14729 - A New Twist in the Quasar Radio Dichotomy: The Case of the Missing Outflows

Cycle: 24, Proposal Category: GO

(Availability Mode: AVAILABLE)

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) 7C-074532.29+451808.00	COS/FUV	1	02-Jun-2017 21:04:33.0	yes
02	(2) 7C-113807.79+463840.00	COS/FUV	1	02-Jun-2017 21:04:34.0	yes
03	(3) VV2006-J121613.6+524245	COS/FUV	1	02-Jun-2017 21:04:35.0	yes
04	(4) 87GB-110153.6+214051	COS/FUV	1	02-Jun-2017 21:04:36.0	yes
05	(5) 2E-3273	COS/FUV	2	02-Jun-2017 21:04:37.0	yes
06	(6) 87GB-153746.8+142023	COS/FUV	1	02-Jun-2017 21:04:38.0	yes
07	(7) 6C-092828+554656	COS/FUV	2	02-Jun-2017 21:04:40.0	yes
08	(8) VV98-J141628.6+124214	COS/FUV	3	02-Jun-2017 21:04:41.0	yes
09	(9) VV98-J150455.5+564920	COS/FUV	3	02-Jun-2017 21:04:42.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
10	(10) 4C-05.38	COS/FUV	3	02-Jun-2017 21:04:43.0	yes
11	(11) NPM1G-+08.0242	COS/FUV	1	02-Jun-2017 21:04:44.0	yes
51	(11) NPM1G-+08.0242	COS/FUV	1	02-Jun-2017 21:04:45.0	yes

20 Total Orbits Used

ABSTRACT

An inspection of quasar spectra taken with COS/G130M or G160M reveals a curious result. While 39/146 radio-quiet quasars show intrinsic N V absorption, thought to trace the quasar outflow, absolutely none of the 19 radio-loud quasars show N V absorption. Essentially all of the radio-loud quasars for which N V absorption can be detected have compact morphologies as sampled by FIRST 1.4 GHz imaging and comparatively flat radio spectra. This implies that we are viewing more face-on orientations which bias us against seeing outflows in absorption. Alternatively, it could be that the structure of quasar winds in radio-loud objects is just fundamentally different than radio-quiet objects. To distinguish between these possibilities, we have assembled a sample of 15 low-redshift SDSS quasars which show lobe-dominated FIRST morphologies, and are UV bright enough to be observable with COS. Four objects have suitable observations in the archive, so we ask to observe the remaining 11.

OBSERVING DESCRIPTION

From our Phase I description (abbreviated):

Our proposed sample for observation is 11 quasars. To estimate exposure times, we require that the spectra be of similar quality as the existing archival spectra to reach similar equivalent width limits. This yields a minimum signal-to-noise of S/N > 7 per resolution element. In the table below, we list the target names, redshifts, wavelength ranges targeted for our NV search, grating choice yielded by the targeted wavelength range, the exposure times calculated with the COS ETC (Version 24.1), and the number of orbits requested.

Table 1: Exposure time calculations

Target Name	z(QSO)	wave_lo	wave_hi	Grating/Tilt	Texp(S/N/r.e.>7)	Norbits
7C 074532.29+451808.00	0.192302	1452	1506	G160M/1600	718	1
7C 113807.79+463840.00	0.114272	1357	1407	G130M/1300	720	1
VV2006 J121613.6+524245	0.269787	1546	1604	G160M/1623	1491	1

87GB 110153.6+214051 0.187895 1447 1500 G160M/1600 1034 1
2E-3273 0.363815 1661 1723 G160M/1600 4871 2
87GB 153746.8+142023 0.120196 1364 1415 G130M/1300 1626 1
6C 092828+554656 0.266543 1542 1600 G160M/1623 3317 2
VV98 J141628.6+124214 0.334934 1626 1686 G160M/1600 7642 3
VV98 J150455.5+564920 0.358903 1655 1717 G160M/1600 8183 3
4C 5.38 0.301759 1585 1644 G160M/1577 6726 3
NPM1G+8.0242 0.200991 1462 1517 G160M/1600 2646 1

We only require one orbit for six of our targets. Some are bright enough to reach the needed minimum S/N in much less than an orbit. However, we expect the improved S/N from a full orbit to enable legacy projects with COS. Three of our targets require three orbits each to reach the needed S/N. While this is half of the total requested number of orbits, we do not think that the proposed science can be done without them. We originally assembled the sample using 19 m(FUV)<18.5 targets. But the four faintest targets would have required four orbits each. The proposed sample allows for the minimum size to make the statistical case with regard to the comparison between radio-loud and radio-quiet objects.

The GALEX magnitudes of these objects lie in the range m(FUV)=16.9-18.3. So, there should be no issue with the limiting count rates of the COS detectors.

Additional/revised information for Phase II:

Acquisition: While we have used SIMBAD to look up object coordinates, all coordinates are in the ICRS reference system, and we have verified that the coordinates should be good to better than 0.1". [Note: For one object, NPM1G+8.0242, the Alladin viewer in APT shows that there is a radio galaxy 3" away from the quasar that we wish to observe. The coordinates provided do point to the desired object.] So, we will use a combination of ACQ/PEAKXD and ACQ/PEAKD modes to center the objects in the COS Primary Science Aperture (PSA) after guide star acquisitions. We will use the preferred grating for the object to carry out the acquisitions. We have used the COS/ETC to estimate requisite exposure times in order to reach S/N=40 (25) for the ACQ/PEAKD (ACQ/PEAKXD) as recommended in the documentation, and the COS ETC reference number is provided in the individual exposures (1 and 2 for each visit). For the ACQ/PEAKD exposure, we use STEP-SIZE=0.9, as recommended in the COS handbook.

Post-Acquisition Exposures: We choose to record the data in TIME-TAG mode, as recommended, in order to best utilize data reduction procedures and minimize wavelength calibration and flat fielding uncertainties. As further required, we will used all FP-POS modes to reduce fixed pattern noise, and as such our exposures will be broken into four sub-exposures, with FLASH=YES to determine the amount of wavelength drift.

New ETC simulations show that the needed wavelength range needed for each of the targets can be achieved with a single grating tilt (though the exact tilt is different for each target). So VV2006 J121613.6+524245 and 6C 092828+554656 will only need the G160M-1623 grating tilt in conjunction with subexposures using all FP-POS modes. [This is a change from our Phase 1 description where we requested two grating tilts for those two objects. The orbital allocation has not changed.] Even though we are using TIME-TAG mode for data collection, we are reading out the detector after each subexposure, and each of those subexposures is set to much less than the maximum buffer time needed given the count rates of each target. The BUFFER time is set to 2/3 of that calculated by the COS ETC as recommended by the ETC.

To figure out exposure times for the sub-exposure, we use the Orbit Planner Auto-Adjust feature to fill the number of orbits originally proposed for each target. For the targets where more than one orbit has been allocated/awarded, we choose to maximize the use of each orbit. Hence, not all FP-POS positions are observed with the same exposure time. For objects with two allocated orbits, we fill the first orbit, post-acquisition, with time for the FP-POS=1 and 2 positions. In the second orbit, after guide-star re-acquisition, we fill the remainder of the visibility period with time for the FP-POS=3 and 4 positions. For objects with three allocated orbits, we use the time remaining in the first orbit, post-acquisition, on the FP-POS=1 position only. The second orbit covers the FP-POS=2 and 3 positions. The third orbit covers the FP-POS=4 position.

COS ETC Simulations: In general, we use the COS grating mentioned in the table, requesting the S/N in the middle of the range specified where we could potentially observe an NV absorption doublet for the combined exposure time allowed by the procedure described using the Orbit Planner. We use the "Non-stellar Objects QSO (FOS based) [100, 3387 A z=0]" spectrum, redshifted to that given in the table, normalized to the m(FUV) AB magnitude reported by GALEX, and standard/average background levels. Since we will be combing 4 subexposures, we check that the combined time results in a S/N that meets our science requirement (>7) For acquisition, we ask instead for the exposure times needed to achieve S/N=25 for ACQ/PEAKXD (in Segment A only) and S/N=40 for ACQ/PEAKD in succession. References to all COS ETC simulations are provided for each subexposure.

Visit

Proposal 14729, 7C0745 (01), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(7C0745 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

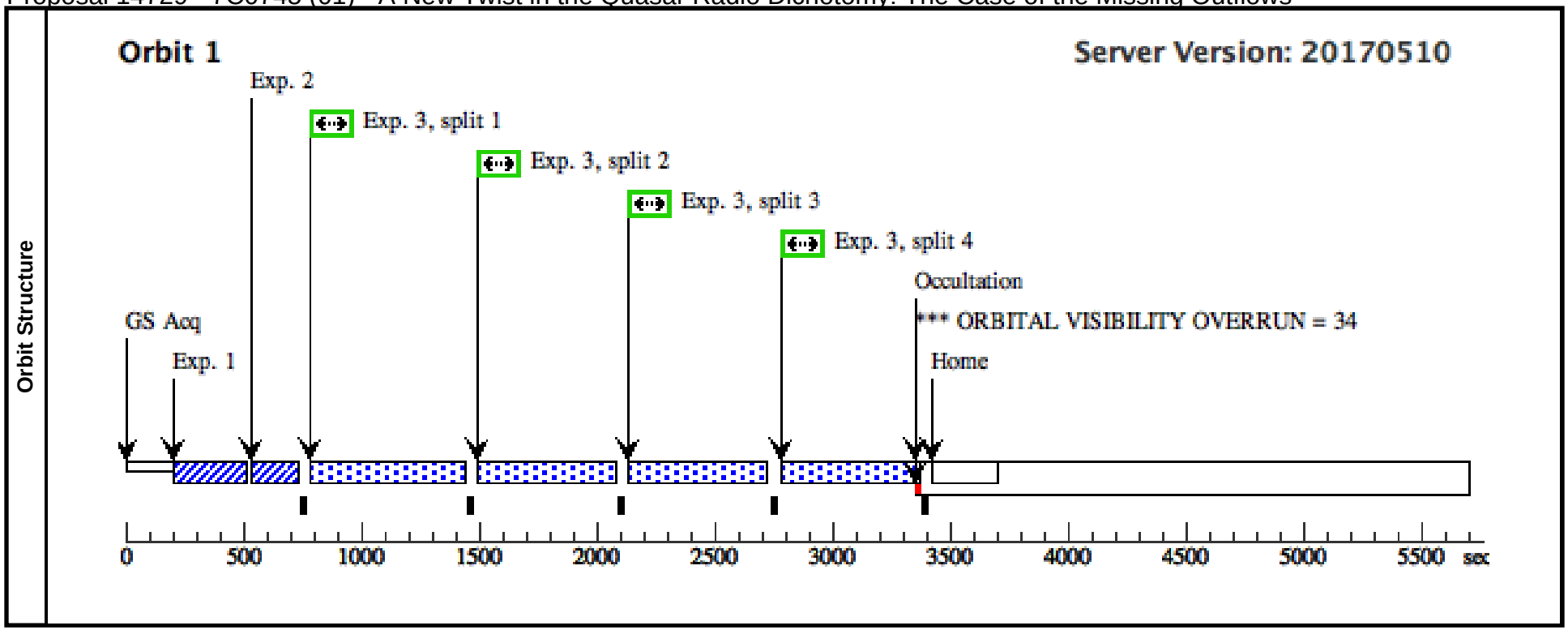
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	7C-074532.29+451808.00	RA: 07 49 6.5000 (117.2770833d) Dec: +45 10 34.00 (45.17611d) Equinox: J2000	Redshift: 0.19216	V=17.1 m(fuv)=16.97	Reference Frame: ICRS

Comments: This object was generated by the targe tselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.841452)	(1) 7C-074532.29+451808.00	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				31.0 Secs (31 Secs) *[==>]*	 ***[1]***
2	(COS.sa.841453)	(1) 7C-074532.29+451808.00	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			10.1 Secs (10.1 Secs) *[==>]*	 ***[1]***
3	(COS.sp.825999)	(1) 7C-074532.29+451808.00	COS/FUV, TIME-TAG, PSA	G160M 1600 A	FP-POS=ALL; BUFFER-TIME=6000; FLASH=YES			539 Secs (2156 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170510
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Occultation
*** ORBITAL VISIBILITY OVERRUN = 34
GS Acq
Exp. 1
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, 7C1138 (02), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(7C1138 (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

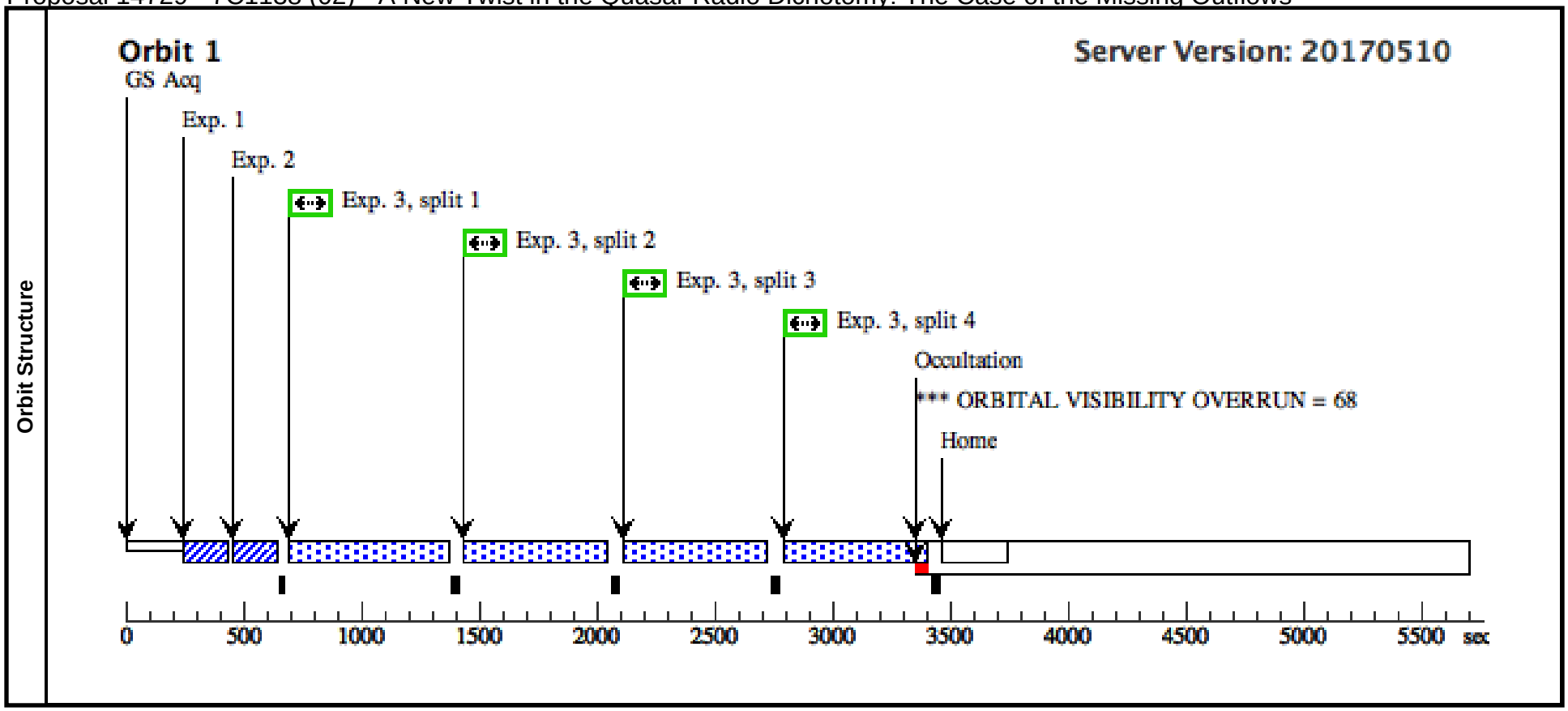
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	7C-113807.79+463840.00	RA: 11 40 47.9000 (175.1995833d) Dec: +46 22 5.00 (46.36806d) Equinox: J2000	Redshift: 0.11486	V=16.14 m(fuv)=17.04	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.825908)	(2) 7C-113807.79+463840.00	COS/FUV, ACQ/PEAKXD, PSA	G130M 1300 A				5.5 Secs (5.5 Secs) *[==>]*	 ***[1]***
2	(COS.sa.825902)	(2) 7C-113807.79+463840.00	COS/FUV, ACQ/PEAKD, PSA	G130M 1300 A	STEP-SIZE=0.9			7.0 Secs (7 Secs) *[==>]*	 ***[1]***
3	(COS.sp.825911)	(2) 7C-113807.79+463840.00	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FP-POS=ALL; BUFFER-TIME=2606; FLASH=YES			562 Secs (2248 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170510
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Occultation
*** ORBITAL VISIBILITY OVERRUN = 68
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, VV2006J1216 (03), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(VV2006J1216 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

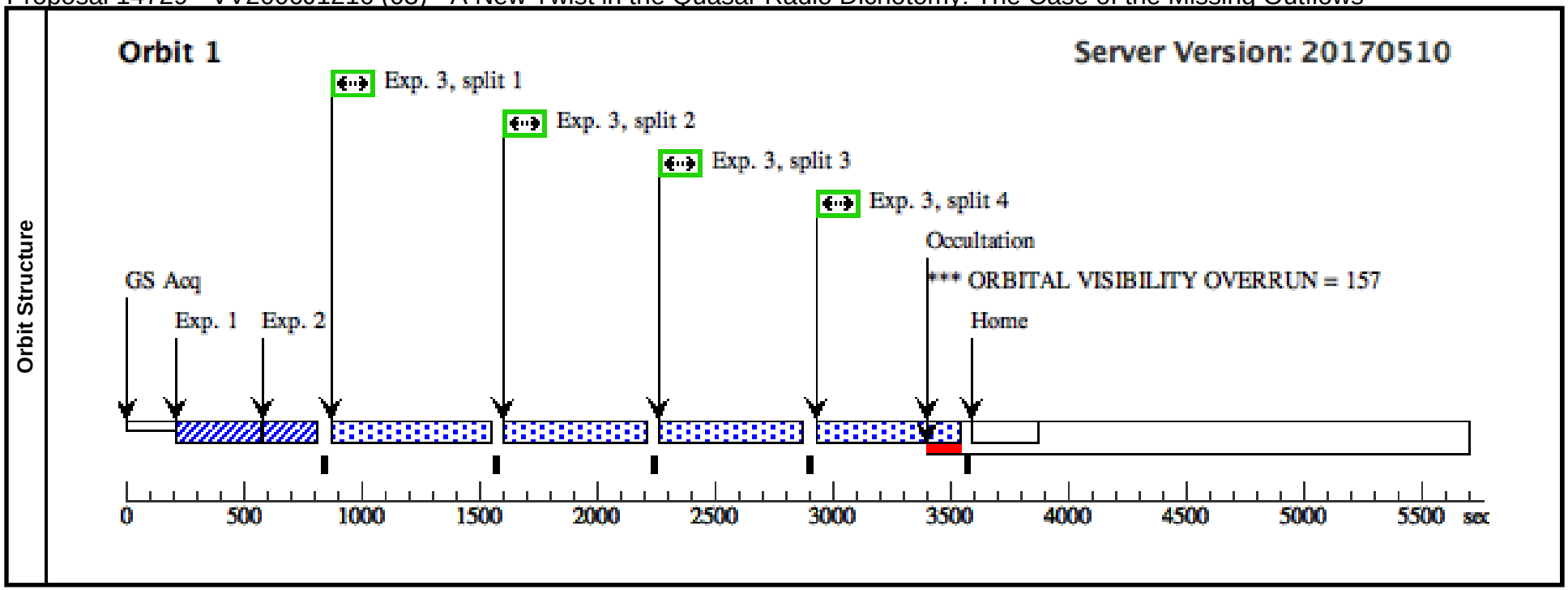
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	VV2006-J121613.6+524245	RA: 12 16 13.6535 (184.0568896d) Dec: +52 42 46.18 (52.71283d) Equinox: J2000	Redshift: 0.26964	V=17.79 m(fuv)=17.34	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826010)	(3) VV2006-J121613.6+524245	COS/FUV, ACQ/PEAKXD, PSA	G160M 1623 A				49.4 Secs (49.4 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826009)	(3) VV2006-J121613.6+524245	COS/FUV, ACQ/PEAKD, PSA	G160M 1623 A	STEP-SIZE=0.9			16.9 Secs (16.9 Secs) *[==>]*	 ***[1]***
3	(COS.sp.826065)	(3) VV2006-J121613.6+524245	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=8000; FLASH=YES; FP-POS=ALL			560 Secs (2240 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170510
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
Occultation
*** ORBITAL VISIBILITY OVERRUN = 157
GS Acq
Exp. 1
Exp. 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, 87GB1101 (04), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(87GB1101 (04)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

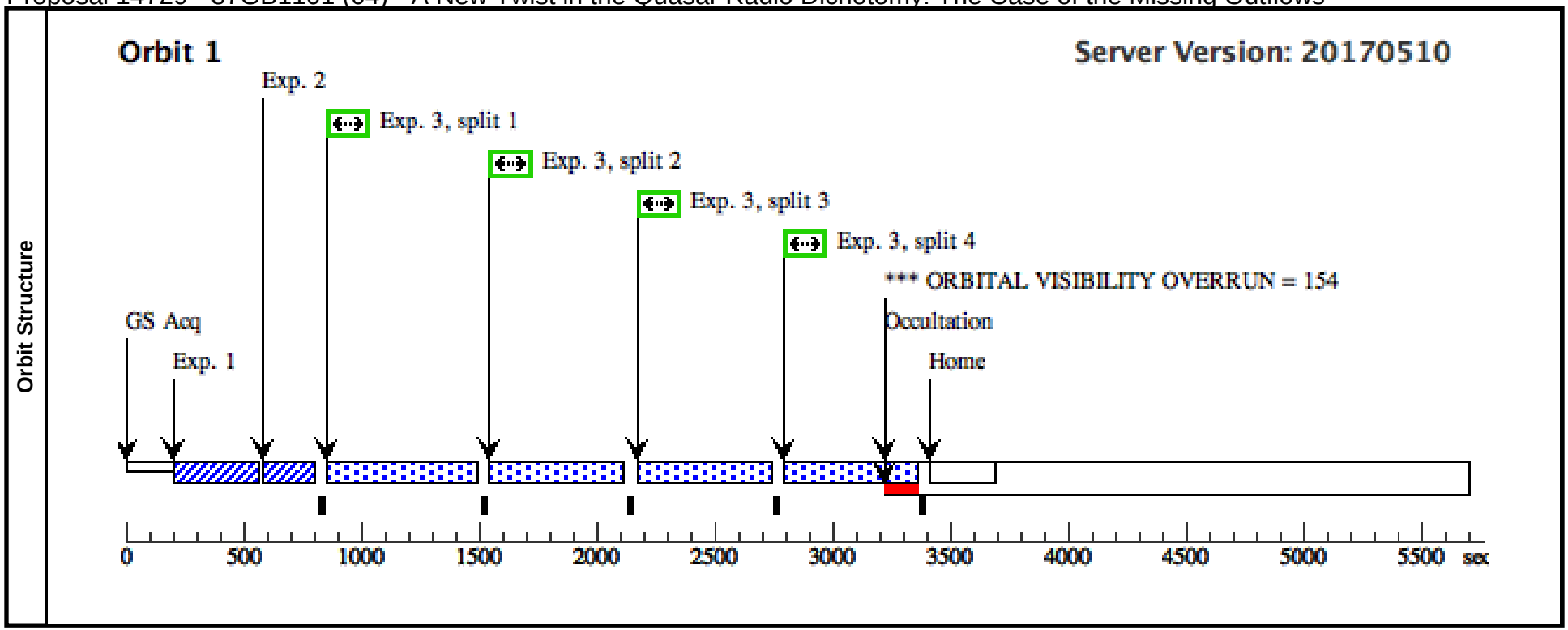
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	87GB-110153.6+214051	RA: 11 04 36.3390 (166.1514125d) Dec: +21 24 17.87 (21.40496d) Equinox: J2000	Redshift: 0.18768	V=17.38 m(fuv)=17.39	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826012)	(4) 87GB-110153.6+214051	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				48.5 Secs (48.5 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826011)	(4) 87GB-110153.6+214051	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			15.1 Secs (15.1 Secs) *[==>]*	 ***[1]***
3	(COS.sp.826066)	(4) 87GB-110153.6+214051	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=7600; FLASH=YES; FP-POS=ALL			517 Secs (2068 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***


Orbit Structure
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Server Version: 20170510
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
*** ORBITAL VISIBILITY OVERRUN = 154
GS Acq
Exp. 1
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, 2E3273 (05), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(2E3273 (05)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

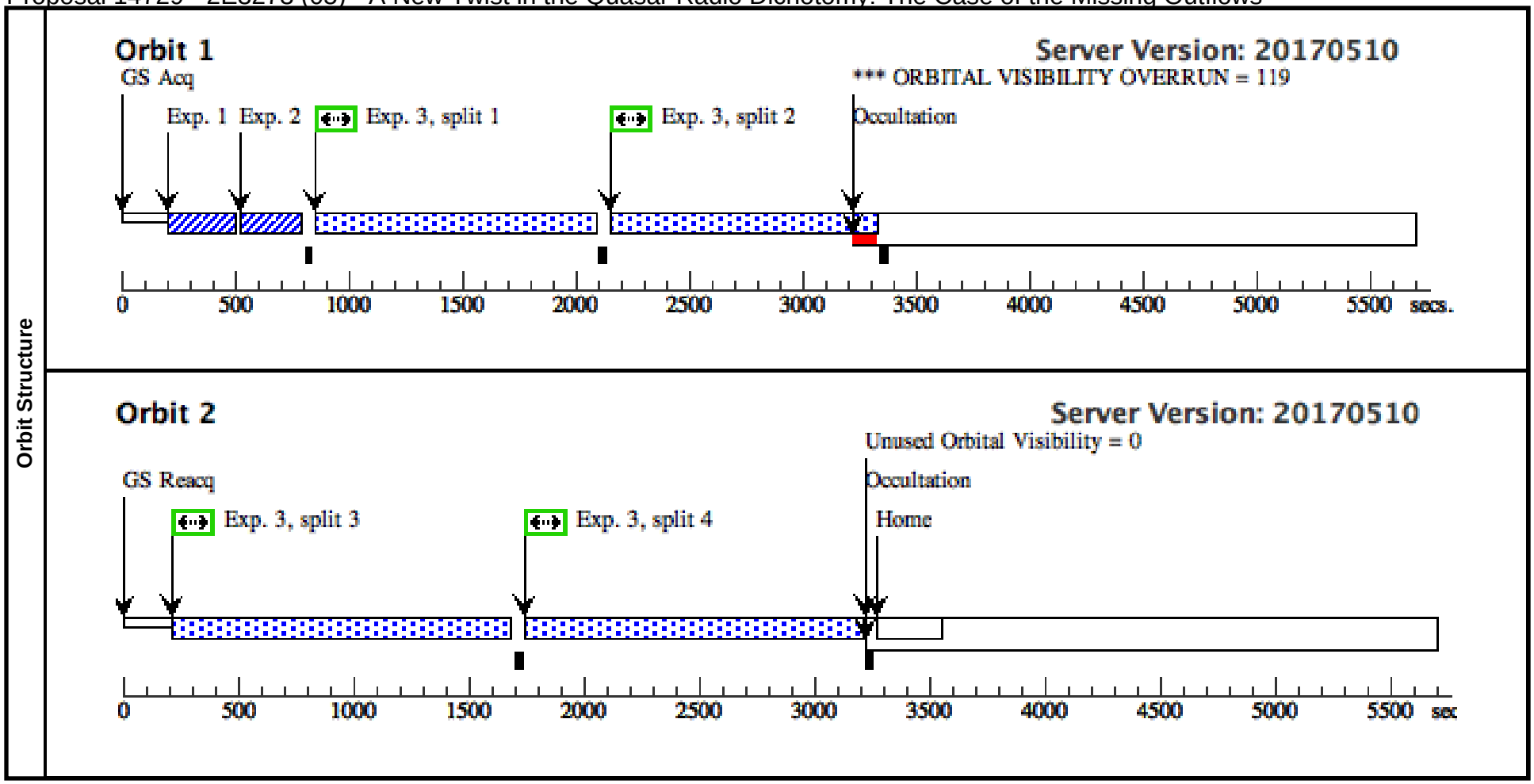
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2E-3273	RA: 14 27 35.6003 (216.8983346d) Dec: +26 32 14.65 (26.53740d) Equinox: J2000	Redshift: 0.36413	V=16.0 m(fuv)=17.70	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826014)	(5) 2E-3273	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				29.9 Secs (29.9 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826013)	(5) 2E-3273	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			24.8 Secs (24.8 Secs) *[==>]*	 ***[1]***
3	(COS.sp.826071)	(5) 2E-3273	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=9600; FLASH=YES; FP-POS=ALL			1000 Secs (5076 Secs) *[==>1124.0 Secs (Split 1)]* *[==>1124.0 Secs (Split 2)]* *[==>1414.0 Secs (Split 3)]* *[==>1414.0 Secs (Split 4)]*	 ***[1]*** ***[2]***


Orbit Structure
Orbit 1
Server Version: 20170510
GS Acq
*** ORBITAL VISIBILITY OVERRUN = 119
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20170510
Unused Orbital Visibility = 0
GS Reacq
Occultation
Exp. 3, split 3
Exp. 3, split 4
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, 87GB1537 (06), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(87GB1537 (06)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

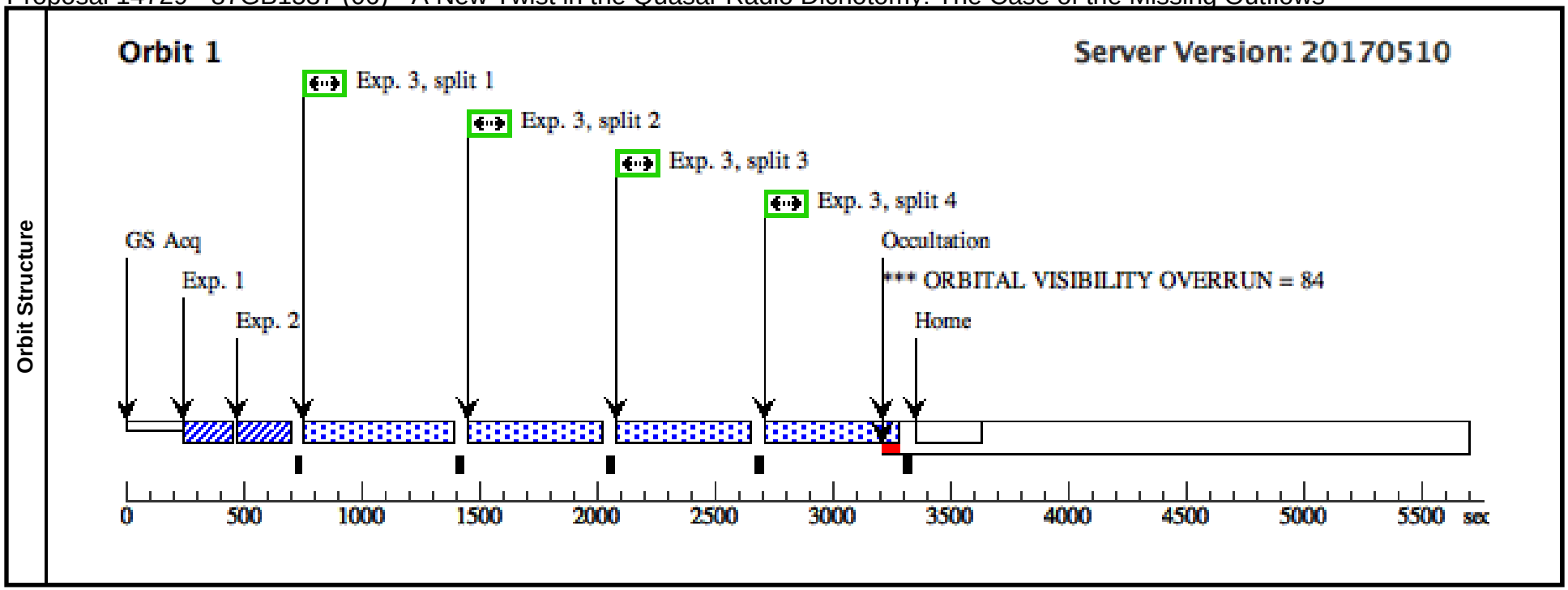
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	87GB-153746.8+142023	RA: 15 40 7.8470 (235.0326958d) Dec: +14 11 37.12 (14.19364d) Equinox: J2000	Redshift: 0.11972	V=17.15 m(fuv)=17.87	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826016)	(6) 87GB-153746.8+142023	COS/FUV, ACQ/PEAKXD, PSA	G130M 1300 A				12.4 Secs (12.4 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826015)	(6) 87GB-153746.8+142023	COS/FUV, ACQ/PEAKD, PSA	G130M 1300 A	STEP-SIZE=0.9			15.9 Secs (15.9 Secs) *[==>]*	 ***[1]***
3	(COS.sp.826073)	(6) 87GB-153746.8+142023	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=3500; FLASH=YES; FP-POS=ALL			516 Secs (2064 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170510
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
GS Acq
Exp. 1
Exp. 2
Occultation
*** ORBITAL VISIBILITY OVERRUN = 84
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, 6C0928 (07), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(6C0928 (07)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

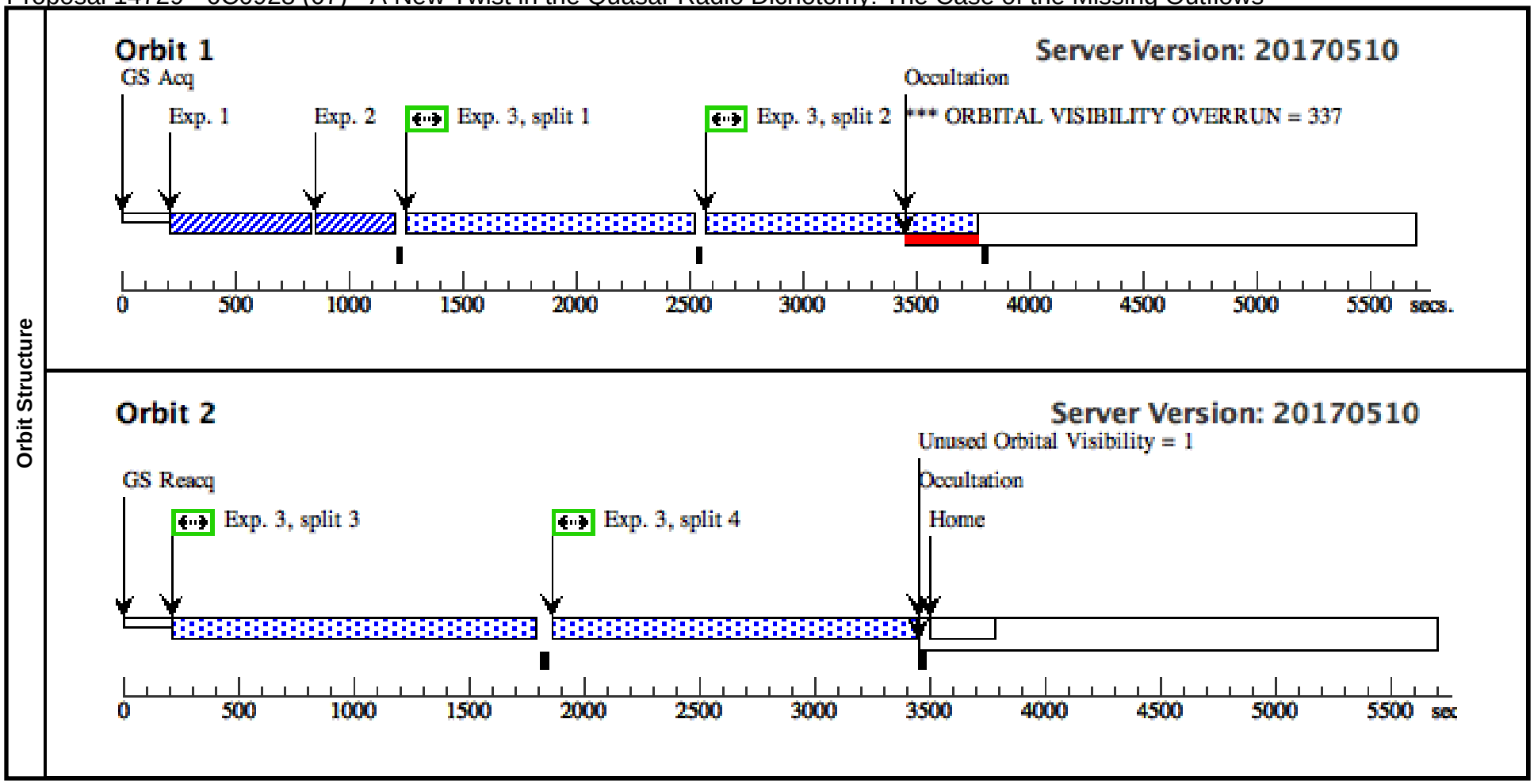
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	6C-092828+554656	RA: 09 32 0.0782 (143.0003258d) Dec: +55 33 47.41 (55.56317d) Equinox: J2000	Redshift: 0.26558	V=17.57 m(fuv)=18.19	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826018)	(7) 6C-092828+554656	COS/FUV, ACQ/PEAKXD, PSA	G160M 1623 A				138.5 Secs (138.5 Secs) *[==>]*	*[1]*
2	(COS.sa.826017)	(7) 6C-092828+554656	COS/FUV, ACQ/PEAKD, PSA	G160M 1623 A	STEP-SIZE=0.9			40.5 Secs (40.5 Secs) *[==>]*	*[1]*
3	(COS.sp.826154)	(7) 6C-092828+554656	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=11000; FLASH=YES; FP-POS=ALL			1149 Secs (5352 Secs) *[==>(Split 1)]* *[==>(Split 2)]* *[==>1527.0 Secs (Split 3)]* *[==>1527.0 Secs (Split 4)]*	*[1]* *[2]*


Orbit Structure
Orbit 1
Server Version: 20170510
GS Acq
Exp. 1
Exp. 2
Exp. 3, split 1
Exp. 3, split 2
Occultation
*** ORBITAL VISIBILITY OVERRUN = 337
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
secs.
Orbit 2
Server Version: 20170510
Unused Orbital Visibility = 1
GS Reacq
Exp. 3, split 3
Exp. 3, split 4
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, VV98J1416 (08), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(VV98J1416 (08)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

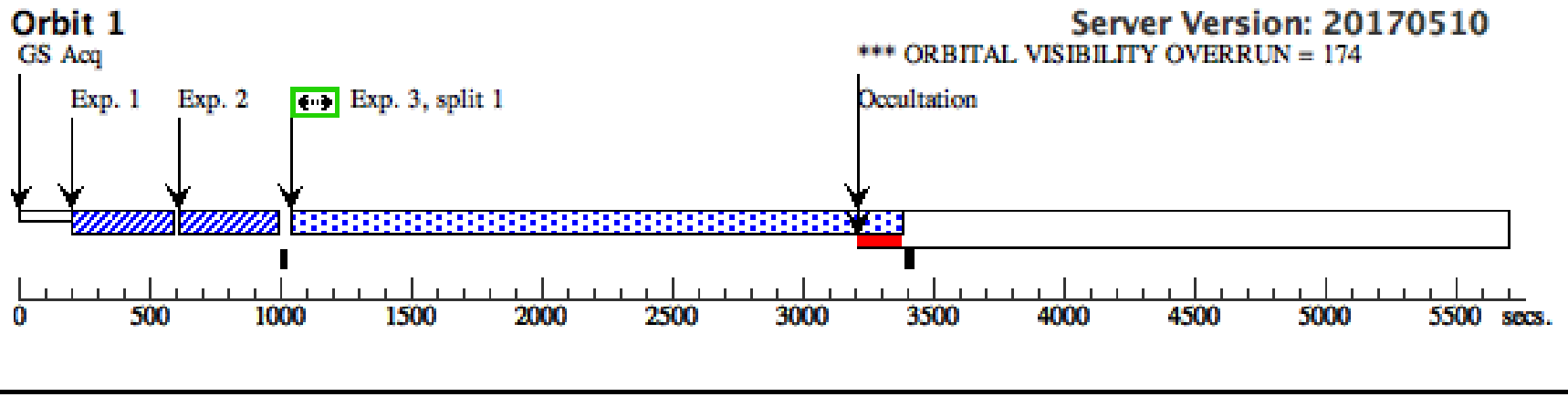
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	VV98-J141628.6+124214	RA: 14 16 28.6563 (214.1194013d) Dec: +12 42 13.58 (12.70377d) Equinox: J2000	Redshift: 0.33476	V=17.54 m(fuv)=18.23	Reference Frame: ICRS

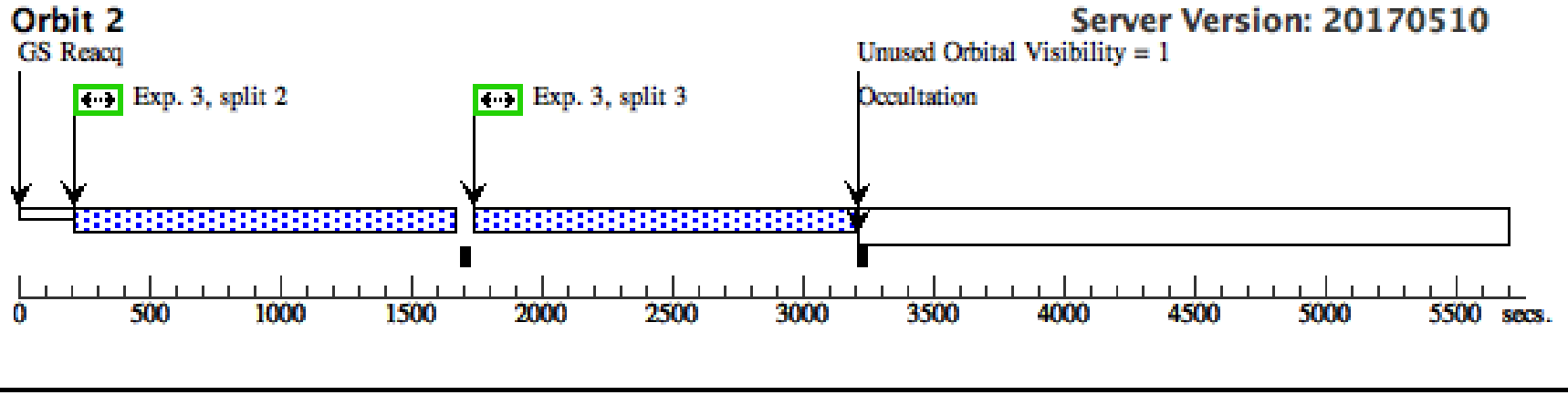
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

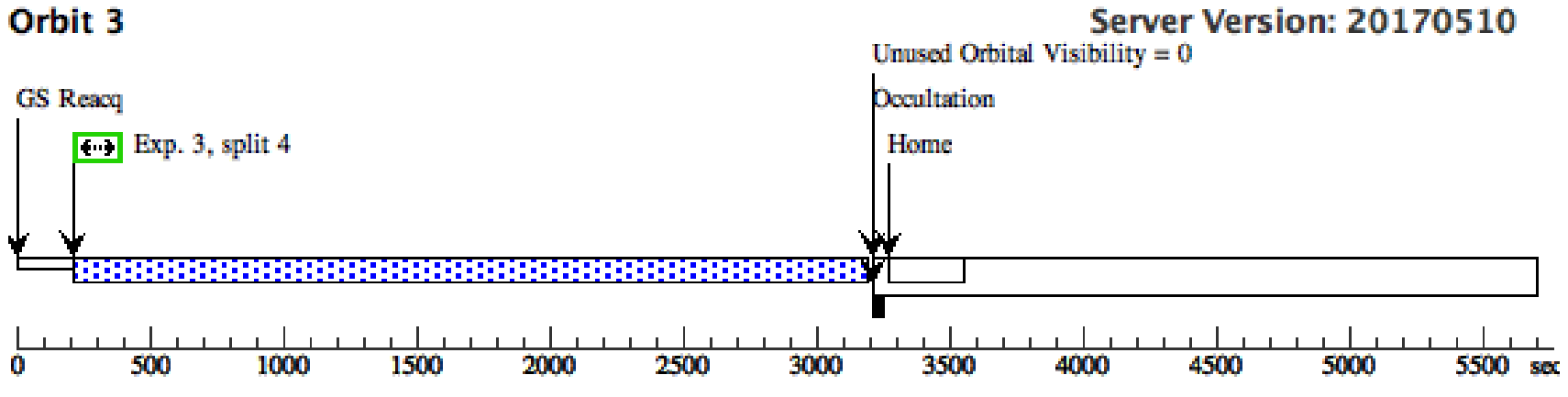
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826020)	(8) VV98-J141628.6+124214	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				57.1 Secs (57.1 Secs)	
								[==>]	***[1]***
2	(COS.sa.826019)	(8) VV98-J141628.6+124214	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			46.6 Secs (46.6 Secs)	
								[==>]	***[1]***
3	(COS.sp.826156)	(8) VV98-J141628.6+124214	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=11000; FLASH=YES; FP-POS=ALL			1200 Secs (7964 Secs)	
								[==>2216.0 Secs (Split 1)]	***[1]***
								[==>1408.0 Secs (Split 2)] *[==>1408.0 Secs (Split 3)]*	***[2]***
								[==>2932.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 14729, VV98J1504 (09), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(VV98J1504 (09)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

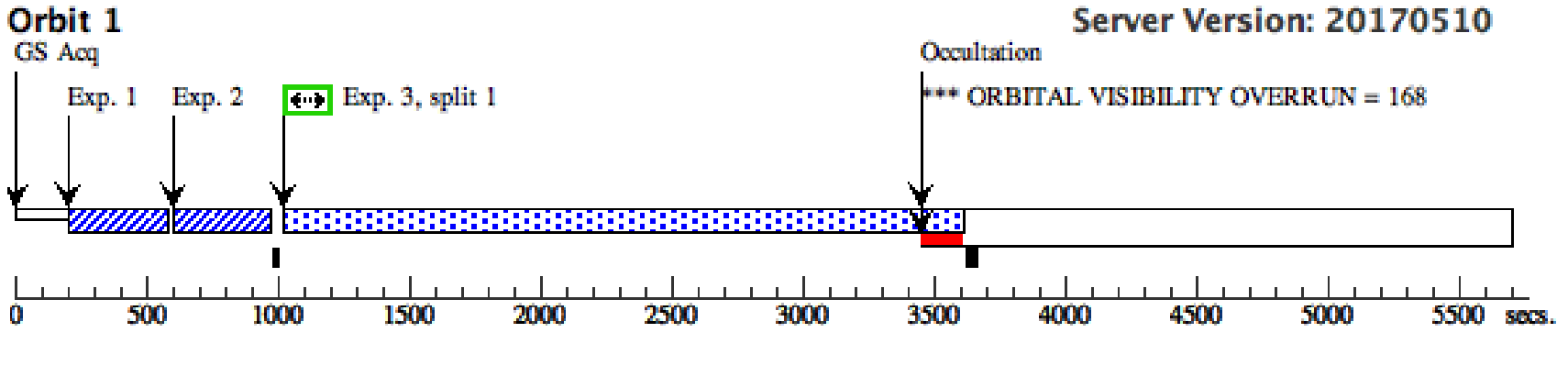
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	VV98-J150455.5+564920	RA: 15 04 55.5624 (226.2315100d) Dec: +56 49 20.30 (56.82231d) Equinox: J2000	Redshift: 0.35897	V=17.2 m(fuv)=18.24	Reference Frame: ICRS

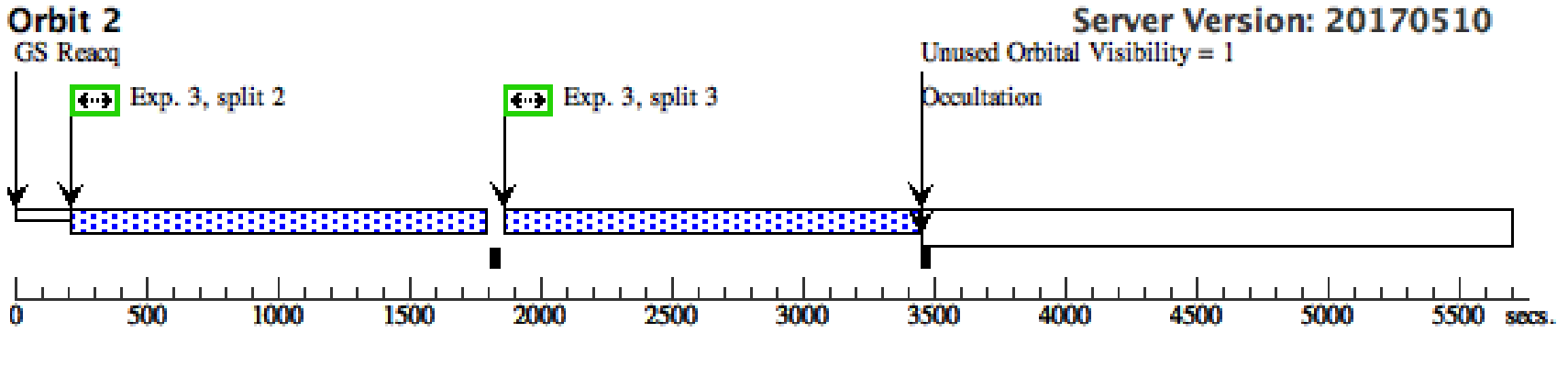
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

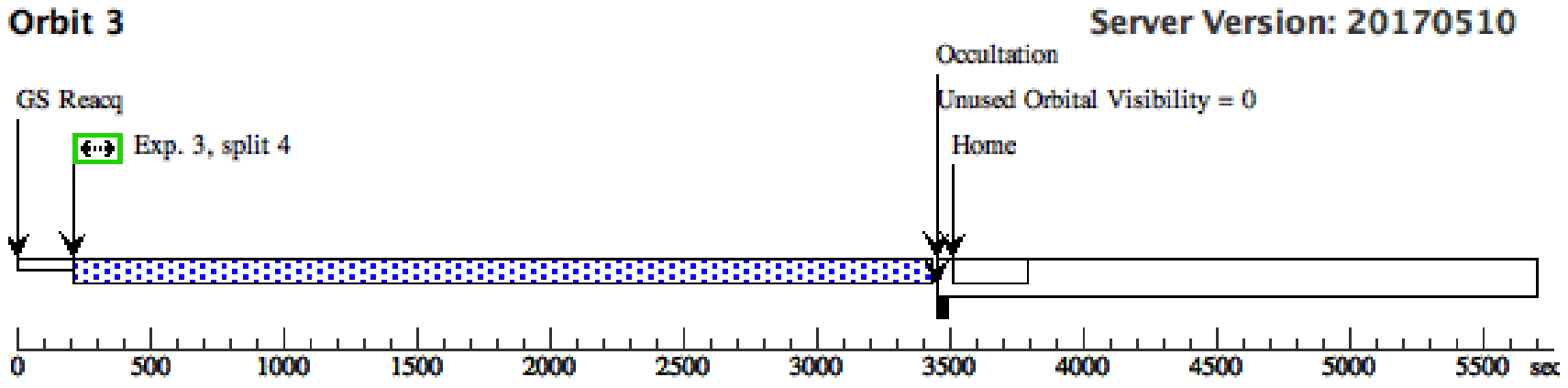
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826022)	(9) VV98-J150455.5+564920	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				53.8 Secs (53.8 Secs)	
								[==>]	***[1]***
2	(COS.sa.826021)	(9) VV98-J150455.5+564920	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			44.1 Secs (44.1 Secs)	
								[==>]	***[1]***
3	(COS.sp.826160)	(9) VV98-J150455.5+564920	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=11000; FLASH=YES; FP-POS=ALL			1200 Secs (8694 Secs)	
								[==>2470.0 Secs (Split 1)]	***[1]***
								[==>1527.0 Secs (Split 2)] *[==>1527.0 Secs (Split 3)]*	***[2]***
								[==>3170.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 14729, 4C0538 (10), completed Sat Jun 03 01:04:47 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(4C0538 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

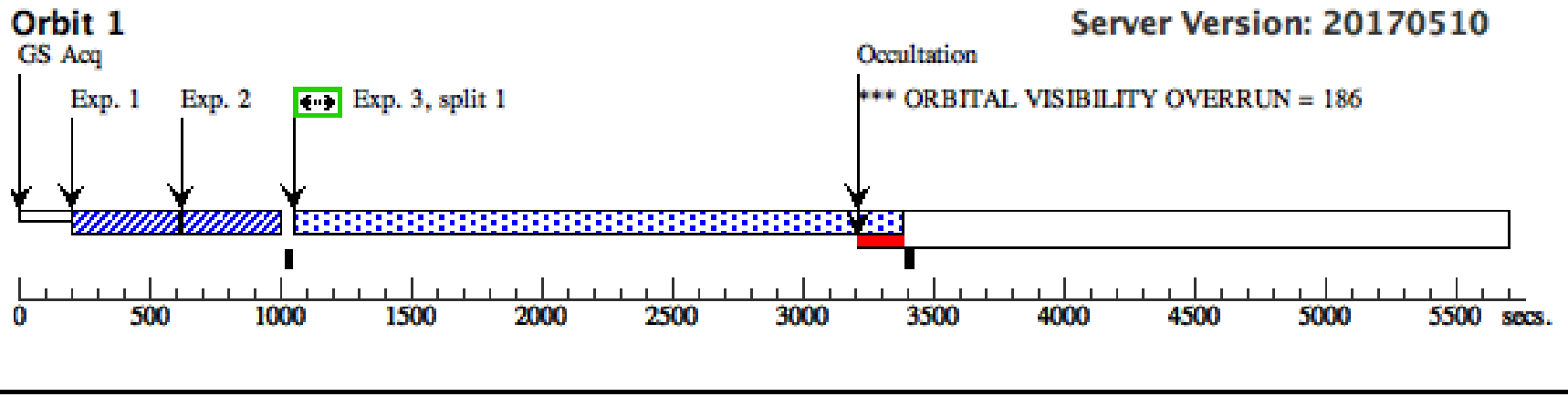
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	4C-05.38	RA: 09 14 1.7684 (138.5073683d) Dec: +05 07 50.50 (5.13069d) Equinox: J2000	Redshift: 0.30134	V=17.54 m(fuv)=18.25	Reference Frame: ICRS

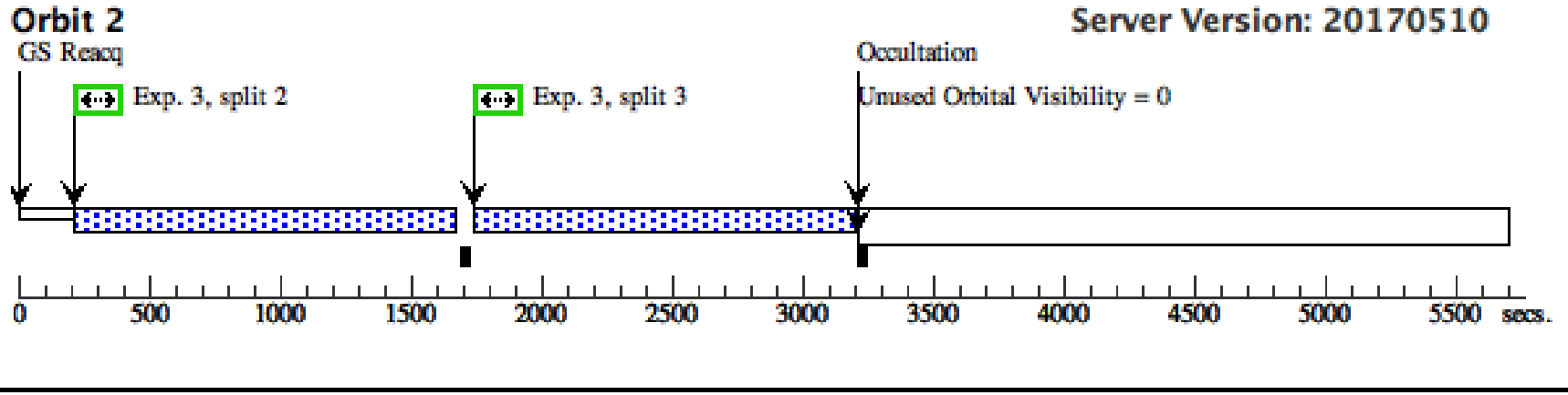
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

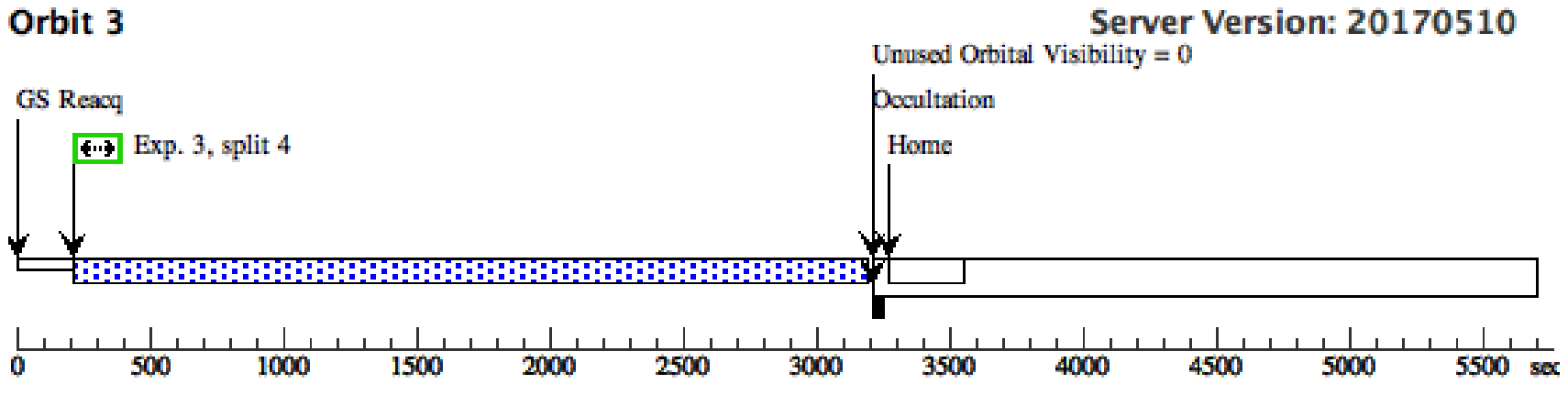
Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826 024)	(10) 4C-05.38	COS/FUV, ACQ/PEAKXD, PSA	G160M 1577 A				63.1 Secs (63.1 Secs)	
								[==>]	***[1]***
2	(COS.sa.826 023)	(10) 4C-05.38	COS/FUV, ACQ/PEAKD, PSA	G160M 1577 A	STEP-SIZE=0.9			46.1 Secs (46.1 Secs)	
								[==>]	***[1]***
3	(COS.sp.826 161)	(10) 4C-05.38	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=11 000; FLASH=YES; FP-POS=ALL			1200 Secs (7946 Secs)	
								[==>2207.0 Secs (Split 1)]	***[1]***
								[==>1406.0 Secs (Split 2)] *[==>1406.0 Secs (Split 3)]*	***[2]***
								[==>2927.0 Secs (Split 4)]	***[3]***

Orbit Structure







Visit

Proposal 14729, NPM1G08 (11), completed Sat Jun 03 01:04:48 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Diagnostics

(NPM1G08 (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

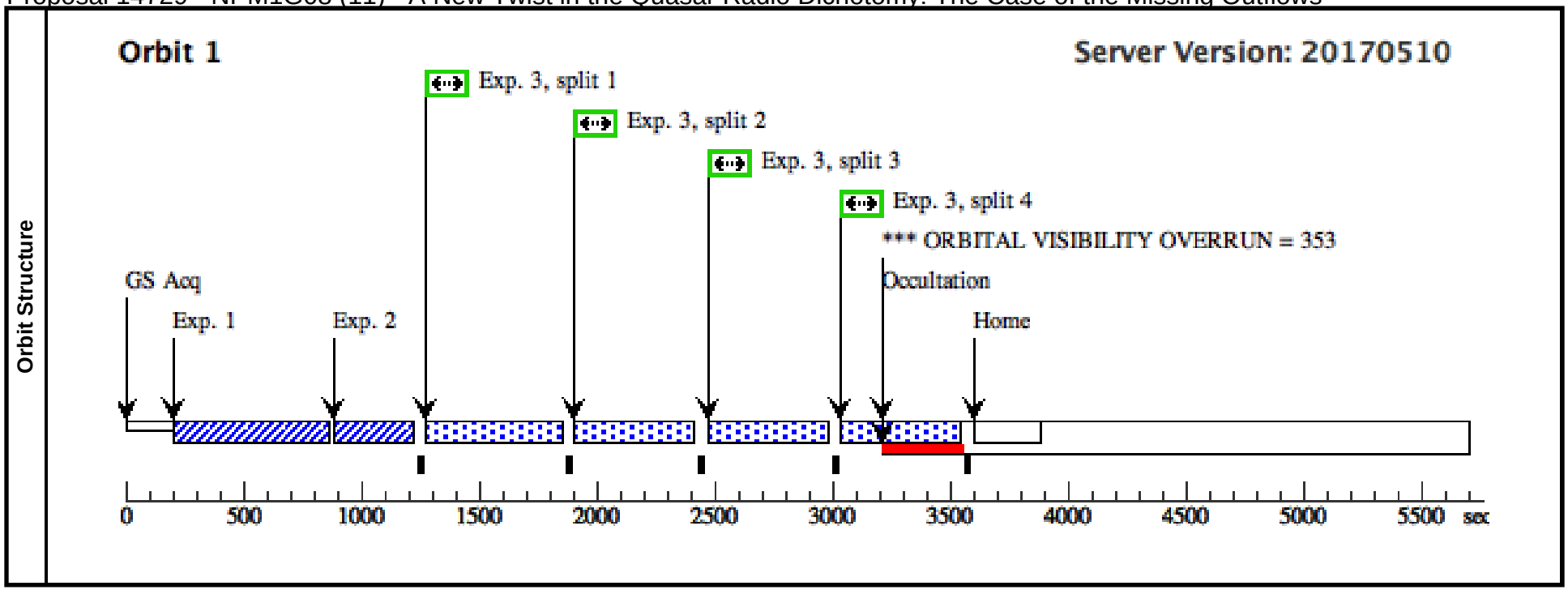
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	NPM1G-+08.0242	RA: 11 07 17.7732 (166.8240550d) Dec: +08 04 38.28 (8.07730d) Equinox: J2000	Redshift: 0.20047	V=17.35 m(fuv)=18.30	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826026)	(11) NPM1G-+08.0242	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A				148.0 Secs (148 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826025)	(11) NPM1G-+08.0242	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			39.1 Secs (39.1 Secs) *[==>]*	 ***[1]***
3	(COS.sp.827770)	(11) NPM1G-+08.0242	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=11000; FLASH=YES; FP-POS=ALL			1061 Secs (1840 Secs) *[==>460.0 Secs (Split 1)]* *[==>460.0 Secs (Split 2)]* *[==>460.0 Secs (Split 3)]* *[==>460.0 Secs (Split 4)]*	 ***[1]***


Orbit Structure
Orbit 1
Server Version: 20170510
Exp. 3, split 1
Exp. 3, split 2
Exp. 3, split 3
Exp. 3, split 4
*** ORBITAL VISIBILITY OVERRUN = 353
GS Acq
Exp. 1
Exp. 2
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 14729, NPM1G08 (51), implementation Sat Jun 03 01:04:48 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	NPM1G-+08.0242	RA: 11 07 17.7732 (166.8240550d) Dec: +08 04 38.28 (8.07730d) Equinox: J2000	Redshift: 0.20047	V=17.35 m(fuv)=18.30	Reference Frame: ICRS

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	(COS.sa.826026)	(11) NPM1G-+08.0242	COS/FUV, ACQ/PEAKXD, PSA	G160M 1600 A	NUM-POS=1			148.0 Secs (148 Secs) *[==>]*	 ***[1]***
2	(COS.sa.826025)	(11) NPM1G-+08.0242	COS/FUV, ACQ/PEAKD, PSA	G160M 1600 A	STEP-SIZE=0.9			39.1 Secs (39.1 Secs) *[==>]*	 ***[1]***
3	(COS.sp.827770)	(11) NPM1G-+08.0242	COS/FUV, TIME-TAG, PSA	G160M 1600 A	BUFFER-TIME=11000; FLASH=YES; FP-POS=ALL			1061 Secs (1840 Secs) *[==>460.0 Secs (Split 1)]* *[==>460.0 Secs (Split 2)]* *[==>460.0 Secs (Split 3)]* *[==>460.0 Secs (Split 4)]*	 ***[1]***

Orbit Structure