



17501 - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Cycle: 31, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>
Dr. Paul Bennet (PI) (Contact)	Space Telescope Science Institute
Dr. Sangmo Tony Sohn (CoI) (Contact)	Space Telescope Science Institute
Dr. Roeland P. van der Marel (CoI) (AdminUSPI)	Space Telescope Science Institute
Dr. Mattia Libralato (CoI) (ESA Member)	Space Telescope Science Institute - ESA - JWST
Dr. Mark Fardal (CoI)	Eureka Scientific Inc.
Dr. Ekta Patel (CoI)	University of Utah
Dr. Laura L. Watkins (CoI) (ESA Member)	Space Telescope Science Institute - ESA
Dr. Andres del Pino Molina (CoI) (ESA Member)	Centro de Estudios de Fisica del Cosmos de Aragon
Dr. Eduardo Vitral (CoI)	Space Telescope Science Institute

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	(1) LEO-P	ACS/WFC	3	22-Sep-2023 15:00:18.0	yes
02	(1) LEO-P	ACS/WFC	3	22-Sep-2023 15:00:19.0	yes
03	(1) LEO-P	ACS/WFC	3	22-Sep-2023 15:00:20.0	yes
04	(1) LEO-P	ACS/WFC	3	22-Sep-2023 15:00:21.0	yes
05	(1) LEO-P	ACS/WFC	2	22-Sep-2023 15:00:22.0	yes
06	(1) LEO-P	ACS/WFC	2	22-Sep-2023 15:00:22.0	yes

16 Total Orbits Used

ABSTRACT

We propose to measure the first proper motion (PM) of a galaxy outside the LG by observing Leo P, a low mass, very low metallicity dwarf beyond the edge of the Local Group (LG, $D=1.6$ Mpc). By combining the new HST PM with the existing line-of-sight velocity, position and distance, we will precisely determine Leo P's trajectory, and compare the orbital characteristics and timescale with the existing star formation history (SFH). This will enable us to address several key questions such as: Is Leo P a member of the Antlia-Sextans group (ASG) or is it truly isolated? If it is part of the ASG, how did that dwarf galaxy group form? What is the transverse motion of galaxies outside the zero-velocity sphere of the LG? How does the SFH of Leo P relate to its environment, and are the sequence of bursts and quenches seen in its SFH driven by internal or external processes? And what are the implications for galaxy evolution at low masses? Leo P is far too distant and faint to be studied by Gaia. Only HST has the depth, astrometric precision and long time baselines via its archives to start measuring PMs of galaxies outside the LG. Thus, with Hubble's exceptional longevity and stability, we are able to continue to push back the frontiers of extra-galactic science.

OBSERVING DESCRIPTION

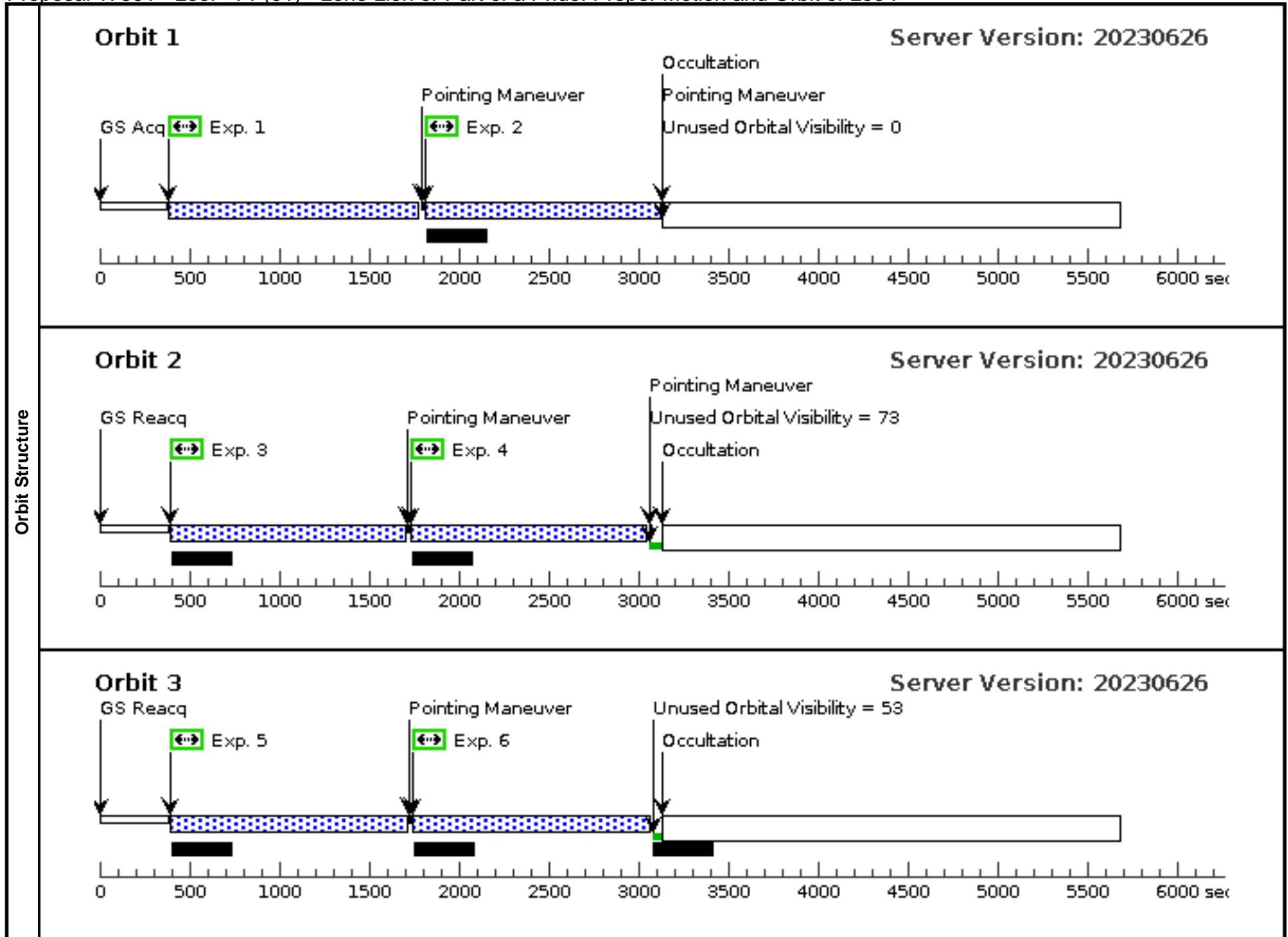
We will observe a single target field of the dwarf galaxy Leo P using ACS/WFC. This target field has deep ACS/WFC imaging data in the HST archive. In this program, the target field will be observed using the same telescope pointings and orientations as the first-epoch to maximize the overlaps of the observed fields between first- and second-epoch data. This will also minimize position-dependent uncertainties originating from imperfect CTE and geometric distortion corrections. To measure PMs, it is sufficient to observe only in one filter. Therefore, we will image all target fields using the F814W filter to measure PMs. Individual exposure times will be a half-orbit long to match the first-epoch, and we will use dithered patterns specially designed to maximize pixel-phase coverage.

We have divided our observations into 4 visits of 6 exposures (3 orbits) and a single visit of 8 exposures (4 orbits). For these separate visits we added Timing Requirements "GROUP WITHIN 30D" so that they can be treated as single epoch data for astrometric analyses.

Proposal 17501 - LeoP-V1 (01) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V1 (01), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 01,02,03,04,05,06 WITHIN 30D <i>Comments: This is a 3 orbit visit for Leo P.</i>																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																						
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0,0		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
	2	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.2228,0 .1158		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
	3	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.0998,0 .2303		1189 Secs (1189 Secs)																			
									[==>]	[2]																		
	4	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.3225,0 .3460		1189 Secs (1189 Secs)																			
								[==>]	[2]																			
5	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.4075,0 .0306		1199 Secs (1199 Secs)																				
								[==>]	[3]																			
6	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.6304,0 .1464		1199 Secs (1199 Secs)																				
								[==>]	[3]																			

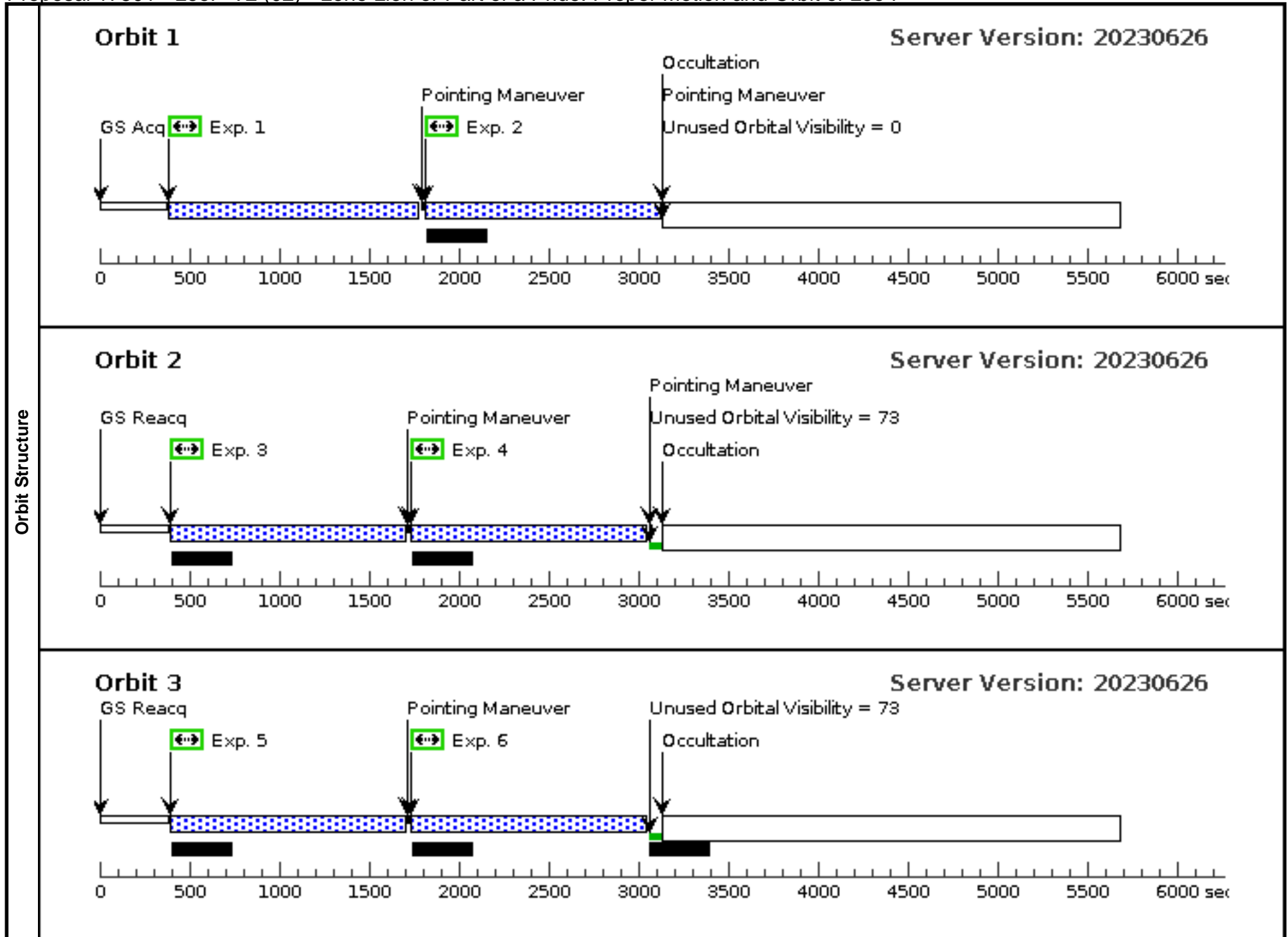


Orbit Structure

Proposal 17501 - LeoP-V2 (02) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V2 (02), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 02,01,03,04,05,06 WITHIN 30D <i>Comments: This is a 3 orbit visit for Leo P.</i>																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																						
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.6304,0 .1464		1189 Secs (1189 Secs) [==>]	[1]																		
	2	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.7302,0 .3767		1189 Secs (1189 Secs) [==>]	[1]																		
	3	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.0018,0 .4085		1189 Secs (1189 Secs) [==>]	[2]																		
	4	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.2246,0 .5243		1189 Secs (1189 Secs) [==>]	[2]																		
	5	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.1017,0 .6388		1189 Secs (1189 Secs) [==>]	[3]																		
	6	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.3244,0 .7545		1189 Secs (1189 Secs) [==>]	[3]																		

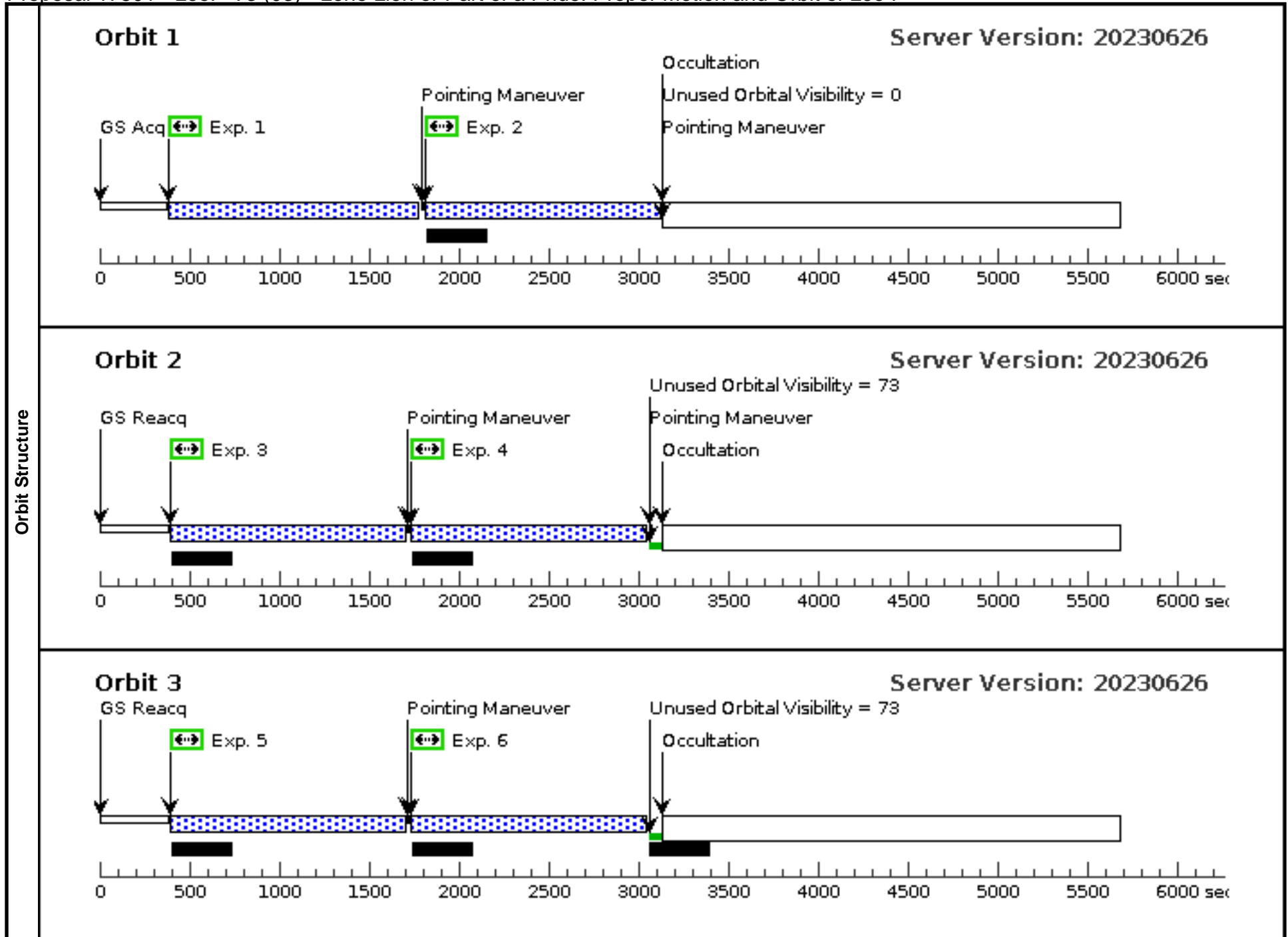


Orbit Structure

Proposal 17501 - LeoP-V3 (03) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V3 (03), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 03,01,02,04,05,06 WITHIN 30D <i>Comments: This is a 3 orbit visit for Leo P.</i>																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																						
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.4093,0 .4392		1189 Secs (1189 Secs)		[1]																			
	2	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.6322,0 .5550		1189 Secs (1189 Secs)		[1]																			
	3	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.5091,0 .6695		1189 Secs (1189 Secs)		[2]																			
	4	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.7320,0 .7852		1189 Secs (1189 Secs)		[2]																			
	5	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.3438,0 .2386		1189 Secs (1189 Secs)		[3]																			
	6	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W	POS TARG 0.5666,0 .3544		1189 Secs (1189 Secs)		[3]																			

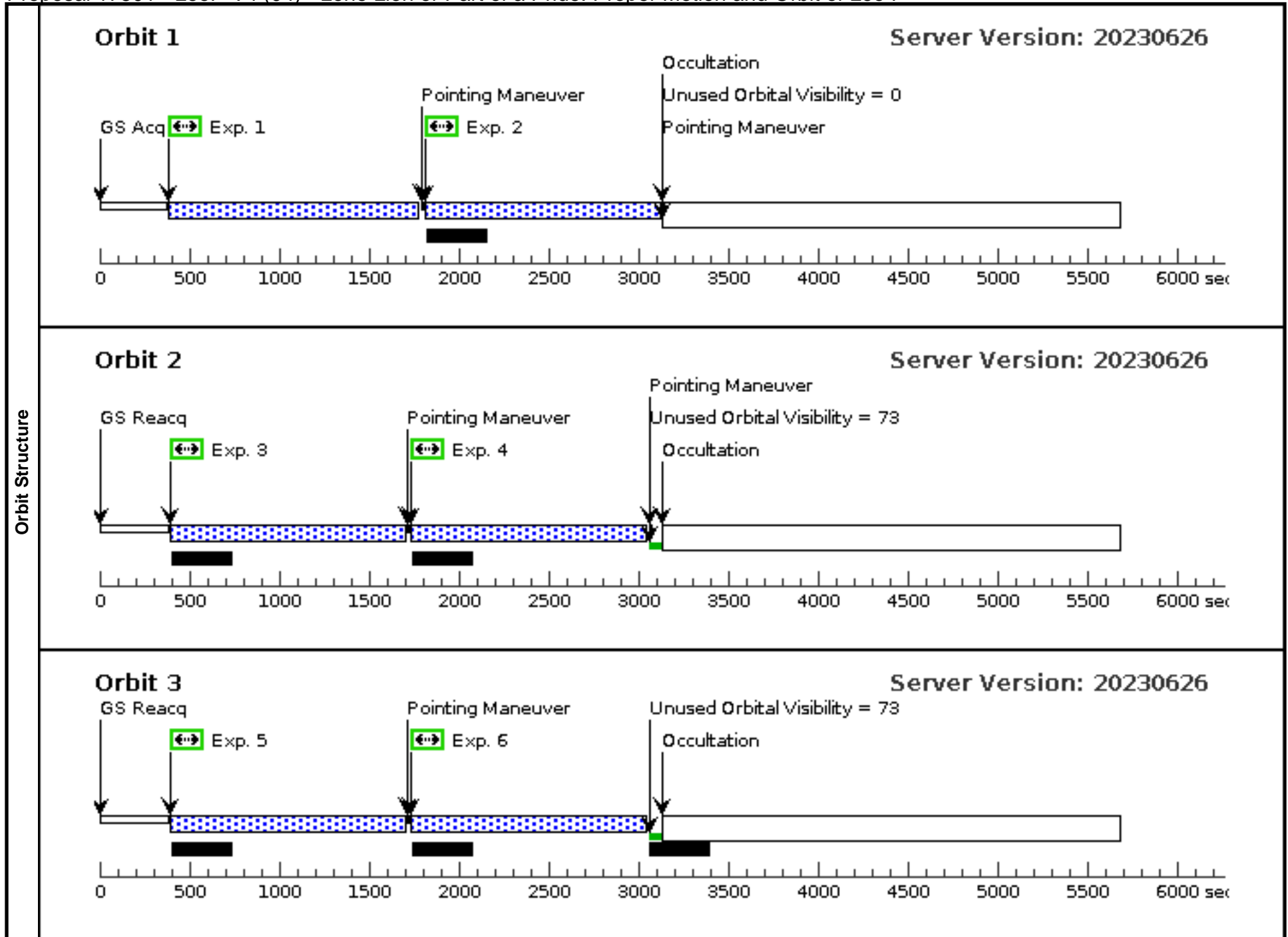


Orbit Structure

Proposal 17501 - LeoP-V4 (04) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V4 (04), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 04,01,02,03,05,06 WITHIN 30D <i>Comments: This is a 3 orbit visit for Leo P.</i>																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																							
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.4436,0 .4689		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
	2	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.6663,0 .5846		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
	3	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.7513,0 .2692		1189 Secs (1189 Secs)																			
									[==>]	[2]																		
4	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.9742,0 .3850		1189 Secs (1189 Secs)																				
								[==>]	[2]																			
5	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.8511,0 .4995		1189 Secs (1189 Secs)																				
								[==>]	[3]																			
6	(1) LEO-P	(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 1.0740,0 .6153		1189 Secs (1189 Secs)																				
								[==>]	[3]																			

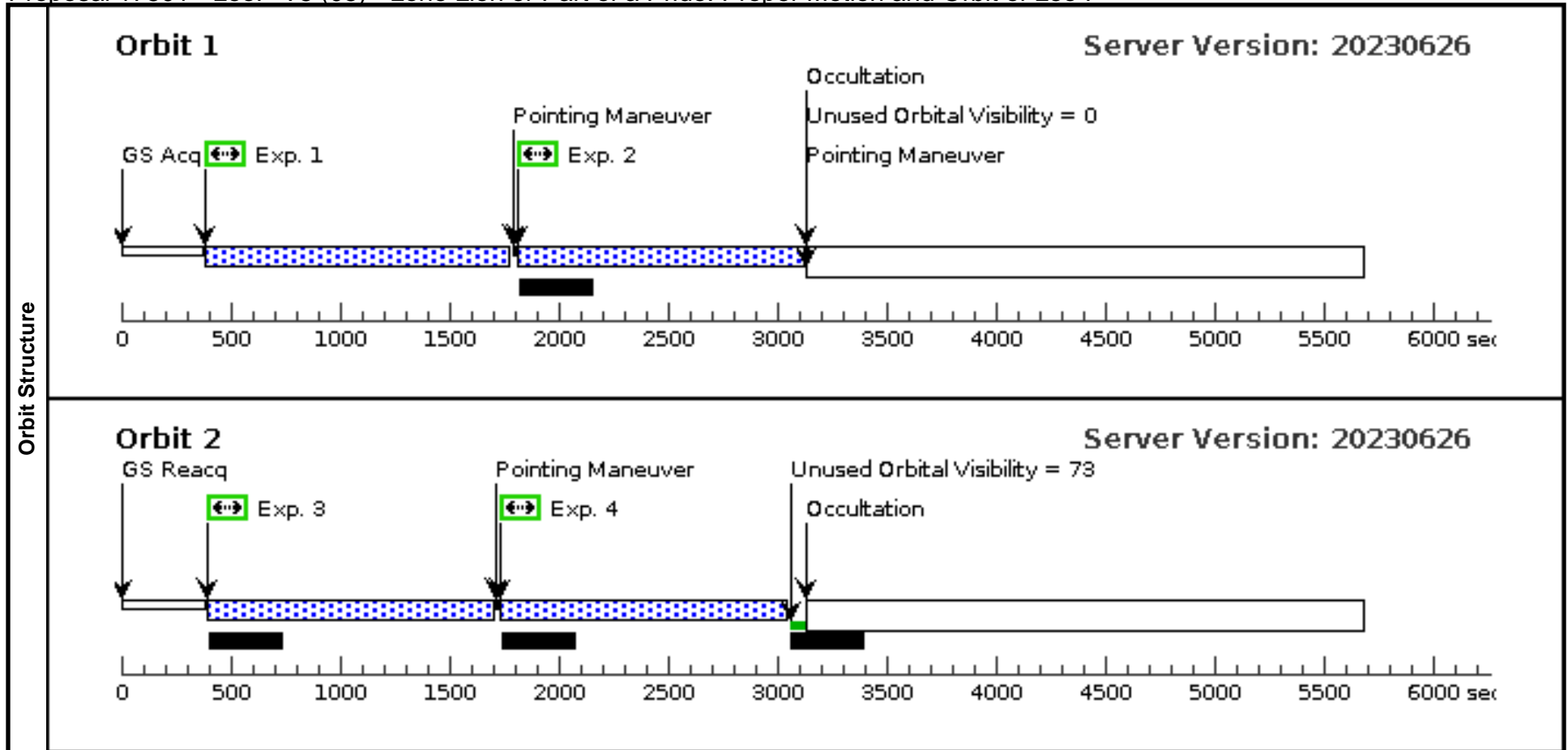


Orbit Structure

Proposal 17501 - LeoP-V5 (05) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V5 (05), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 05,01,02,03,04 WITHIN 30D <i>Comments: This is a 2 orbit visit for Leo P.</i>																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> <i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																						
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.3456,0 .6471		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
	2		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.5684,0 .7629		1189 Secs (1189 Secs)																			
									[==>]	[1]																		
3		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.4455,0 .8774		1189 Secs (1189 Secs)																				
								[==>]	[2]																			
4		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.6682,0 .9931		1189 Secs (1189 Secs)																				
								[==>]	[2]																			



Proposal 17501 - LeoP-V6 (06) - Lone Lion or Part of a Pride: Proper Motion and Orbit of Leo P

Fri Sep 22 19:00:23 GMT 2023

Visit	Proposal 17501, LeoP-V6 (06), implementation Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 95.02D TO 95.02 D; GROUP 06,01,02,03,04 WITHIN 30D Comments: This is a 2 orbit visit for Leo P.																											
	Fixed Targets	<table border="1"> <thead> <tr> <th>#</th> <th>Name</th> <th>Target Coordinates</th> <th>Targ. Coord. Corrections</th> <th>Fluxes</th> <th>Miscellaneous</th> </tr> </thead> <tbody> <tr> <td>(1)</td> <td>LEO-P</td> <td>RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000</td> <td>Epoch of Position: 2015.5</td> <td>V=16.8</td> <td>Reference Frame: SIMBAD</td> </tr> <tr> <td colspan="6"> Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES </td> </tr> </tbody> </table>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD	Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES				
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																						
(1)	LEO-P	RA: 10 21 48.1157 (155.4504821d) Dec: +18 05 33.80 (18.09272d) Equinox: J2000	Epoch of Position: 2015.5	V=16.8	Reference Frame: SIMBAD																							
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database. Category=GALAXY Description=[DWARF ELLIPTICAL, STAR FORMING REGION] Extended=YES																												
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit																		
	1		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.7531,0 .6778		1189 Secs (1189 Secs) [==>]	[1]																		
	2		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.9760,0 .7936		1189 Secs (1189 Secs) [==>]	[1]																		
	3		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 0.8529,0 .9081		1189 Secs (1189 Secs) [==>]	[2]																		
	4		(1) LEO-P	ACS/WFC, ACCUM, WFCENTER	F814W		POS TARG 1.0758,1 .0238		1189 Secs (1189 Secs) [==>]	[2]																		

