11731 - Studying Cepheid Systematics in M81: H-band Observations

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	(1) M81FIELD01 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:05:49.0	yes
02	(2) M81FIELD02 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:05:56.0	yes
03	(3) M81FIELD03 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:01.0	yes
04	(4) M81FIELD04HOLMBERG ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:09.0	yes
05	(5) M81FIELD05 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:14.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
06	(6) M81FIELD06 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:20.0	yes
07	(7) M81FIELD07 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:25.0	yes
08	(8) M81FIELD08 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:30.0	yes
09	(9) M81FIELD09 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:37.0	yes
10	(10) M81FIELD10 ANY	ACS/WFC WFC3/IR	1	16-Oct-2008 21:06:42.0	yes
11	(4) M81FIELD04HOLMBERG ANY	ACS/WFC WFC3/UVIS	1	16-Oct-2008 21:06:46.0	yes

11 Total Orbits Used

ABSTRACT

The local value of the Hubble Constant remains one of the most important constraints in cosmology, but improving on the 10% accuracy of the HST Key Project is challenging. No improvements will be convincing until the metallicity dependence is well constrained and blending effects are fully understood. M81 and its dwarf companion Holmberg IX are superb laboratories for studying Cepheid systematics because they contain large numbers of bright Cepheids with a good spread in metallicity lying at a common, relatively close distance. We have identified 180 12<P< 70 day Cepheids in these two galaxies using the Large Binocular Telescope (compared to 30 in total by the KP), and will expand the sample further in 2008-2009. We will use 10 orbits with WFC3/IR to obtain H-band images of 100

Cepheids in M81 to add to the ACS/BVI calibrations we will obtain from archival data and 1 orbit with WFC3/UVIS to add B-band data for Holmberg IX. Four band BVIH photometry will allow us to flux calibrate, estimate extinction, measure metallicity effects and then check the results in detail. We can also examine blending effects on WFC3/IR data in a relatively nearby galaxy before it is applied to more distant galaxies. Our M81 sample is three times larger than the next best sample, that of NGC4258, and suffers less from blending because M81 is at half the distance, so it is an excellent laboratory for studying Cepheid systematics even if it lacks as precise a geometric distance as NGC4258.

OBSERVING DESCRIPTION

These observations are meant to calibrate the H-band magnitudes of roughly 100 Cepheids in M81 and to supply a B-band magnitude for those in Holmberg IX.

The observations are multiply dithered/CR split in order to maximize control of systematics that may effect the calibrations (CR hits, hot pixels etc) and to modestly improve the PSF sampling.

Visit

Proposal 11731, Visit 01, implementation Fri Oct 17 01:06:49 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 320D TO 100 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

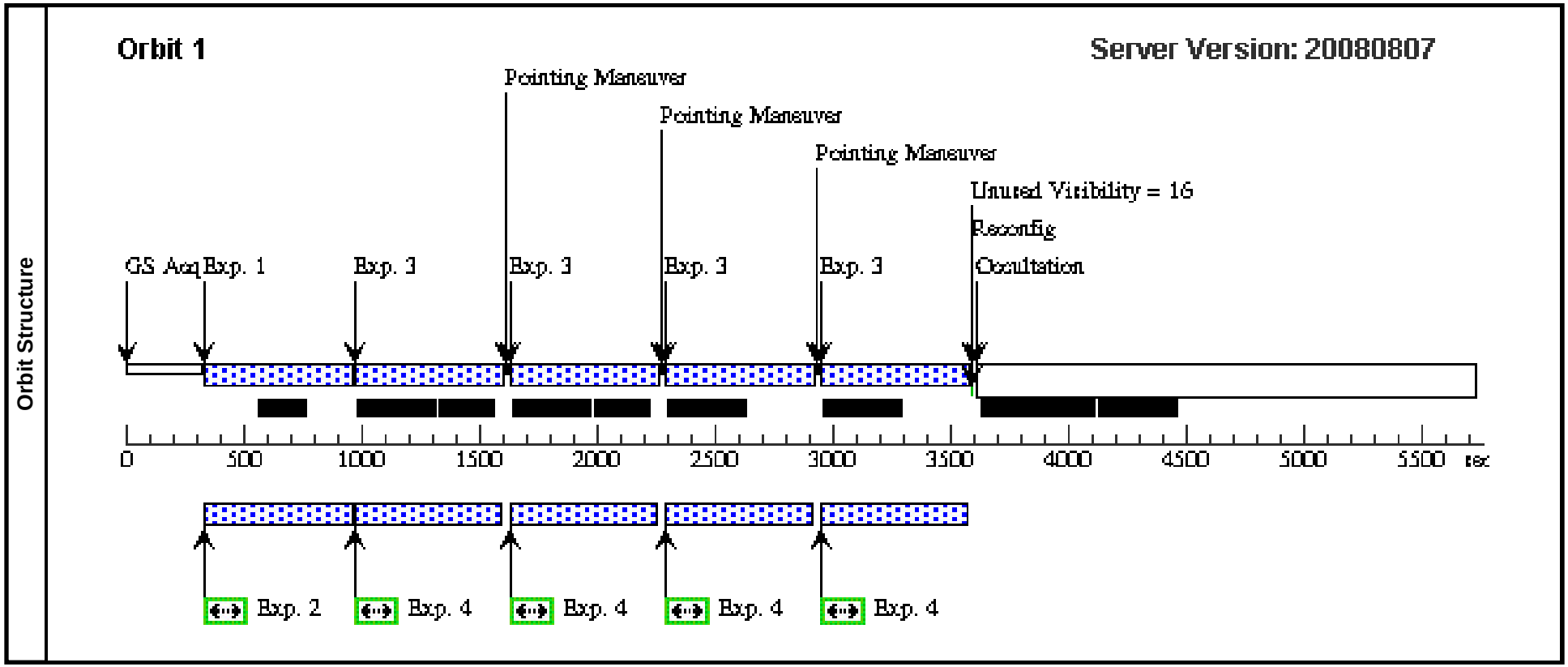
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	M81FIELD01	RA: 09 56 19.7090 (149.0821208d) Dec: +69 04 34.47 (69.07624d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) M81FIELD01	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(1) M81FIELD01	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 02, implementation Fri Oct 17 01:06:49 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 60D TO 140 D

Patterns

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(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

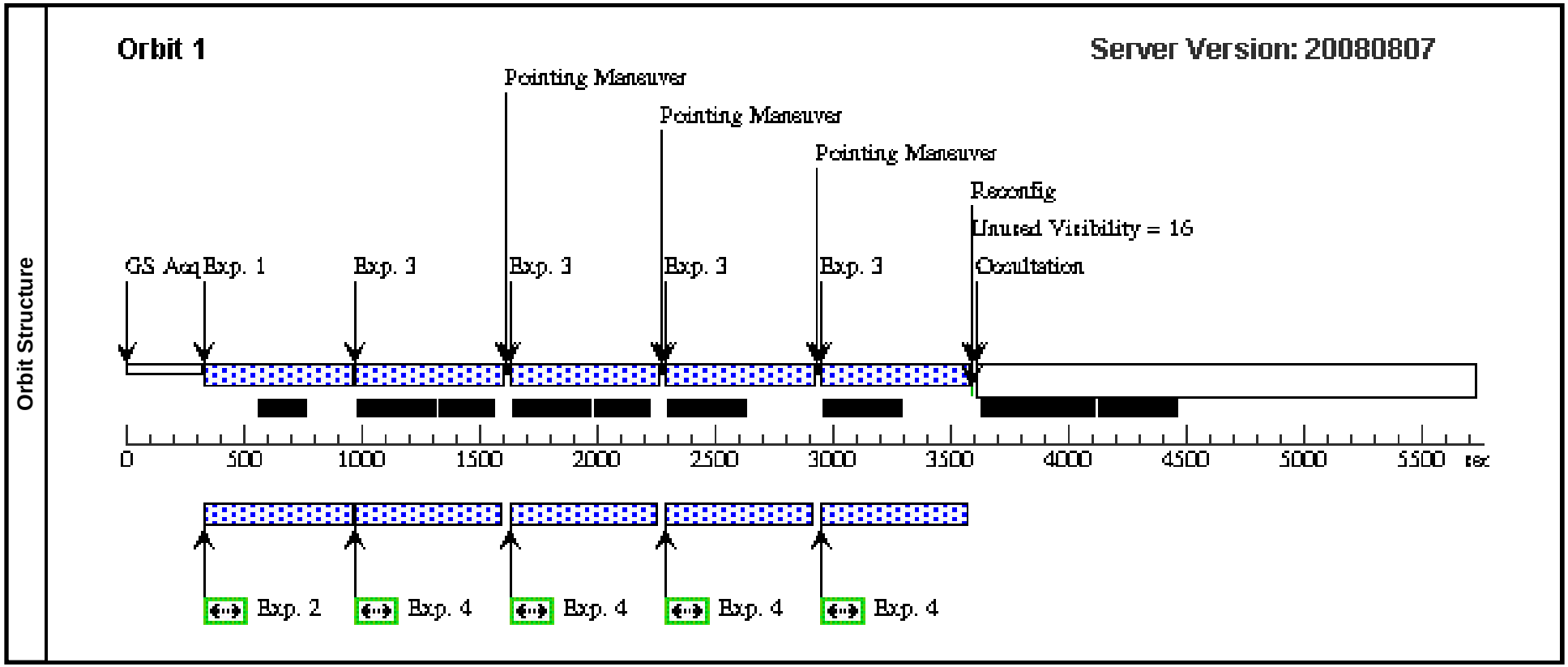
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	M81FIELD02	RA: 09 56 8.1920 (149.0341333d) Dec: +68 59 9.19 (68.98589d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) M81FIELD02	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(2) M81FIELD02	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 03, implementation Fri Oct 17 01:06:50 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 270D TO 120 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

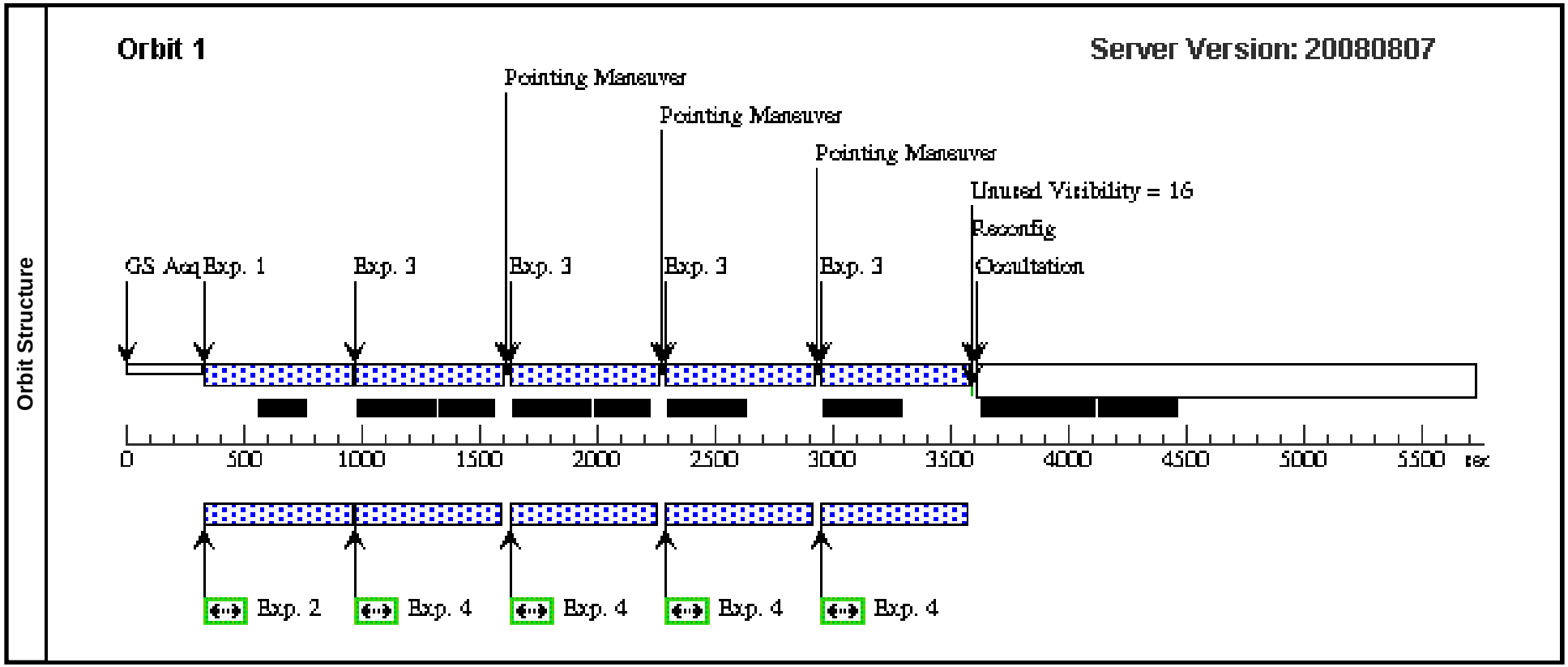
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	M81FIELD03	RA: 09 55 36.4270 (148.9017792d) Dec: +69 08 1.26 (69.13368d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) M81FIELD03	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(3) M81FIELD03	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Visit

Proposal 11731, Visit 04, implementation Fri Oct 17 01:06:50 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 0.0D TO 80 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

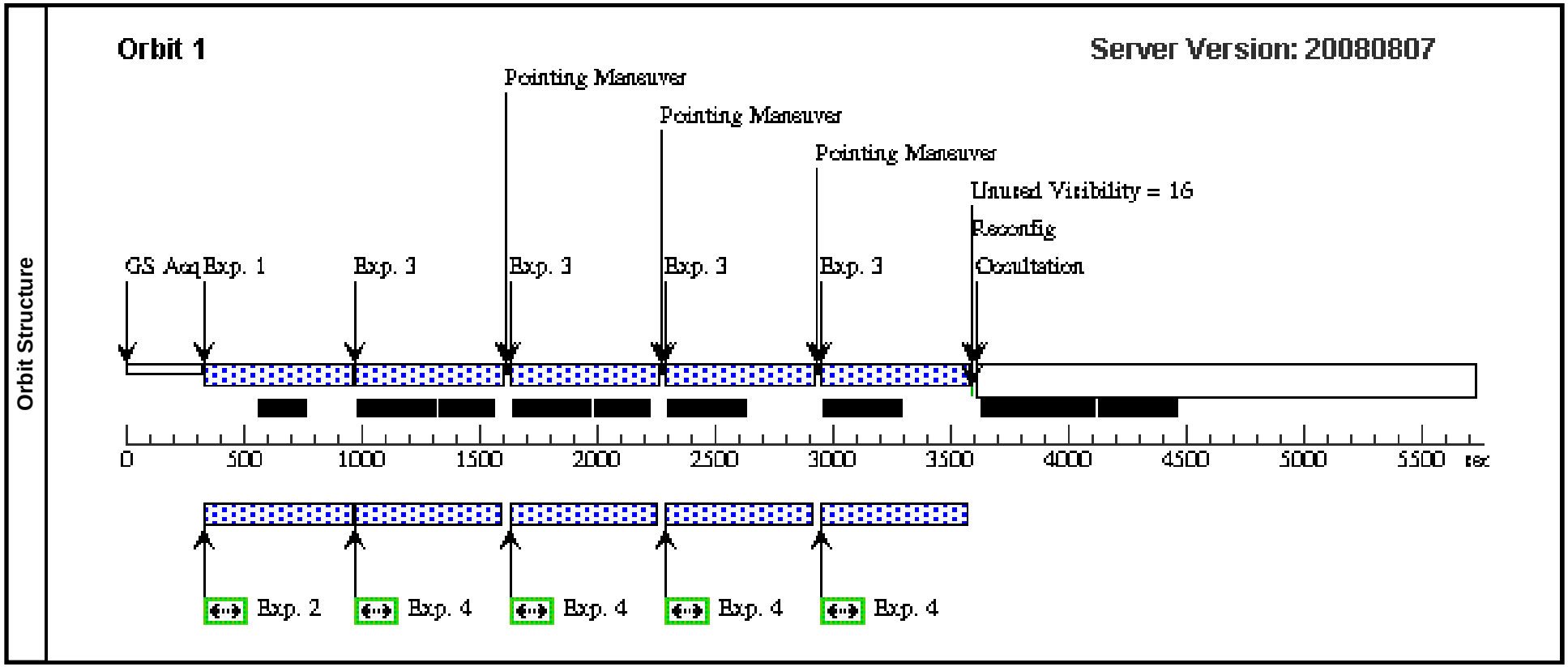
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	M81FIELD04HOLMBERG	RA: 09 57 34.5150 (149.3938125d) Dec: +69 02 34.93 (69.04304d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby dwarf galaxy (Holmberg IX)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) M81FIELD04HOLMBERG	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(4) M81FIELD04HOLMBERG	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Visit

Proposal 11731, Visit 05, implementation Fri Oct 17 01:06:51 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 320D TO 90 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

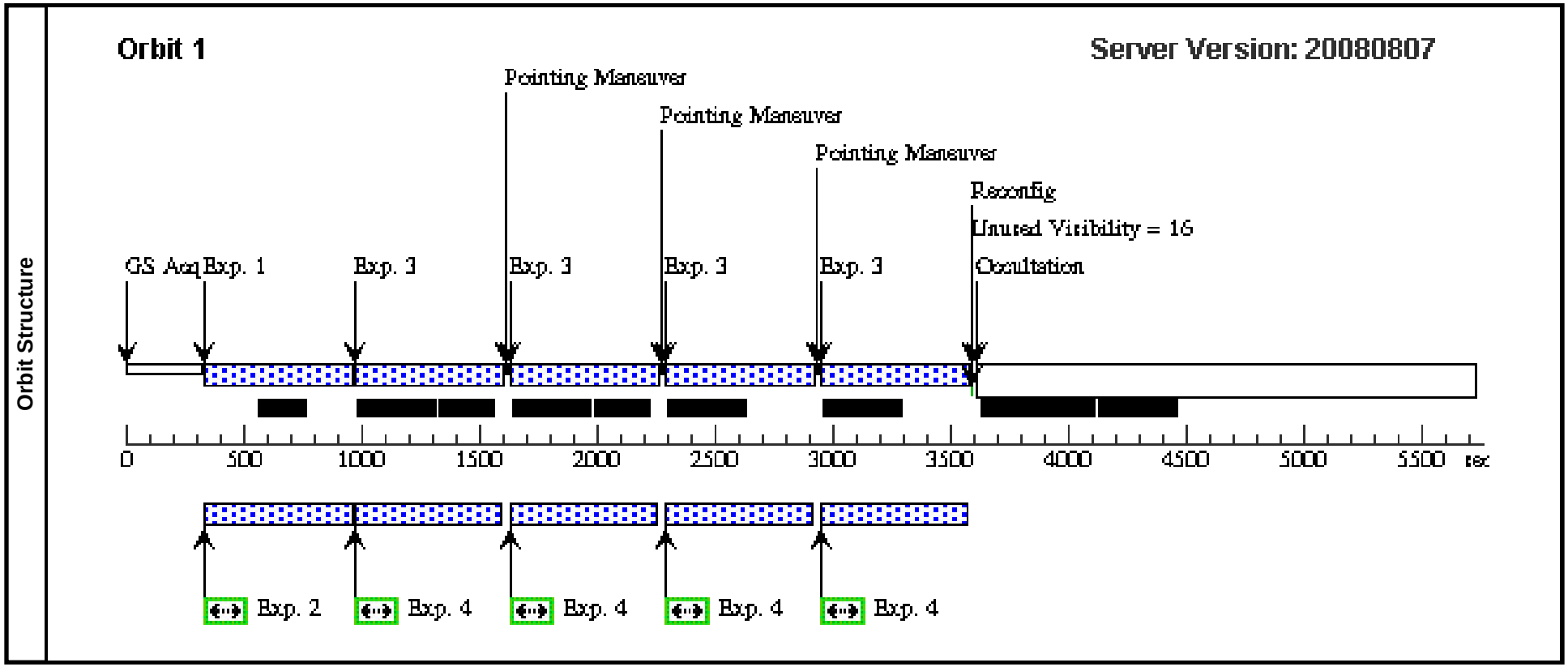
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	M81FIELD05	RA: 09 56 20.7200 (149.0863333d) Dec: +69 07 37.66 (69.12713d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) M81FIELD05	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(5) M81FIELD05	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Visit

Proposal 11731, Visit 06, implementation Fri Oct 17 01:06:51 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 250D TO 360 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

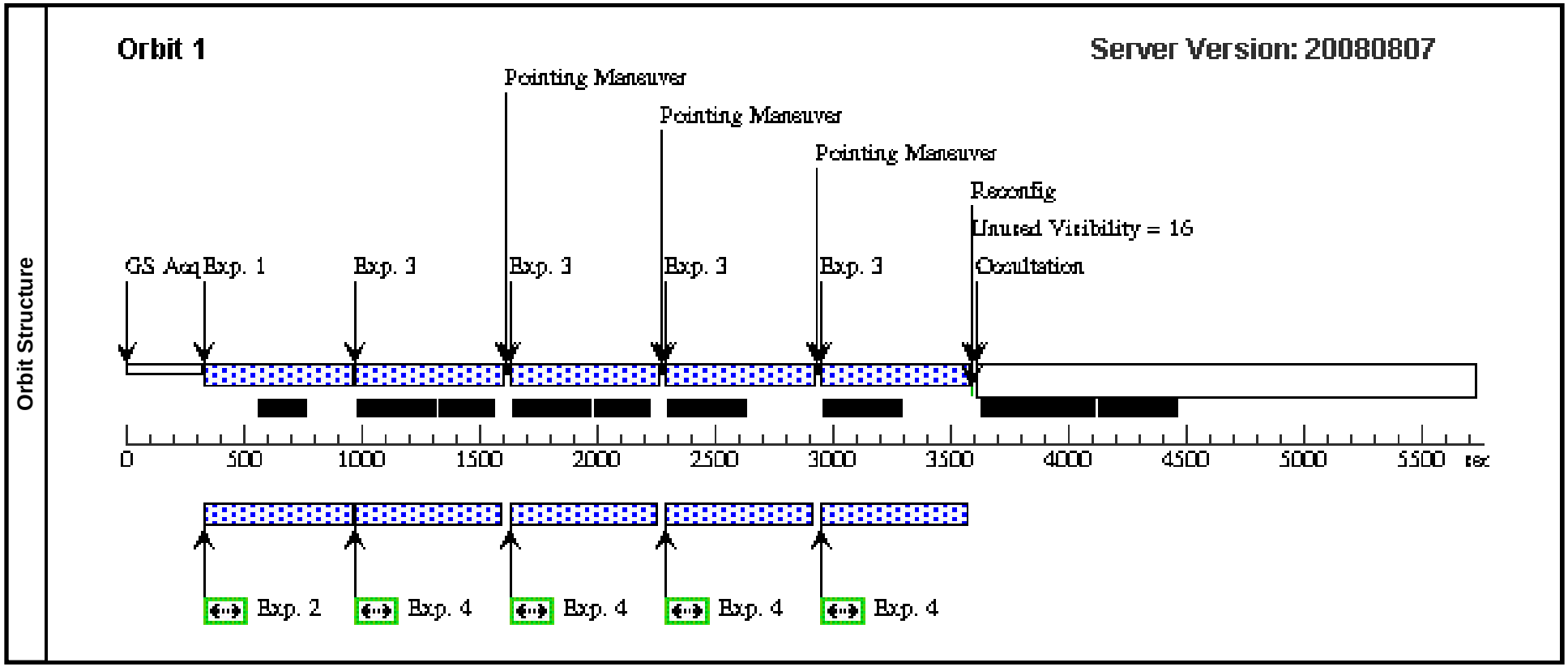
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	M81FIELD06	RA: 09 55 13.7400 (148.8072500d) Dec: +69 10 5.10 (69.16808d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) M81FIELD06	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(6) M81FIELD06	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Visit

Proposal 11731, Visit 07, implementation Fri Oct 17 01:06:52 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 280D TO 20 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

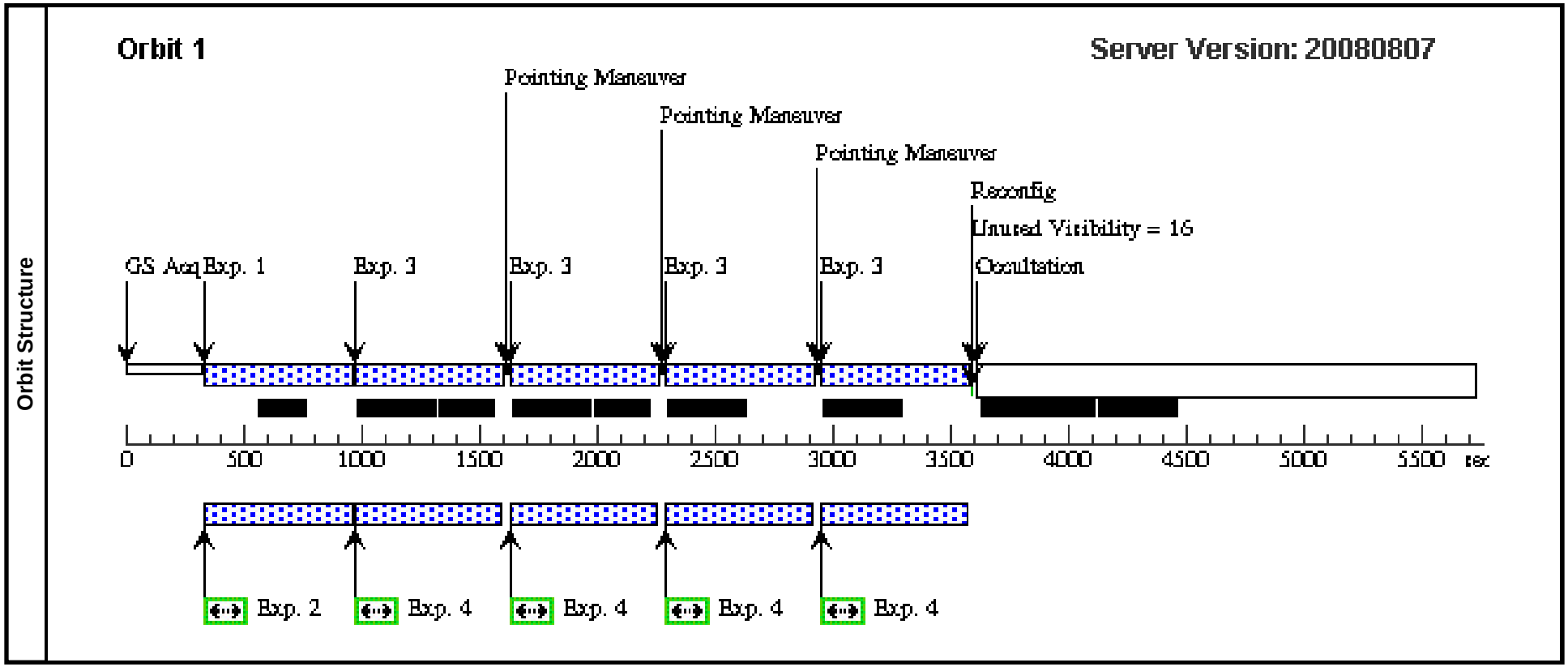
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	M81FIELD07	RA: 09 55 34.3510 (148.8931292d) Dec: +69 12 23.47 (69.20652d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(7) M81FIELD07	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(7) M81FIELD07	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***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Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 08, implementation Fri Oct 17 01:06:52 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 0.0D TO 130 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

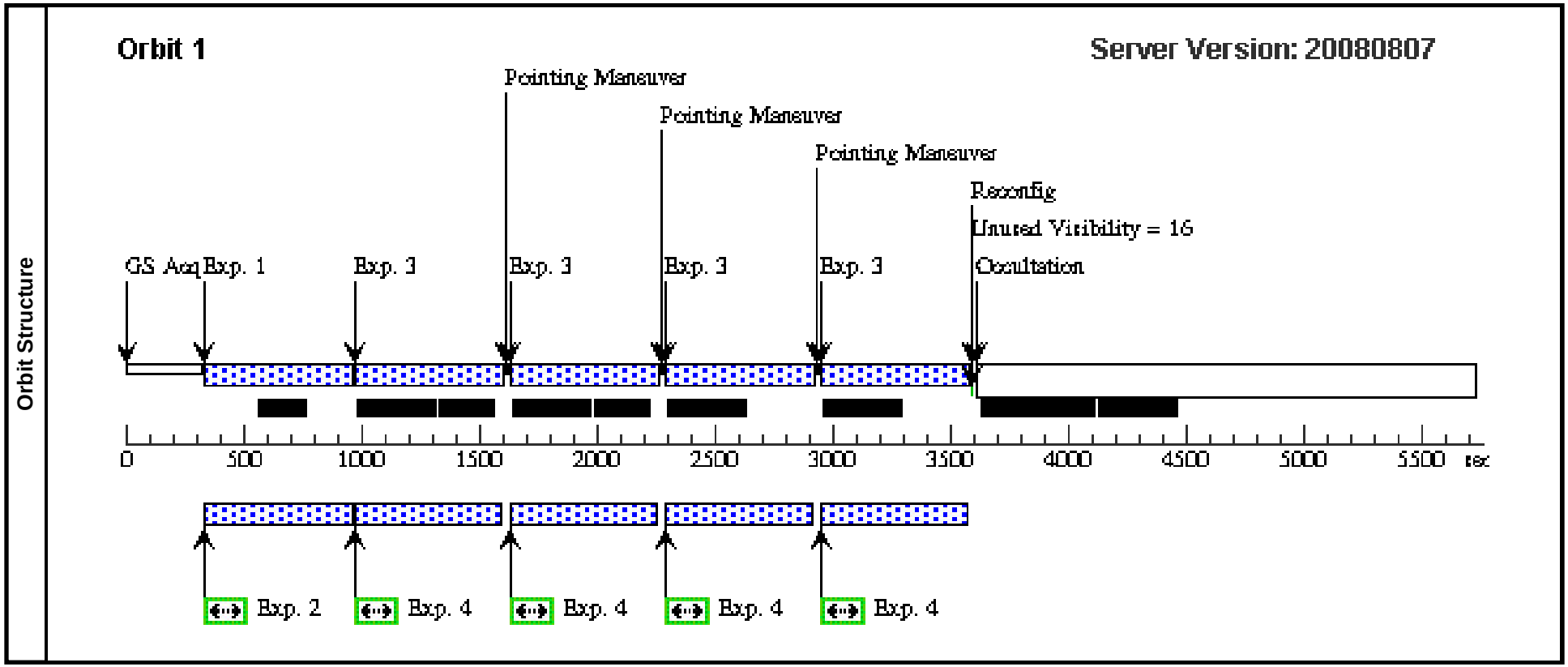
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	M81FIELD08	RA: 09 56 16.2890 (149.0678708d) Dec: +69 02 41.39 (69.04483d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(8) M81FIELD08	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(8) M81FIELD08	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080807
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Reconfig
Unused Visibility = 16
GS Acq
Exp. 1
Exp. 3
Exp. 3
Exp. 3
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 2
Exp. 4
Exp. 4
Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 09, implementation Fri Oct 17 01:06:52 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 140D TO 270 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

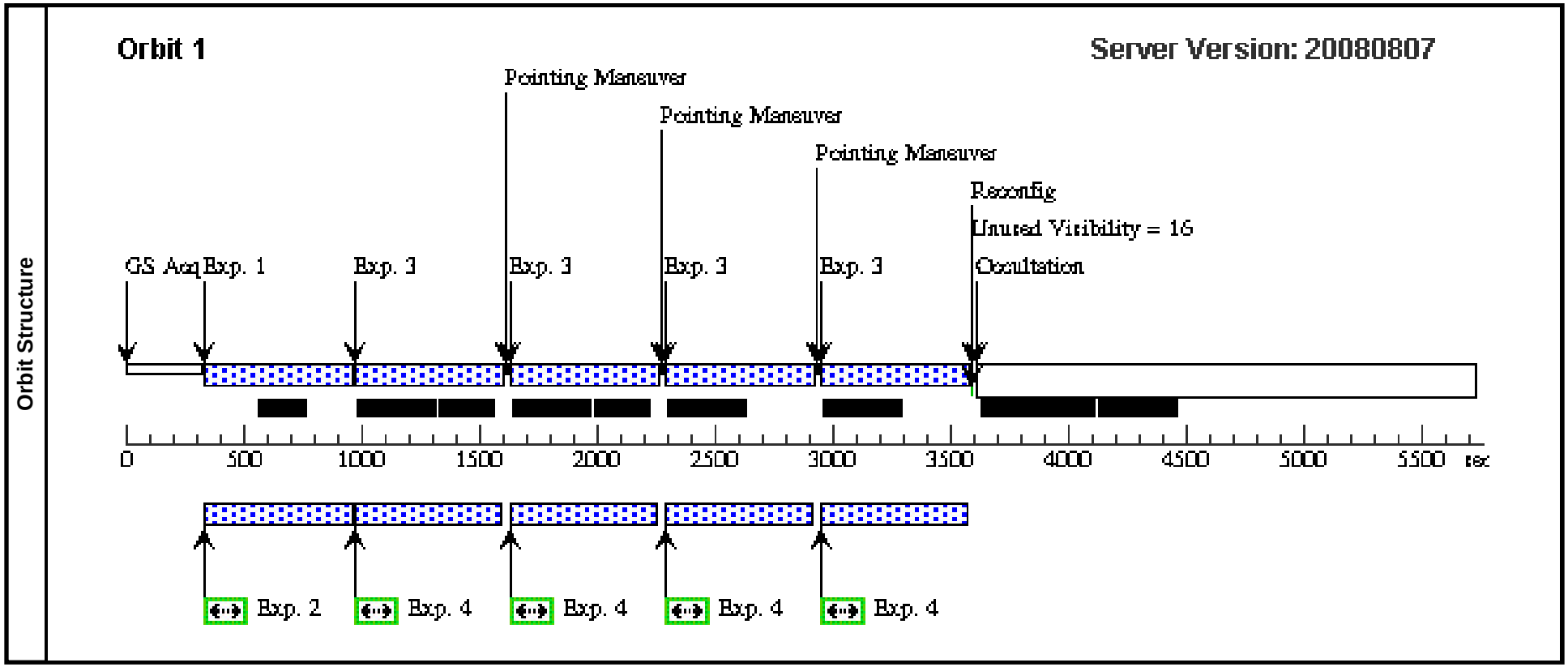
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	M81FIELD09	RA: 09 54 45.7730 (148.6907208d) Dec: +69 02 19.00 (69.03861d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(9) M81FIELD09	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(9) M81FIELD09	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080807
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Reconfig
Unused Visibility = 16
GS Acq
Exp. 1
Exp. 3
Exp. 3
Exp. 3
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 2
Exp. 4
Exp. 4
Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 10, implementation Fri Oct 17 01:06:53 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, ACS/WFC

Special Requirements: ORIENT 120D TO 260 D

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=0.572 Line Spacing=0.365	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(3-4)

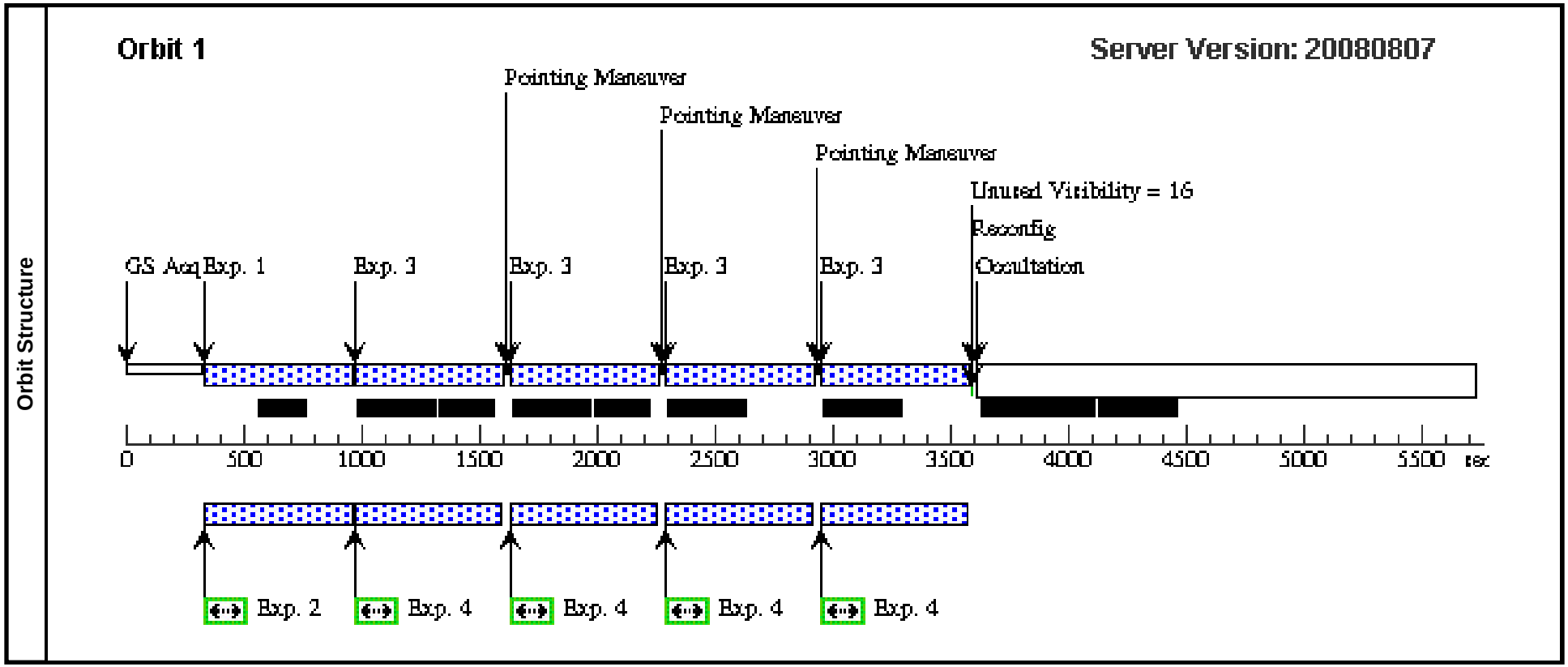
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	M81FIELD10	RA: 09 54 57.7700 (148.7407083d) Dec: +69 00 19.34 (69.00537d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby galaxy (M81)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(10) M81FIELD10	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Prime + Parallel Group 1-2	*[==>]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Prime + Parallel Group 1-2	400 Secs *[==>421.0 Secs]*	***[1]***
3		(10) M81FIELD10	WFC3/IR, MULTIACCUM, IR-FIX	F160W	NSAMP=10; SAMP-SEQ=STEP200		Pattern 3-4 (1) Prime + Parallel Group 3-4	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 3-4 (1) Prime + Parallel Group 3-4	500 Secs *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080807
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Unused Visibility = 16
Reconfig
GS Acq
Exp. 1
Exp. 3
Exp. 3
Exp. 3
Exp. 3
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 2
Exp. 4
Exp. 4
Exp. 4
Exp. 4

Visit

Proposal 11731, Visit 11, implementation Fri Oct 17 01:06:53 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC, WFC3/UVIS

Special Requirements: SAME ORIENT AS 04

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(3)	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		(1-2)

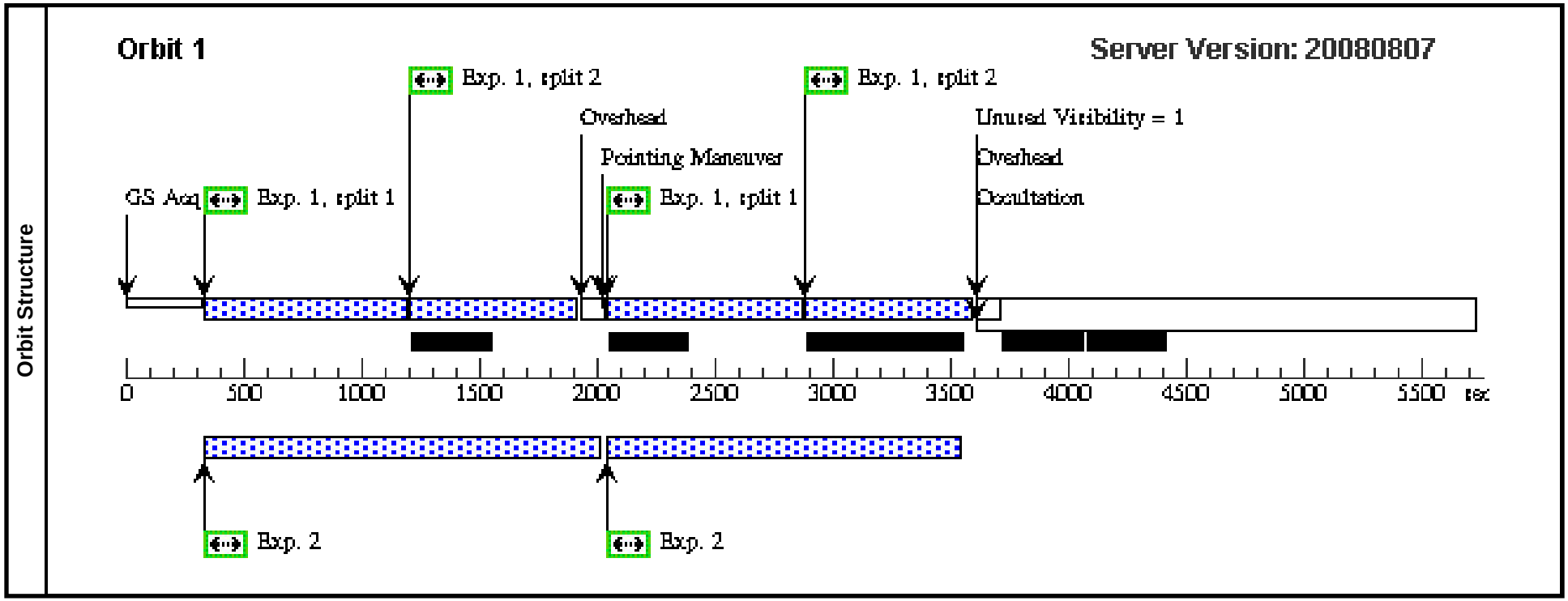
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	M81FIELD04HOLMBERG	RA: 09 57 34.5150 (149.3938125d) Dec: +69 02 34.93 (69.04304d) Equinox: J2000		V=24	Reference Frame: SDSS

Comments: Cepheids embedded in large nearby dwarf galaxy (Holmberg IX)

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) M81FIELD04HOLMBERG	WFC3/UVIS, ACCUM, UVIS-FIX	F438W			Pattern 1-2 (3)	1420 Secs	
							Prime + Parallel Group 1-2	*[==>713.0 Secs (Pattern 1, Split 1)]* *[==>713.0 Secs (Pattern 1, Split 2)]* *[==>713.0 Secs (Pattern 2, Split 1)]* *[==>713.0 Secs (Pattern 2, Split 2)]*	***[1]***
2		ANY	ACS/WFC, ACCUM, WFC	F555W			Pattern 1-2 (3)	1350 Secs	
							Prime + Parallel Group 1-2	*[==>1470.0 Secs (Pattern 1)]* *[==>1380.0 Secs (Pattern 2)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080807
Exp. 1, split 2
Exp. 1, split 2
Overhead
Unused Visibility = 1
Pointing Maneuver
Overhead
GS Acq
Exp. 1, split 1
Exp. 1, split 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec
Exp. 2
Exp. 2