10903 - Resolving the LMC Microlensing Puzzle: Where are the Lensing Objects?

Cycle: 15, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Armin Rest (PI)	**National Optical Astronomy Observatories - CTIO**	**arest@noao.edu**
Dr. Chris Stubbs (CoI) (AdminUSPI)	Harvard University	cstubbs@cfa.harvard.edu
Dr. Chris Smith (CoI)	National Optical Astronomy Observatories - CTIO	csmith@noao.edu
Dr. Knut A.G. Olsen (CoI)	National Optical Astronomy Observatories - CTIO	kolsen@ctio.noao.edu
Dr. Nicholas B. Suntzeff (CoI)	National Optical Astronomy Observatories - CTIO	nsuntzeff@noao.edu
Mr. Jose Luis Prieto (CoI)	The Ohio State University Research Foundation	prieto@astronomy.ohio-state.edu
Dr. Andy Becker (CoI)	University of Washington	becker@astro.washington.edu
Dr. Gajus Miknaitis (CoI)	Fermi National Accelerator Laboratory (FNAL)	gm@astro.washington.edu
Mr. Ricardo Covarrubias (CoI)	University of Washington	ricardo@astro.washington.edu
Dr. Kem Cook (CoI)	Lawrence Livermore National Laboratory	kcook@llnl.org
Dr. Sergei Nikolaev (CoI)	Lawrence Livermore National Laboratory	nikolaev2@llnl.gov
Dr. Mark Huber (CoI)	Lawrence Livermore National Laboratory	mhuber@astro.ubc.ca
Dr. Lorenzo Morelli (CoI)	Universidad Catolica de Chile	lmorelli@astro.puc.cl
Dr. Alejandro Clocchiatti (CoI)	Universidad Catolica de Chile	aclocchi@astro.puc.cl
Dr. Anthony Miceli (CoI)	University of Washington	amiceli@astro.washington.edu
Dr. Dante Minniti (CoI) (ESA Member)	Universidad Catolica de Chile	dante@astro.puc.cl
Dr. Douglas L. Welch (CoI)	McMaster University	welch@dogwood.physics.mcmaster.ca
Mr. Peter Challis (CoI)	Harvard University	pchallis@cfa.harvard.edu
Ms. Arti Garg (CoI)	Harvard University	agarg@cfa.harvard.edu
Dr. Stefan Keller (CoI)	Lawrence Livermore National Laboratory	skeller@igpp.ucllnl.org

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) 2005-LMC-250	WFPC2	1	21-May-2007 20:39:49.0	yes
02	(2) 2004-LMC-958	WFPC2	1	21-May-2007 20:39:55.0	yes
03	(3) 2004-LMC-976	WFPC2	1	21-May-2007 20:40:00.0	yes
04	(4) 2002-LMC-026	WFPC2	1	21-May-2007 20:40:03.0	yes
05	(5) 2002-LMC-054	WFPC2	1	21-May-2007 20:40:07.0	yes
06	(6) 2002-LMC-074	WFPC2	1	21-May-2007 20:40:10.0	yes
07	(7) 2002-LMC-075	WFPC2	1	21-May-2007 20:40:14.0	yes
08	(8) 2003-LMC-101	WFPC2	1	21-May-2007 20:40:17.0	yes
09	(9) 2003-LMC-219	WFPC2	1	21-May-2007 20:40:20.0	yes
10	(10) 2003-LMC-282	WFPC2	1	21-May-2007 20:40:23.0	yes
11	(11) 2005-LMC-324	WFPC2	1	21-May-2007 20:40:27.0	yes
12	(12) 2001-LMC-100	WFPC2	1	21-May-2007 20:40:30.0	yes

12 Total Orbits Used

ABSTRACT

We are requesting 12 HST orbits to continue to investigate the nature of the population that gives rise to the microlensing seen towards the LMC. This proposal builds on the cycle 14 HST program (10583) and will complement the study with 12 yet-to-be discovered microlensing candidates from Fall 2006. Our SuperMacho project is an ongoing ground-based survey on the CTIO 4m that has demonstrated the ability to detect LMC microlensing events via frame subtraction. The combination of high angular resolution and photometric accuracy with HST will allow us to 1) confrim that the detected flux excursions arise from LMC stars, rather than background supernovae or AGN, and 2) obtain reliable baseline flux

measurements for the objects in their unlensed state. This latter measurement in important in determining the microlensing optical depth towards the LMC.

OBSERVING DESCRIPTION

We plan to use the ACS to take 3 filters per lensing target.

Visit

Proposal 10903, Visit 01 Mon May 21 19:40:32 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

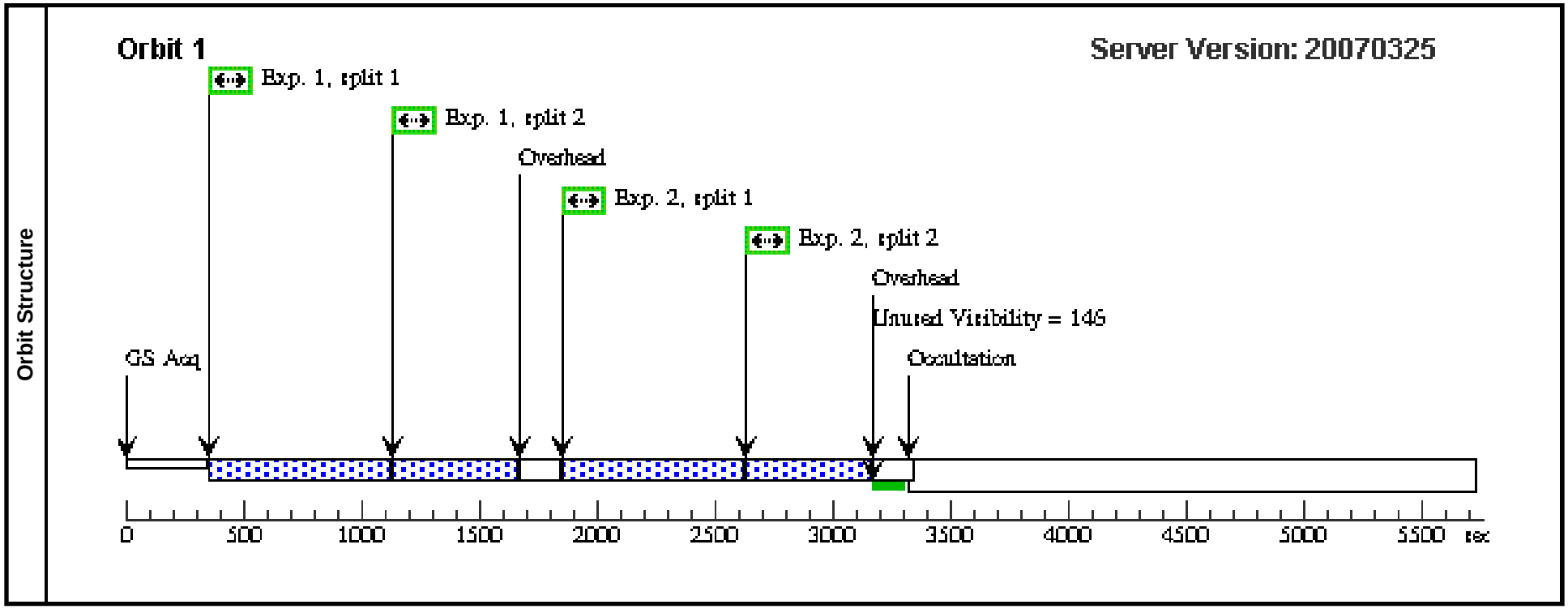
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	2005-LMC-250	RA: 05 36 50.2400 (84.2093333d) Dec: -70 03 58.00 (-70.06611d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) 2005-LMC-250	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(1) 2005-LMC-250	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***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Exp. 2, split 1
Exp. 2, split 2
Overhead
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GS Acq
Occultation
0
500
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sec

Visit

Proposal 10903, Visit 02 Mon May 21 19:40:33 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	2004-LMC-958	RA: 05 24 22.9620 (81.0956750d) Dec: -70 56 6.06 (-70.93502d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) 2004-LMC-958	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(2) 2004-LMC-958	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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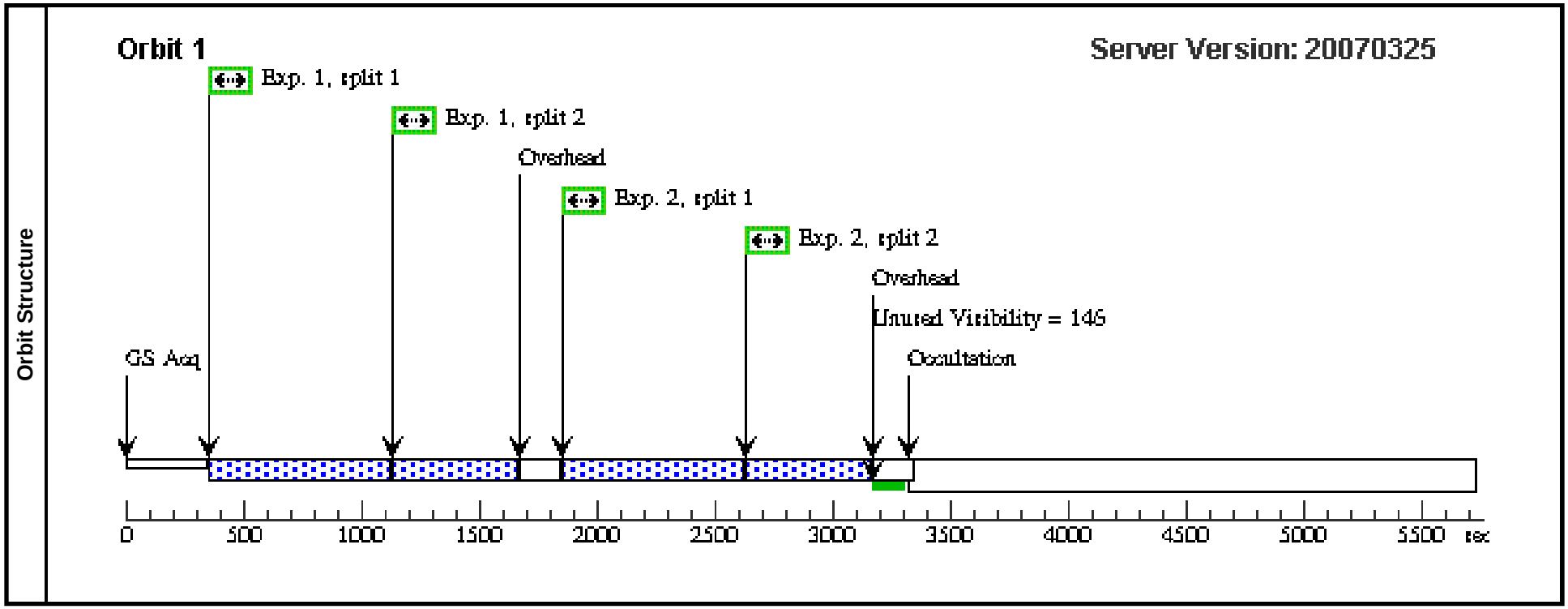
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Unused Visibility = 146
GS Acq
Occultation
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Visit

Proposal 10903, Visit 03 Mon May 21 19:40:34 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

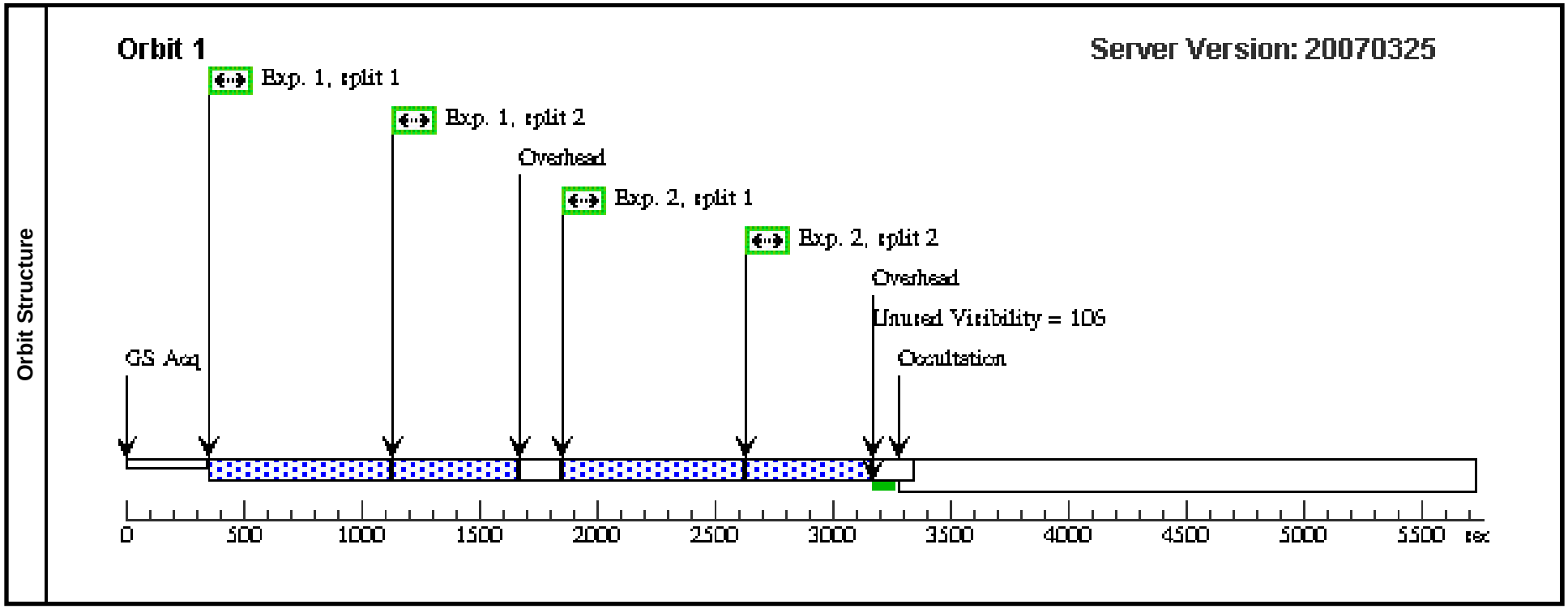
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	2004-LMC-976	RA: 05 35 18.0700 (83.8252917d) Dec: -69 45 19.72 (-69.75548d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) 2004-LMC-976	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(3) 2004-LMC-976	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***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Exp. 2, split 2
Overhead
Unused Visibility = 106
GS Acq
Occultation
0
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sec

Visit

Proposal 10903, Visit 04 Mon May 21 19:40:34 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	2002-LMC-026	RA: 04 59 46.9070 (74.9454458d) Dec: -68 57 7.94 (-68.95221d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) 2002-LMC-026	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(4) 2002-LMC-026	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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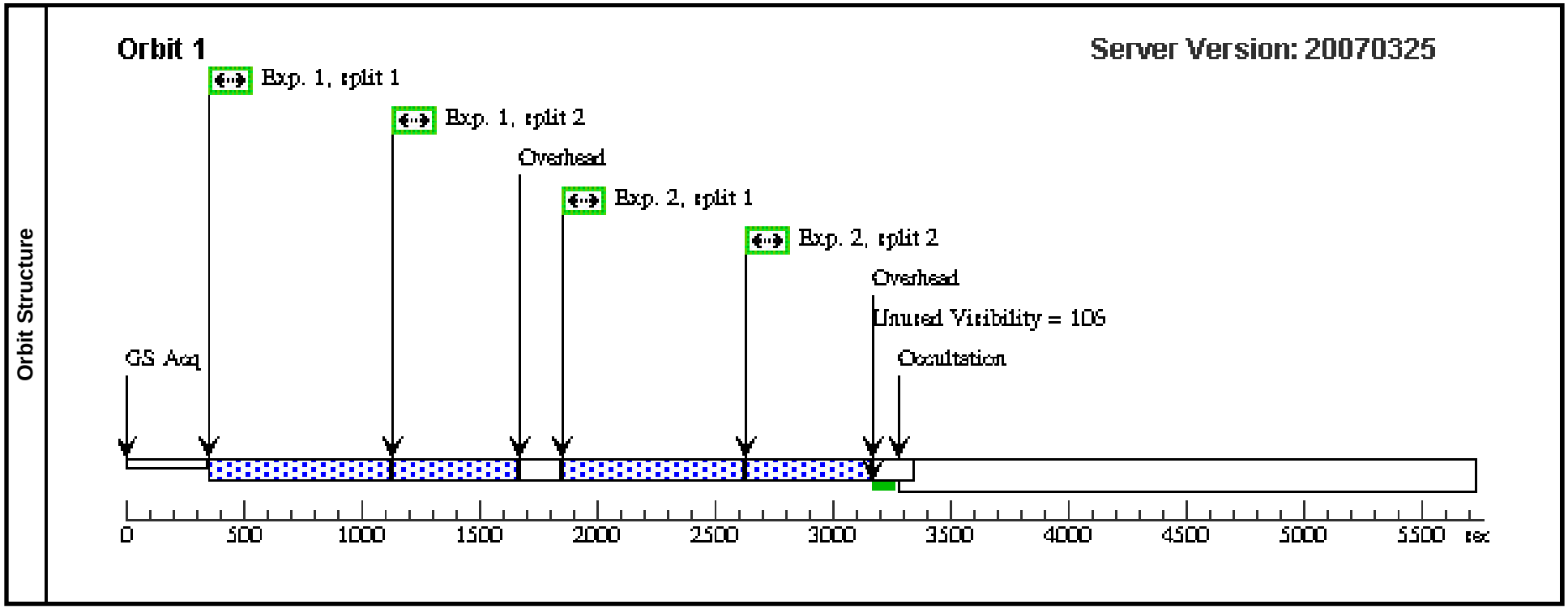
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Exp. 2, split 2
Overhead
Unused Visibility = 106
GS Acq
Occultation
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Visit

Proposal 10903, Visit 05 Mon May 21 19:40:35 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	2002-LMC-054	RA: 05 45 15.7990 (86.3158292d) Dec: -68 42 51.73 (-68.71437d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) 2002-LMC-054	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(5) 2002-LMC-054	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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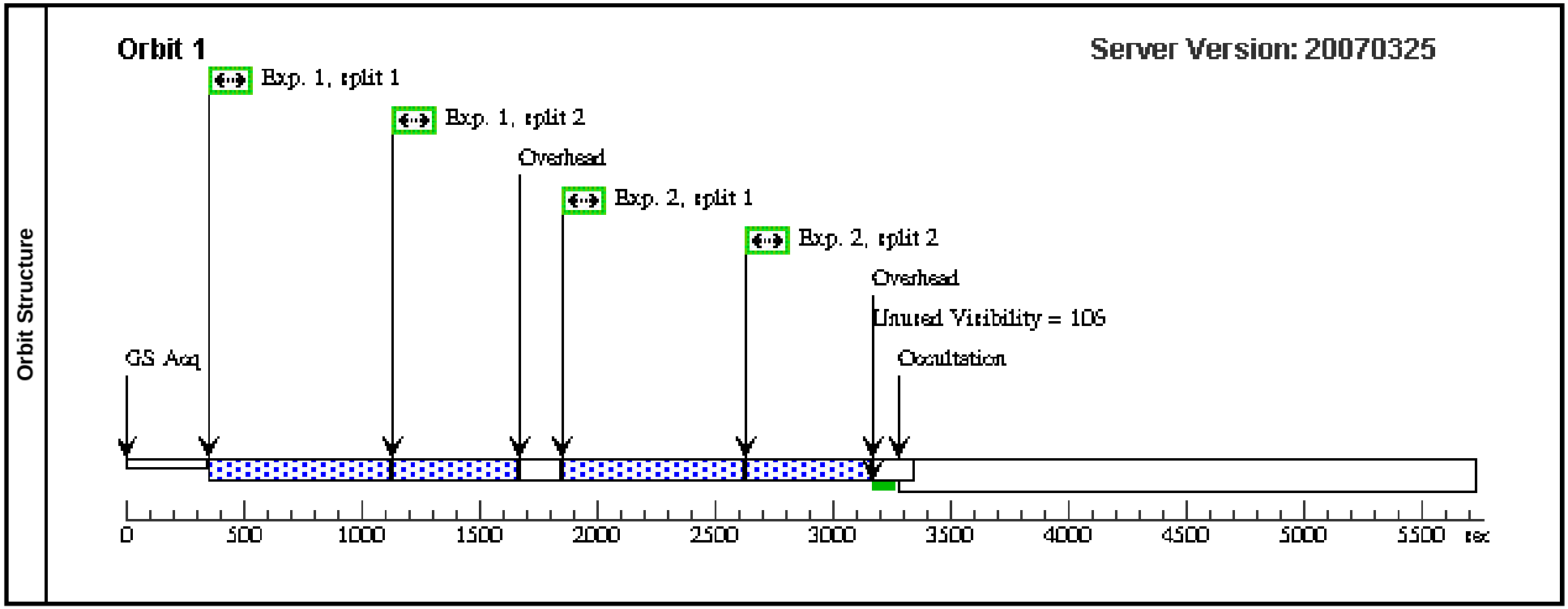
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Overhead
Exp. 2, split 1
Exp. 2, split 2
Overhead
Unused Visibility = 106
GS Acq
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Visit

Proposal 10903, Visit 06 Mon May 21 19:40:35 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

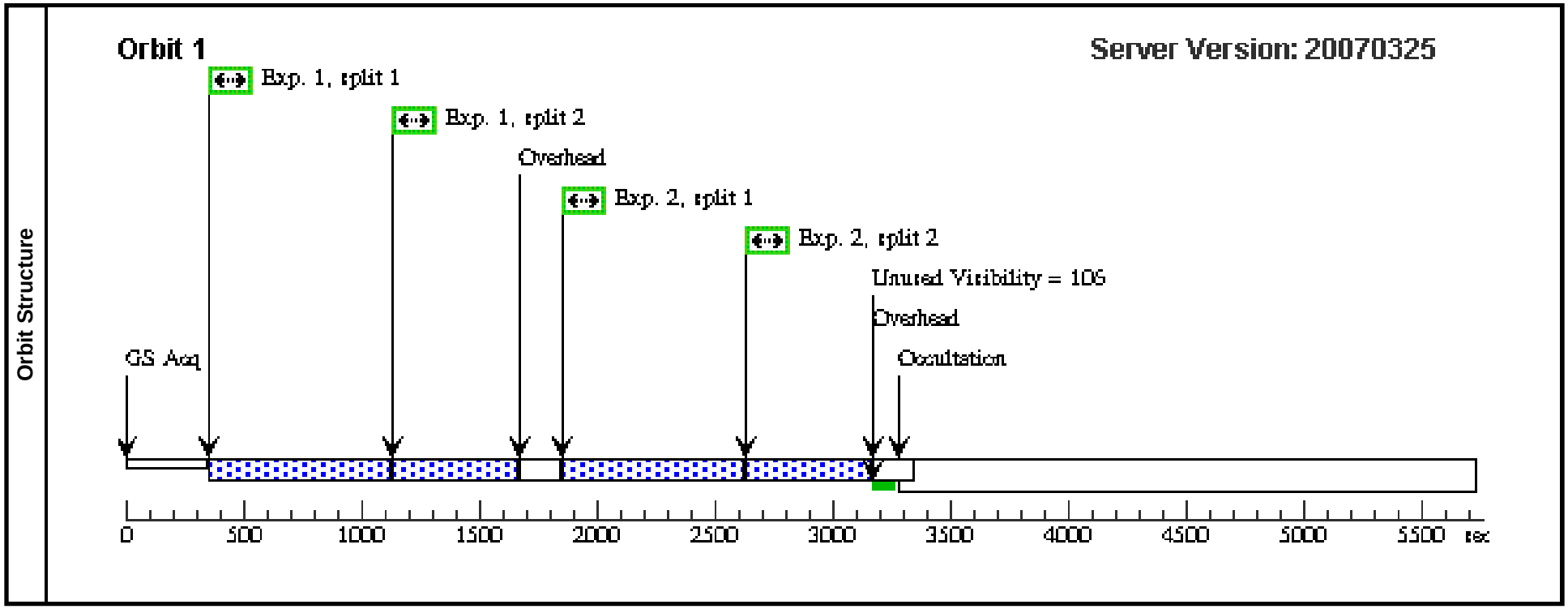
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	2002-LMC-074	RA: 05 31 10.2850 (82.7928542d) Dec: -68 37 2.76 (-68.61743d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) 2002-LMC-074	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(6) 2002-LMC-074	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***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Exp. 2, split 2
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Overhead
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Visit

Proposal 10903, Visit 07

Mon May 21 19:40:36 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	2002-LMC-075	RA: 05 24 7.5400 (81.0314167d) Dec: -67 22 33.61 (-67.37600d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) 2002-LMC-075	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(7) 2002-LMC-075	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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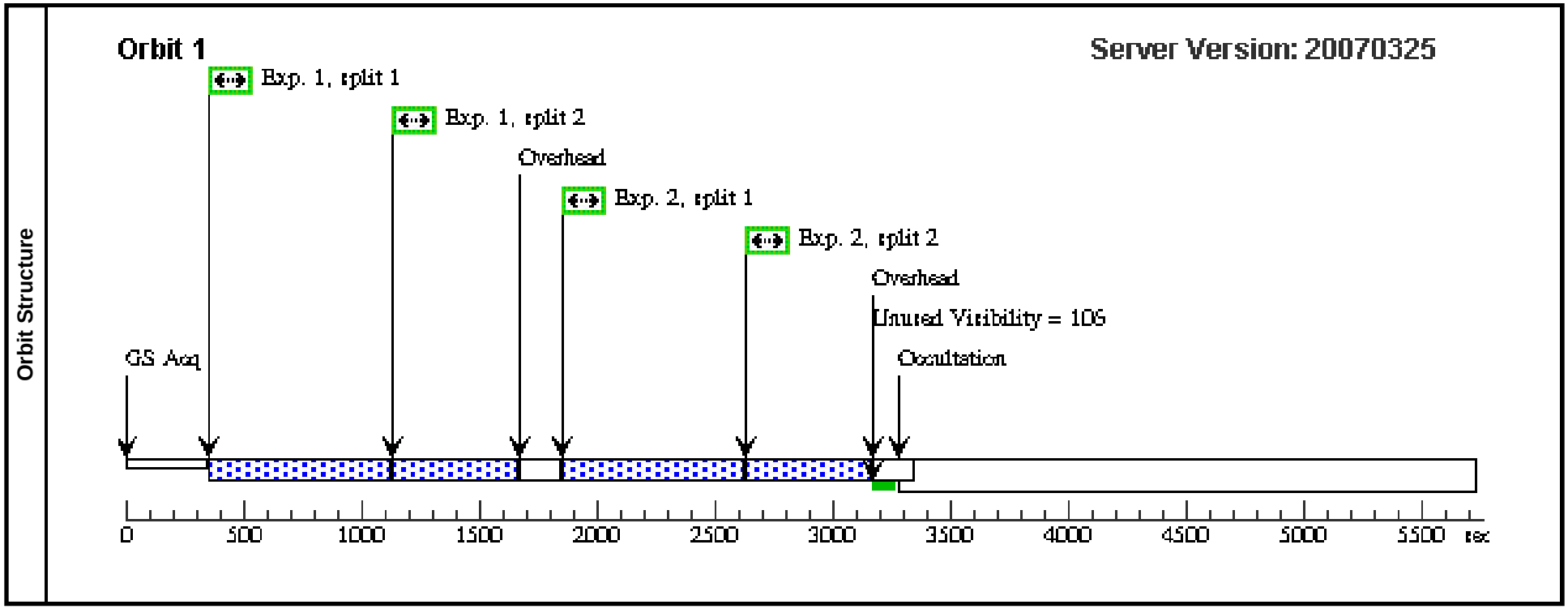
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Exp. 2, split 2
Overhead
Unused Visibility = 106
GS Acq
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Visit

Proposal 10903, Visit 08 Mon May 21 19:40:36 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	2003-LMC-101	RA: 05 23 22.2750 (80.8428125d) Dec: -68 26 29.92 (-68.44164d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) 2003-LMC-101	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(8) 2003-LMC-101	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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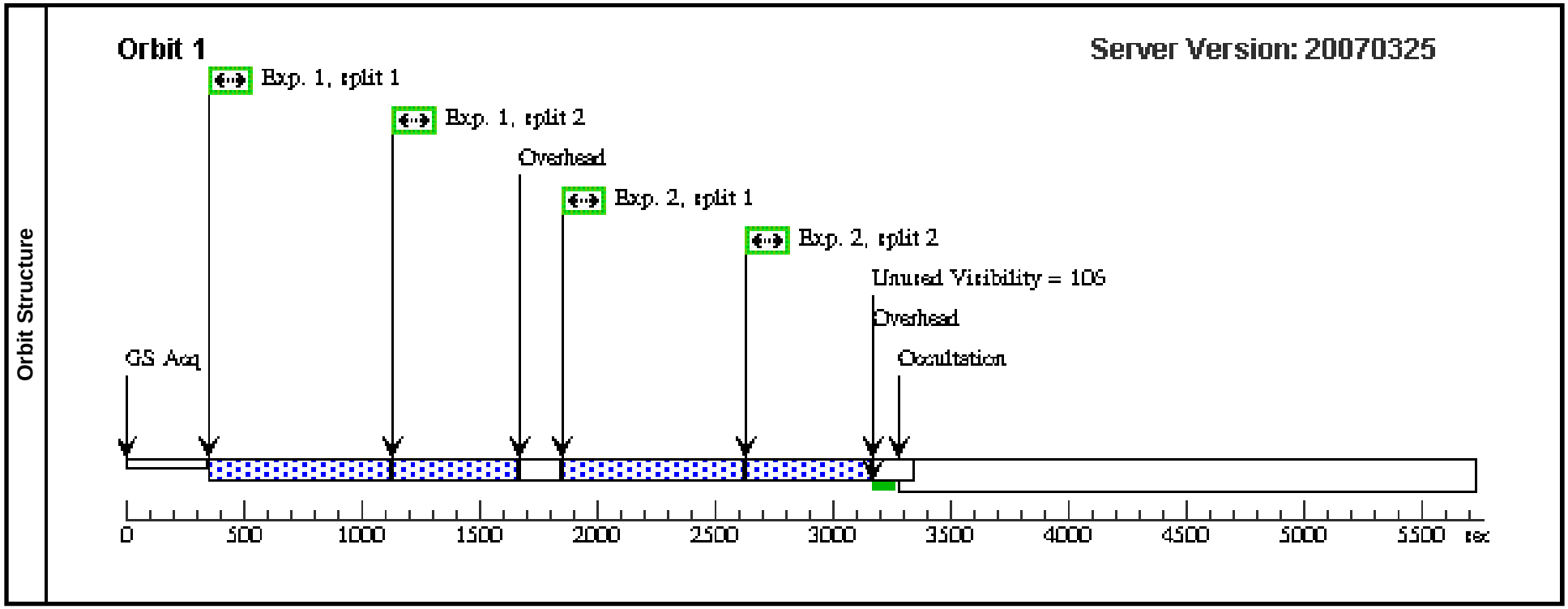
Orbit Structure
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Exp. 2, split 2
Unused Visibility = 106
Overhead
GS Acq
Occultation
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Visit

Proposal 10903, Visit 09 Mon May 21 19:40:38 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	2003-LMC-219	RA: 05 19 51.7570 (79.9656542d) Dec: -69 42 18.52 (-69.70514d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) 2003-LMC-219	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
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2		(9) 2003-LMC-219	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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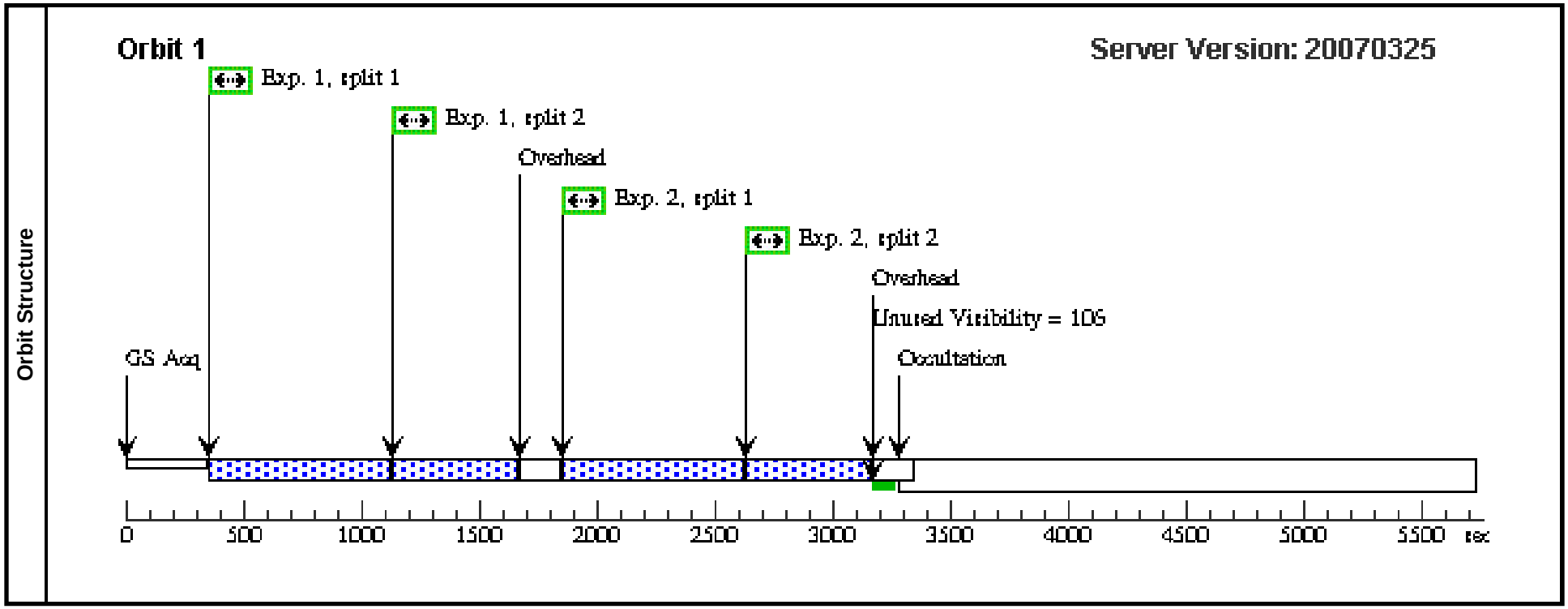
Orbit Structure
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Unused Visibility = 106
GS Acq
Occultation
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Visit

Proposal 10903, Visit 10 Mon May 21 19:40:39 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	2003-LMC-282	RA: 05 21 33.9810 (80.3915875d) Dec: -69 26 8.92 (-69.43581d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) 2003-LMC-282	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(10) 2003-LMC-282	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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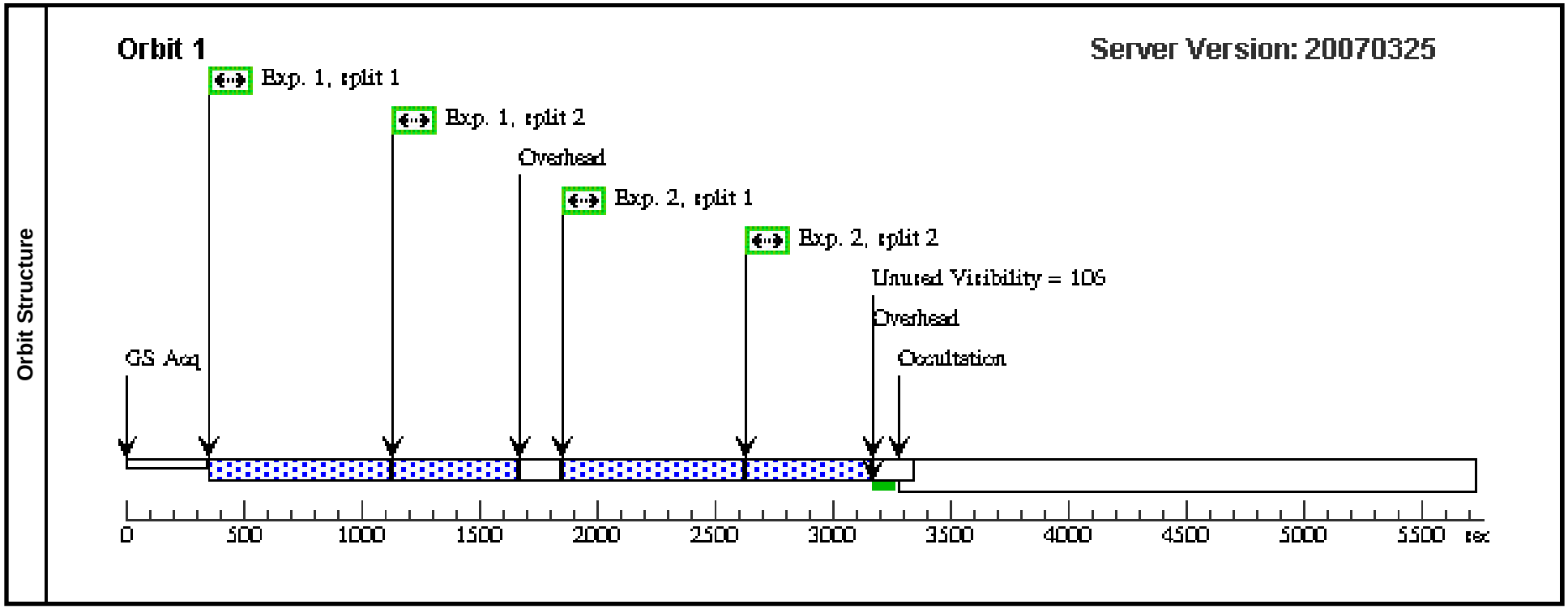
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Exp. 2, split 2
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Overhead
GS Acq
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Visit

Proposal 10903, Visit 11 Mon May 21 19:40:39 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(11)	2005-LMC-324	RA: 05 35 10.9220 (83.7955083d) Dec: -71 22 12.73 (-71.37020d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(11) 2005-LMC-324	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(11) 2005-LMC-324	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
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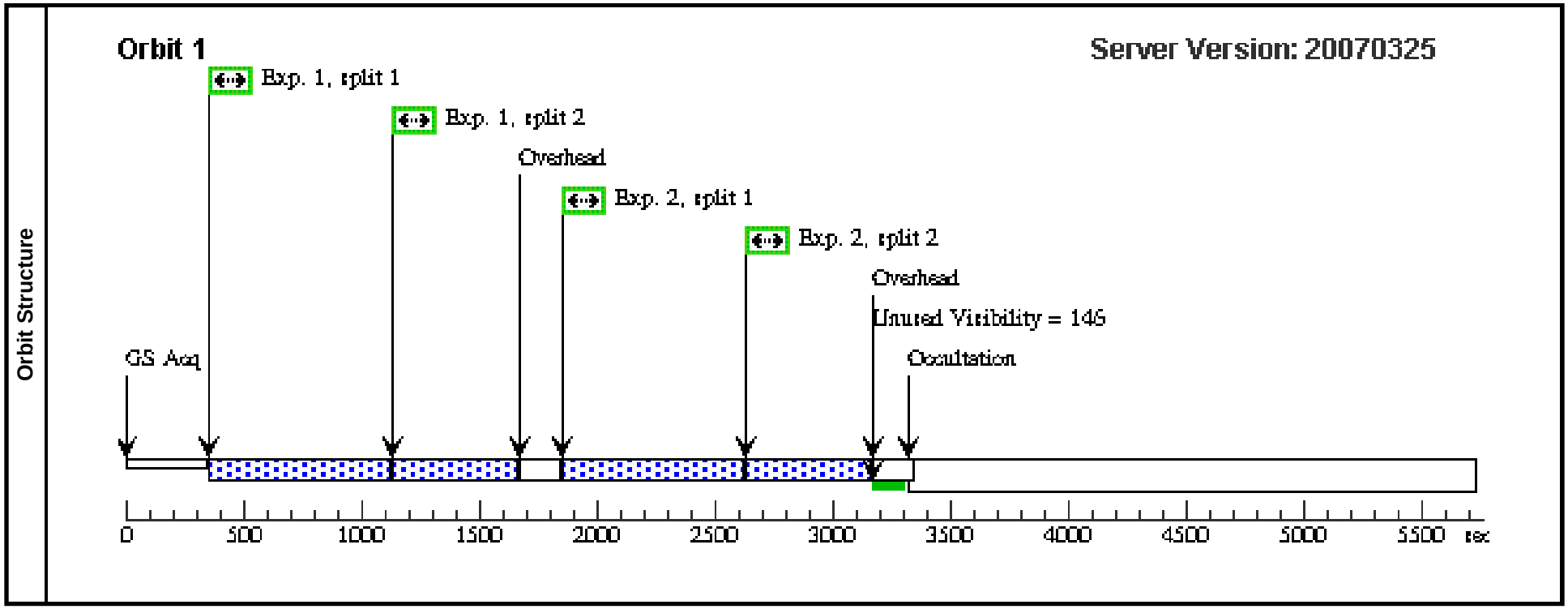
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Exp. 2, split 1
Exp. 2, split 2
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Unused Visibility = 146
GS Acq
Occultation
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5500
sec

Visit

Proposal 10903, Visit 12 Mon May 21 19:40:40 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: WFPC2

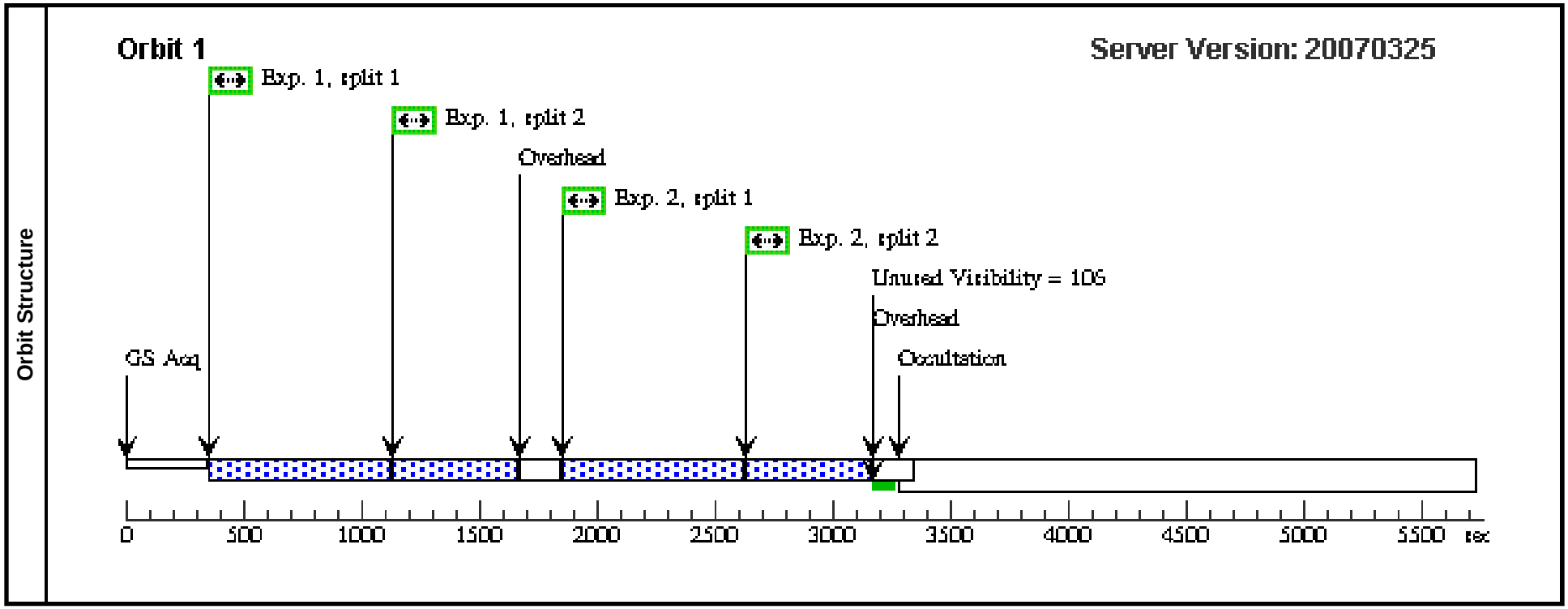
Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(12)	2001-LMC-100	RA: 05 21 7.5270 (80.2813625d) Dec: -69 34 45.16 (-69.57921d) Equinox: J2000		V=22.0	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(12) 2001-LMC-100	WFPC2, IMAGE, PC1-FIX	F555W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***
2		(12) 2001-LMC-100	WFPC2, IMAGE, PC1-FIX	F814W	CR-SPLIT=DEF			1000.0 Secs	
								[==>(Split 1)] *[==>(Split 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20070325
Exp. 1, split 1
Exp. 1, split 2
Overhead
Exp. 2, split 1
Exp. 2, split 2
Unused Visibility = 106
Overhead
GS Acq
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec