10929 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Cycle: 15, 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) GJ-54 (7) GJ54-REF1 (8) GJ54-REF3 (9) GJ54-REF2	FGS	1	21-May-2007 21:41:49.0	yes
02	(2) GJ-469 (10) GL469-021-REF (11) GL469-083-REF (12) GL469-140-REF	FGS	1	21-May-2007 21:42:01.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
03	(3) GJ-473	FGS	1	21-May-2007 21:42:06.0	yes
04	(4) GJ-1081 (13) GJ1081-023-REF (14) GJ1081-051-REF (15) GJ1081-054-REF (16) GJ1081-089-REF (25) GJ1081-096-REF	FGS	1	21-May-2007 21:42:13.0	yes
05	(5) G-250-029 (17) G250-29-344-REF (18) G250-29-USNO1-REFB (19) G250-29-USNO2-REFB	FGS	1	21-May-2007 21:42:23.0	yes
06	(6) LHS-224 (20) LHS224AB-0 (21) LHS224AB-REF1 (22) LHS224AB-REF2 (23) LHS224AB-REF3 (24) LHS224AB-REF4 (26) LHS224AB-REF5	FGS	1	21-May-2007 21:42:35.0	yes

6 Total Orbits Used

ABSTRACT

We propose to use HST-FGS1R to finish calibrating the mass-luminosity relation for stars less massive than 0.5 Msun, with special emphasis on objects near the stellar/substellar border. Our goals are to determine Mv values to 0.05 magnitude and masses to 5%, and thereby build the fundamental database of stellar masses that we will use to test theoretical models as never before.

This program uses the combination of HST-FGS3/FGS1R at optical wavelengths, historical infrared speckle data, ground-based parallax work, metallicity studies, and radial velocity monitoring to examine nearby, subarcsecond binary systems. The high precision separation and position angle measurements with HST-FGS3/FGS1R (to 1 mas in the separations) for these faint (V = 10-15) targets simply cannot be equaled by any ground-based technique. As a result of these measurements, we are deriving high quality luminosities and masses for the components in the systems, and characterizing their spectral energy distributions from 0.5 to 2.2 microns. One of the objects, GJ 1245 C with mass 0.074 +/- 0.002 Msun, is the only object known with an accurate dynamical mass less than 0.10 Msun. The payoff of this proposal is high because the six systems selected for final observations in Cycles 15 and 16 have already been resolved during Cycles 5-13 with HST FGS3/FGS1R and contain most of the reddest objects for which accurate dynamical masses can be determined.

OBSERVING DESCRIPTION

We will use FGS1r in Transfer mode to resolve the target binary systems, thereby obtaining the system separation and position of each binary. We will also observe the binary and nearby field stars in Position mode in order to establish the local inertial reference frame about which the binary components orbit, thereby yielding an absolute rather than just a relative orbit of the components. The F583W broad band filter will be used for all exposures to maximize photometric signal. The Orients and Betweens are selected to (1) place the reference field stars within the FGS FOV, and (2) to execute the observations at times that sample the orbital phase space as well as at times of desired parallax factors.

Visit

Proposal 10929, Visit 01, scheduling Mon May 21 20:42:38 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: FGS

Special Requirements: ORIENT 220.0D TO 220.0 D; BETWEEN 13-MAY-2007:00:00:00 AND 21-JUN-2007:00:00:00

Fixed Targets

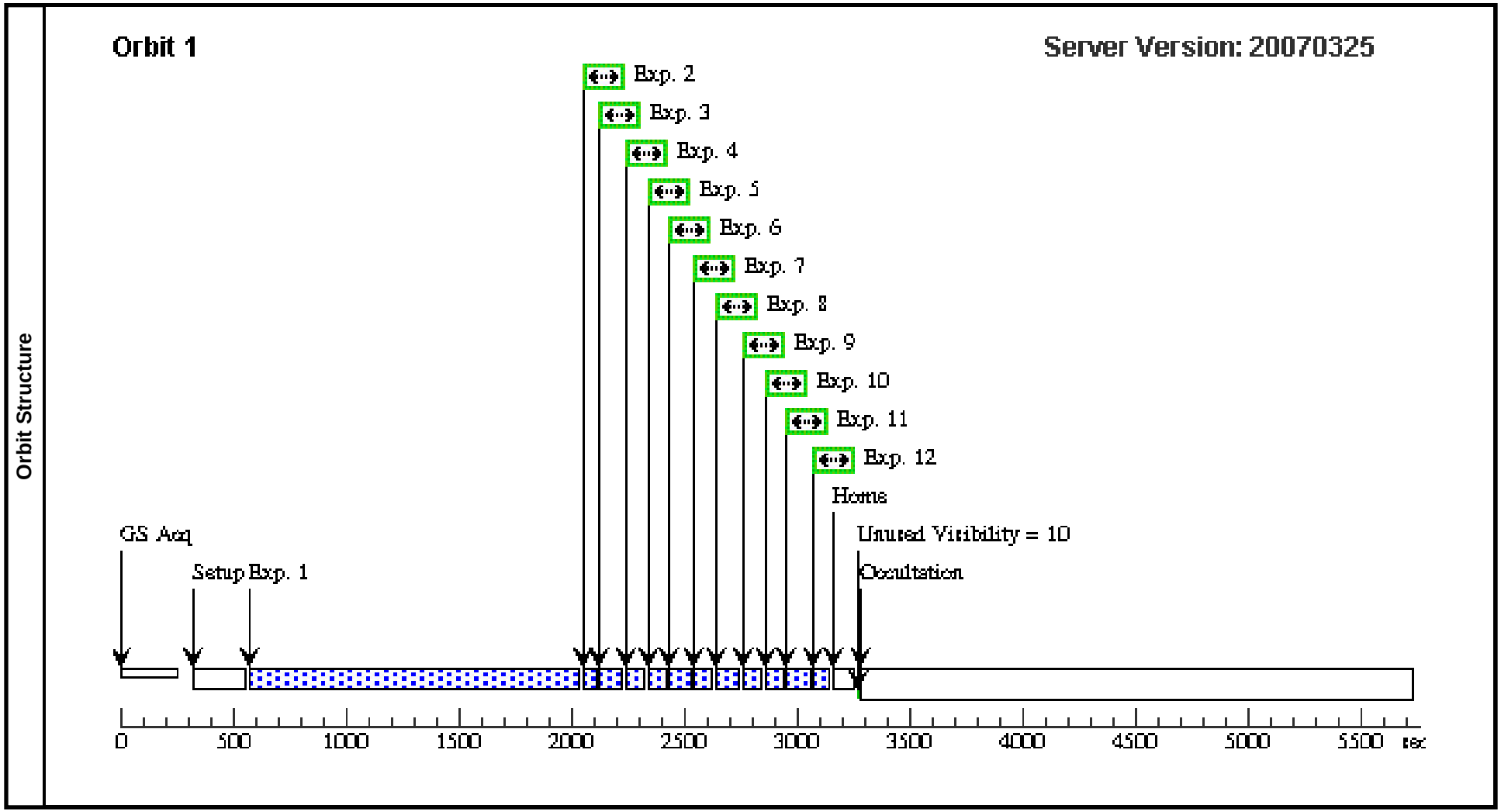
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GJ-54	RA: 01 10 22.8971 (17.5954046d) Dec: -67 26 46.84 (-67.44634d) Equinox: J2000	Proper Motion RA: 0.06765s/yr Proper Motion Dec: 0.57198"/yr Epoch of Position: 1991.25	V=9.8+/-0.1 B-V=1.57	Reference Frame: ICRS
Comments: .					
(7)	GJ54-REF1	RA: 01 09 35.5120 (17.3979667d) Dec: -67 28 29.24 (-67.47479d) Equinox: J2000		V=14.73+/-0.2	Reference Frame: ICRS
(8)	GJ54-REF3	RA: 01 10 52.0800 (17.7170000d) Dec: -67 25 2.96 (-67.41749d) Equinox: J2000		V=13.59+/-0.2	Reference Frame: ICRS
(9)	GJ54-REF2	RA: 01 09 25.5120 (17.3563000d) Dec: -67 30 51.62 (-67.51434d) Equinox: J2000		V=12.74+/-0.1	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GJ-54	FGS, TRANS, 1	F583W	SCANS=22; STEP-SIZE=0.5	GS ACQ SCENARIO ONEB1T	Sequence 1-12 Non-Int	1100.0 Secs *[==>]*	 ***[1]***
2		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
3		(7) GJ54-REF1	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
4		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
5		(8) GJ54-REF3	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
6		(9) GJ54-REF2	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
7		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
8		(7) GJ54-REF1	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
9		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
10		(9) GJ54-REF2	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11		(8) GJ54-REF3	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs	
								[==>]	***[1]***
12		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs	
								[==>]	***[1]***


Orbit Structure
Orbit 1
Server Version: 20070325
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Horns
GS Acq
Setup Exp. 1
Unused Visibility = 10
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10929, Visit 02, completed Mon May 21 20:42:40 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: FGS

Special Requirements: ORIENT 290.0D TO 296.0 D; BETWEEN 20-NOV-2006:00:00:00 AND 01-DEC-2006:00:00:00

Fixed Targets

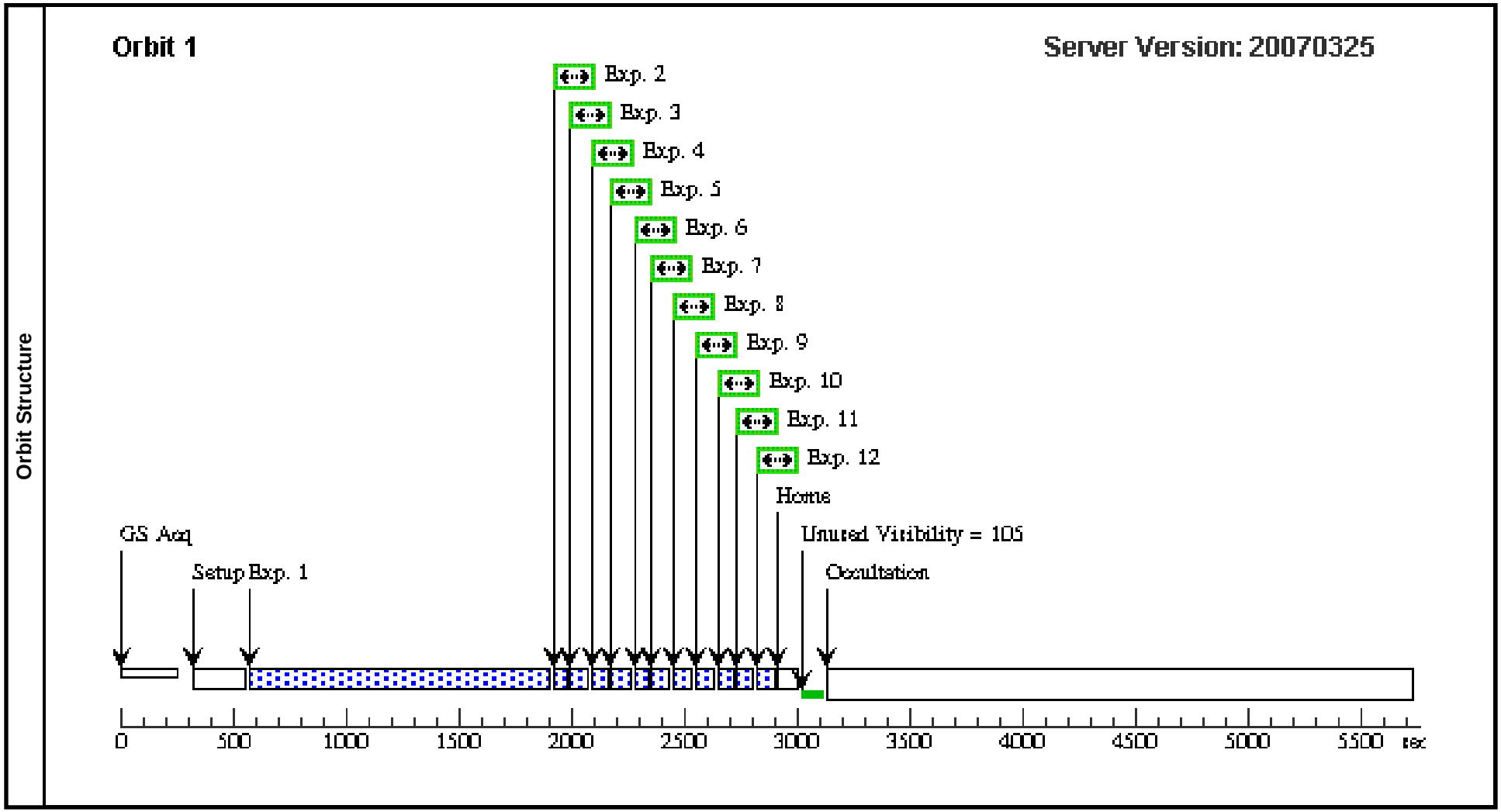
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GJ-469	RA: 12 28 57.5855 (187.2399396d) Dec: +08 25 31.86 (8.42552d) Equinox: J2000	Proper Motion RA: -0.04303s/yr Proper Motion Dec: -0.2881"/yr Epoch of Position: 2000.0	V=12.06+/-0.1 B-V=1.6	Reference Frame: ICRS
(10)	GL469-021-REF	RA: 12 29 26.9000 (187.3620833d) Dec: +08 23 30.16 (8.39171d) Equinox: J2000		V=11.3+/-0.2	Reference Frame: ICRS
(11)	GL469-083-REF	RA: 12 28 41.9700 (187.1748750d) Dec: +08 26 3.44 (8.43429d) Equinox: J2000		V=11.8+/-0.2	Reference Frame: ICRS
(12)	GL469-140-REF	RA: 12 28 53.8000 (187.2241667d) Dec: +08 25 42.13 (8.42837d) Equinox: J2000		V=14.8+/-0.2	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) GJ-469	FGS, TRANS, 1	F583W	SCANS=26; STEP-SIZE=1	GS ACQ SCENARIO ONEB1T	Sequence 1-12 Non-Int	930.0 Secs *[==>]*	 ***[1]***
2		(2) GJ-469	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
3		(12) GL469-140-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
4		(11) GL469-083-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
5		(12) GL469-140-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
6		(2) GJ-469	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
7		(10) GL469-021-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
8		(2) GJ-469	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
9		(12) GL469-140-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***
10		(11) GL469-083-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs *[==>]*	 ***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11		(2) GJ-469	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs	
								[==>]	***[1]***
12		(10) GL469-021-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs	
								[==>]	***[1]***


Orbit Structure
Orbit 1
Server Version: 20070325
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Home
GS Acq
Setup Exp. 1
Unused Visibility = 105
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10929, Visit 03, completed Mon May 21 20:42:41 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: FGS

Special Requirements: BETWEEN 10-JAN-2007:00:00:00 AND 23-MAY-2007:18:58:30

Fixed Targets

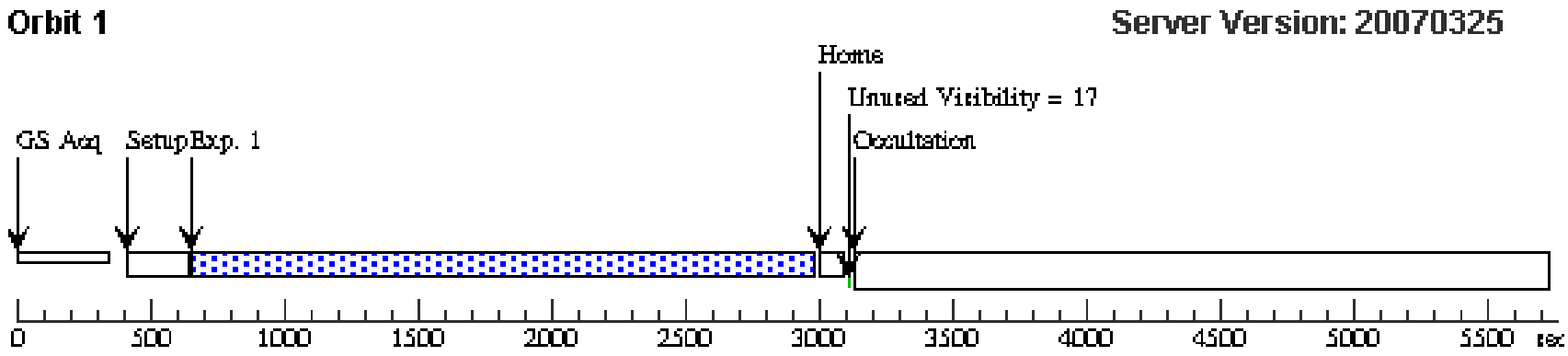
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	GJ-473	RA: 12 33 19.5400 (188.3314167d)	Proper Motion RA: -0.12132s/yr	V=12.46+/-0.05	Reference Frame: ICRS
		Dec: +09 01 11.32 (9.01981d)	Proper Motion Dec: 0.2332"/yr	B-V=1.84	
		Equinox: J2000	Epoch of Position: 1982.07		

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(3) GJ-473	FGS, TRANS, 1	F583W	SCANS=26; STEP-SIZE=1			1930.0 Secs *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 10929, Visit 04, scheduling Mon May 21 20:42:41 GMT 2007

Diagnostic Status: No Diagnostics

Scientific Instruments: FGS

Special Requirements: ORIENT 260.0D TO 270.0 D; BETWEEN 01-OCT-2007:00:00:00 AND 20-OCT-2007:00:00:00

Fixed Targets

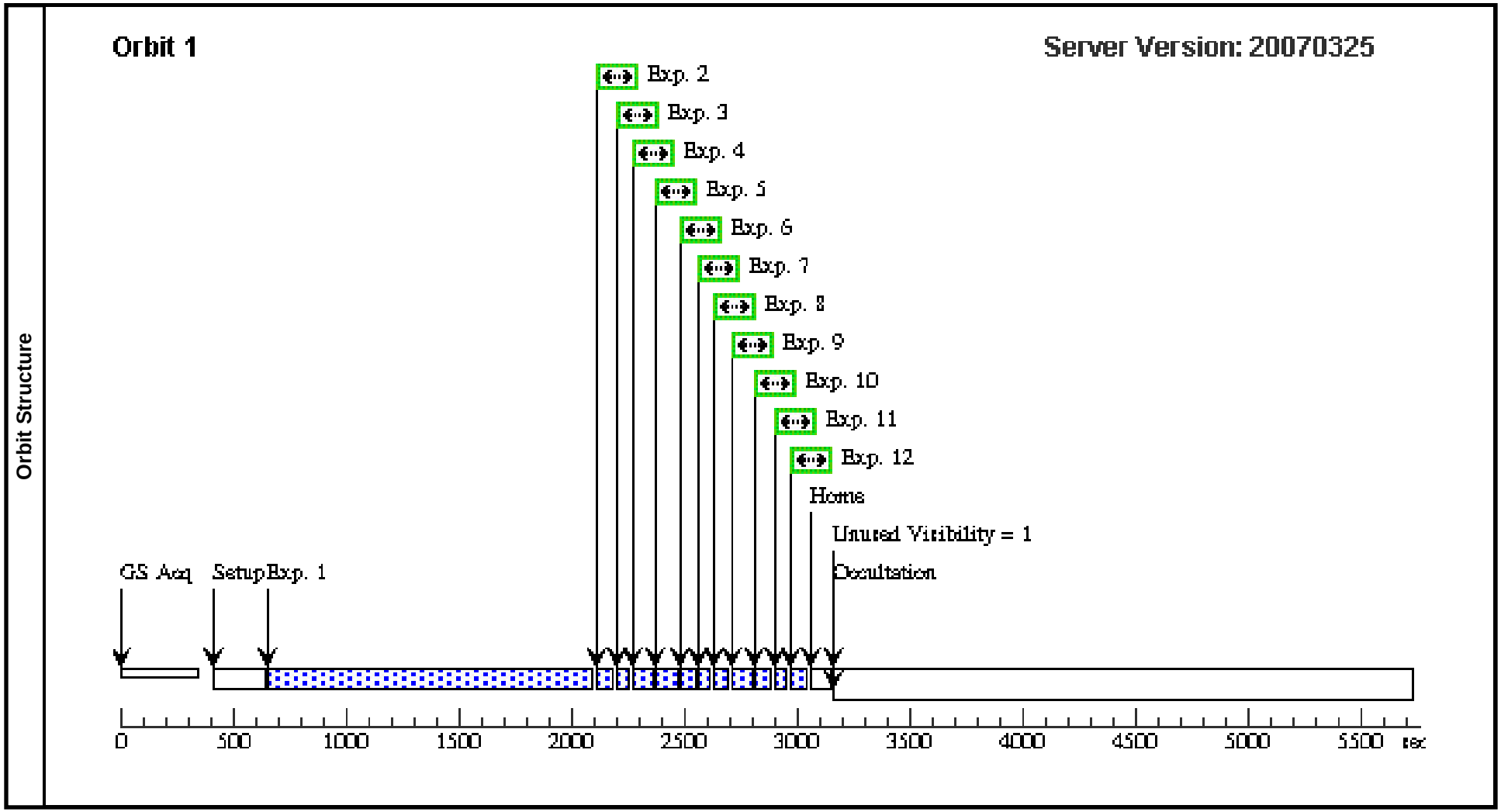
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	GJ-1081	RA: 05 33 19.1000 (83.3295833d) Dec: +44 49 4.94 (44.81804d) Equinox: J2000	Proper Motion RA: 0.0048s/yr Proper Motion Dec: -0.365"/yr Epoch of Position: 1983.03	V=12.21+/-0.2 B-V=1.6	Reference Frame: ICRS
(13)	GJ1081-023-REF	RA: 05 33 11.7000 (83.2987500d) Dec: +44 50 19.43 (44.83873d) Equinox: J2000		V=12.7+/-0.2	Reference Frame: ICRS
(14)	GJ1081-051-REF	RA: 05 33 17.9000 (83.3245833d) Dec: +44 48 44.14 (44.81226d) Equinox: J2000		V=10.9+/-0.2	Reference Frame: ICRS
(15)	GJ1081-054-REF	RA: 05 33 35.2200 (83.3967500d) Dec: +44 49 52.20 (44.83117d) Equinox: J2000		V=13.3+/-0.2	Reference Frame: ICRS
(16)	GJ1081-089-REF	RA: 05 33 7.6390 (83.2818292d) Dec: +44 47 26.88 (44.79080d) Equinox: J2000		V=14.2+/-0.2	Reference Frame: ICRS
(25)	GJ1081-096-REF	RA: 05 33 19.5200 (83.3313333d) Dec: +44 47 18.53 (44.78848d) Equinox: J2000		V=13.2+/-0.2	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(4) GJ-1081	FGS, TRANS, 1	F583W	SCANS=30; STEP-SIZE=1		Sequence 1-12 Non-Int	1000.0 Secs *[==>]*	 ***[1]***
2		(4) GJ-1081	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***
3		(14) GJ1081-051-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***
4		(15) GJ1081-054-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***
5		(25) GJ1081-096-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***
6		(14) GJ1081-051-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***
7		(4) GJ-1081	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs *[==>]*	 ***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
8		(13) GJ1081-023-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs	
								[==>]	***[1]***
9		(16) GJ1081-089-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs	
								[==>]	***[1]***
10		(14) GJ1081-051-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs	
								[==>]	***[1]***
11		(4) GJ-1081	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs	
								[==>]	***[1]***
12		(15) GJ1081-054-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs	
								[==>]	***[1]***


Orbit 1
Server Version: 20070325
Orbit Structure
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Home
Unused Visibility = 1
Occultation
GS Acq
Setup
Exp. 1
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10929, Visit 05, completed Mon May 21 20:42:42 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: FGS

Special Requirements: ORIENT 280.0D TO 285.0 D; BETWEEN 07-SEP-2006:00:00:00 AND 15-SEP-2006:00:00:00

Diagnostics

(Visit 05) Warning: FGS EXPOSURE TOO SHORT TO GUARANTEE SCIENCE DATA
(Visit 05) Warning: FGS EXPOSURE TOO SHORT TO GUARANTEE SCIENCE DATA
(Visit 05) Warning: FGS EXPOSURE TOO SHORT TO GUARANTEE SCIENCE DATA
(Visit 05) Warning: FGS EXPOSURE TOO SHORT TO GUARANTEE SCIENCE DATA

Fixed Targets

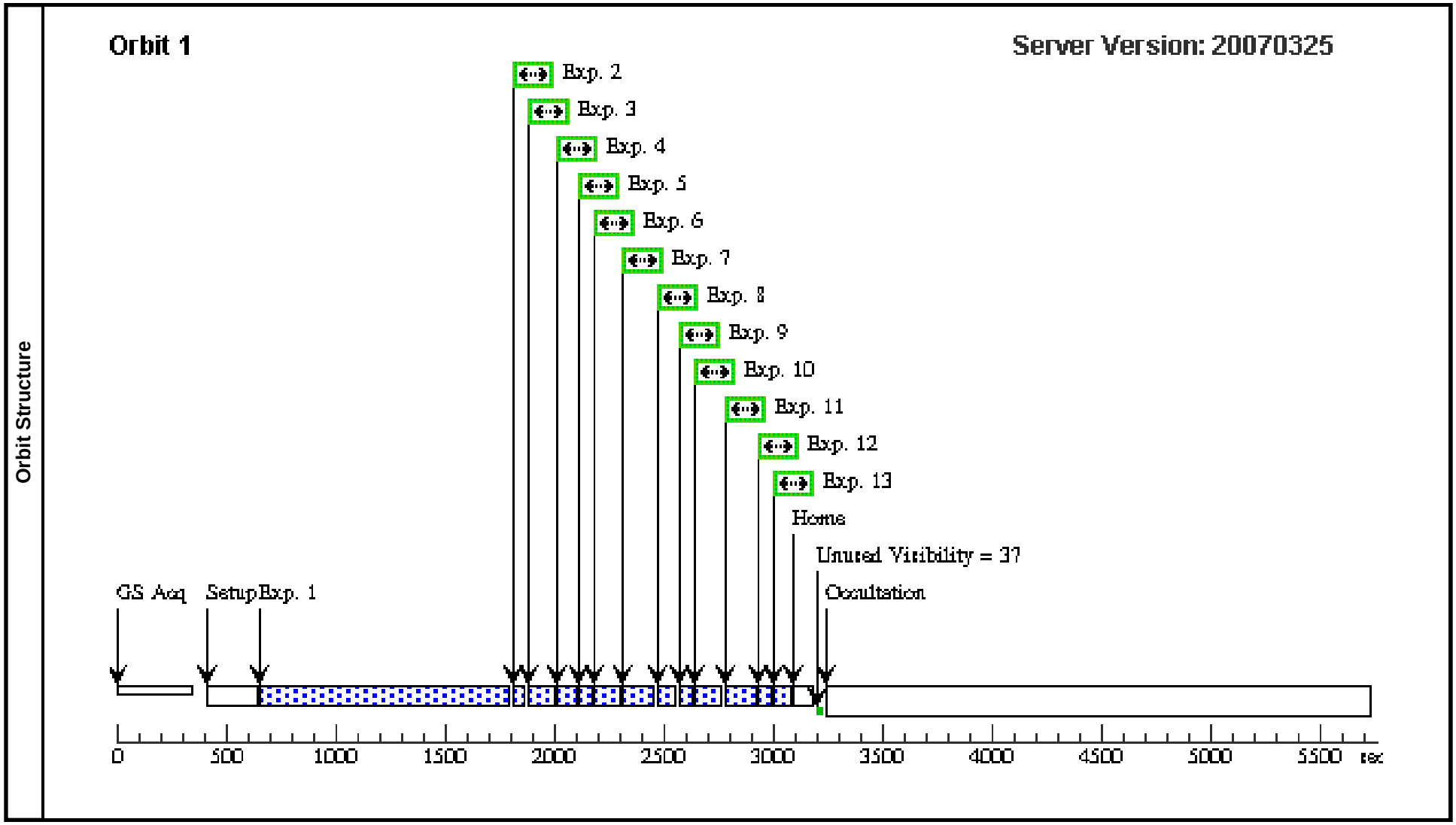
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	G-250-029	RA: 06 54 4.2353 (103.5176471d) Dec: +60 52 18.35 (60.87176d) Equinox: J2000	Proper Motion RA: 0.07319s/yr Proper Motion Dec: -1.0155"/yr Epoch of Position: 2000.0	V=11.02+/-0.2 B-V=1.54	Reference Frame: ICRS
Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.					
(17)	G250-29-344-REF	RA: 06 54 21.4150 (103.5892292d) Dec: +60 53 31.02 (60.89195d) Equinox: J2000		V=14.4+/-0.2	Reference Frame: ICRS
(18)	G250-29-USNO1-REFB	RA: 06 53 57.7790 (103.4907458d) Dec: +60 52 6.00 (60.86833d) Equinox: J2000		V=15.7+/-0.2	Reference Frame: ICRS
(19)	G250-29-USNO2-REFB	RA: 06 54 9.2400 (103.5385000d) Dec: +60 52 49.60 (60.88044d) Equinox: J2000		V=15.4+/-0.2	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(5) G-250-029	FGS, TRANS, 1	F583W	SCANS=12; STEP-SIZE=0.6		Sequence 1-13 Non-Int	900.0 Secs *[==>]*	 ***[1]***
2		(5) G-250-029	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	4.0 Secs *[==>]*	 ***[1]***
3		(19) G250-29-USNO2-REFB	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs *[==>]*	 ***[1]***
4		(17) G250-29-344-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs *[==>]*	 ***[1]***
5		(5) G-250-029	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	2.0 Secs *[==>]*	 ***[1]***
6		(18) G250-29-USNO1-REFB	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs *[==>]*	 ***[1]***
7		(19) G250-29-USNO2-REFB	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs *[==>]*	 ***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
8		(17) G250-29-344-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	2.0 Secs	
								[==>]	***[1]***
9		(5) G-250-029	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs	
								[==>]	***[1]***
10		(19) G250-29-USNO2-REFB	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs	
								[==>]	***[1]***
11		(18) G250-29-USNO1-REFB	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs	
								[==>]	***[1]***
12		(5) G-250-029	FGS, POS, 1	F583W			Sequence 1-13 Non-Int	2.0 Secs	
								[==>]	***[1]***
13		(17) G250-29-344-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs	
								[==>]	***[1]***


Orbit 1
Server Version: 20070325
Orbit Structure
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Exp. 12
Exp. 13
Home
Unused Visibility = 37
GS Acq
Setup
Exp. 1
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 10929, Visit 06, completed Mon May 21 20:42:43 GMT 2007

Diagnostic Status: Warning

Scientific Instruments: FGS

Special Requirements: PCS MODE FINE; ORIENT 245.0D TO 261.0 D; BETWEEN 06-NOV-2006:00:00:00 AND 10-NOV-2006:00:00:00

Diagnostics

(Visit 06) Warning: SHORT FGS SCAN LENGTH MAY SIGNAL PROBLEMS

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	LHS-224	RA: 07 03 55.7400 (105.9822500d) Dec: +52 42 5.80 (52.70161d) Equinox: J2000	Proper Motion RA: 0.08359s/yr Proper Motion Dec: -0.921"/yr Epoch of Position: 2000.0	V=13.3+/-0.2 B-V=1.5	Reference Frame: ICRS
(20)	LHS224AB-0	RA: 07 03 55.8000 (105.9825000d) Dec: +52 42 5.80 (52.70161d) Equinox: J2000	Proper Motion RA: 0.08359s/yr Proper Motion Dec: -0.921"/yr Epoch of Position: 2000.0	V=15.8+/-0.2	Reference Frame: ICRS
Comments: This is LHS224AB, but with a false magnitude specification that will facilitate acquisition in Position Mode.					
(21)	LHS224AB-REF1	RA: 07 03 49.4500 (105.9560417d) Dec: +52 42 14.54 (52.70404d) Equinox: J2000		V=11.26+/-0.2	Reference Frame: ICRS
(22)	LHS224AB-REF2	RA: 07 03 41.3160 (105.9221500d) Dec: +52 40 14.31 (52.67064d) Equinox: J2000		V=10.37+/-0.2	Reference Frame: ICRS
(23)	LHS224AB-REF3	RA: 07 03 34.8000 (105.8950000d) Dec: +52 40 39.32 (52.67759d) Equinox: J2000		V=12.18+/-0.2	Reference Frame: ICRS
(24)	LHS224AB-REF4	RA: 07 04 26.4000 (106.1100000d) Dec: +52 44 6.40 (52.73511d) Equinox: J2000		V=13.27+/-0.2	Reference Frame: ICRS
(26)	LHS224AB-REF5	RA: 07 04 34.9500 (106.1456250d) Dec: +52 45 7.99 (52.75222d) Equinox: J2000		V=11.24+/-0.2	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(6) LHS-224	FGS, TRANS, 1	F583W	SCANS=18; STEP-SIZE=0.5	GS ACQ SCENARIO ONEB1T	Sequence 1-17 Non-Int	750.0 Secs *[==>]*	 ***[1]***
2		(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs *[==>]*	 ***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
3		(21) LHS224AB-REF1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
4		(23) LHS224AB-REF3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
5		(22) LHS224AB-REF2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
6		(24) LHS224AB-REF4	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
7		(26) LHS224AB-REF5	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
8		(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
9		(21) LHS224AB-REF1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
10		(23) LHS224AB-REF3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	14.0 Secs	
								[==>]	***[1]***
11		(22) LHS224AB-REF2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
12		(24) LHS224AB-REF4	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
13		(26) LHS224AB-REF5	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
14		(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
15		(21) LHS224AB-REF1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
16		(22) LHS224AB-REF2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***
17		(23) LHS224AB-REF3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-17 Non-Int	10.0 Secs	
								[==>]	***[1]***

Orbit Structure