



11979 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Cycle: 16, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:19.0	yes
02	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:23.0	yes
03	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:25.0	yes
04	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:27.0	yes
05	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:30.0	yes
06	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:32.0	yes
07	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:34.0	yes
08	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:37.0	yes

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
09	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:40.0	yes
10	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:42.0	yes
11	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:44.0	yes
12	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:46.0	yes
13	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:48.0	yes
14	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:50.0	yes
15	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:52.0	yes
16	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:54.0	yes
17	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:56.0	yes
18	(2) NAME-FOMALHAUT	WFPC2	1	16-Apr-2009 21:23:58.0	yes

18 Total Orbits Used

ABSTRACT

Fomalhaut is a bright nearby star that harbors a belt of dusty material with a morphology that has been used to predict the presence of a shepherding planet. With ACS/HRC coronagraphy, we have achieved the direct detection of a planet candidate (Fomalhaut b) in F606W and F814W. The planet candidate lies 18 AU interior to the dust belt and we detect counterclockwise orbital motion in two epochs of observations (2004 and 2006).

Fomalhaut b has mass no greater than three Jupiter masses based on an analysis of its luminosity, including non-detections at infrared wavelengths, and the dynamical argument that a significantly more massive object would disrupt the dust belt. Variability at optical wavelengths and the brightness in the F606W passband suggest additional sources of luminosity such as starlight reflected from a circumplanetary ring system. A second possibility that has been invoked for substellar objects is a significant contribution of H-alpha emission. Here we propose follow-up WFPC2 observations to test the possibility that the F606W flux is contaminated by H-alpha emission. We demonstrate that the detection of Fomalhaut b using WFPC2 is feasible using roll deconvolution. Furthermore, a detection of Fomalhaut b in 2009 will provide a crucial third epoch for astrometry. With the existing two epochs of data, the orbit of Fomalhaut b cannot be determined uniquely. The third epoch will be used to test the prediction of

apsidal alignment and more accurately determine the dynamical mass of Fomalhaut b. If apsidal mis-alignment is found between the planet and the belt, this result would point to the existence of still other planets lurking unseen in the Fomalhaut system.

OBSERVING DESCRIPTION

The goal is to achieve high contrast for point sources beyond 10 arcseconds radius from the bright star Fomalhaut using the roll deconvolution technique that has been successful in the past (e.g. with Beta Pictoris in GO-5700). Fomalhaut will be acquired on the PC so that the much fainter planet candidate Fomalhaut b will land on a wide-field CCD. Absolute orientations are chosen so that Fomalhaut b falls correctly within the WF field. To achieve roll subtraction, consecutive orbits have an ORIENT FROM command of 1.2 degree from the previous orbit. Each orbit is an individual visit. Visits 01-09 are the same as 10-18, except that the former set uses the F606W filter and the latter set use the F656N filter. We want to minimize PSF breathing, which means that Visits 01-09 should be scheduled in consecutive orbits, if possible. The same goes for Visits 10-18.

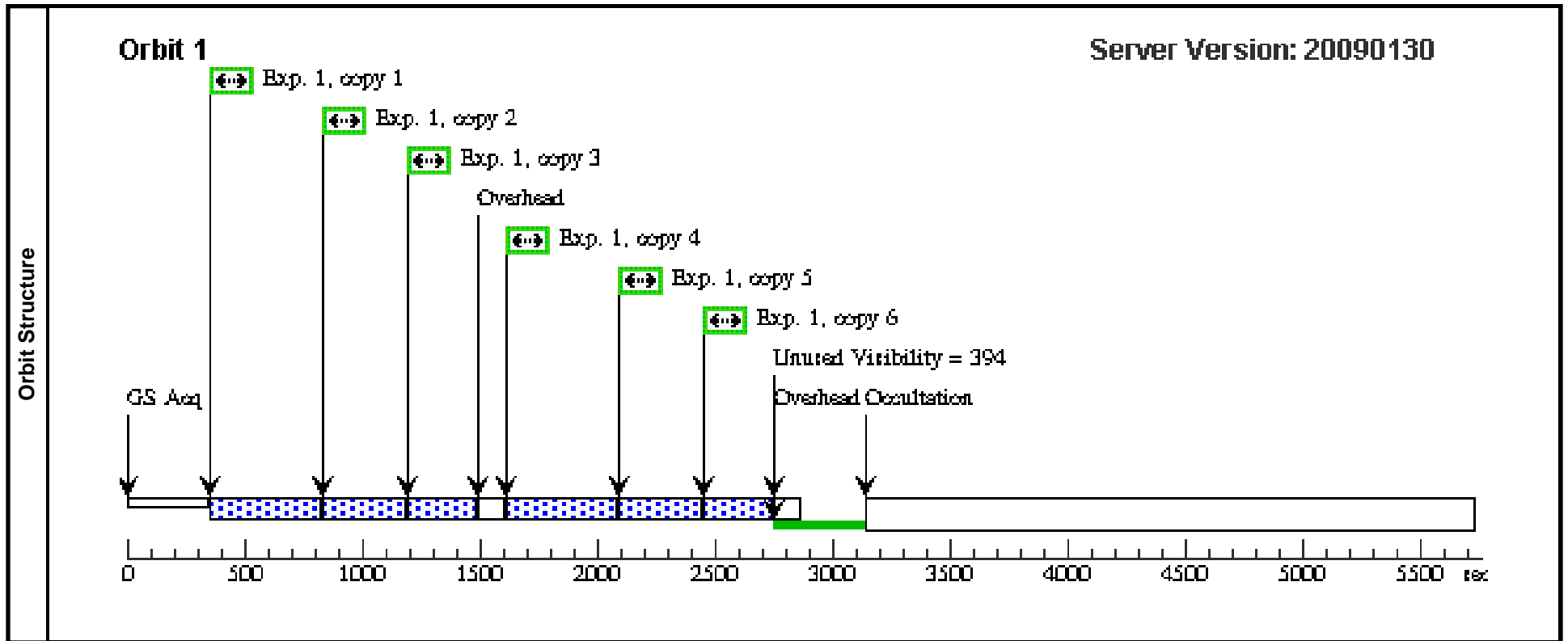
ADDITIONAL COMMENTS

Guide star availability should be checked as soon as possible because sometimes this has been a problem for Fomalhaut observations. Also, the APT shows a scheduling window available beginning April 22, 2009, which is a few weeks before the scheduled servicing mission.

Proposal 11979 - Visit 01 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:01 GMT 2009

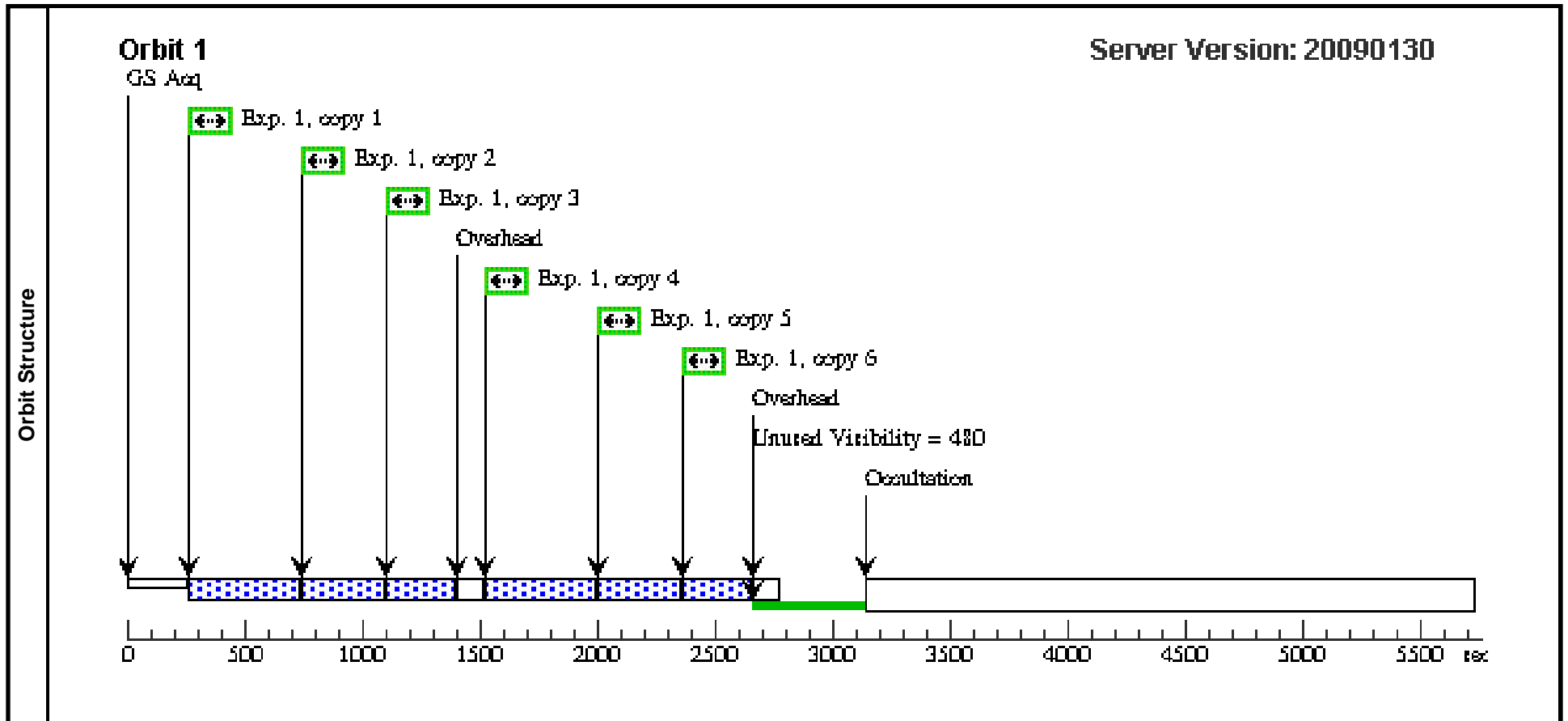
Visit	Proposal 11979, Visit 01, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 228.5D TO 228.6 D; GROUP 01,02,03,04,05 WITHIN 4.5 Orbits									
	Diagnostics	(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 01) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O BASE1T3		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 02 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:02 GMT 2009

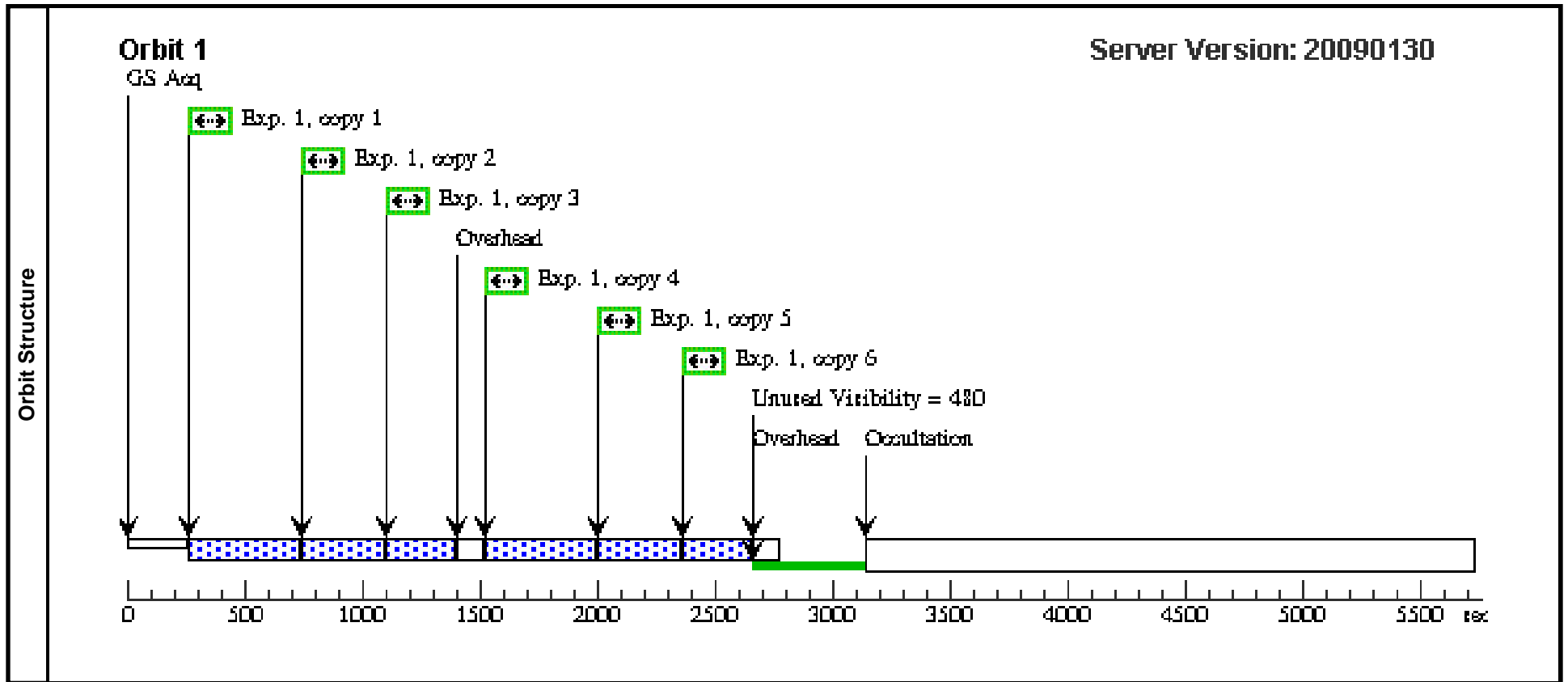
Visit	Proposal 11979, Visit 02, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.2D TO 1.2D FROM 01									
	Diagnostics	(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 02) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 03 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:02 GMT 2009

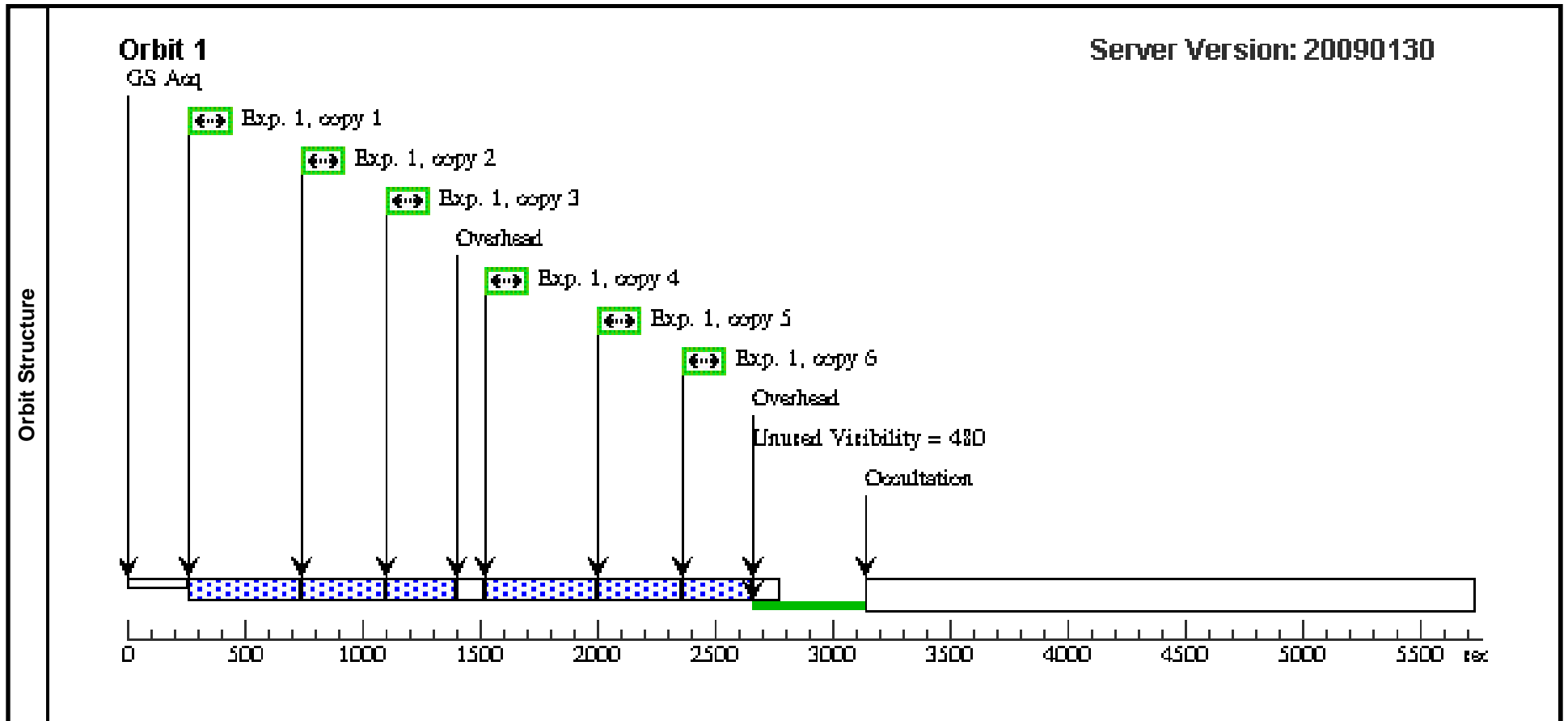
Visit	Proposal 11979, Visit 03, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 2.4D TO 2.4D FROM 01									
	Diagnostics	(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 03) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 04 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:03 GMT 2009

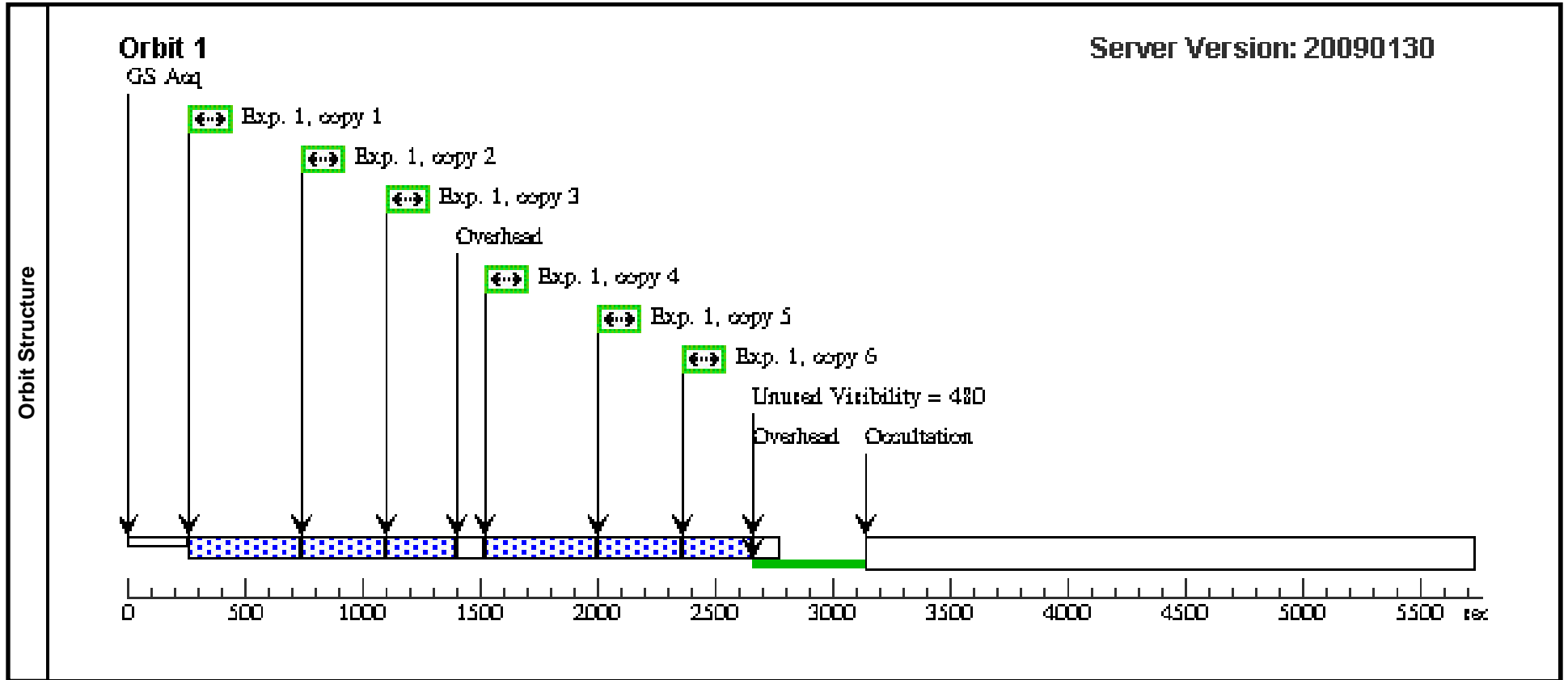
Visit	Proposal 11979, Visit 04, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 3.6D TO 3.6D FROM 01									
	Diagnostics	(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 04) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 05 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:03 GMT 2009

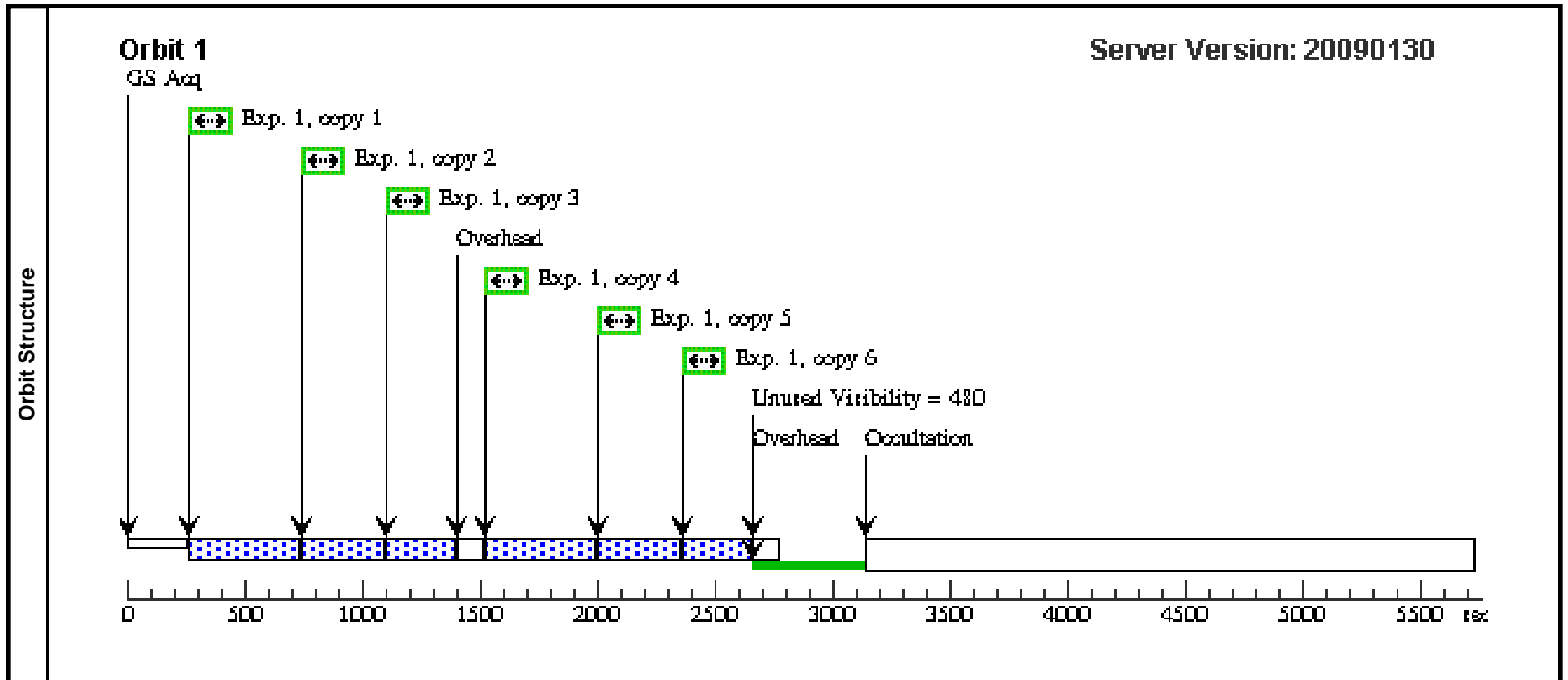
Visit	Proposal 11979, Visit 05, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 4.8D TO 4.8D FROM 01									
	Diagnostics	(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 05) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 06 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:03 GMT 2009

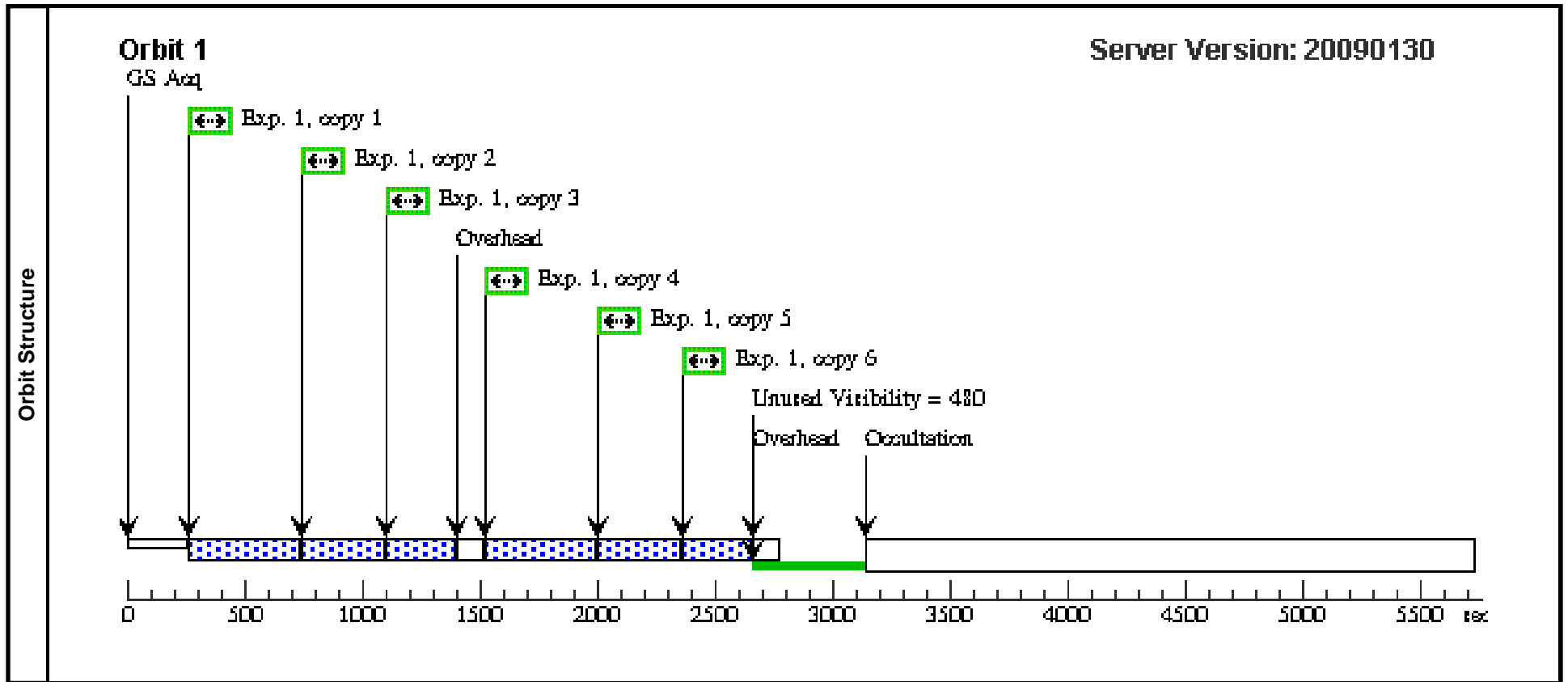
Visit	Proposal 11979, Visit 06, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 234.5D TO 234.6 D; AFTER 05 BY 1 H TO 20 H; GROUP 06,07,08,09 WITHIN 3.6 Orbits									
	Diagnostics	(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 06) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 07 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:04 GMT 2009

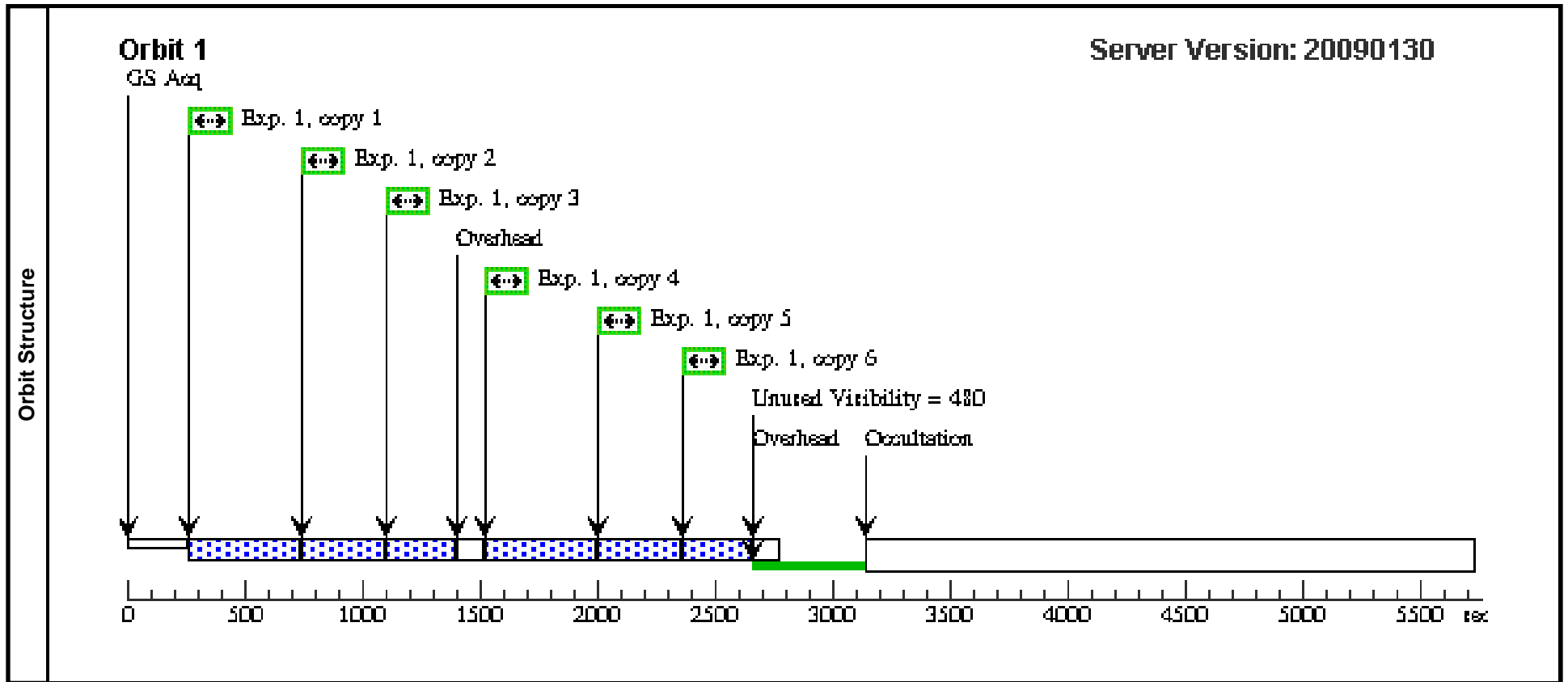
Visit	Proposal 11979, Visit 07, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 0.6D TO 0.6D FROM 06									
	Diagnostics	(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 07) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 08 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:04 GMT 2009

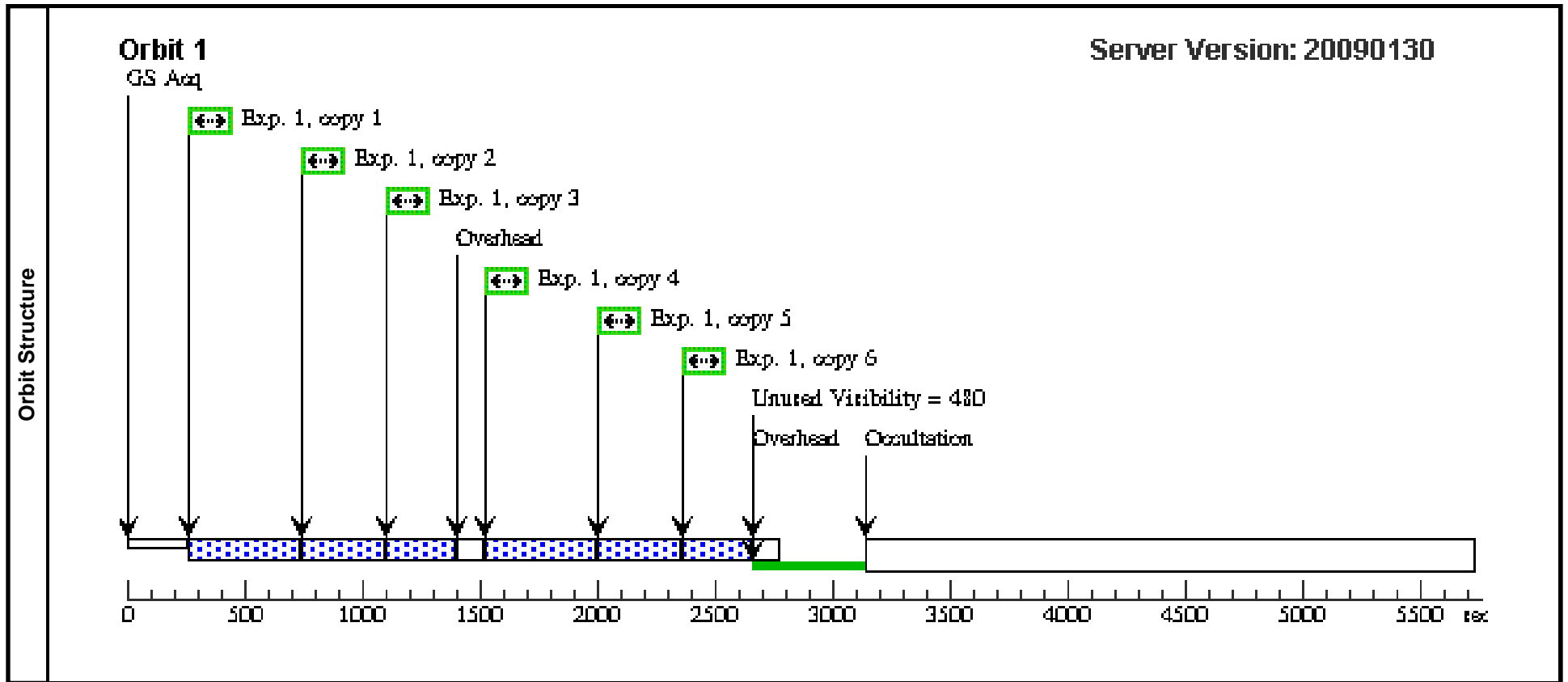
Visit	Proposal 11979, Visit 08, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.2D TO 1.2D FROM 06									
	Diagnostics	(Visit 08) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 08) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 08) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
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(Visit 08) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 08) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 09 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:04 GMT 2009

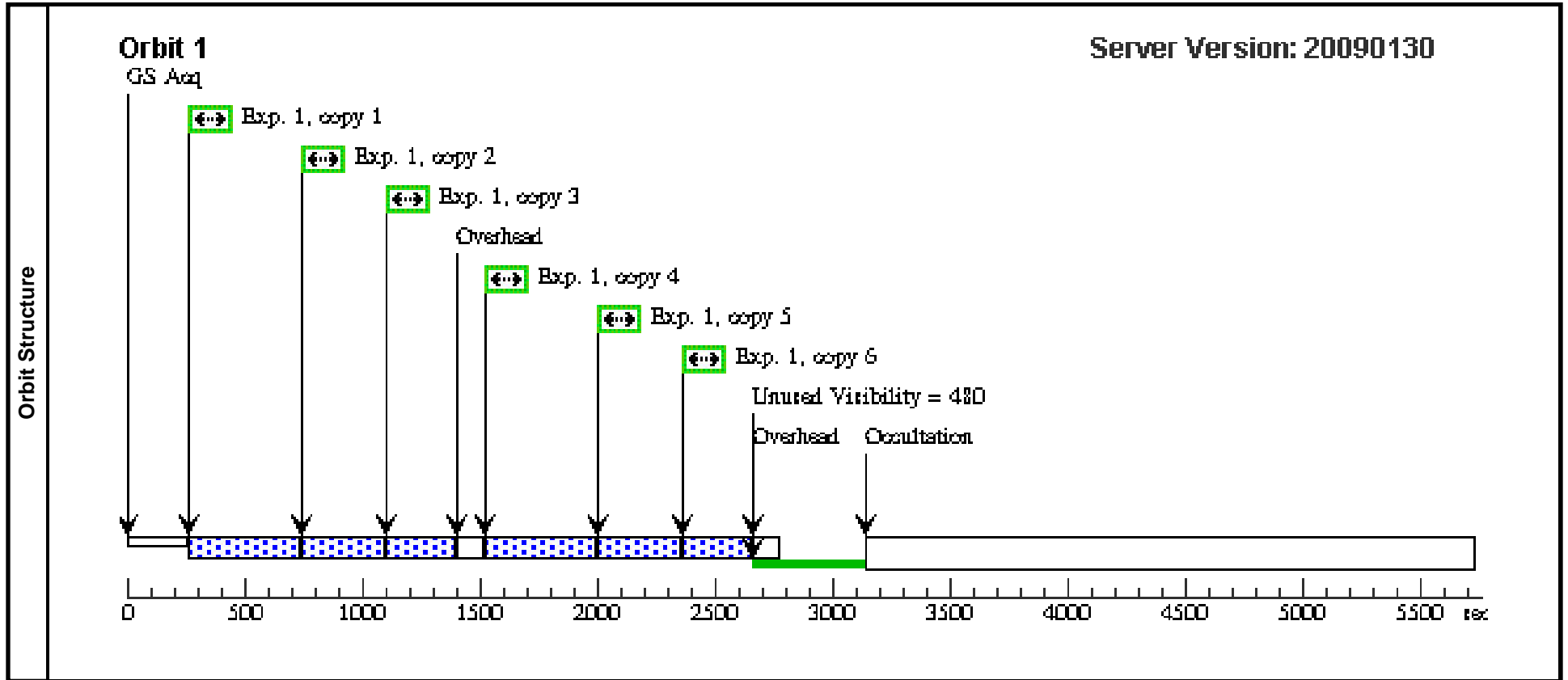
Visit	Proposal 11979, Visit 09, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.8D TO 1.85D FROM 06									
	Diagnostics	(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 09) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0		V=1.16	Reference Frame: ICRS			
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F606W	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 10 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:05 GMT 2009

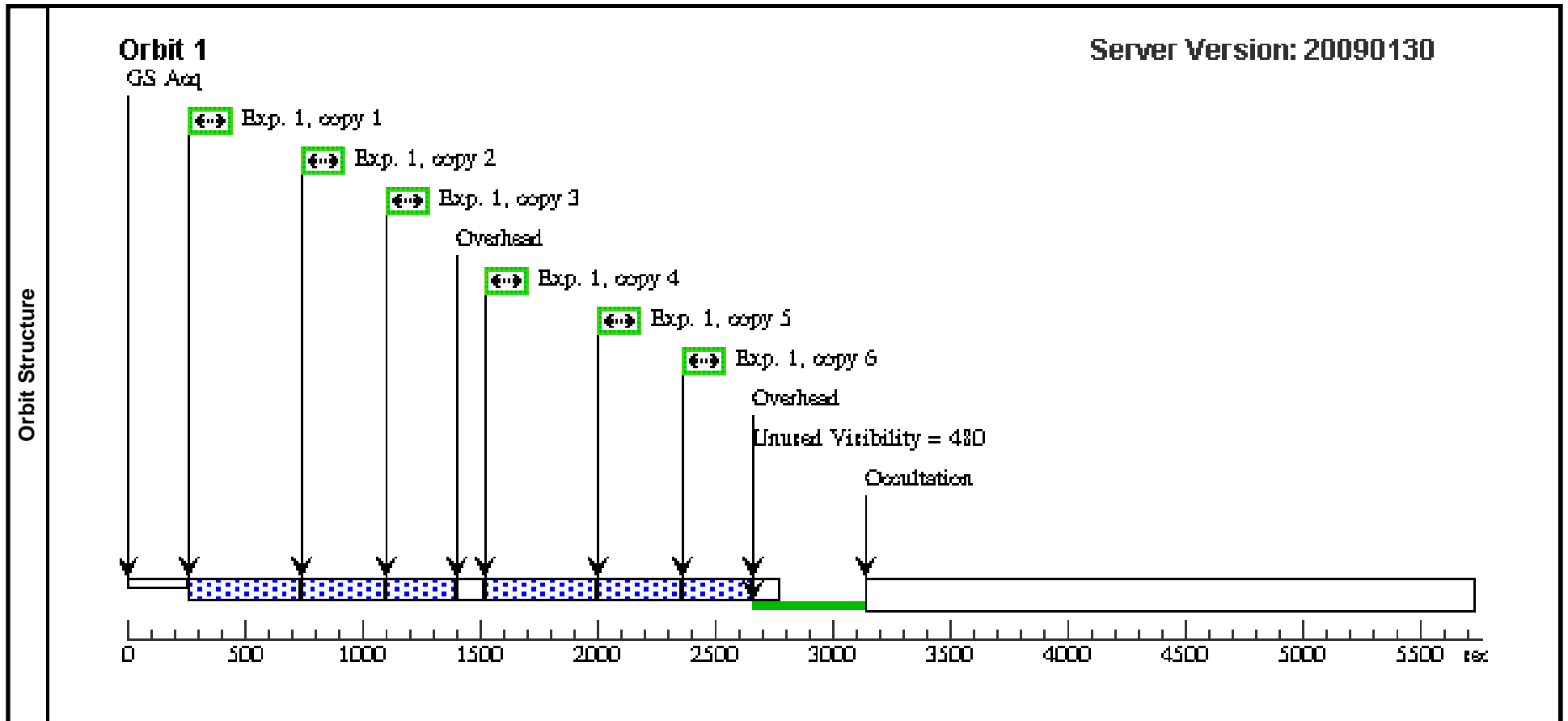
Visit	Proposal 11979, Visit 10, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 230.3D TO 232.3 D; GROUP 10,11,12,13,14 WITHIN 4.5 Orbits									
	Diagnostics	(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 10) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 11 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:05 GMT 2009

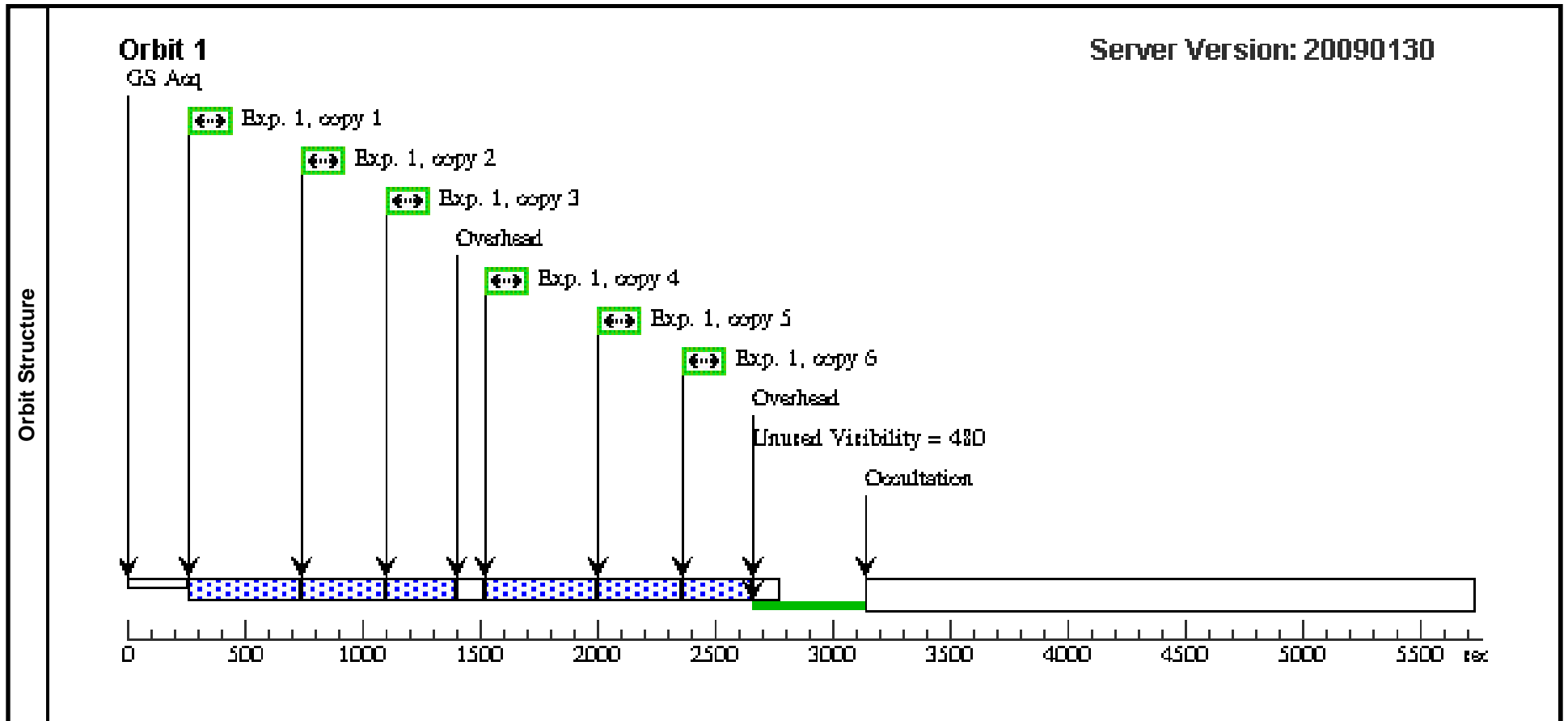
Visit	Proposal 11979, Visit 11, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.2D TO 1.2D FROM 10									
	Diagnostics	(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 11) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 12 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:05 GMT 2009

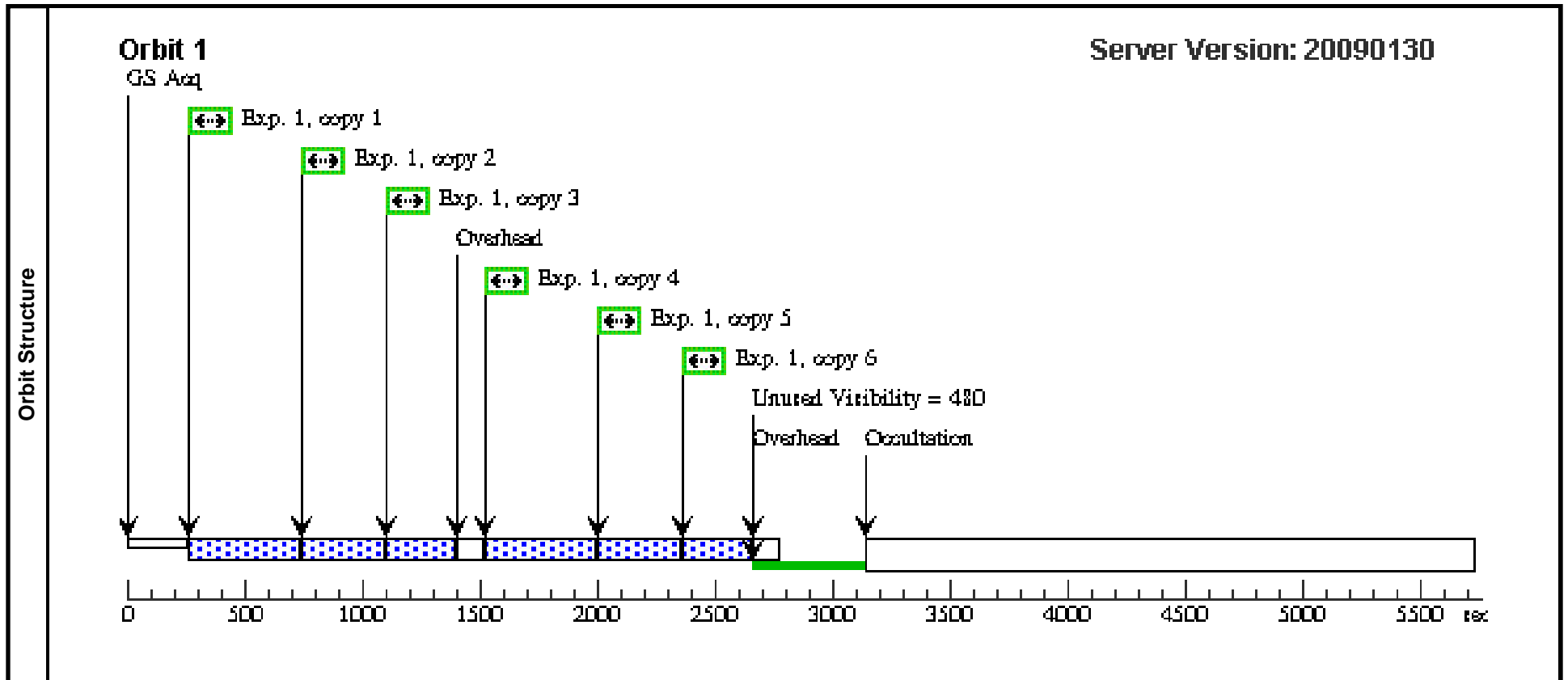
Visit	Proposal 11979, Visit 12, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 2.4D TO 2.4D FROM 10									
	Diagnostics	(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 12) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 13 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:06 GMT 2009

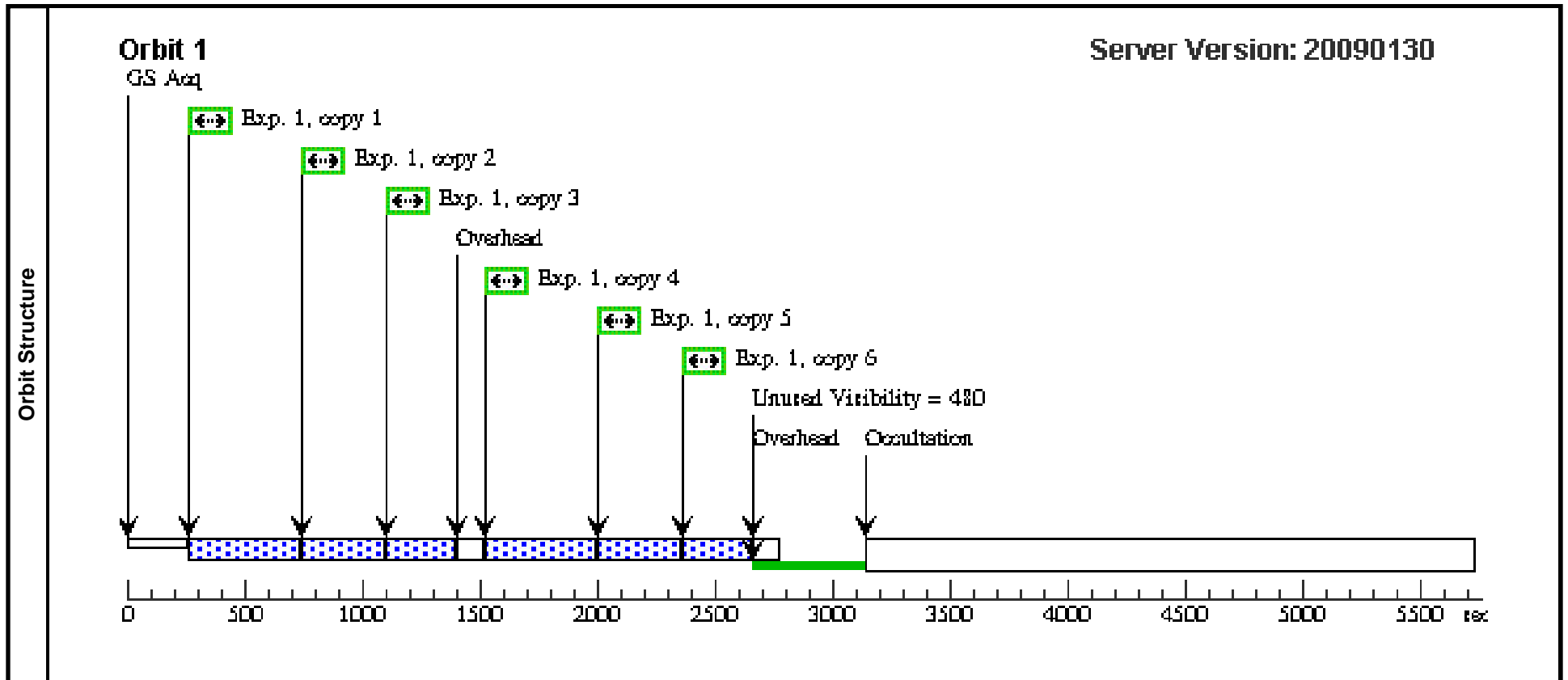
Visit	Proposal 11979, Visit 13, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 3.6D TO 3.6D FROM 10									
	Diagnostics	(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 13) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 14 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:06 GMT 2009

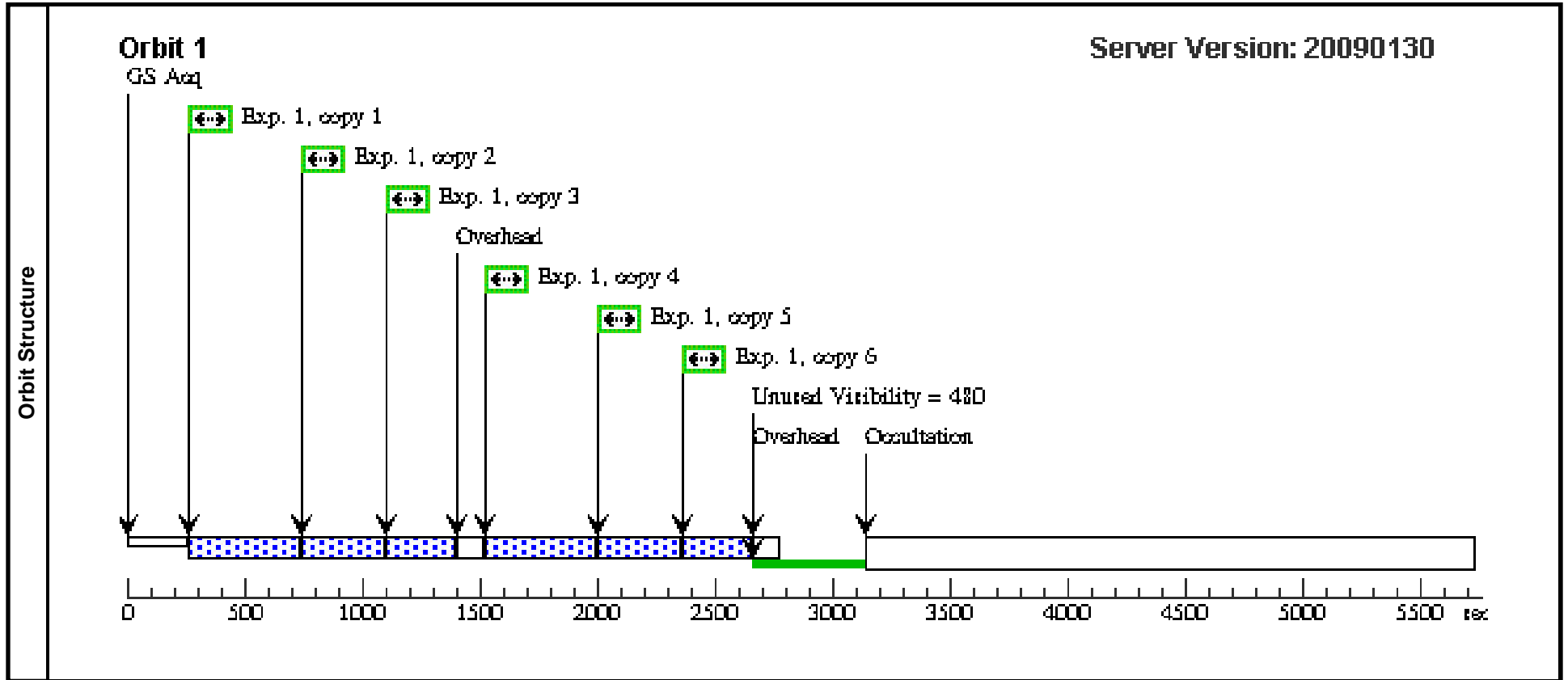
Visit	Proposal 11979, Visit 14, implementation Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 4.8D TO 4.8D FROM 10									
	(Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC (Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC (Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC (Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC (Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC (Visit 14) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC									
Diagnosics										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 15 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:06 GMT 2009

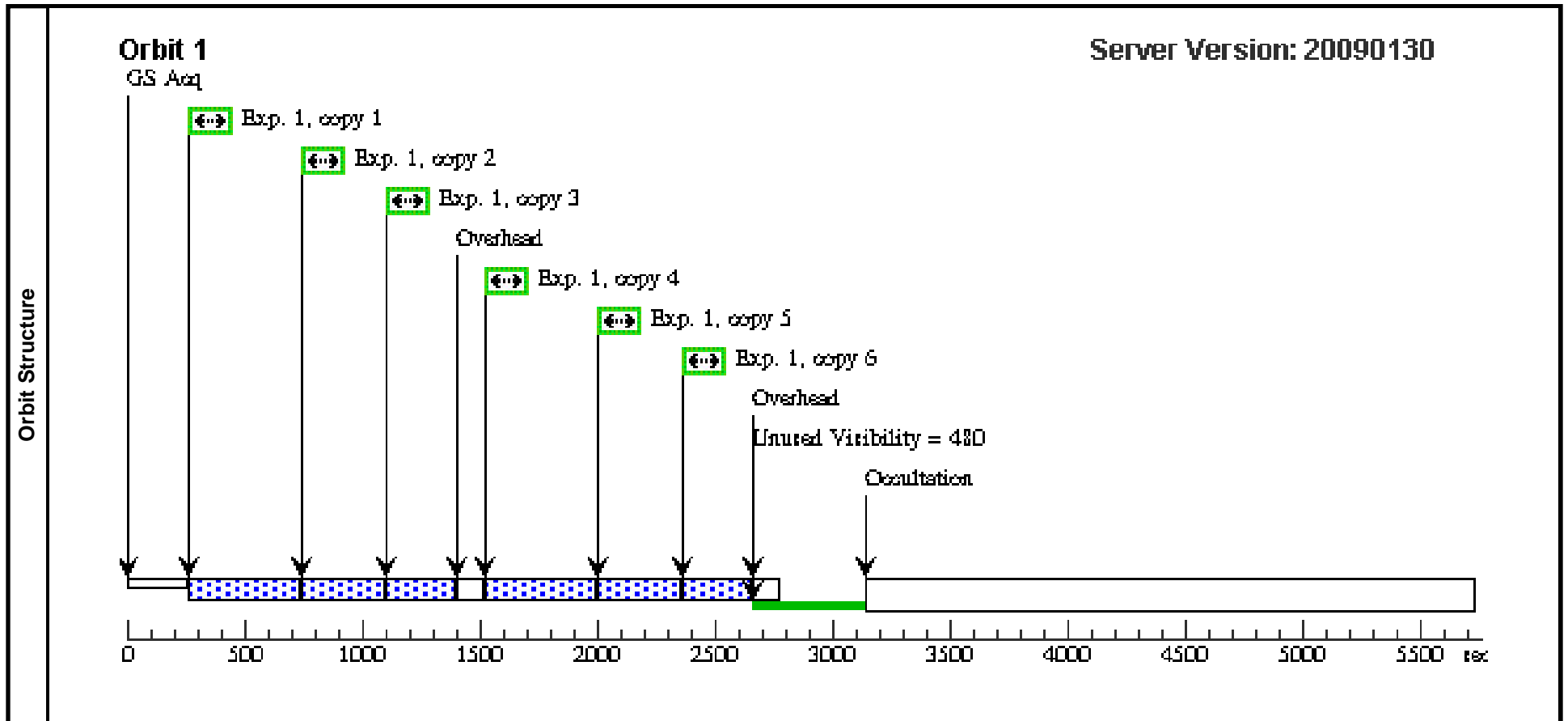
Visit	Proposal 11979, Visit 15, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 234.5D TO 234.6 D; GROUP 15,16,17,18 WITHIN 3.6 Orbits									
	Diagnostics	(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 15) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [==>(Copy 1)] [==>(Copy 2)] [==>(Copy 3)] [==>(Copy 4)] [==>(Copy 5)] [==>(Copy 6)]	[1]



Proposal 11979 - Visit 16 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:06 GMT 2009

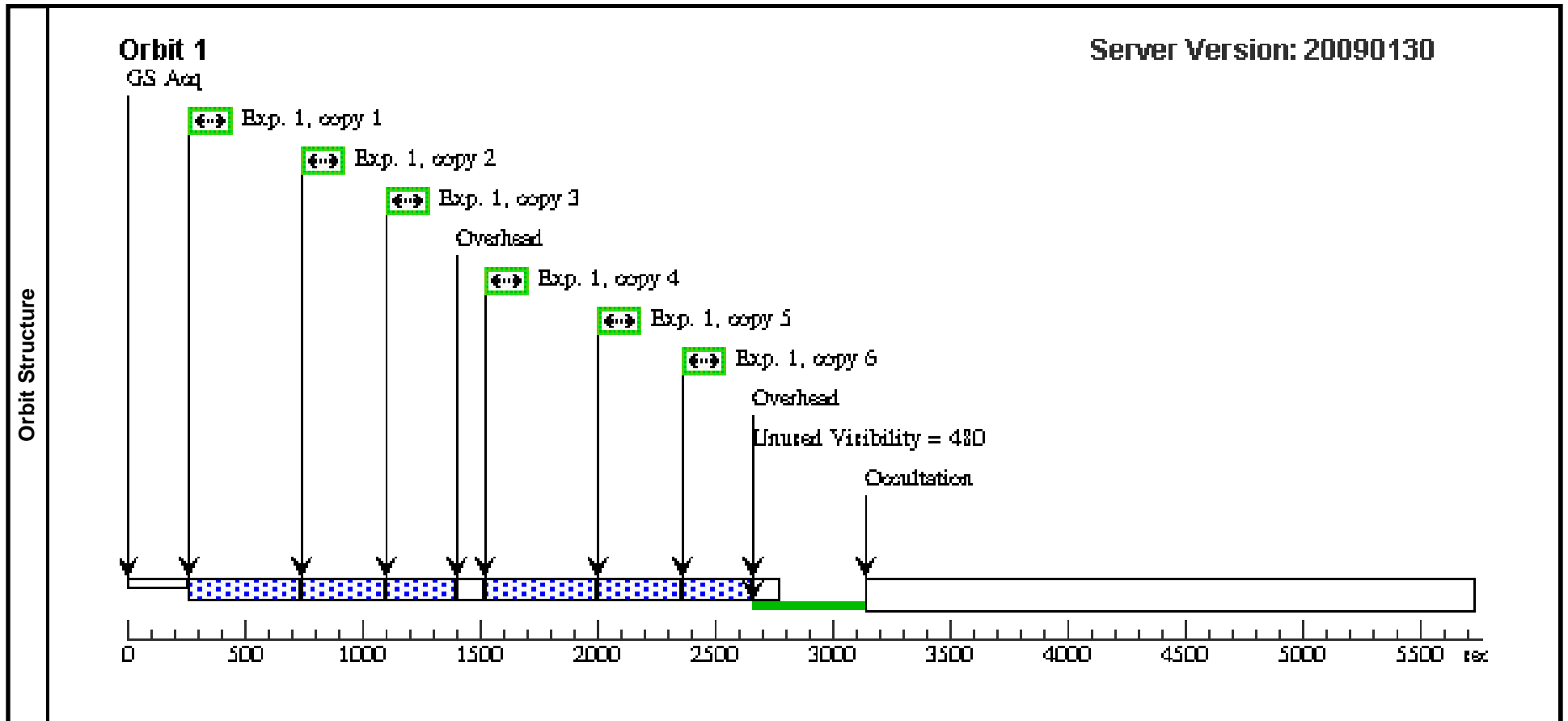
Visit	Proposal 11979, Visit 16, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 0.6D TO 0.6D FROM 15									
	Diagnostics	(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 16) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 17 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:07 GMT 2009

Visit	Proposal 11979, Visit 17, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.2D TO 1.2D FROM 15									
	Diagnostics	(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 17) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]



Proposal 11979 - Visit 18 - WFPC2 Imaging of Fomalhaut b: Determining its orbit and testing for H-alpha emission

Fri Apr 17 01:24:07 GMT 2009

Visit	Proposal 11979, Visit 18, scheduling Diagnostic Status: Warning Scientific Instruments: WFPC2 Special Requirements: ORIENT 1.8D TO 1.85D FROM 15									
	Diagnostics	(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC								
(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
(Visit 18) Warning (Orbit Planner): EXPOSURE TIME DECREASED FOR WFPC										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(2)	NAME-FOMALHAUT Alt Name1: HD216956 Alt Name2: HR8728	RA: 22 57 39.0465 (344.4126938d) Dec: -29 37 20.05 (-29.62224d) Equinox: J2000	Proper Motion RA: 0.0255s/yr Proper Motion Dec: -0.165"/yr Parallax: 0.13008" Epoch of Position: 2000.0	V=1.16	Reference Frame: ICRS				
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(2) NAME-FOMALHAUT	WFPC2, IMAGE, PC1-FIX	F656N	CLOCKS=YES; ATD-GAIN=15	POS TARG -14.1,-1 4.3; GS ACQ SCENARI O SINGLE		295 Secs X 6 [=>(Copy 1)] [=>(Copy 2)] [=>(Copy 3)] [=>(Copy 4)] [=>(Copy 5)] [=>(Copy 6)]	[1]

