11692 - The LMC as a QSO Absorption Line System

Cycle: 17, 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	(8) HD33133	STIS/CCD STIS/FUV-MAMA	1	16-Mar-2010 21:12:01.0	yes
02	(1) RBS542	COS/FUV	1	16-Mar-2010 21:12:07.0	yes
03	(4) PKS0558-504	COS/FUV	1	16-Mar-2010 21:12:12.0	yes
04	(2) RBS563	COS/FUV	3	16-Mar-2010 21:12:18.0	yes
05	(7) CAL-F	COS/FUV	3	16-Mar-2010 21:12:23.0	yes
06	(3) PKS0552-640	COS/FUV COS/NUV	3	16-Mar-2010 21:12:28.0	yes
07	(3) PKS0552-640	COS/FUV COS/NUV	3	16-Mar-2010 21:12:34.0	yes
08	(5) IRAS-L06229-6434	COS/FUV COS/NUV	3	16-Mar-2010 21:12:39.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
09	(5) IRAS-L06229-6434	COS/FUV COS/NUV	3	16-Mar-2010 21:12:43.0	yes
10	(6) PKS0637-752	COS/FUV COS/NUV	3	16-Mar-2010 21:12:47.0	yes
11	(6) PKS0637-752	COS/FUV COS/NUV	3	16-Mar-2010 21:12:51.0	yes
55	(9) CAL-F-COPY	COS/FUV	3	16-Mar-2010 21:12:56.0	yes
58	(10) IRAS-L06229-6434-COPY	COS/FUV COS/NUV	3	16-Mar-2010 21:13:01.0	yes

33 Total Orbits Used

ABSTRACT

We propose to obtain high resolution, high signal-to-noise observations of QSOs behind the Large Magellanic Clouds. These QSOs are situated beyond the star forming disk of the galaxy, giving us the opportunity to study the distribution of metals and energy in regions lacking significant star formation. In particular, we will derive the metallicities and study the ionization characteristics of LMC gas at impact parameters 3-17 kpc. We will compare our results with high-z QSO absorption line systems.

OBSERVING DESCRIPTION

We will obtain high S/N spectroscopy of seven AGNs and the WR star HD 33133 to study gas associated with the LMC. All the AGNs have fluxes drawn from FUSE and/or IUE spectroscopy, ranging from 5e-15 to 3e-14, while HD 33133 has a flux 1e-12 at 1400 Ang from IUE spectroscopy (and confirmed by FUSE). We will obtain full coverage of the FUV spectral region at S/N~20 for all objects. Such high S/N is required to detect low columns of metals, including from the outflowing wind of the LMC (e.g., Lehner & Howk 2007). We will study absorption from N I, O I, C II, C II*, S II, Si II, Fe II, Si III, Si IV, C IV, N V, and other ions.

These include diagnostics of collisionally ionized (Si IV, C IV, N V) and photoionized gas (Si III), probes of abundances and ionization fractions (e.g., comparing O I and Si II), and electron density (C II*). The AGN observations with COS will be done with both the G130M and G160M gratings to get nearly complete coverage of the FUV spectral range. To achieve S/N~20 required 1 to 6 orbits. HD 33133 is too bright for COS, and we will use STIS with the E140M grating and 0.2x0.2 arcsec aperture. In one orbit (~2.6 ksec) we will obtain a full FUV spectrum of the star at S/N~20. All targets have orbital visibilites of 59 minutes. If STIS cannot be repaired, we will ask permission to replace HD 33133 with the high-mass X-ray binary CAL E, which is a factor of 10 fainter, for COS observations.

Visit

Proposal 11692, Visit 01, completed Wed Mar 17 01:13:05 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: STIS/FUV-MAMA, STIS/CCD

Special Requirements: (none)

Comments: STIS observations of WR star HD 33133 (GSC 0888900352).

Diagnostics

(Visit 01) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

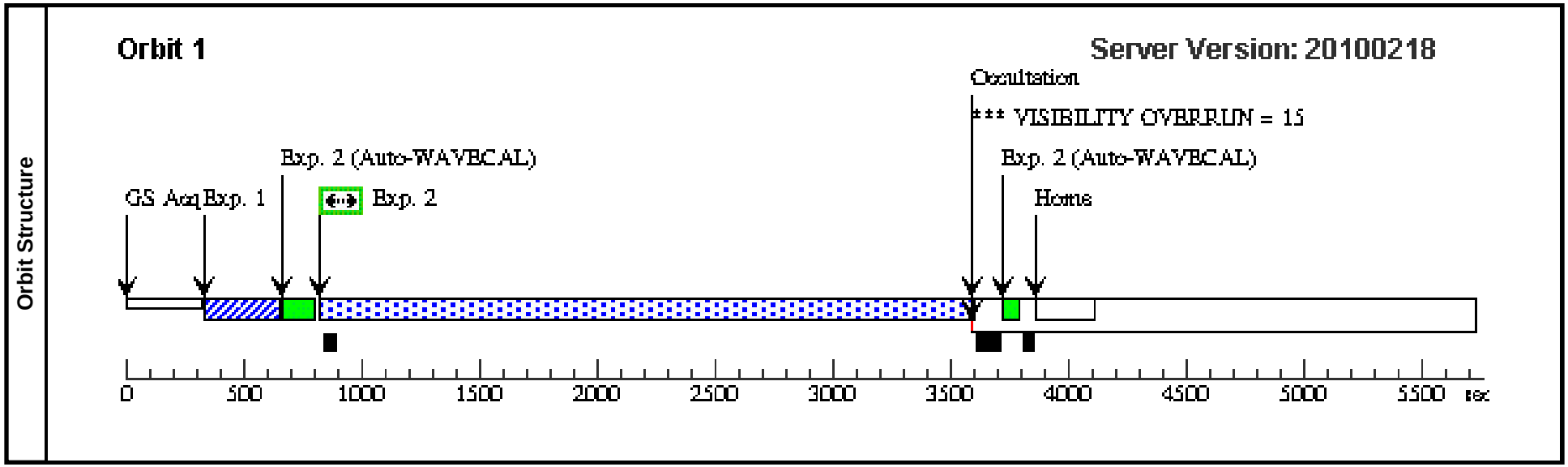
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	HD33133	RA: 05 03 8.9200 (75.7871667d) Dec: -66 40 57.50 (-66.68264d) Equinox: J2000	Redshift: 0	V=12.706 F(1400 A) = 1e-12	Reference Frame: ICRS

Comments: WN8 star
ETC Simulation: STIS77081

This WN8 star has IUE and FUSE fluxes consistent with 1e-14 across the STIS band. No strong variability is seen over a decade of IUE observations.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) HD33133	STIS/CCD, ACQ, F25ND3	MIRROR				7 Secs *[==>]*	 ***[1]***
2		(8) HD33133	STIS/FUV-MAMA, ACCUM, 0.2X0.2	E140M 1425 A				2600 Secs *[==>2764.0 Secs]*	 ***[1]***


Orbit Structure
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Server Version: 20100218
Occultation
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Exp. 2 (Auto-WAVECAL)
GS Acq
Exp. 1
Exp. 2
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 02, implementation Wed Mar 17 01:13:06 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: RBS542 -- COS Observations with G130M/G160M.

IUE flux 3e-14 @ 1500 Ang in 1994.
FUSE fluxes @ 1165 Ang between 3 and 6e-14 between 2007 and 2008.

Some variability, but the object represents no safety concerns for FUV detector. See ETC COS75436/COS75437 for the brightest fluxes. The fluxes quoted in our proposal (3e-14) are COS74858/COS74860.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	RBS542 Alt Name1: RXJ0426.0-5712 Alt Name2: 1H0419-577	RA: 04 26 0.7000 (66.5029167d) Dec: -57 12 1.80 (-57.20050d) Equinox: J2000	Redshift: 0.104	V=15.1 F(1500 A) = 3e-14	Reference Frame: ICRS

Comments: Sy1 Galaxy; IUE flux.

IUE flux 3e-14 @ 1500 Ang in 1994.
FAUST consistent with this.
FUSE fluxes @ 1165 Ang between 3 and 6e-14 between 2007 and 2008.

Some variability, but the object represents no safety concerns for FUV detector. See ETC COS75436/COS75437 for the brightest fluxes. The fluxes quoted in our proposal (3e-14) are COS74858/COS74860.

We have used FUV dispersed light acquisition in case this object brightens significantly.

****** UPDATED:*

After adjusting spectral elements, new ETC simulations for this object are COS.A286756/COS.A286765/COS.A286773/COS.A286780 based on the nominal fluxes. Acquisition simulations are COS.A286888.

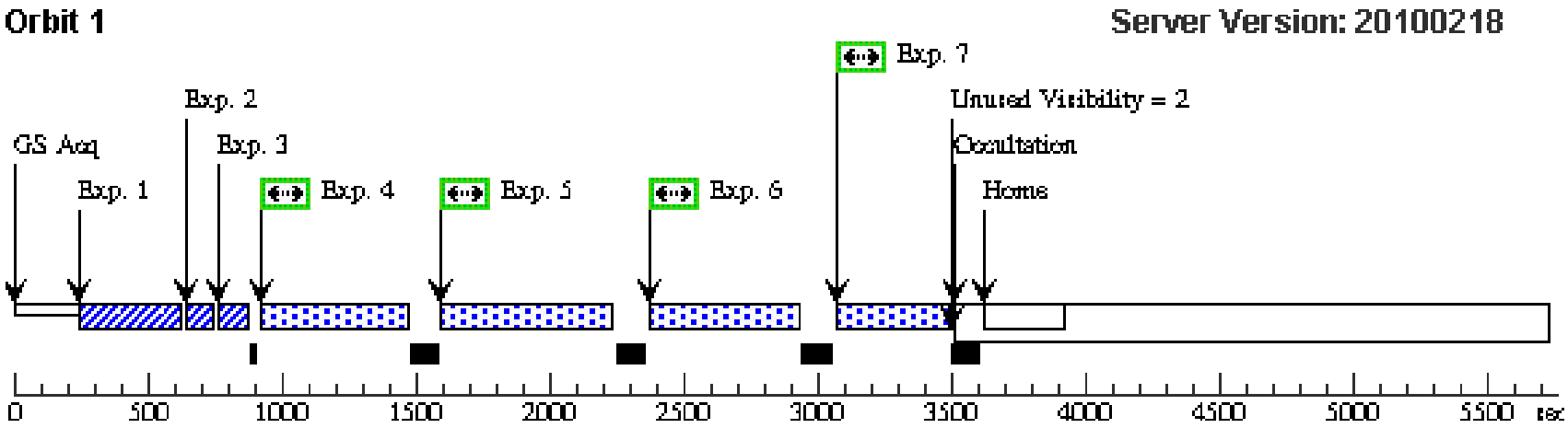
***NOTE: The BOT flags this target as a potential safety hazard based on assuming an O5 spectral type. Our simulations based on observed UV fluxes and using a composite QSO spectrum and normalized flux confirm there is no safety risk from this object, with a global count rate <3400 (~1900, ~1500 in segments A, B) assuming the largest fluxes. Doubling the largest observed fluxes would only give ~6400 global counts. The nominal fluxes give count rates <2300 total.*

The total acquisition count rates are ~1600 for the base flux. Assuming twice the maximum observed flux gives only ~5100 total counts (COS.A286889).

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	RBS542-search	(1) RBS542	COS/FUV, ACQ/SEARCH, PSA	G130M 1291 A	CENTER=FLUX-WT; SCAN-SIZE=3			2 Secs *[==>]*	 ***[1]***
2	RBS542-peakxd	(1) RBS542	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				2 Secs *[==>]*	 ***[1]***
3	RBS542-peakd	(1) RBS542	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	NUM-POS=3; STEP-SIZE=1.2; CENTER=DEF			2 Secs *[==>]*	 ***[1]***
4		(1) RBS542	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FLASH=YES; BUFFER-TIME=500			500 Secs *[==>497.0 Secs]*	 ***[1]***
5		(1) RBS542	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FLASH=YES; BUFFER-TIME=523			523 Secs *[==>520.0 Secs]*	 ***[1]***
6		(1) RBS542	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FLASH=YES; BUFFER-TIME=368			400 Secs *[==>397.0 Secs]*	 ***[1]***
7		(1) RBS542	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FLASH=YES; BUFFER-TIME=300			300 Secs *[==>297.0 Secs]*	 ***[1]***

Orbit Structure



Visit

Proposal 11692, Visit 03, implementation Wed Mar 17 01:13:06 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: PKS0558-504 -- COS Observations with G130M/G160M.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	PKS0558-504	RA: 05 59 47.3900 (89.9474583d) Dec: -50 26 51.90 (-50.44775d) Equinox: J2000	Redshift: 0.137	V=14.97 F(1550 A) = 2.5e-14	Reference Frame: ICRS

Comments: Sy1 Galaxy.
ETC Simulations: COS74881/COS74884 (G130M/G160M)

IUE flux gives 2.5e-14 at 1550 Ang.

2 FUSE epochs, 2 IUE epochs, 1 HUT all consistent (15 years diff). Corbin & Smith (2000) show <~0.2 mag variations in optical over 4 epochs.

Nonetheless, we have used FUV dispersed light acquisition in case this object brightens significantly.

******UPDATED:*

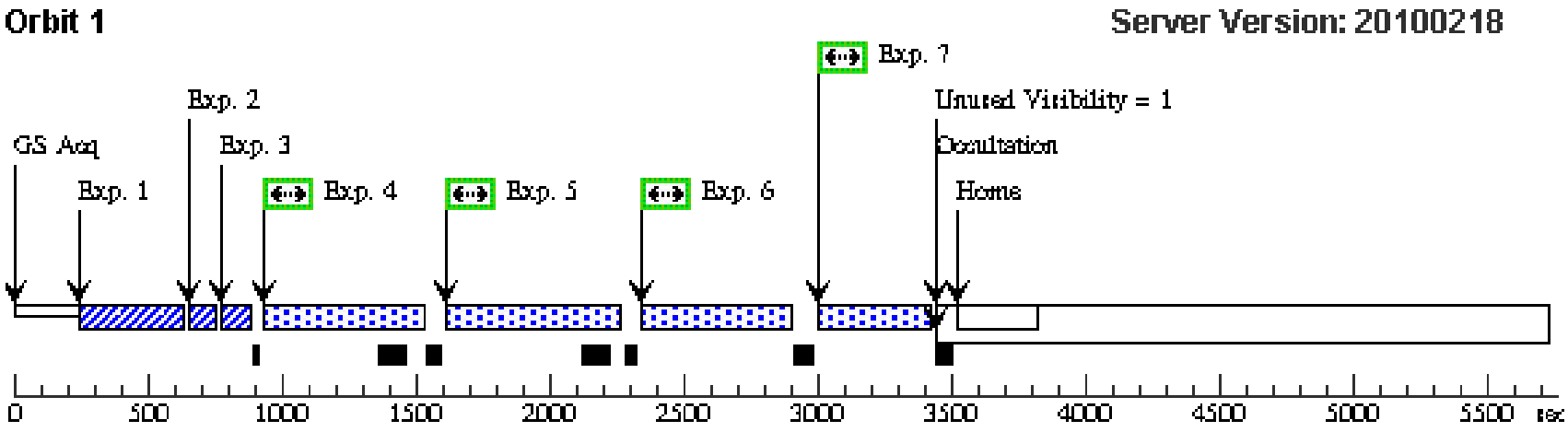
ETC simulations for the settings used here are COS.A286891/COS.A286893 and COS.A286895/COS.A286896 for G130M and G160M. The acquisition calculations are COS.A286899.

The total count rates are <~2000 for all settings. The BOT identifies the target QSO as an unknown object; there are no safety issues associated with it.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PKS0558-search	(4) PKS0558-504	COS/FUV, ACQ/SEARCH, PSA	G130M 1291 A	CENTER=FLUX-WT; SCAN-SIZE=3			3 Secs *[==>]*	 ***[1]***
2	PKS0558-peakxd	(4) PKS0558-504	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				3 Secs *[==>]*	 ***[1]***
3	PKS0558-peakd	(4) PKS0558-504	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=FLUX-WT; STEP-SIZE=1.2; NUM-POS=3			3 Secs *[==>]*	 ***[1]***
4		(4) PKS0558-504	COS/FUV, TIME-TAG, PSA	G130M 1291 A	FLASH=YES; BUFFER-TIME=400			550 Secs *[==>]*	 ***[1]***
5		(4) PKS0558-504	COS/FUV, TIME-TAG, PSA	G130M 1300 A	FLASH=YES; BUFFER-TIME=400			525 Secs *[==>]*	 ***[1]***
6		(4) PKS0558-504	COS/FUV, TIME-TAG, PSA	G160M 1577 A	FLASH=YES; BUFFER-TIME=600			400 Secs *[==>]*	 ***[1]***
7		(4) PKS0558-504	COS/FUV, TIME-TAG, PSA	G160M 1589 A	FLASH=YES; BUFFER-TIME=600			300 Secs *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 11692, Visit 04, implementation Wed Mar 17 01:13:07 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: RBS563 -- COS Observations with G130M/G160M.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	RBS563	RA: 04 38 29.1700 (69.6215417d)	Redshift: 0.069	V=15.70	Reference Frame: ICRS
	Alt Name1: RXJ0438.5-6148	Dec: -61 47 58.90 (-61.79969d)		F(1175 A) = 1e-14	
		Equinox: J2000			

Comments: Sy1 Galaxy; FUSE flux.

We have used FUV dispersed light acquisition in case this object brightens significantly.

ETC Simulations: COS74875/COS74877 (G130M/G160M)

******UPDATED:*

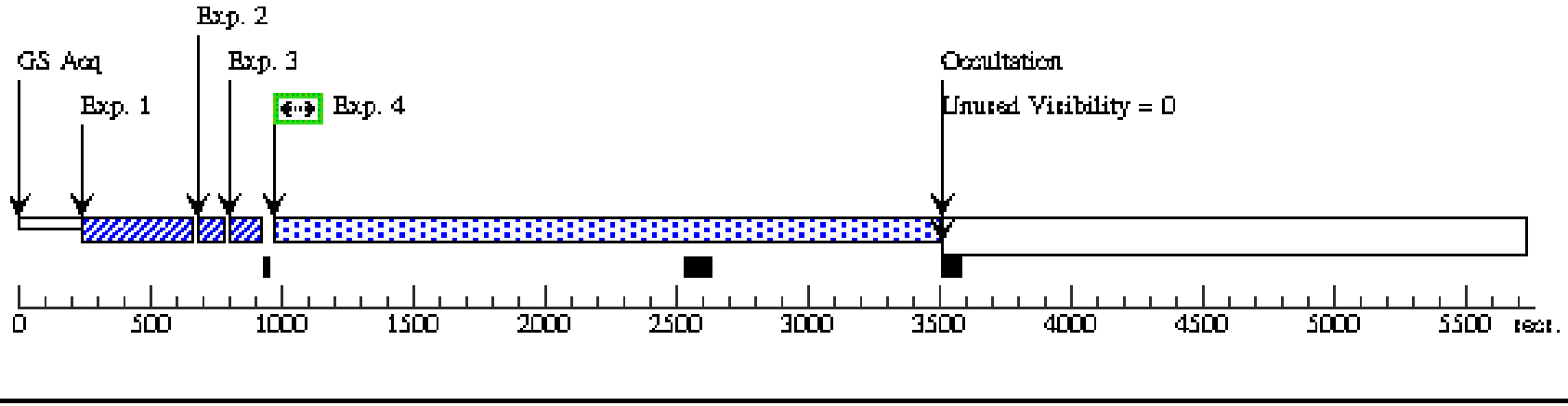
New ETC simulations are COS.A286900/COS.A286901 and COS.A286902/COS.A286903 for G130M and G160M. Count rates <900 for all observations. Acquisition ETC calculations are COS.A286907.

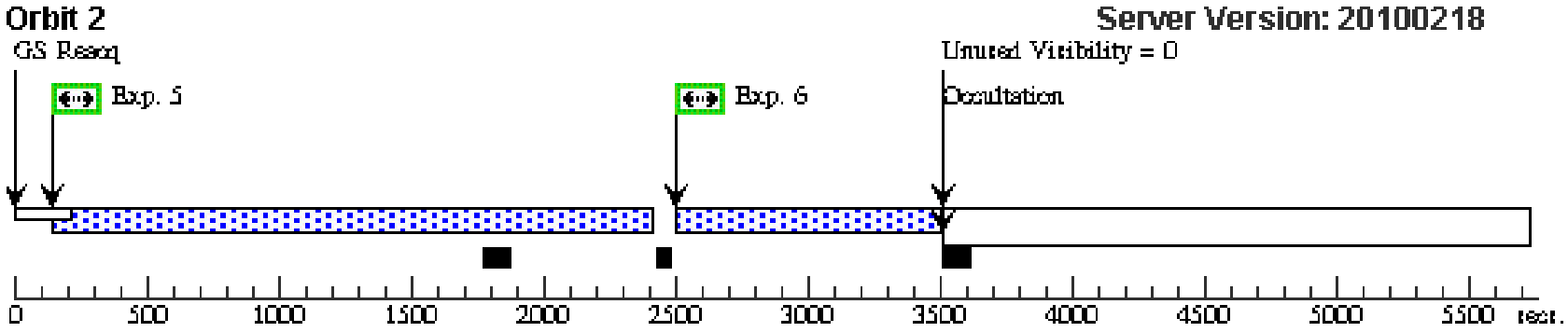
***NOTE: The BOT lists one unknown object, which is the target itself.*

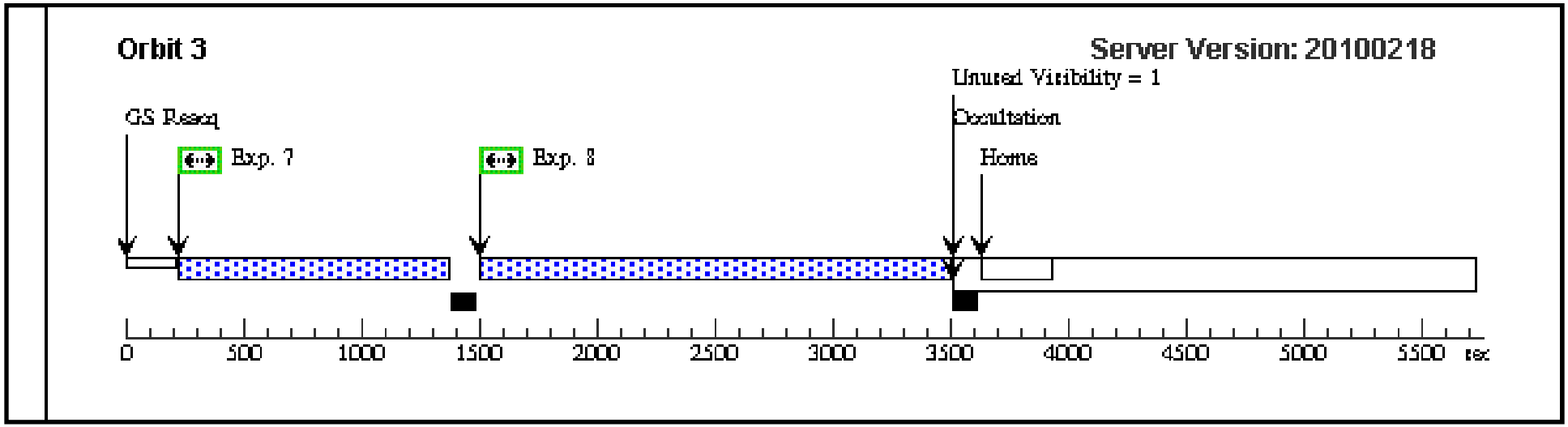
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	RBS563-search	(2) RBS563	COS/FUV, ACQ/SEARCH, PSA	G130M 1291 A	CENTER=FLUX-WT; SCAN-SIZE=3			6 Secs *[==>]*	 ***[1]***
2	RBS563-peakxd	(2) RBS563	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				6 Secs *[==>]*	 ***[1]***
3	RBS563-peakd	(2) RBS563	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	STEP-SIZE=1.2; NUM-POS=3; CENTER=DEF			6 Secs *[==>]*	 ***[1]***
4		(2) RBS563	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1526; FLASH=YES			2478 Secs *[==>]*	 ***[1]***
5		(2) RBS563	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1526; FLASH=YES			2150 Secs *[==>]*	 ***[2]***
6		(2) RBS563	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>]*	 ***[2]***
7		(2) RBS563	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=1100; FLASH=YES			1100 Secs *[==>]*	 ***[3]***
8		(2) RBS563	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1875; FLASH=YES			1875 Secs *[==>]*	 ***[3]***

Orbit Structure



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GS Reacq
Exp. 7
Exp. 8
Occultation
Home
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 05, failed Wed Mar 17 01:13:07 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: CAL F -- COS Observations with G130M/G160M.

Diagnostics

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 05) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	CAL-F	RA: 05 03 3.9300 (75.7663750d) Dec: -66 33 45.90 (-66.56275d) Equinox: J2000	Redshift: 0.064	V=16.0 F(1175 A) = 1e-14	Reference Frame: ICRS

Comments: Sy 1 Galaxy
ETC Simulations: COS74873/COS74875 (G130M/G160M)

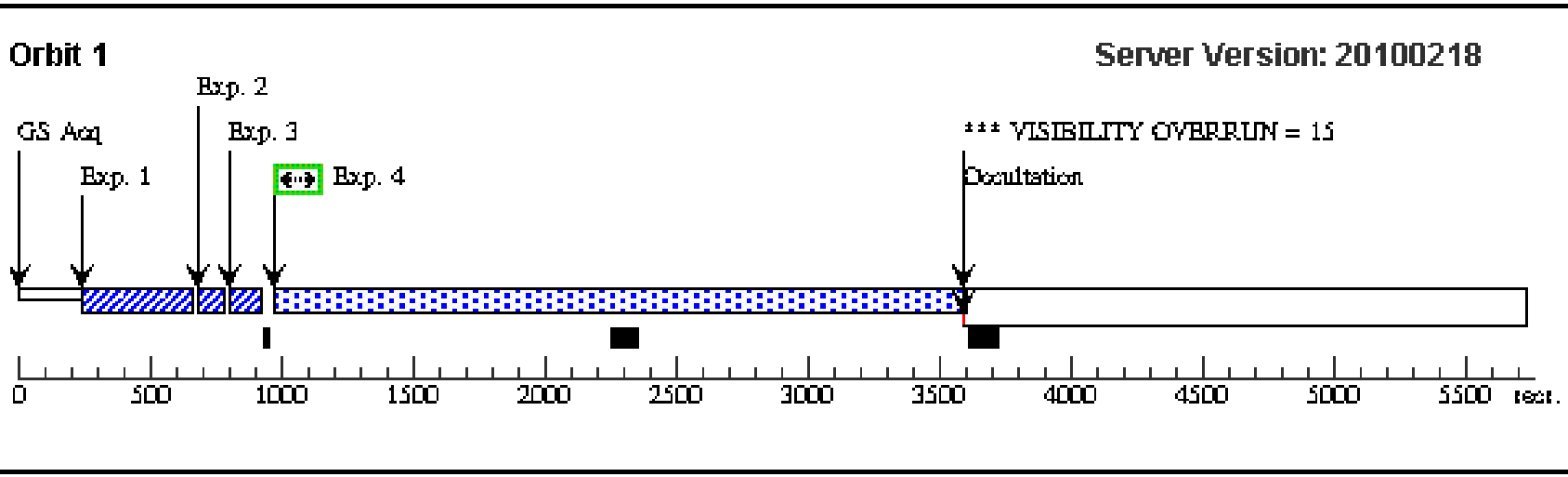
FUSE gives a flux 1e-14 at 1175 Ang (10/2003) and ~6e-15 Ang (07/2007).

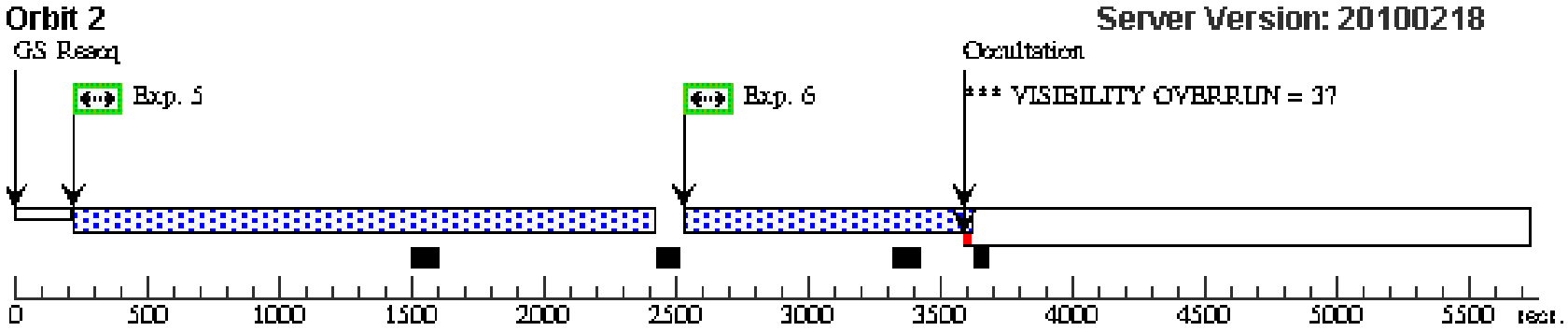
This object poses no safety risk for the FUV detector. We use an FUV dispersed light acquisition in case the flux brightens enough to cause difficulties with NUV imaging acquisitions.

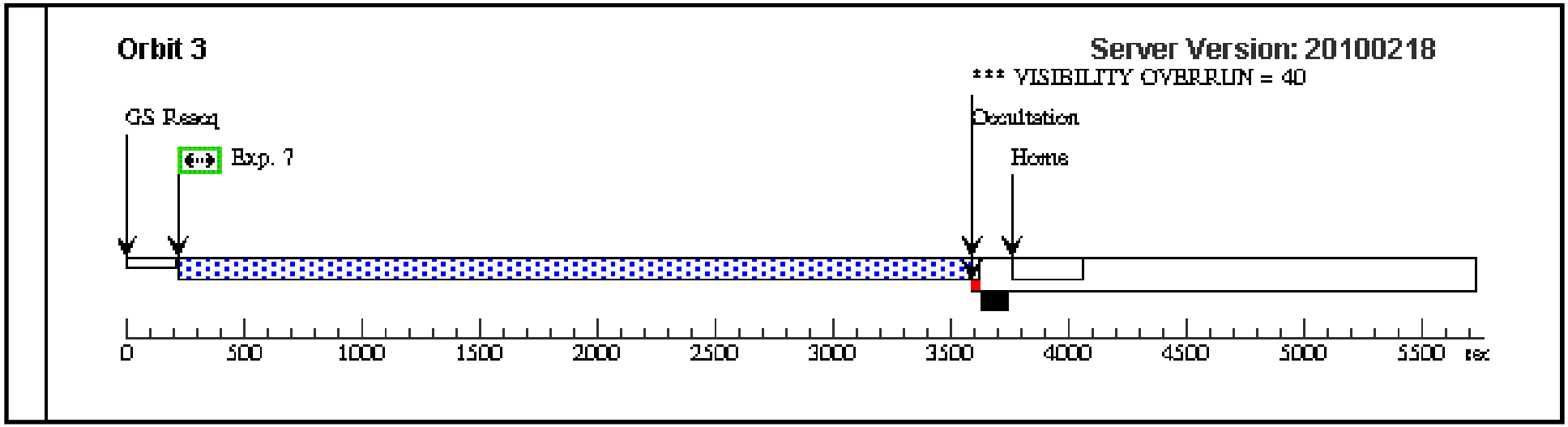
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	CAL_F-search	(7) CAL-F	COS/FUV, ACQ/SEARCH, PSA	G130M 1291 A	SCAN-SIZE=3; CENTER=FLUX-WT			6 Secs *[==>]*	 ***[1]***
2	CAL_F-peakxd	(7) CAL-F	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				6 Secs *[==>]*	 ***[1]***
3	CAL_F-peakd	(7) CAL-F	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=DEF; STEP-SIZE=1.2; NUM-POS=3			6 Secs *[==>]*	 ***[1]***
4		(7) CAL-F	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1250; FLASH=YES			2855 Secs *[==>2576.0 Secs]*	 ***[1]***
5		(7) CAL-F	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1250; FLASH=YES			2150 Secs *[==>]*	 ***[2]***
6		(7) CAL-F	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=650; FLASH=YES			833 Secs *[==>925.0 Secs]*	 ***[2]***
7		(7) CAL-F	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3353.0 Secs]*	 ***[3]***

Orbit Structure



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Server Version: 20100218
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GS Reacq
Exp. 7
Occultation
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1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 06, completed Wed Mar 17 01:13:08 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: PKS0552-640-- COS Observations with G130M/G160M.

Diagnostics

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 06) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	PKS0552-640	RA: 05 52 24.5000 (88.1020833d) Dec: -64 02 10.80 (-64.03633d) Equinox: J2000	Redshift: 0.68	V=15.04 F(1175 A) = 5e-15	Reference Frame: ICRS

Comments: Sy1 Galaxy; FUSE flux

ETC Simulations: COS74894/COS74897 (G130M/G160M)

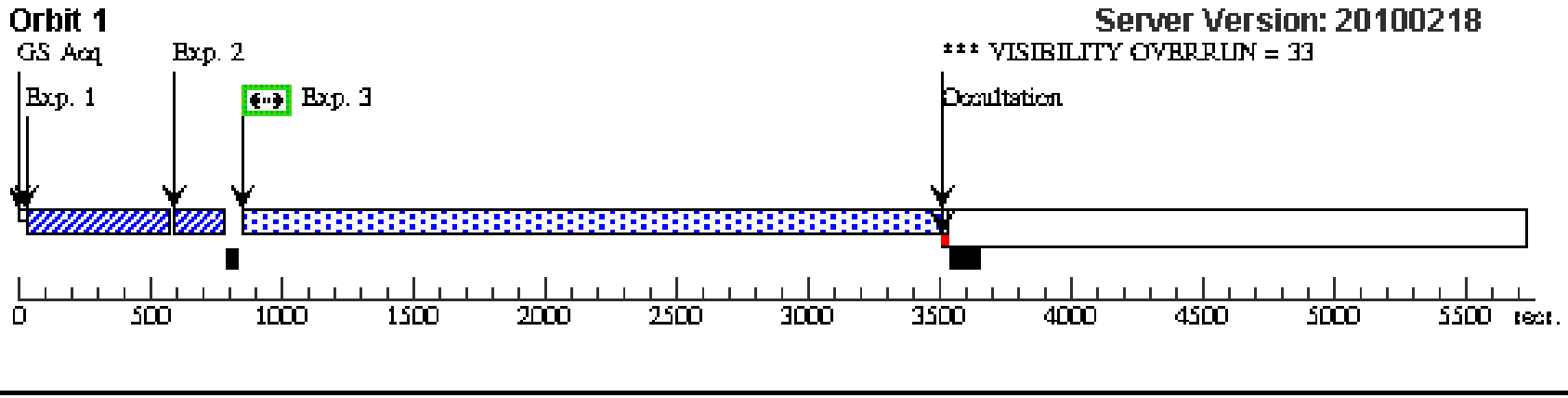
FUSE flux measurement gives 5e-15 at 1175 Ang (09/2003)

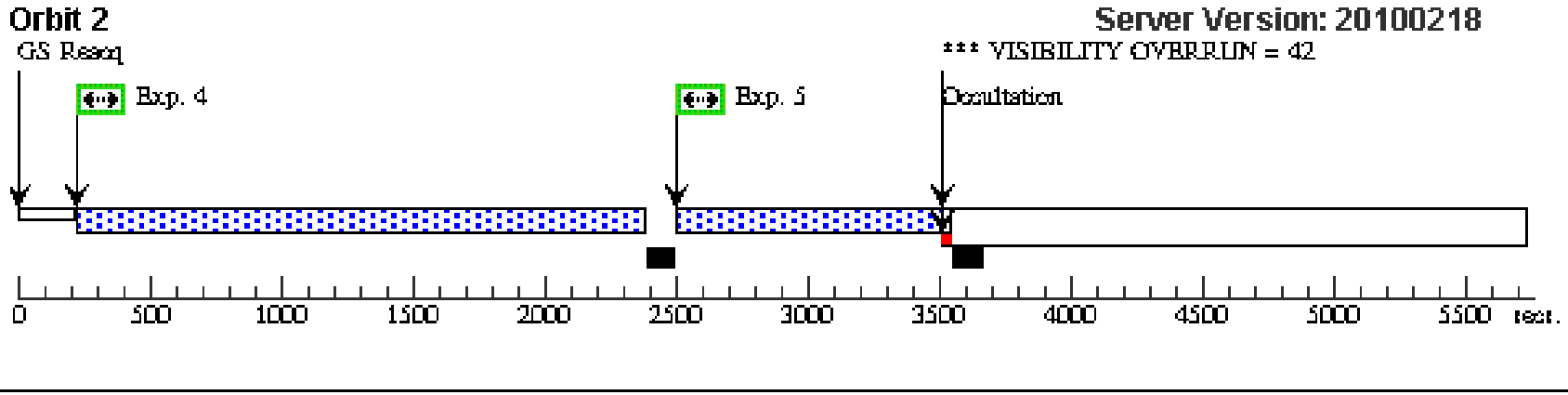
This object poses no safety hazard.

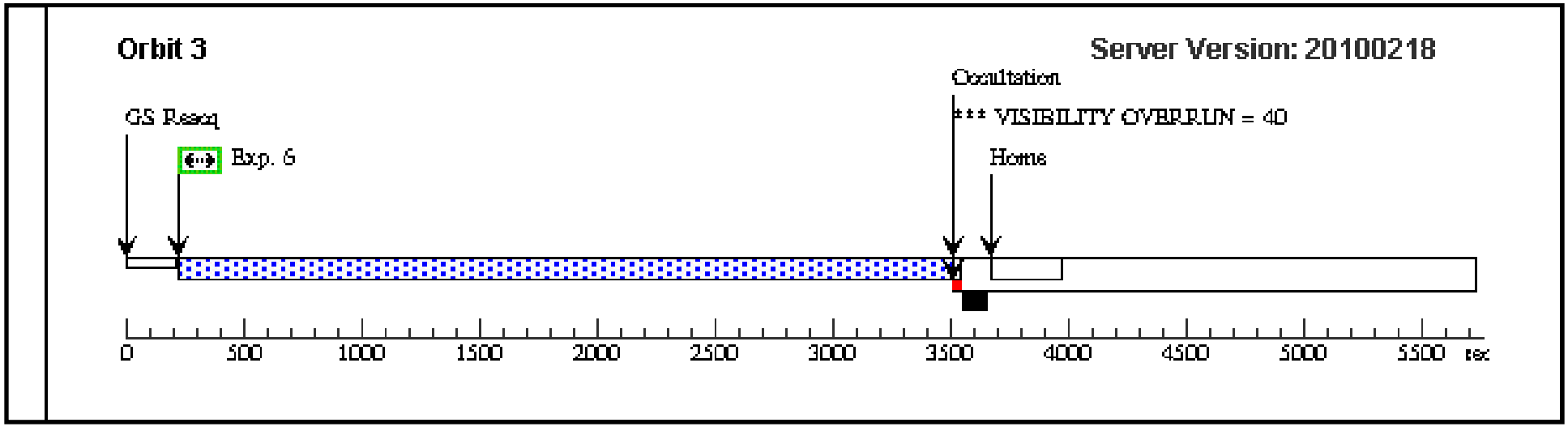
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PKS0552-acq-image	(3) PKS0552-640	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			25 Secs *[==>]*	 ***[1]***
2	PKS0552-acq-image	(3) PKS0552-640	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs *[==>]*	 ***[1]***
3		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2522.0 Secs]*	 ***[1]***
4		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2106.0 Secs]*	 ***[2]***
5		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>872.0 Secs]*	 ***[2]***
6		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3270.0 Secs]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20100218
Occultation
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GS Reacq
Exp. 6
Home
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500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 07, completed Wed Mar 17 01:13:09 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: PKS0552-640-- COS Observations with G130M/G160M.

Diagnostics

(Visit 07) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 07) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 07) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	PKS0552-640	RA: 05 52 24.5000 (88.1020833d) Dec: -64 02 10.80 (-64.03633d) Equinox: J2000	Redshift: 0.68	V=15.04 F(1175 A) = 5e-15	Reference Frame: ICRS

Comments: Sy1 Galaxy; FUSE flux

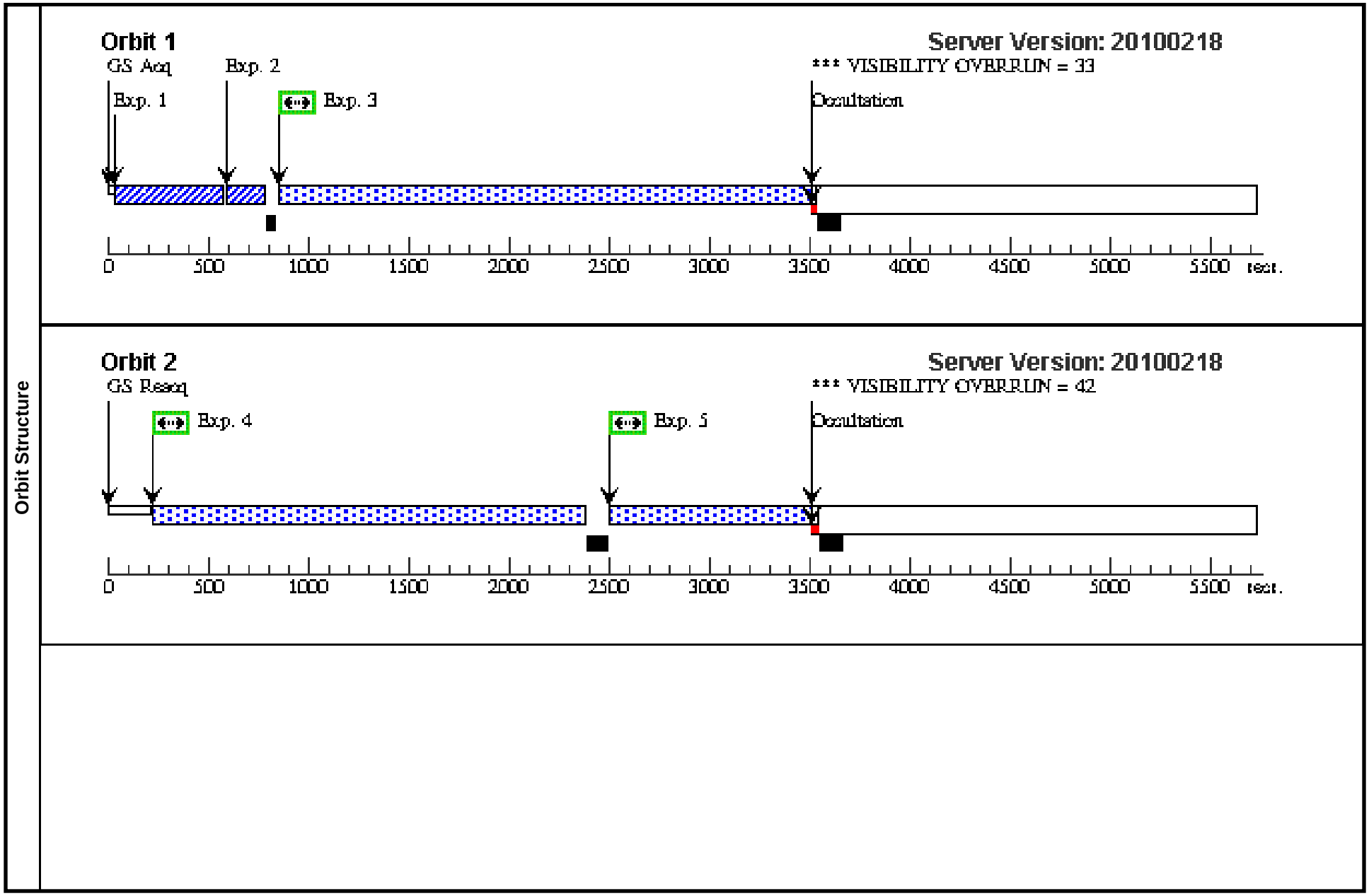
ETC Simulations: COS74894/COS74897 (G130M/G160M)

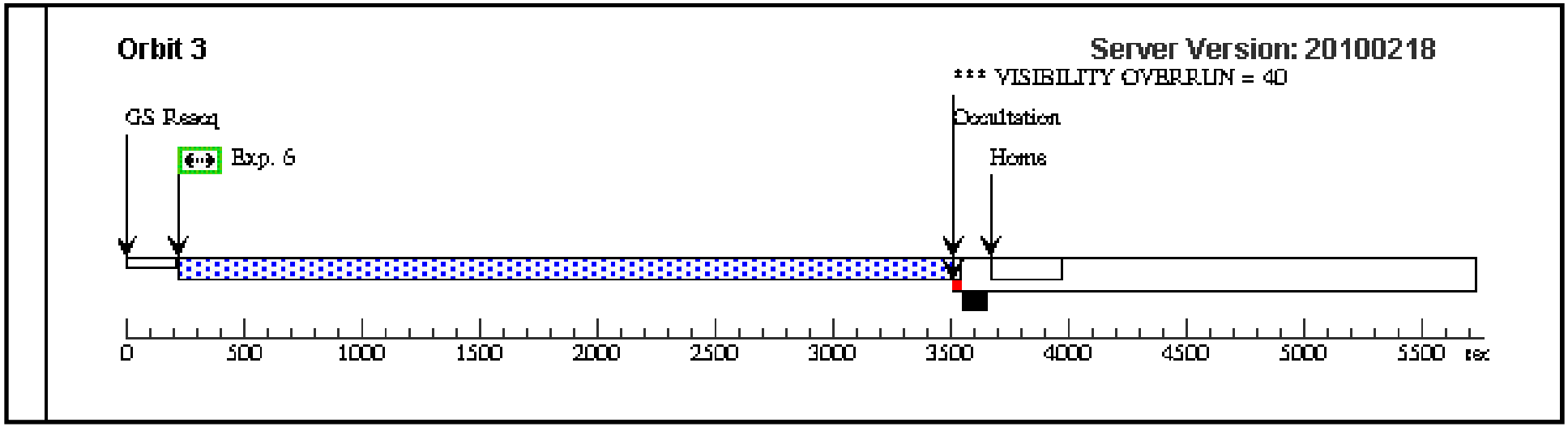
FUSE flux measurement gives 5e-15 at 1175 Ang (09/2003)

This object poses no safety hazard.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PKS0552-acq-image	(3) PKS0552-640	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			25 Secs *[==>]*	 ***[1]***
2	PKS0552-acq-image	(3) PKS0552-640	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs *[==>]*	 ***[1]***
3		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2522.0 Secs]*	 ***[1]***
4		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2106.0 Secs]*	 ***[2]***
5		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>872.0 Secs]*	 ***[2]***
6		(3) PKS0552-640	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3270.0 Secs]*	 ***[3]***


Orbit Structure
Orbit 1
Server Version: 20100218
GS Acq
Exp. 2
*** VISIBILITY OVERRUN = 33
Exp. 1
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20100218
GS Reacq
*** VISIBILITY OVERRUN = 42
Exp. 4
Exp. 5
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.


Orbit 3
Server Version: 20100218
*** VISIBILITY OVERRUN = 40
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 08, failed Wed Mar 17 01:13:10 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: IRAS-L06229-6434 -- COS Observations with G130M/G160M.

Diagnostics

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 08) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IRAS-L06229-6434	RA: 06 23 7.6800 (95.7820000d) Dec: -64 36 20.70 (-64.60575d) Equinox: J2000	Redshift: 0.129	V=14.8 F(1145 A) = 5e-15	Reference Frame: ICRS

Comments: Sy1 Galaxy; FUSE flux.
ETC Simulations: COS74915/COS74918 (G130M/G160M)

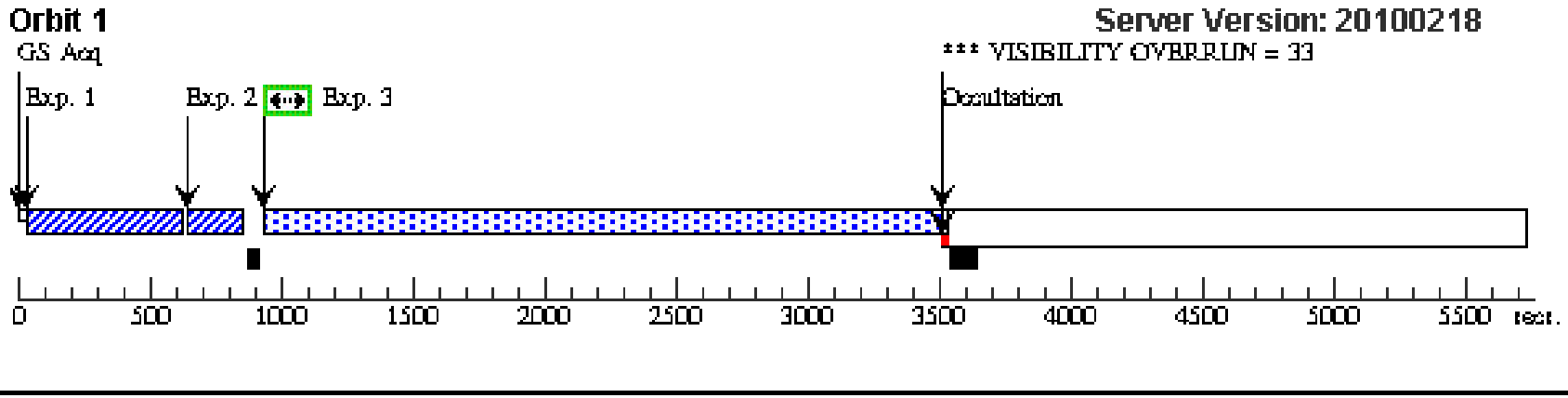
FUSE fluxes are 5e-15 at 1150,1180 Ang taken in 2007.

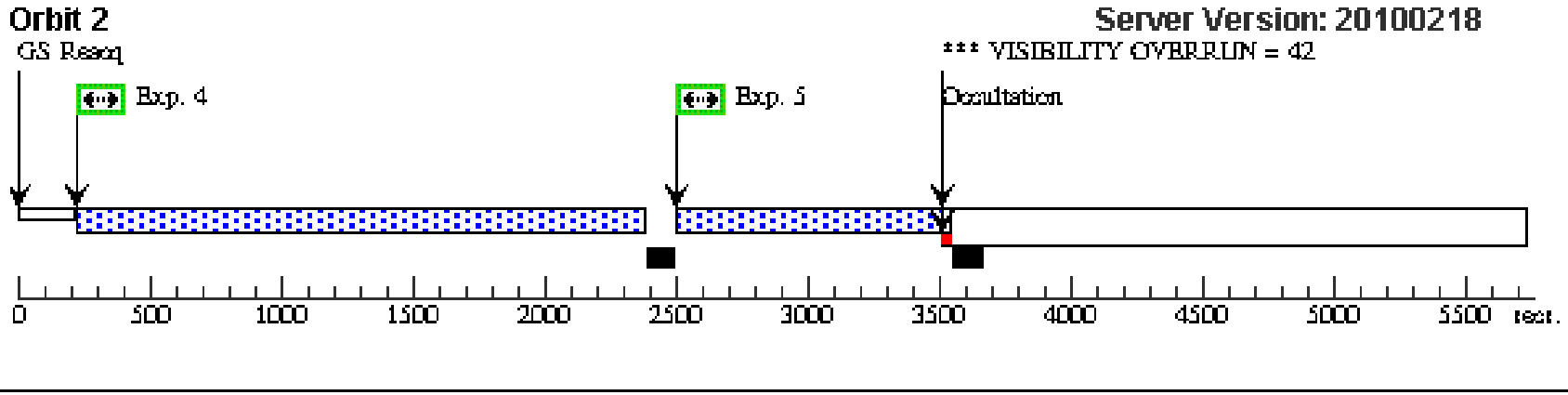
***NOTE: The BOT identifies this as a potentially dangerous object given its V-band magnitude (or an "Unknown" object in some exposures). This object is quite faint and represents no danger to the instrument, even if it brightens by a magnitude. ETC simulations COS74915/COS74918 are appropriate for the science exposires on this object, while COS74913 is the simulation for the NUV imaging acquisition.*

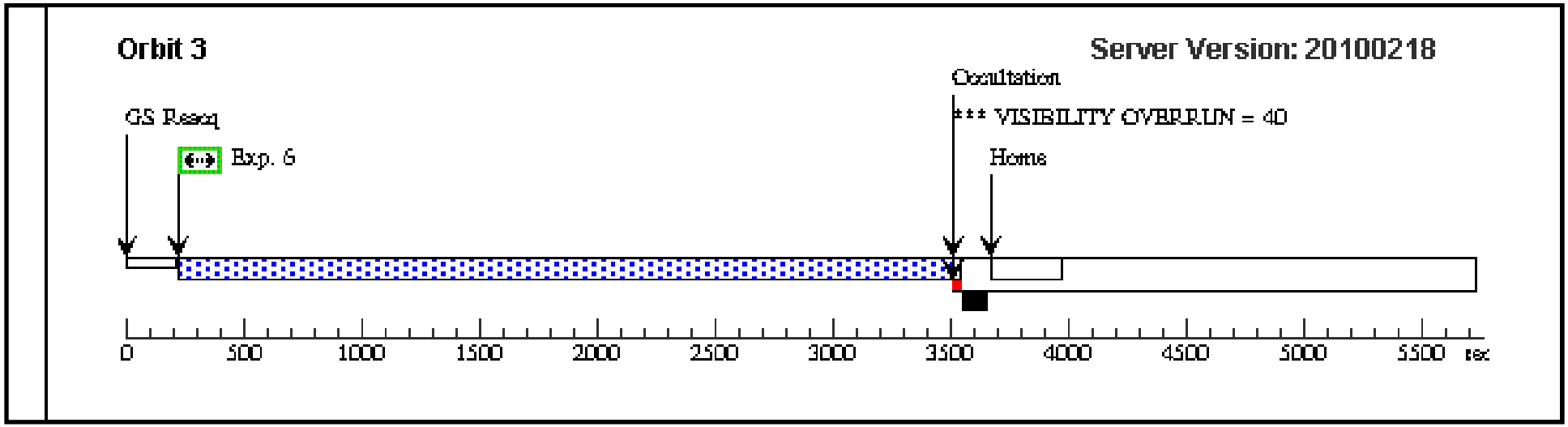
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	IL06229-acq-image	(5) IRAS-L06229-6434	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			38 Secs *[==>]*	 ***[1]***
2	IL06229-acq-image	(5) IRAS-L06229-6434	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				38 Secs *[==>]*	 ***[1]***
3		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2444.0 Secs]*	 ***[1]***
4		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2106.0 Secs]*	 ***[2]***
5		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>872.0 Secs]*	 ***[2]***
6		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3270.0 Secs]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20100218
Occultation
GS Reacq
*** VISIBILITY OVERRUN = 40
Exp. 6
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 09, completed Wed Mar 17 01:13:10 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: IRAS-L06229-6434 -- COS Observations with G130M/G160M.

Diagnostics

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 09) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	IRAS-L06229-6434	RA: 06 23 7.6800 (95.7820000d) Dec: -64 36 20.70 (-64.60575d) Equinox: J2000	Redshift: 0.129	V=14.8 F(1145 A) = 5e-15	Reference Frame: ICRS

Comments: Sy1 Galaxy; FUSE flux.
ETC Simulations: COS74915/COS74918 (G130M/G160M)

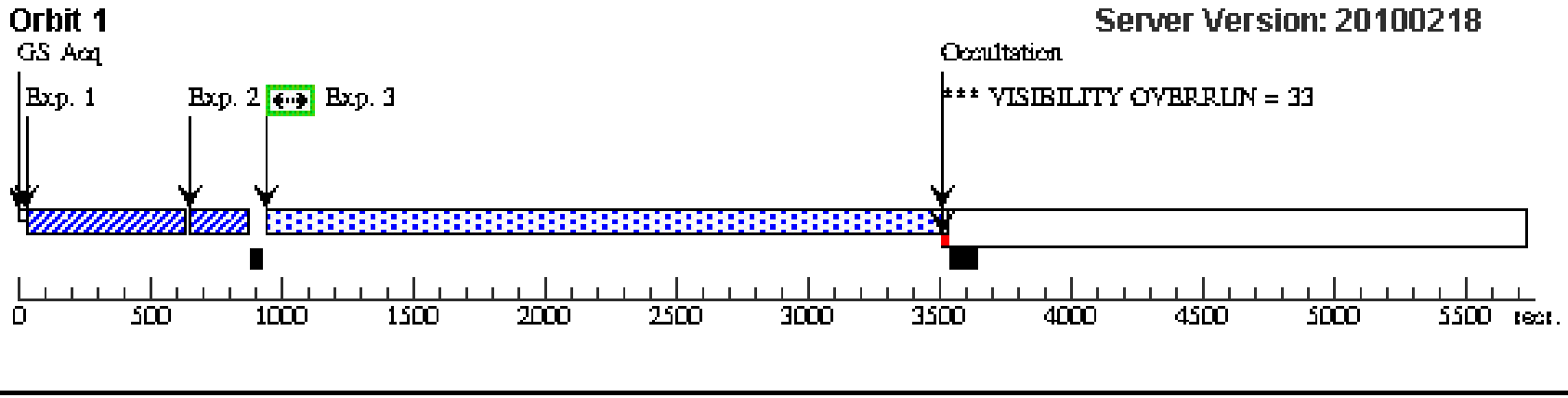
FUSE fluxes are 5e-15 at 1150,1180 Ang taken in 2007.

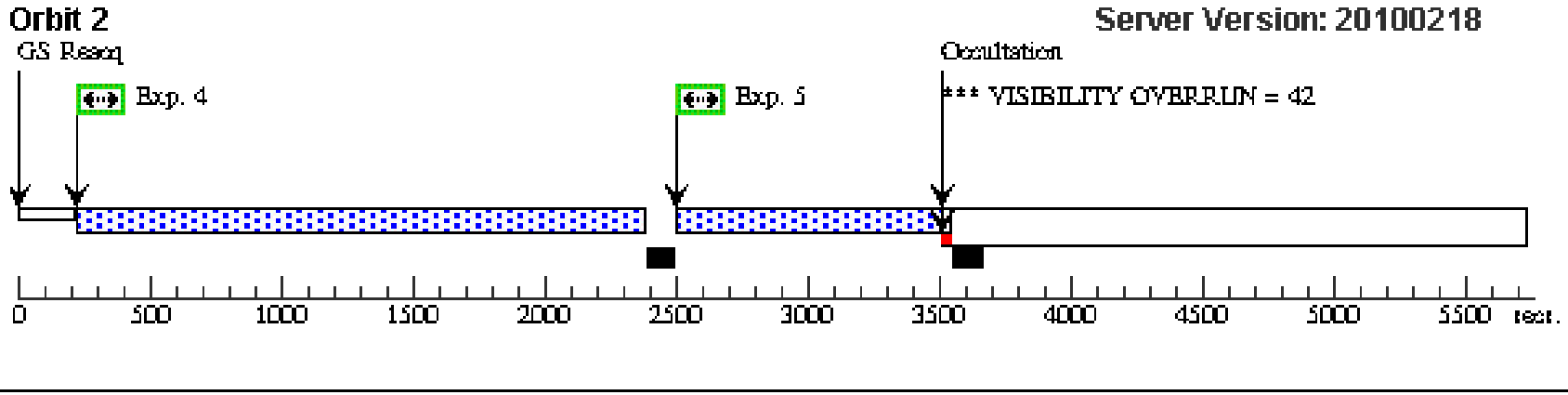
***NOTE: The BOT identifies this as a potentially dangerous object given its V-band magnitude (or an "Unknown" object in some exposures). This object is quite faint and represents no danger to the instrument, even if it brightens by a magnitude. ETC simulations COS74915/COS74918 are appropriate for the science exposires on this object, while COS74913 is the simulation for the NUV imaging acquisition.*

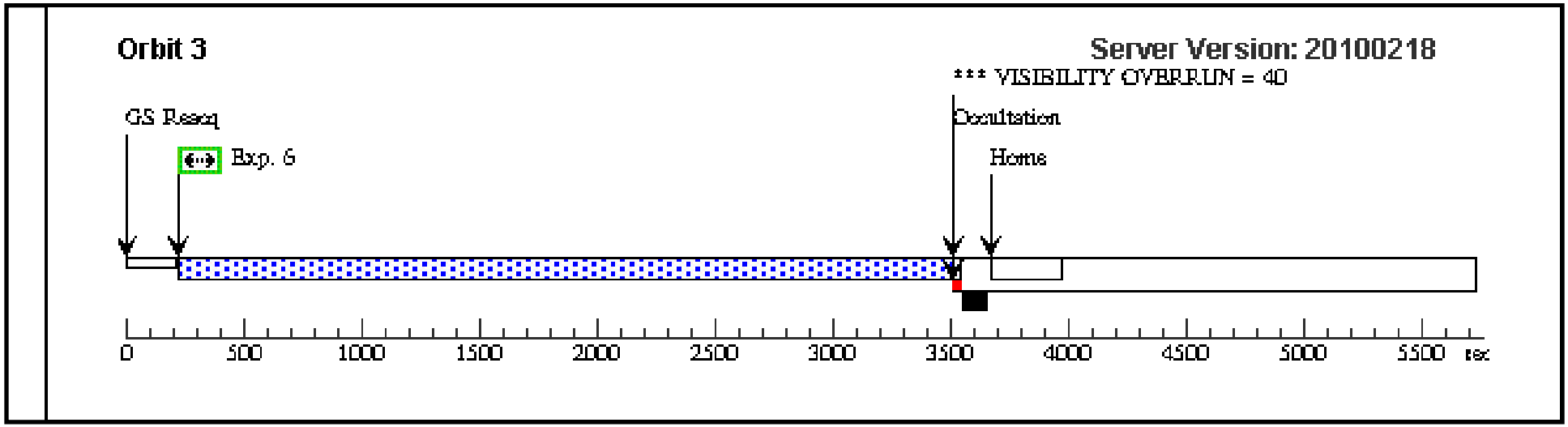
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	IL06229-acq-image	(5) IRAS-L06229-6434	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			40 Secs *[==>]*	 ***[1]***
2	IL06229-acq-image	(5) IRAS-L06229-6434	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				40 Secs *[==>]*	 ***[1]***
3		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2432.0 Secs]*	 ***[1]***
4		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2106.0 Secs]*	 ***[2]***
5		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>872.0 Secs]*	 ***[2]***
6		(5) IRAS-L06229-6434	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3270.0 Secs]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20100218
*** VISIBILITY OVERRUN = 40
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 10, completed Wed Mar 17 01:13:11 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: PKS0637-752 -- COS Observations with G130M/G160M.

Diagnostics

(Visit 10) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 10) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 10) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PKS0637-752	RA: 06 35 46.5000 (98.9437500d) Dec: -75 16 16.81 (-75.27134d) Equinox: J2000	Redshift: 0.65	V=15.75 F(1400 A) = 5e-15	Reference Frame: ICRS

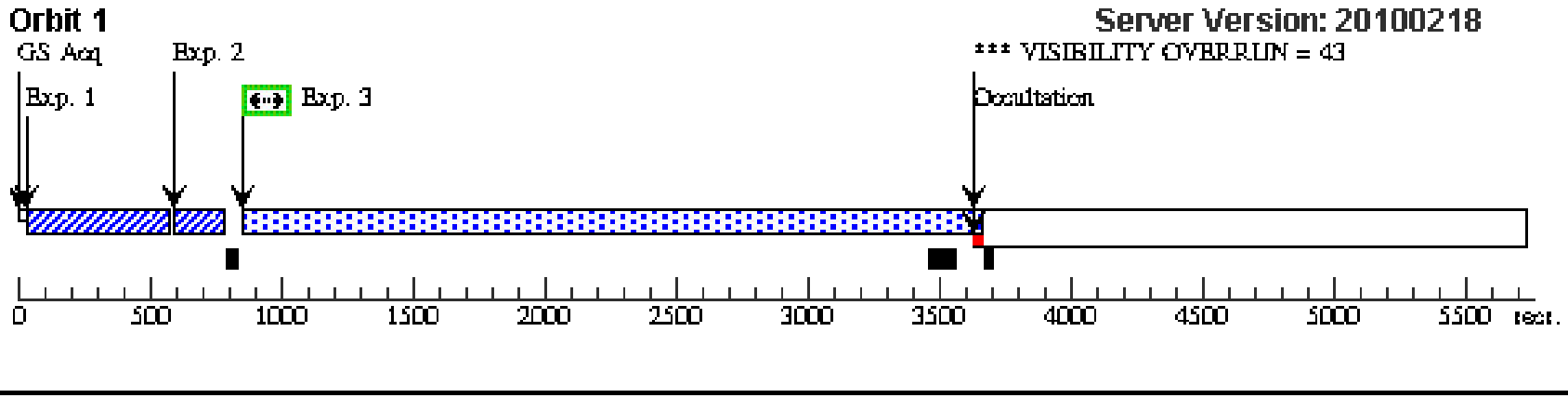
Comments: Sy1 Galaxy
ETC Simulations: COS74899/COS74901 (G130M/G160M)

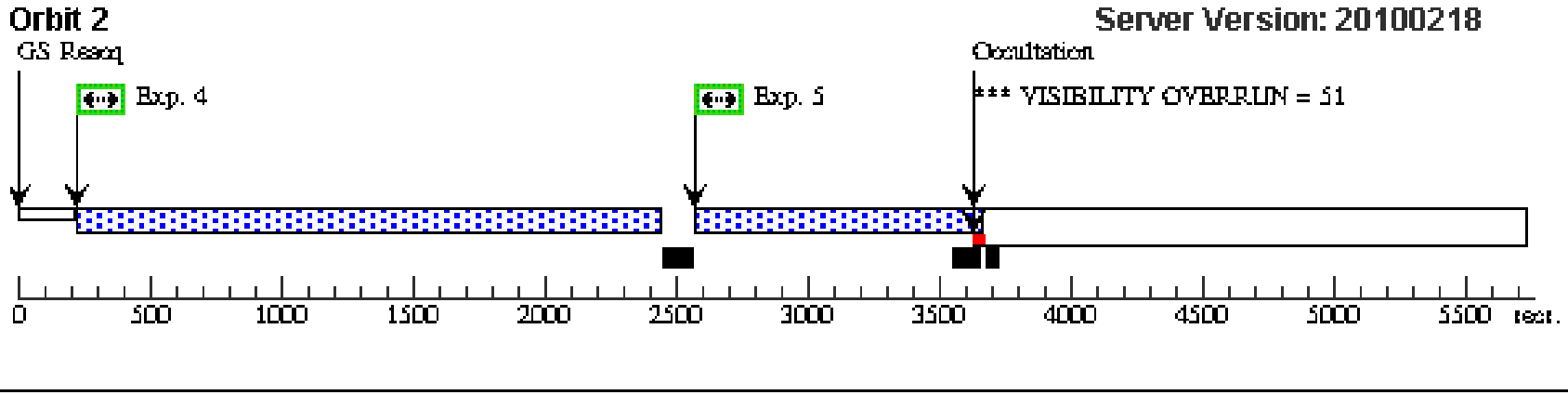
FOS (05/1992) and IUE (1981-1990) fluxes are consistent with no variability over a decade. This object is quite faint and represents no danger even if it brightens by a magnitude.

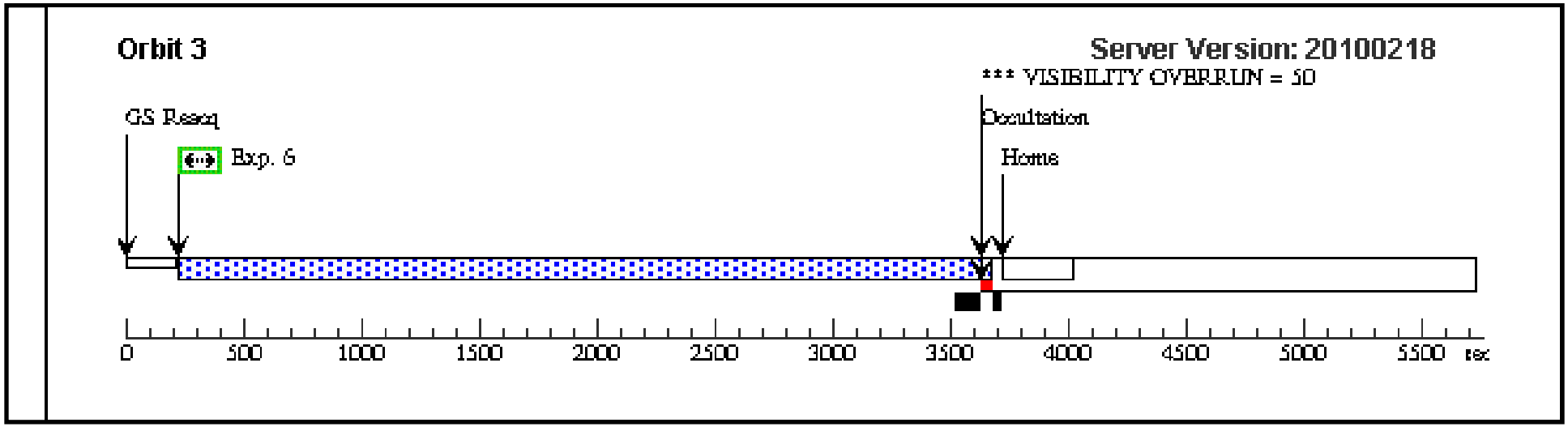
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PKS0637-acq-image	(6) PKS0637-752	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			25 Secs *[==>]*	 ***[1]***
2	PKS0637-acq-image	(6) PKS0637-752	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs *[==>]*	 ***[1]***
3		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2649.0 Secs]*	 ***[1]***
4		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2164.0 Secs]*	 ***[2]***
5		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>930.0 Secs]*	 ***[2]***
6		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3397.0 Secs]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20100218
*** VISIBILITY OVERRUN = 50
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 11, completed Wed Mar 17 01:13:12 GMT 2010

Diagnostic Status: Warning

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: PKS0637-752 -- COS Observations with G130M/G160M.

Diagnostics

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

(Visit 11) Warning (Orbit Planner): VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PKS0637-752	RA: 06 35 46.5000 (98.9437500d) Dec: -75 16 16.81 (-75.27134d) Equinox: J2000	Redshift: 0.65	V=15.75 F(1400 A) = 5e-15	Reference Frame: ICRS

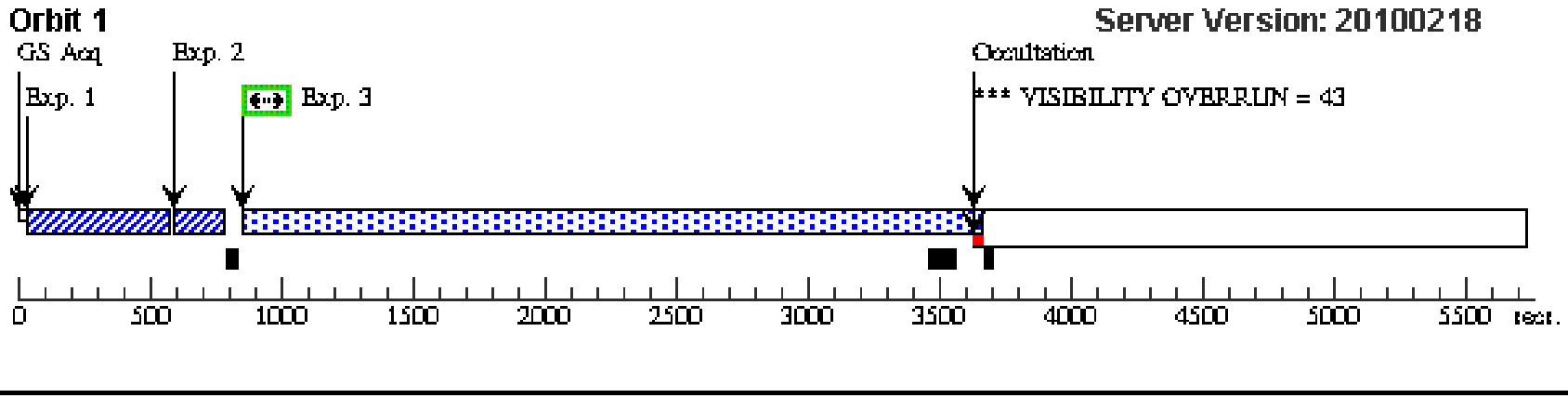
Comments: Sy1 Galaxy
ETC Simulations: COS74899/COS74901 (G130M/G160M)

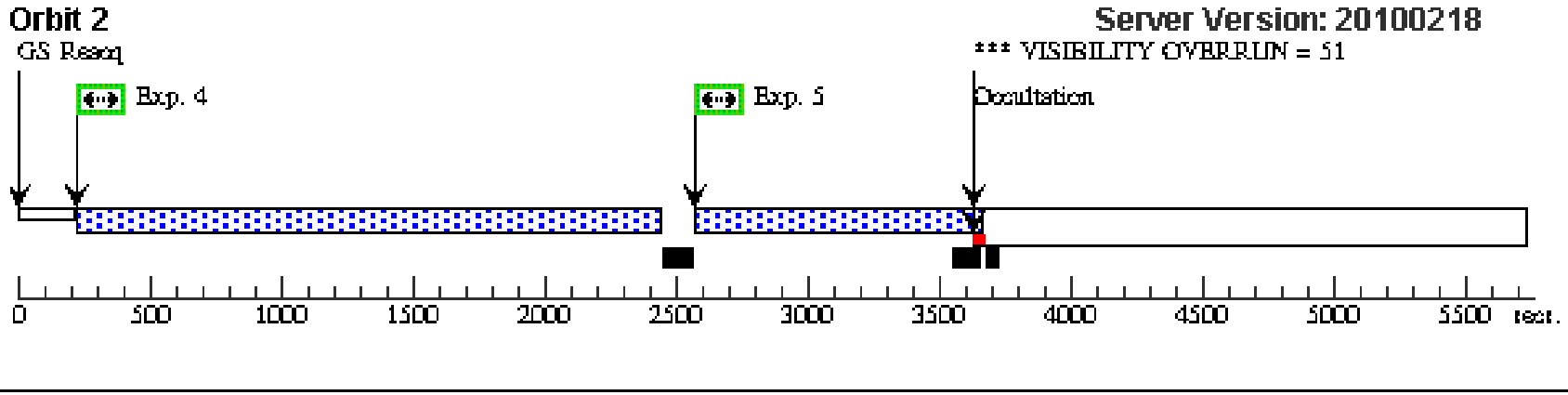
FOS (05/1992) and IUE (1981-1990) fluxes are consistent with no variability over a decade. This object is quite faint and represents no danger even if it brightens by a magnitude.

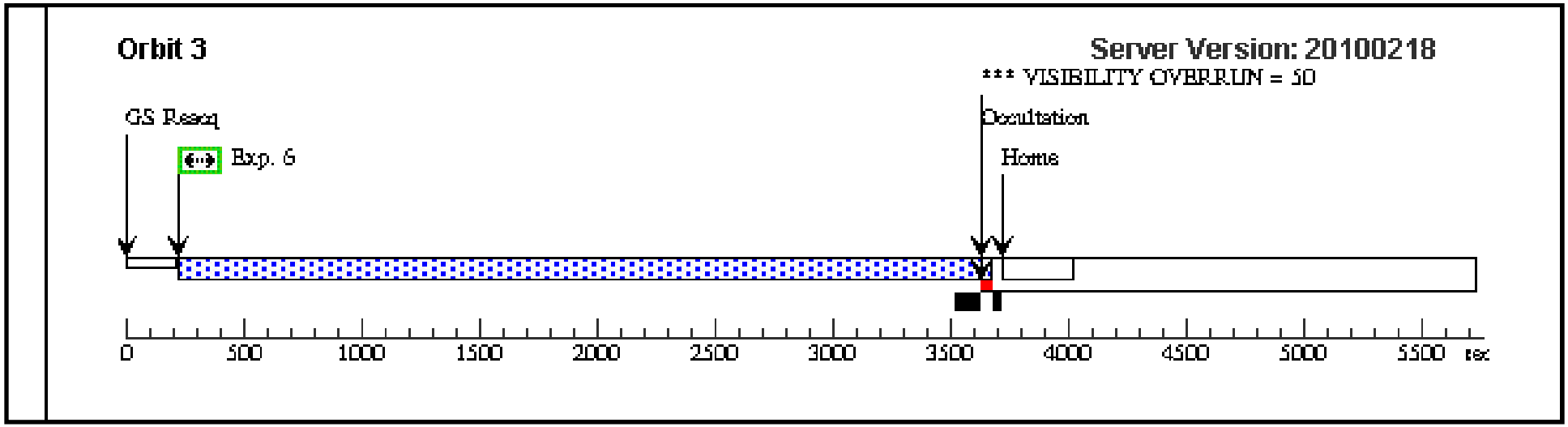
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	PKS0637-acq-image	(6) PKS0637-752	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			25 Secs *[==>]*	*[1]*
2	PKS0637-acq-image	(6) PKS0637-752	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				25 Secs *[==>]*	*[1]*
3		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2475; FLASH=YES			2855 Secs *[==>2649.0 Secs]*	*[1]*
4		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2150; FLASH=YES			2150 Secs *[==>2164.0 Secs]*	*[2]*
5		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>930.0 Secs]*	*[2]*
6		(6) PKS0637-752	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=3270; FLASH=YES			3270 Secs *[==>3397.0 Secs]*	*[3]*

Orbit Structure






Orbit 3
Server Version: 20100218
*** VISIBILITY OVERRUN = 50
GS Reacq
Exp. 6
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 55, implementation Wed Mar 17 01:13:12 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/FUV

Special Requirements: (none)

Comments: CAL F -- COS Observations with G130M/G160M.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	CAL-F-COPY	RA: 05 03 3.9300 (75.7663750d) Dec: -66 33 45.90 (-66.56275d) Equinox: J2000	Redshift: 0.064	V=16.0 F(1175 A) = 1e-14	Reference Frame: ICRS

Comments: Sy 1 Galaxy
ETC Simulations: COS74873/COS74875 (G130M/G160M)

FUSE gives a flux 1e-14 at 1175 Ang (10/2003) and ~6e-15 (07/2007).

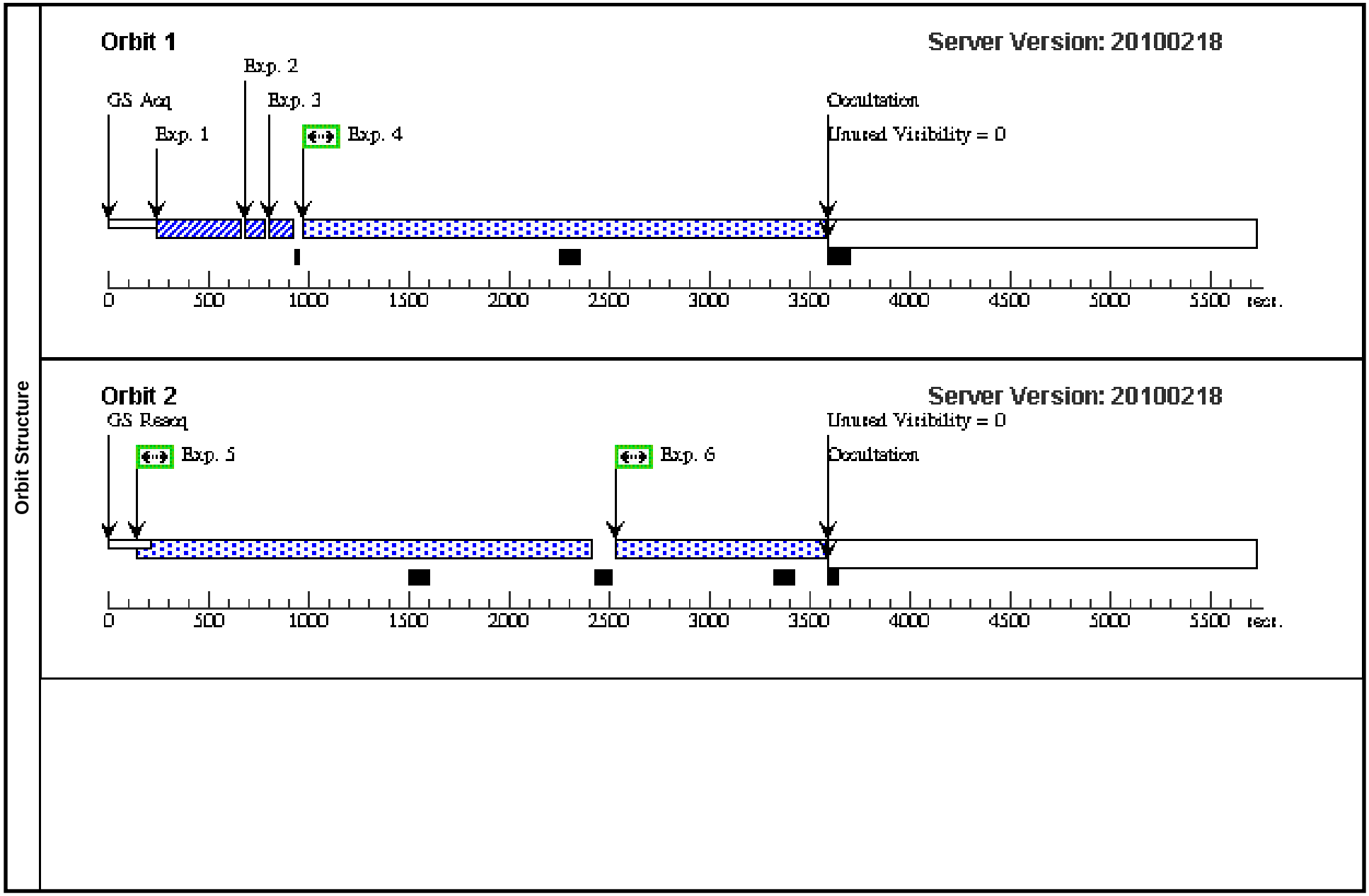
This object poses no safety risk for the FUV detector. We use an FUV dispersed light acquisition in case the flux brightens enough to cause difficulties with NUV imaging acquisitions.

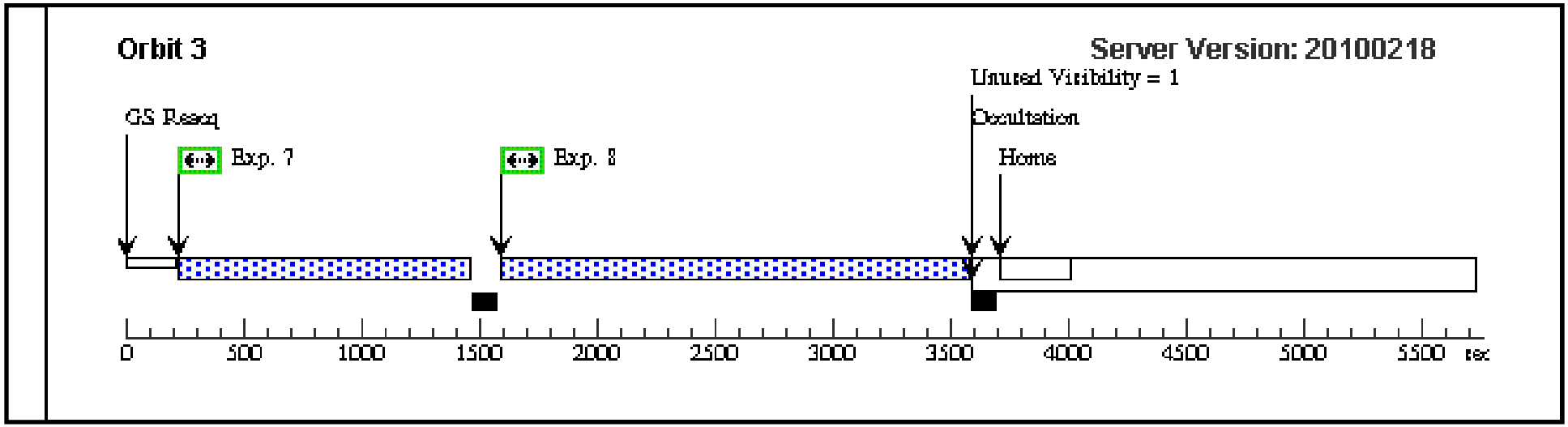
******UPDATED:*

New ETC simulations are COS.A286908/COS.A286909 and COS.A286912/COS.A286913 for G130M and G160M settings. All count rates <~900 for this object. Acquisition ETC simulations are COS.A286914.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	CAL_F-search	(9) CAL-F-COPY	COS/FUV, ACQ/SEARCH, PSA	G130M 1291 A	SCAN-SIZE=3; CENTER=FLUX-WT			6 Secs *[==>]*	*[1]*
2	CAL_F-peakxd	(9) CAL-F-COPY	COS/FUV, ACQ/PEAKXD, PSA	G130M 1291 A				6 Secs *[==>]*	*[1]*
3	CAL_F-peakd	(9) CAL-F-COPY	COS/FUV, ACQ/PEAKD, PSA	G130M 1291 A	CENTER=DEF; STEP-SIZE=1.2; NUM-POS=3			6 Secs *[==>]*	*[1]*
4		(9) CAL-F-COPY	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=1250; FLASH=YES			2561 Secs *[==>]*	*[1]*
5		(9) CAL-F-COPY	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=1250; FLASH=YES			2150 Secs *[==>]*	*[2]*
6		(9) CAL-F-COPY	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=650; FLASH=YES			888 Secs *[==>]*	*[2]*
7		(9) CAL-F-COPY	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=1200; FLASH=YES			1200 Secs *[==>1190.0 Secs]*	*[3]*
8		(9) CAL-F-COPY	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1878; FLASH=YES			1878 Secs *[==>1868.0 Secs]*	*[3]*


Orbit Structure
Orbit 1
Server Version: 20100218
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.
Orbit 2
Server Version: 20100218
GS Reacq
Exp. 5
Exp. 6
Occultation
Unused Visibility = 0
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec.


Orbit 3
Server Version: 20100218
Unused Visibility = 1
GS Reacq
Exp. 7
Exp. 8
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11692, Visit 58, implementation Wed Mar 17 01:13:13 GMT 2010

Diagnostic Status: No Diagnostics

Scientific Instruments: COS/NUV, COS/FUV

Special Requirements: (none)

Comments: IRAS-L06229-6434 -- COS Observations with G130M/G160M.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	IRAS-L06229-6434-COPY	RA: 06 23 7.6800 (95.7820000d) Dec: -64 36 20.70 (-64.60575d) Equinox: J2000	Redshift: 0.129	V=14.8 F(1145 A) = 5e-15	Reference Frame: ICRS

Comments: Sy1 Galaxy; FUSE flux.
ETC Simulations: COS74915/COS74918 (G130M/G160M)

FUSE fluxes are 5e-15 at 1150,1180 Ang taken in 2007.

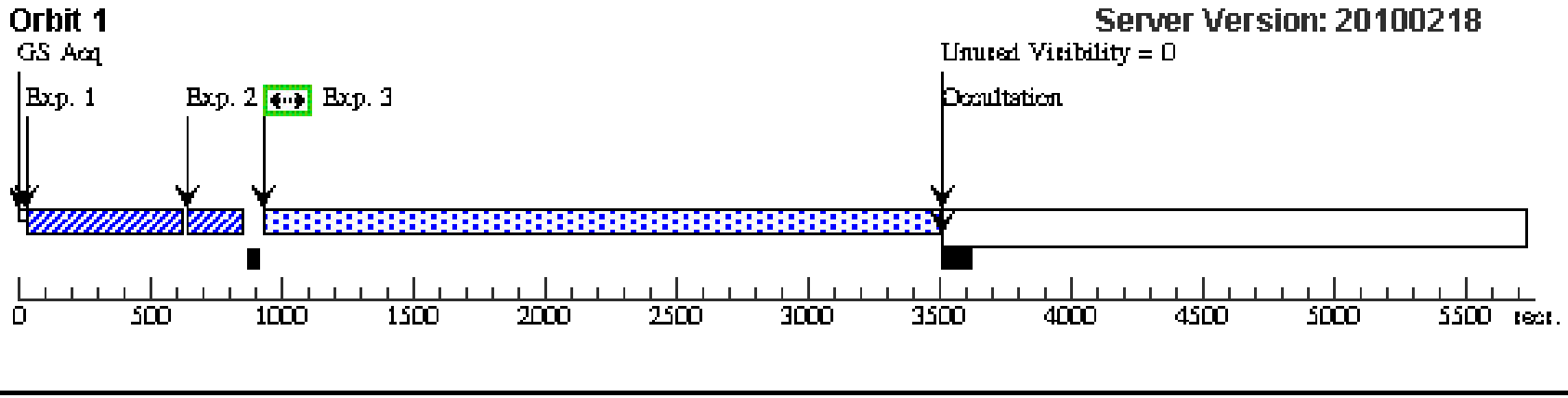
******UPDATED:*
Spectroscopic ETC simulations are COS.A286918/COS.A286919 and COS.A286920/COS.A286921. Count rates are all <900. Imaging acquisition ETC is COS.A286916.

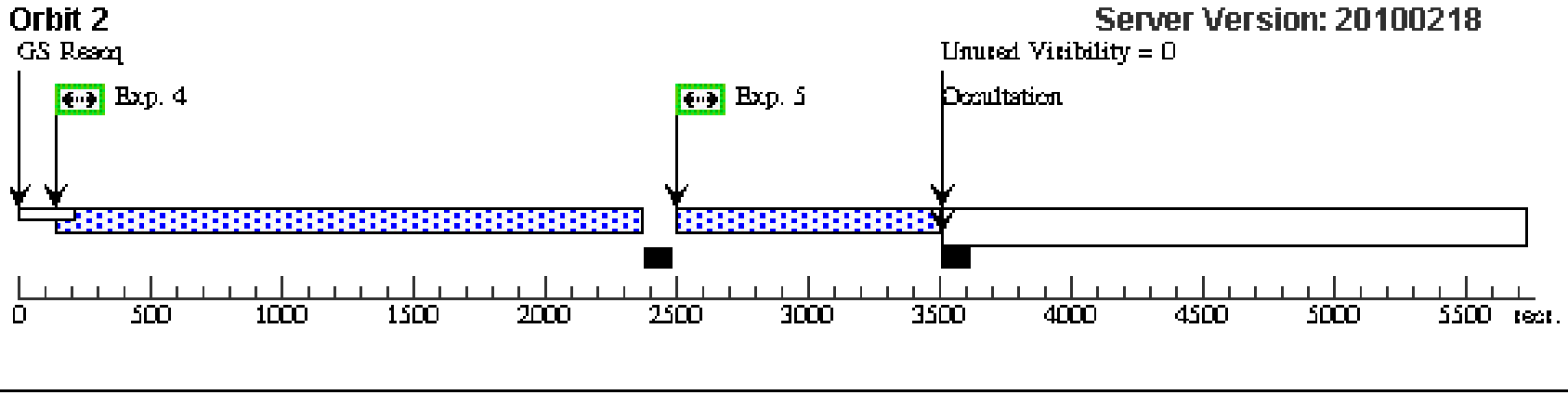
This object is quite faint and represents no danger to the instrument, even if it brightens by a magnitude.

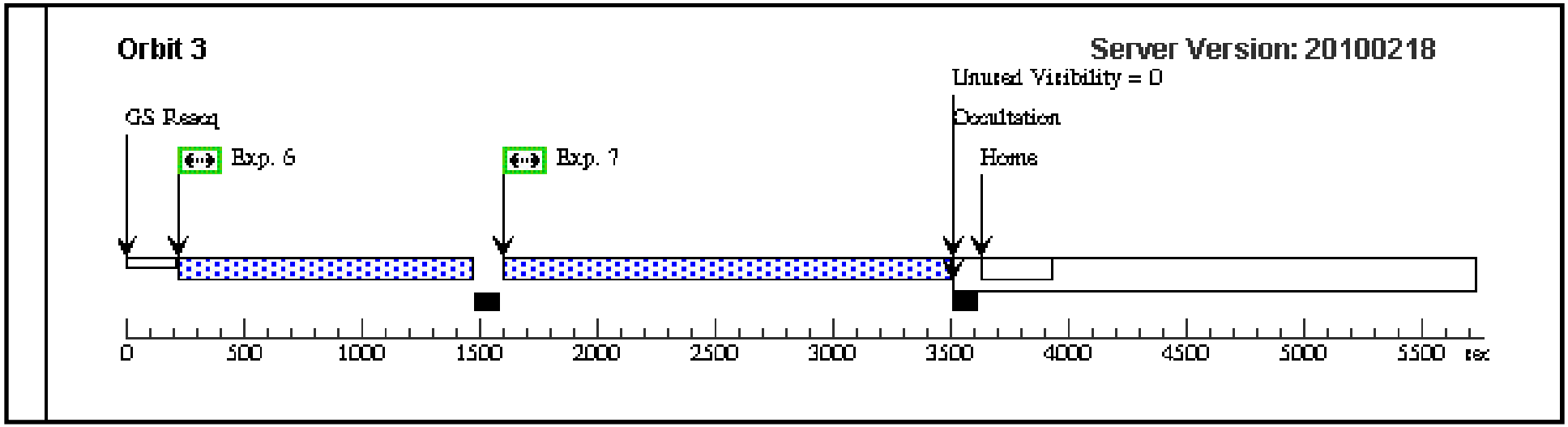
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	IL06229-acq-image	(10) IRAS-L06229-6434-COPY	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	CENTER=FLUX-WT; SCAN-SIZE=2			38 Secs *[==>]*	 ***[1]***
2	IL06229-acq-image	(10) IRAS-L06229-6434-COPY	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				38 Secs *[==>]*	 ***[1]***
3		(10) IRAS-L06229-6434-COPY	COS/FUV, TIME-TAG, PSA	G130M 1291 A	BUFFER-TIME=2380; FLASH=YES			2429 Secs *[==>2411 Secs]*	 ***[1]***
4		(10) IRAS-L06229-6434-COPY	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=2103; FLASH=YES			2103 Secs *[==>]*	 ***[2]***
5		(10) IRAS-L06229-6434-COPY	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=833; FLASH=YES			833 Secs *[==>]*	 ***[2]***
6		(10) IRAS-L06229-6434-COPY	COS/FUV, TIME-TAG, PSA	G160M 1577 A	BUFFER-TIME=1200; FLASH=YES			1200 Secs *[==>]*	 ***[3]***
7		(10) IRAS-L06229-6434-COPY	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=1776; FLASH=YES			1776 Secs *[==>]*	 ***[3]***

Orbit Structure






Orbit 3
Server Version: 20100218
Unused Visibility = 0
GS Reacq
Exp. 6
Exp. 7
Occultation
Home
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec