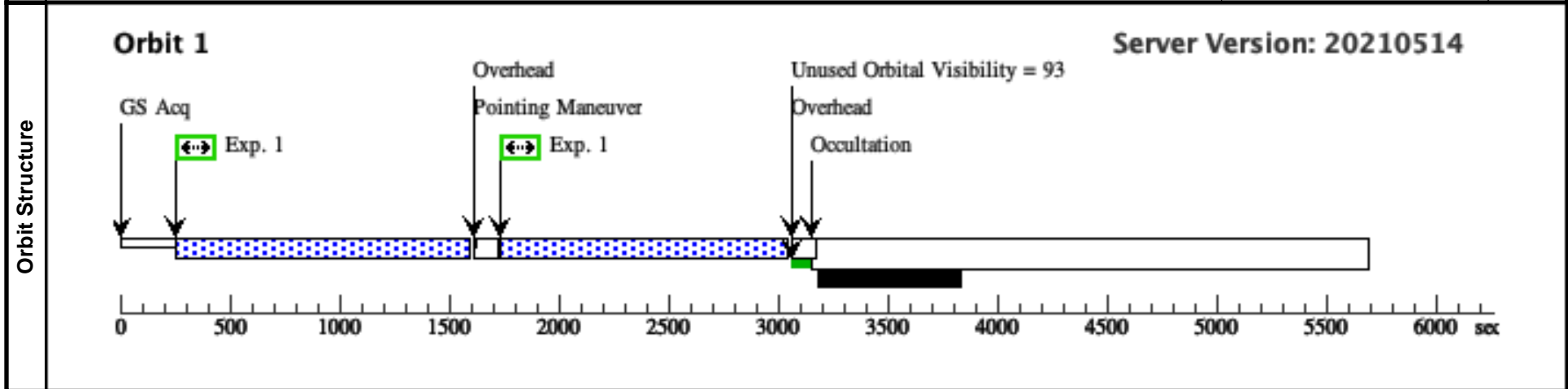
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	PSO172+18	RA: 11 29 25.3677 (172.3556987d) Dec: +18 46 24.30 (18.77342d) Equinox: J2000		V=24 J(AB) = 20.91 +- 0.11	Reference Frame: ICRS

Comments: Radio-Loud QSO at z=6.823. The reported V-Magnitude is a place-holder (no detection at SN>3 at mag=24).
 Category=GALAXY
 Description=[HIGH REDSHIFT GALAXY, QSO, QUASAR]

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F953N (WFC3UVIS.im.1680385)	(1) PSO172+18	WFC3/UVIS, ACCUM, UVIS-FIX	F953N	FLASH=17.0	POS TARG 0.00,0.00; GS ACQ SCENARIO SINGLE	Pattern 6, Exps 1-1 in PSO172_WFC3UVIS_NB_13_1ORBIT (22) (6)	1313 Secs (2626 Secs) [=>(Pattern 1)] [=>(Pattern 2)]	[1]



Proposal 16258 - PSO172 WFC3UVIS NB 14 1ORBIT (23) - The Environment of the most distant Radio Loud Quasar

Tue Dec 21 18:00:23 GMT 2021

Visit	<p>Proposal 16258, PSO172_WFC3UVIS_NB_14_1ORBIT (23), implementation</p> <p>Diagnostic Status: No Diagnostics</p> <p>Scientific Instruments: WFC3/UVIS</p> <p>Special Requirements: SAME ORIENT AS 25</p> <p><i>Comments: This WFC3/UVIS visit has the same ORIENT as PSO172_WFC3IR_J_1_1ORBIT (25).</i></p> <p><i>Added WFC3-UVIS-DITHER-LINE-3PT dither pattern to the UVIS observations on top of the already used WFC3-UVIS-DITHER-LINE pattern. This was done using the POS-TARG values for the WFC3-UVIS-DITHER-LINE-3PT pattern (given in Table C.3 of WFC3 IHB; https://hst-docs.stsci.edu/wfc3ihb/appendix-c-dithering-and-mosaicking/c-2-wfc3-patterns) on each orbit/visit such that each UVIS orbit/visit executes at one of the locations of the WFC3-UVIS-DITHER-LINE-3PT pattern. Each UVIS orbit/visit continues to use the WFC3-UVIS-DITHER-LINE pattern. This reduces the repetitions in UV pointings from 15 times down to 5 times.</i></p> <p><i>This orbit/visit uses POS-TARGs: (0.092, 0.098)</i></p>																								
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Proposal 16258 - PSO172 WFC3UVIS NB 15 1ORBIT (24) - The Environment of the most distant Radio Loud Quasar

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