



11299 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Cycle: 16, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Todd J. Henry (PI)	Georgia State University Research Foundation	thentry@chara.gsu.edu
Dr. George Fritz Benedict (CoI)	University of Texas at Austin	fritz@astro.as.utexas.edu
Dr. Otto G. Franz (CoI)	Lowell Observatory	Otto.Franz@lowell.edu
Dr. Philip A. Ianna (CoI)	The University of Virginia	pai@virginia.edu
Dr. Barbara McArthur (CoI)	University of Texas at Austin	mca@astro.as.utexas.edu
Dr. Edmund Nelan (CoI)	Space Telescope Science Institute	nelan@stsci.edu
Dr. Lawrence H. Wasserman (CoI)	Lowell Observatory	l.h.wasserman@lowell.edu

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) GJ-54 (7) GJ54-REF1 (8) GJ54-REF3 (9) GJ54-REF2	FGS	1	07-Oct-2008 21:07:32.0	yes
02	(2) GJ-469 (10) GL469-021-REF (11) GL469-083-REF (12) GL469-140-REF	FGS	1	07-Oct-2008 21:07:39.0	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>
03	(3) GJ-473	FGS	1	07-Oct-2008 21:07:42.0	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	07-Oct-2008 21:07:46.0	yes
05	(5) G-250-029 (17) G250-29-344-REF (18) G250-29-USNO1-REFB (19) G250-29-USNO2-REFB	FGS	1	07-Oct-2008 21:07:51.0	yes
06	(6) LHS-224 (20) LHS224AB-0 (21) LHS224AB-REF1 (22) LHS224AB-REF2 (23) LHS224AB-REF3 (24) LHS224AB-REF4	FGS	1	07-Oct-2008 21:07:57.0	yes
54	(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	07-Oct-2008 21:08:02.0	yes

7 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 M_v 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 Orbits 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.

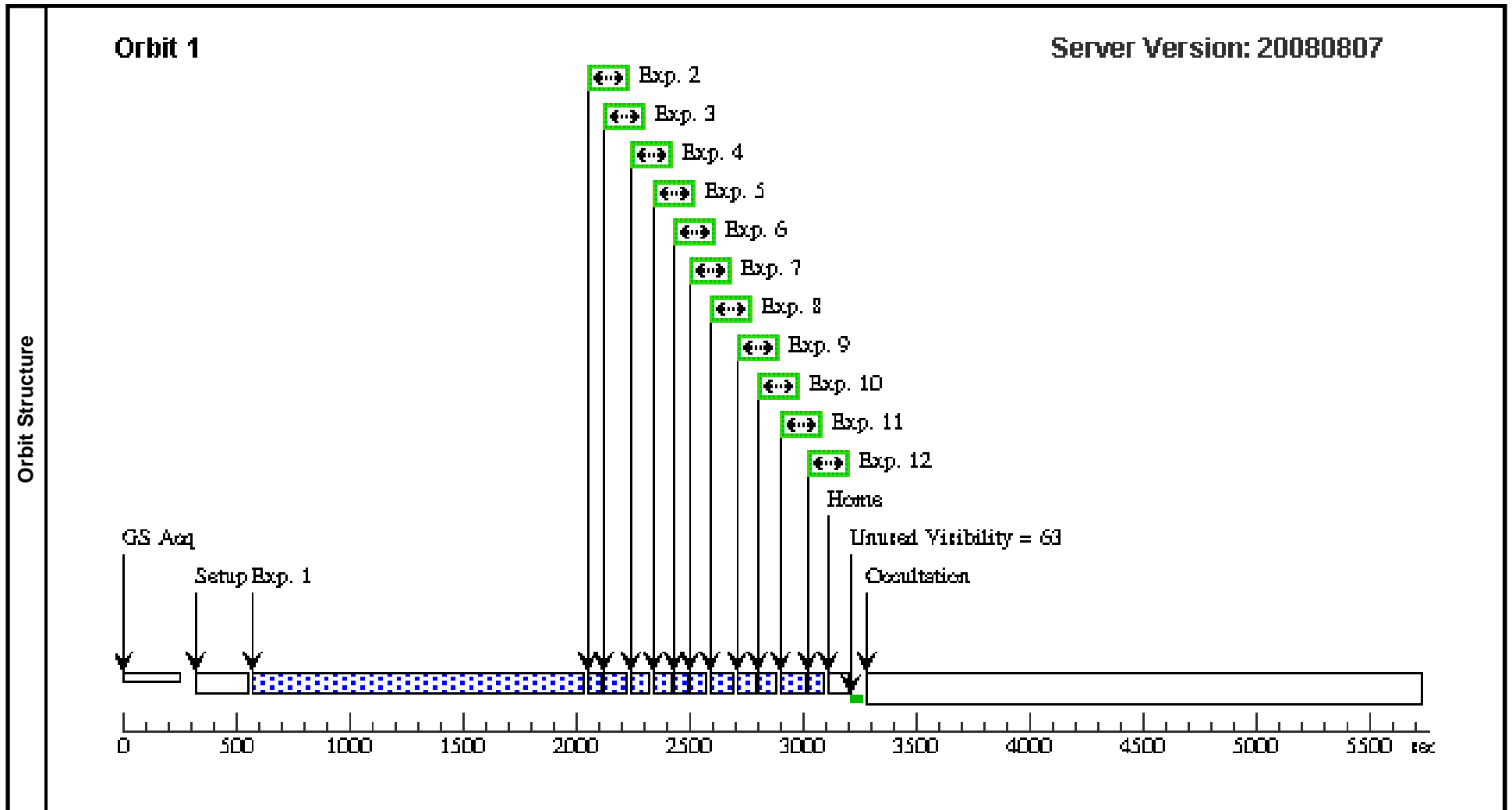
Proposal 11299 - Visit 01 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:05 GMT 2008

Visit	Proposal 11299, Visit 01, completed									
	Diagnostic Status: No Diagnostics									
Scientific Instruments: FGS										
Special Requirements: ORIENT 70.0D TO 75.0 D										
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				
	<i>Comments: .</i>									
	(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 25.6100 (17.3567083d) Dec: -67 30 52.40 (-67.51456d) 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	(1) GJ-54	FGS, TRANS, 1	F583W	SCANS=22; STEP-SIZE=0.5	GS ACQ SCENARI O ONEBIT	Sequence 1-12 Non-Int	1100.0 Secs [==>]	[1]
	2	(1) GJ-54	(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	3	(7) GJ54-REF1	(7) GJ54-REF1	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	4	(1) GJ-54	(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	5	(8) GJ54-REF3	(8) GJ54-REF3	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	6	(8) GJ54-REF3	(8) GJ54-REF3	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	7	(1) GJ-54	(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	8	(7) GJ54-REF1	(7) GJ54-REF1	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
	9	(1) GJ-54	(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]
10	(9) GJ54-REF2	(9) GJ54-REF2	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]	

Proposal 11299 - Visit 01 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

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 [==>]
	12		(1) GJ-54	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]



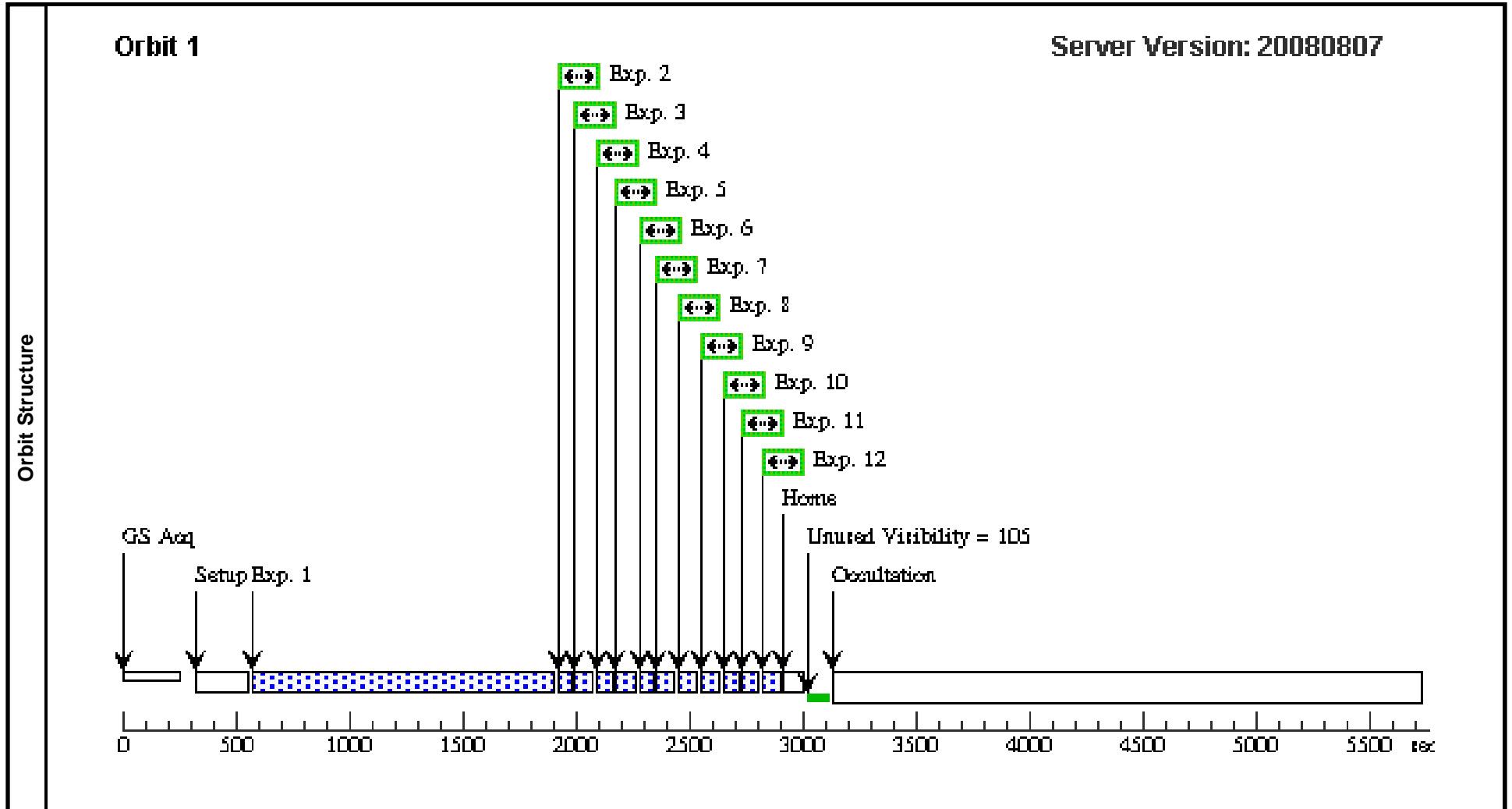
Proposal 11299 - Visit 02 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:06 GMT 2008

Visit	Proposal 11299, Visit 02, completed Diagnostic Status: No Diagnostics Scientific Instruments: FGS Special Requirements: ORIENT 290.0D TO 296.0 D; BETWEEN 10-NOV-2007:00:00:00 AND 28-NOV-2007:00:00:00									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(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 SCENARI O ONEBIT	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]	

Proposal 11299 - Visit 02 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

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 [==>]
	12		(10) GL469-021-RE F	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	10.0 Secs [==>]	[1]



Proposal 11299 - Visit 03 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:07 GMT 2008

Visit	Proposal 11299, Visit 03, completed Diagnostic Status: No Diagnostics Scientific Instruments: FGS Special Requirements: BETWEEN 10-JAN-2008:00:00:00 AND 23-MAY-2008:18:58:30									
	Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous			
(3)		GJ-473	RA: 12 33 19.5400 (188.3314167d) Dec: +09 01 11.32 (9.01981d) Equinox: J2000	Proper Motion RA: -0.12132s/yr Proper Motion Dec: 0.2332"/yr Epoch of Position: 1982.07	V=12.46+/-0.05 B-V=1.84	Reference Frame: ICRS				
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	(3) GJ-473	FGS, TRANS, 1	F583W	SCANS=26; STEP-SIZE=1			1930.0 Secs [==>]	[1]
Orbit Structure	Orbit 1									
	<p style="text-align: right;">Server Version: 20080807</p>									

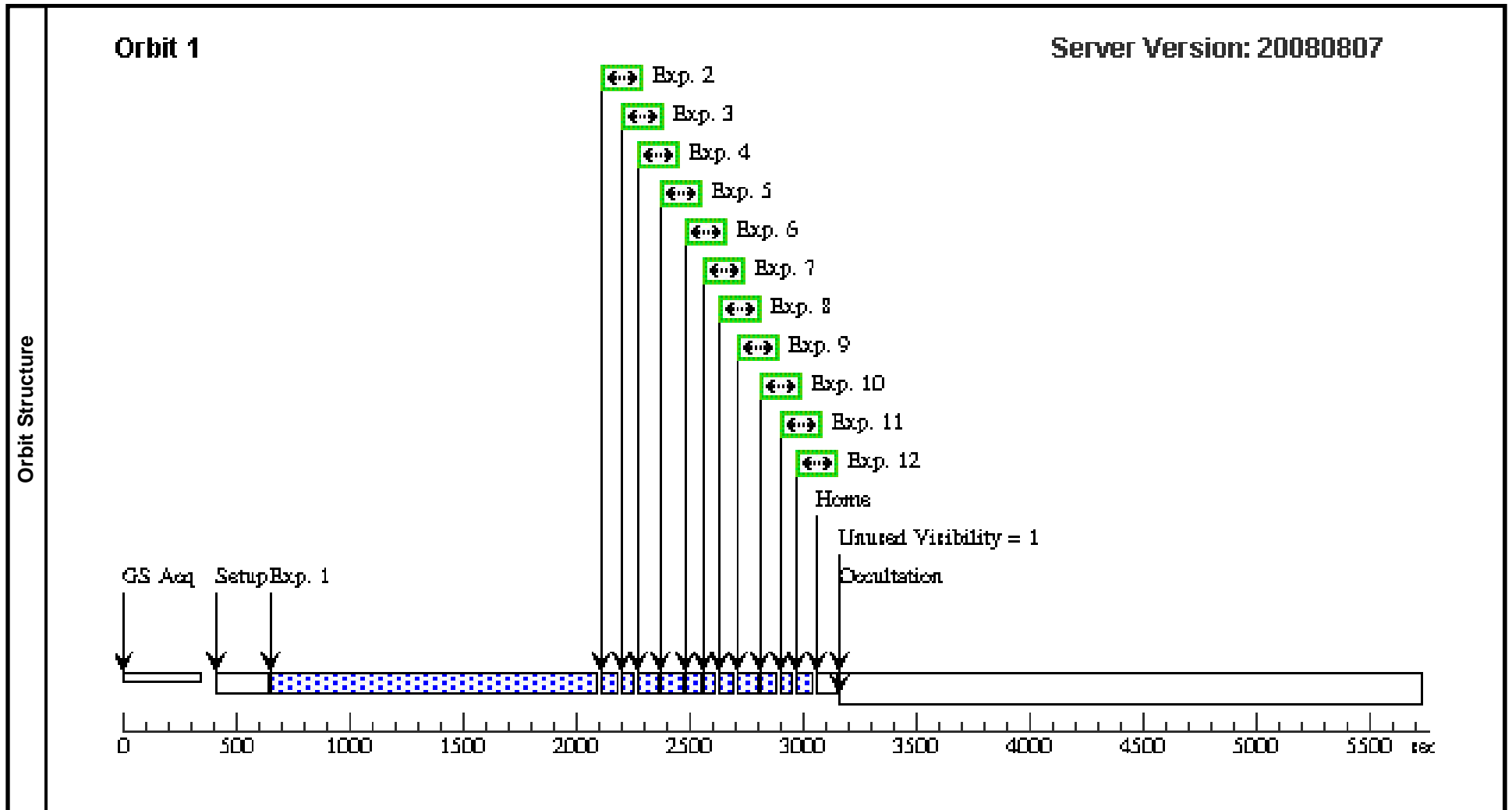
Proposal 11299 - Visit 04 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:08 GMT 2008

Visit		Proposal 11299, Visit 04, failed Diagnostic Status: No Diagnostics Scientific Instruments: FGS Special Requirements: ORIENT 260.0D TO 270.0 D; BETWEEN 01-OCT-2008:00:00:00 AND 20-OCT-2008:00:00:00									
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	(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	(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	(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	(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	(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	(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	(4) GJ-1081	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-12 Non-Int	20.0 Secs [==>]	[1]

Proposal 11299 - Visit 04 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

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



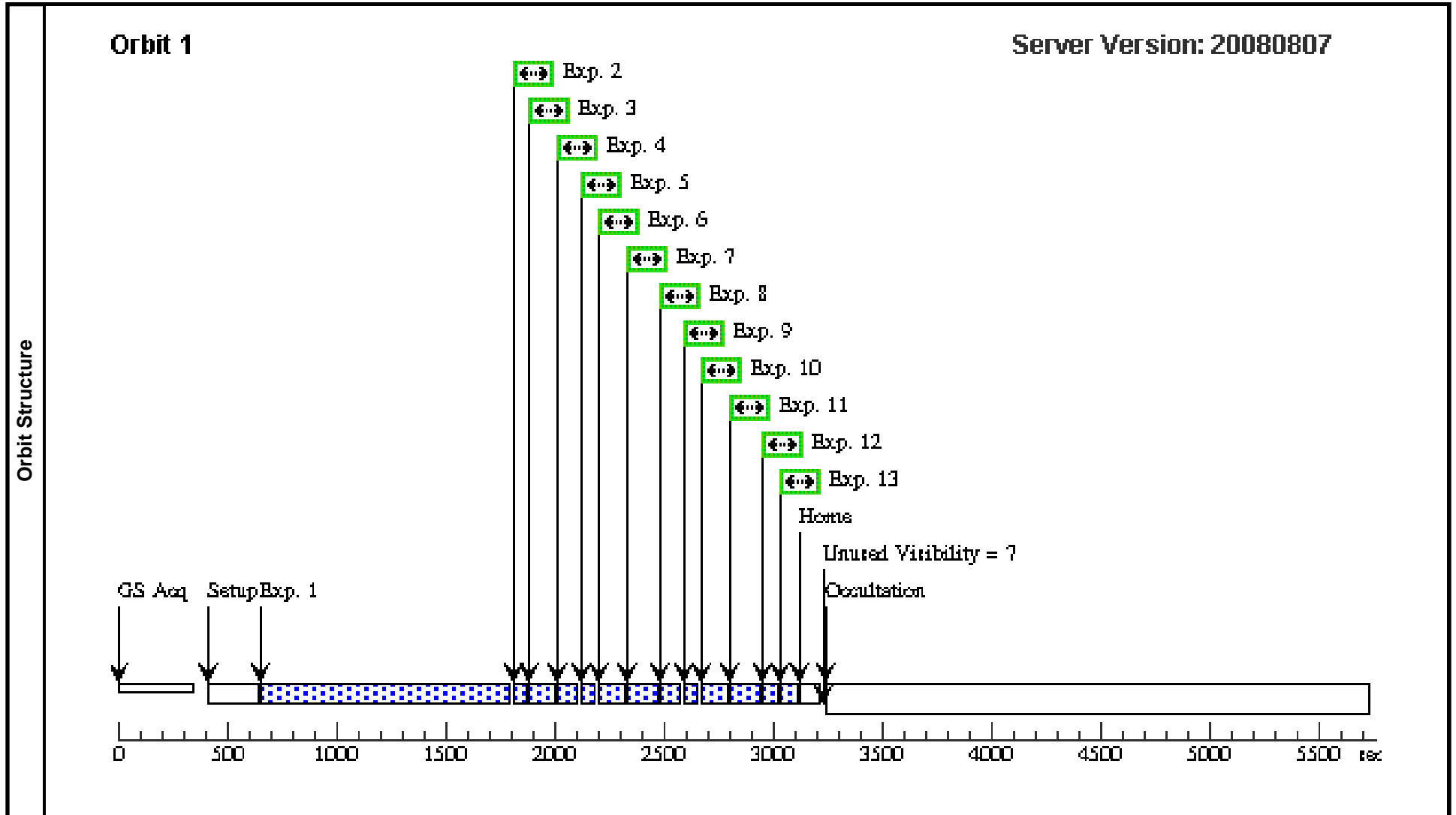
Proposal 11299 - Visit 05 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:08 GMT 2008

Visit	Proposal 11299, Visit 05, completed									
	Diagnostic Status: No Diagnostics									
Scientific Instruments: FGS										
Special Requirements: ORIENT 280.0D TO 285.0 D; BETWEEN 07-SEP-2007:00:00:00 AND 15-SEP-2007:00:00:00										
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				
	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>									
	(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	10.0 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	10.0 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]
	8		(17) G250-29-344-REF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 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]	

Proposal 11299 - Visit 05 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Exposures (continued)	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	11		(18) G250-29-USNO 1-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	10.0 Secs	
								[==>]	[1]	
13		(17) G250-29-344-R EF	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-13 Non-Int	10.0 Secs		
								[==>]	[1]	



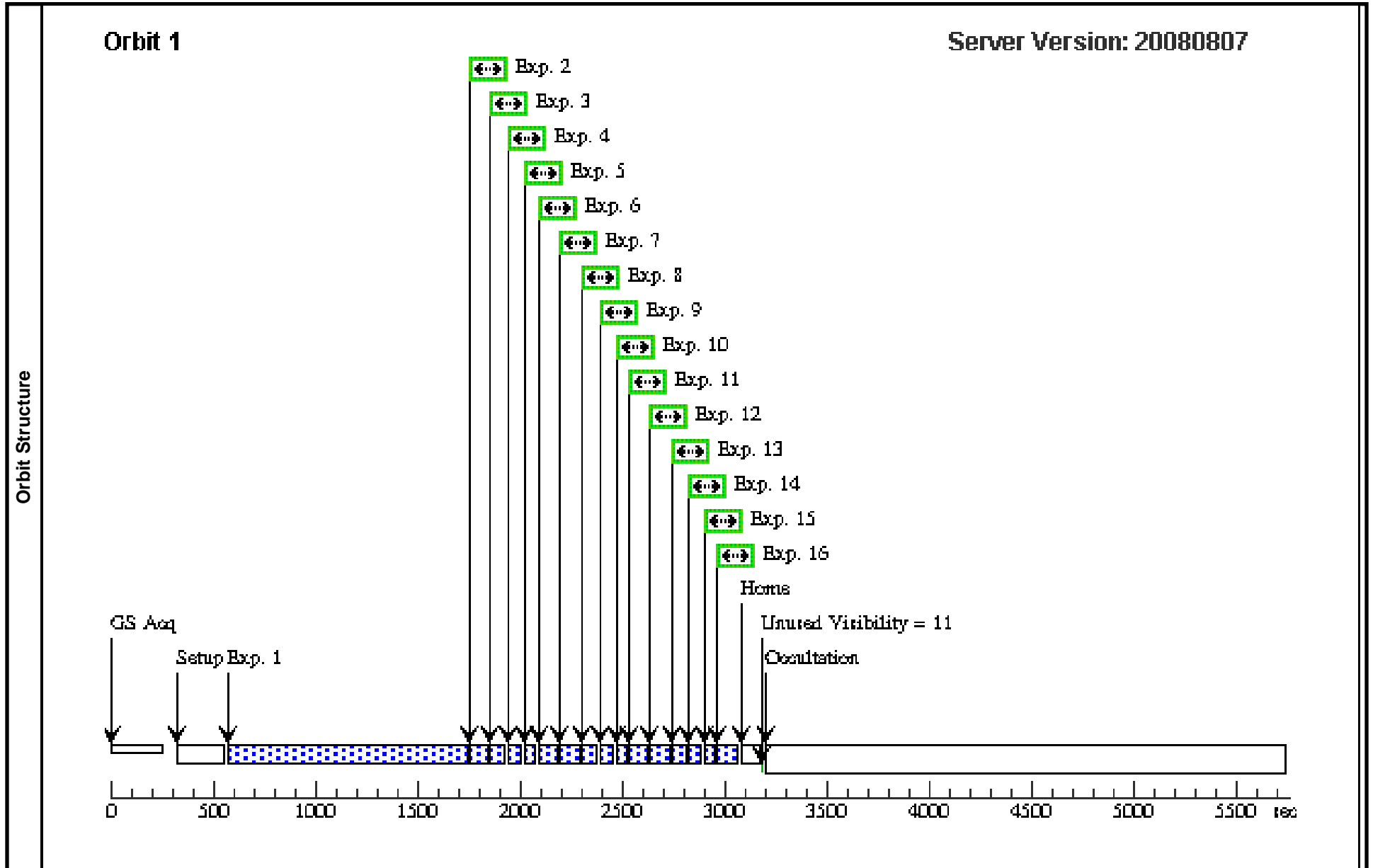
Proposal 11299 - Visit 06 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:09 GMT 2008

Visit	Proposal 11299, Visit 06, completed Diagnostic Status: No Diagnostics Scientific Instruments: FGS Special Requirements: PCS MODE FINE; ORIENT 74.0D TO 74.0 D									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
Fixed Targets	(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				
	<i>Comments: This is LHS224AB, but with a false magnitude specification that will facilitate acquisition in Position Mode.</i>									
	(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 0.64 (52.73351d) Equinox: J2000		V=13.27+/-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	POS TARG 0.0,-10.0; GS ACQ SCENARI O ONEBIT	Sequence 1-16 Non-Int	870.0 Secs [==>]	[1]
	2		(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	3		(21) LHS224AB-REF1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	4		(23) LHS224AB-REF3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	5		(22) LHS224AB-REF2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	6		(24) LHS224AB-REF4	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]

Proposal 11299 - Visit 06 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
Exposures (continued)	7	(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	8	(21) LHS224AB-RE F1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	9	(23) LHS224AB-RE F3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	14.0 Secs [==>]	[1]
	10	(22) LHS224AB-RE F2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	11	(24) LHS224AB-RE F4	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	12	(20) LHS224AB-0	FGS, POS, 1	F583W	FES-TIME=0.05	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	13	(21) LHS224AB-RE F1	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	14	(22) LHS224AB-RE F2	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	15	(23) LHS224AB-RE F3	FGS, POS, 1	F583W	FES-TIME=0.025	SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]
	16	(24) LHS224AB-RE F4	FGS, POS, 1	F583W		SAME POS AS 1	Sequence 1-16 Non-Int	10.0 Secs [==>]	[1]



Proposal 11299 - Visit 54 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

Wed Oct 08 01:08:10 GMT 2008

Visit		Proposal 11299, Visit 54								
		Diagnostic Status: No Diagnostics Scientific Instruments: FGS Special Requirements: ORIENT 260.0D TO 270.0 D; BEFORE 31-DEC-2008:00:00:00								
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	GS ACQ SCENARI O BASE1T3	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]

Proposal 11299 - Visit 54 - Calibrating the Mass-Luminosity Relation at the End of the Main Sequence

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

