



# 12464 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Cycle: 19, Proposal Category: GO

(Availability Mode: SUPPORTED)

## INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
<b>Dr. Kevin France (PI)</b>	<b>University of Colorado at Boulder</b>	<b>kevin.france@colorado.edu</b>
Dr. Feng Tian (CoI)	University of Colorado at Boulder	feng.tian@colorado.edu
Dr. Jeffrey L. Linsky (CoI)	University of Colorado at Boulder	jlinsky@jila.colorado.edu
Dr. Aki Roberge (CoI)	NASA Goddard Space Flight Center	aki.roberge@nasa.gov
Dr. Cynthia Froning (CoI)	University of Colorado at Boulder	cfroning@casa.colorado.edu
Dr. John T. Stocke (CoI)	University of Colorado at Boulder	stocke@casa.colorado.edu
Dr. Brian C. Wolven (CoI)	The Johns Hopkins University	wolven@pha.jhu.edu
Dr. Hao Yang (CoI)	University of Colorado at Boulder	haoyang@jilau1.colorado.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>
03	(2) GJ876	COS/FUV COS/NUV	2	18-Oct-2011 21:01:40.0	yes
04	(2) GJ876	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	1	18-Oct-2011 21:01:54.0	yes
05	(3) GJ832	COS/FUV COS/NUV	2	18-Oct-2011 21:02:03.0	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>
06	(3) GJ832	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	1	18-Oct-2011 21:02:17.0	yes
07	(4) GJ436	COS/FUV COS/NUV	3	18-Oct-2011 21:02:29.0	yes
08	(4) GJ436	STIS/CCD STIS/NUV-MAMA	1	18-Oct-2011 21:02:38.0	yes
09	(5) GJ1214	COS/FUV COS/NUV	3	18-Oct-2011 21:02:48.0	yes
10	(5) GJ1214	STIS/CCD STIS/NUV-MAMA	1	18-Oct-2011 21:02:57.0	yes

14 Total Orbits Used

## ABSTRACT

Extrasolar planets orbiting M-stars may represent our best chance to discover habitable worlds in the coming decade. The ultraviolet (UV) spectrum incident upon the habitable zone of these planets drives the dissociation of water, the production of ozone, and may determine their ultimate habitability. Despite the importance of the incident UV radiation for understanding planetary atmospheres in the habitable zone, existing model calculations have not used measured, local UV fluxes. At present, we lack the observational and theoretical basis to predict the far- and near-UV spectrum of an M-dwarf. We propose Project MUSCLES (Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems) to remedy this situation by building the first spectrally and temporally resolved catalog of local M-stars hosting exoplanetary systems.

## OBSERVING DESCRIPTION

We are observing the spectral and temporal characteristics of M-stars known to host exoplanetary systems.

This will be accomplished with a combination of STIS and COS observations, both NUV and FUV.

For the COS FUV, we will acquire the targets using a 2x2 search and then a target acq. While the coordinates for these objects are well-known, they are high proper motion targets (all  $d < 13$  pc), and I would like to run the acq searches in order to make sure we do not miss one of them. We will

Proposal 12464 (STScI Edit Number: 4, Created: Tuesday, October 18, 2011 8:03:04 PM EST) - Overview

then observe with COS G130M+G160M, one orbit for the  $d < 5$  pc targets and 3 orbits for  $d > 10$  pc targets. The exposure times for the closest targets are short, so we only obtain spectra in one FP-POS for these stars.

With STIS, we will acquire the targets using the long-pass optical filter. The FOV is large (unlike the COS acq), so a single image will suffice. The STIS target acq images are very short. From there, we will obtain STIS FUV G140M spectra at LyA of three of the targets (using the 52 x 0.1" slit to minimize airglow), and STIS NUV G230L spectra of all 5 targets (also through the 52 x 0.1" slit, for consistency) to measure the NUV continuum and any FUV lines (e.g., MgII 2800A).

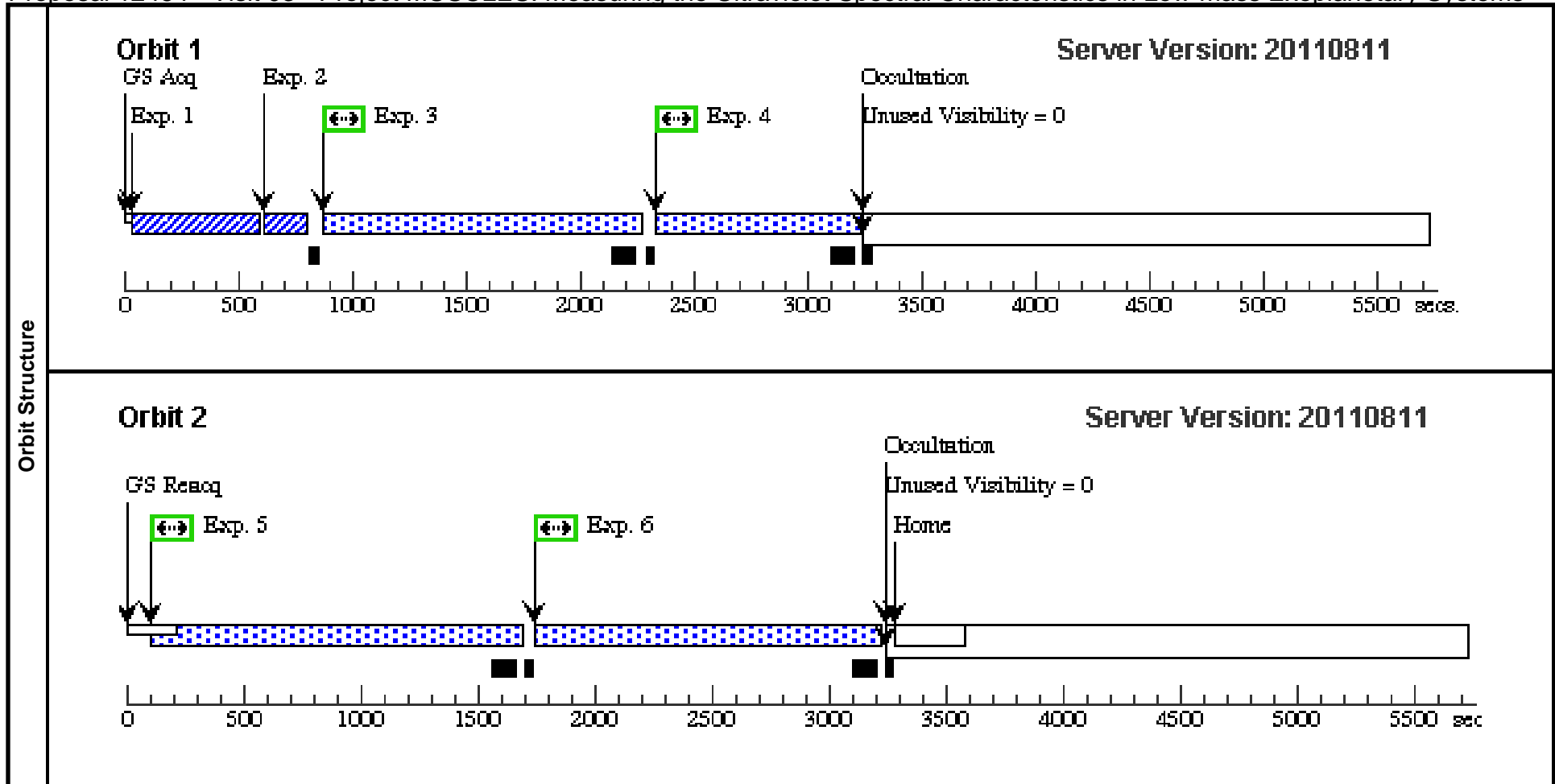
Because of the high-proper motions, Target Confirmation Charts will be essential.

Bright object protection has been run for all stars. The only violations are where the target star is reported with an unidentified spectral type.

Proposal 12464 - Visit 03 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:04 GMT 2011

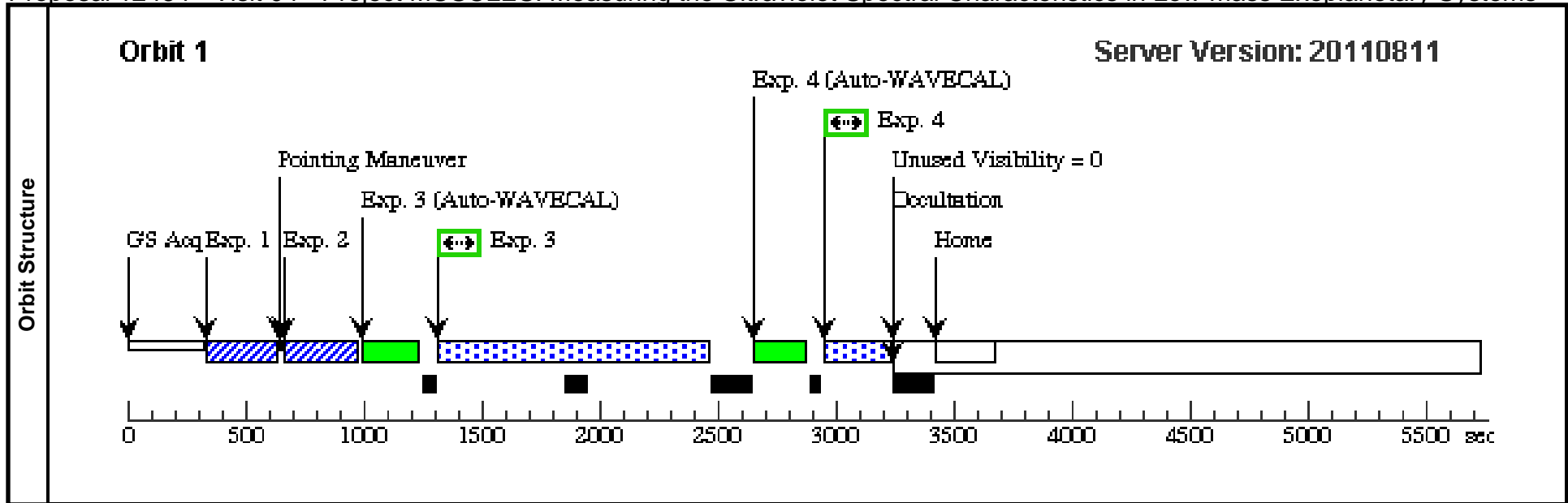
<b>Visit</b>	<p><b>Proposal 12464, Visit 03, implementation</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: COS/NUV, COS/FUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: ETC runs for template M-star at 4.7 pc</i></p>																																																																														
	<p><b>Diagnosics</b></p> <p>(Visit 03) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.</p>																																																																														
<b>Fixed Targets</b>	<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>(2)</td> <td>GJ876</td> <td>RA: 22 53 16.7335 (343.3197229d) Dec: -14 15 49.32 (-14.26370d) Equinox: J2000</td> <td>Proper Motion RA: 959.84 mas/yr Proper Motion Dec: -675.33 mas/yr Parallax: 0.21328" Epoch of Position: 2000 Radial Velocity: 8.7 km/sec</td> <td>V=10.18+/-1 (GJ876, M5, d=4.7pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Updated - kf - 06/13/11</i></p> <p><i>Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</i></p>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(2)	GJ876	RA: 22 53 16.7335 (343.3197229d) Dec: -14 15 49.32 (-14.26370d) Equinox: J2000	Proper Motion RA: 959.84 mas/yr Proper Motion Dec: -675.33 mas/yr Parallax: 0.21328" Epoch of Position: 2000 Radial Velocity: 8.7 km/sec	V=10.18+/-1 (GJ876, M5, d=4.7pc)	Reference Frame: ICRS																																																									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																																																																									
(2)	GJ876	RA: 22 53 16.7335 (343.3197229d) Dec: -14 15 49.32 (-14.26370d) Equinox: J2000	Proper Motion RA: 959.84 mas/yr Proper Motion Dec: -675.33 mas/yr Parallax: 0.21328" Epoch of Position: 2000 Radial Velocity: 8.7 km/sec	V=10.18+/-1 (GJ876, M5, d=4.7pc)	Reference Frame: ICRS																																																																										
<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GJ876_AC Q_SRCH (COS.ta.182 853)</td> <td>(2) GJ876</td> <td>COS/NUV, ACQ/SEARCH, PSA</td> <td>MIRRORB</td> <td>SCAN-SIZE=2</td> <td></td> <td></td> <td>30 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>GJ876_AC Q_IMG (COS.ta.182 853)</td> <td>(2) GJ876</td> <td>COS/NUV, ACQ/IMAGE, PSA</td> <td>MIRRORB</td> <td></td> <td></td> <td></td> <td>30 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>3</td> <td>GJ876_G13 0Ma (COS.sp.182 852)</td> <td>(2) GJ876</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1300 A</td> <td>BUFFER-TIME=11 30; FP-POS=4</td> <td></td> <td></td> <td>1240 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>4</td> <td>GJ876_G13 0Mb (COS.sp.182 852)</td> <td>(2) GJ876</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1327 A</td> <td>BUFFER-TIME=66 7; FP-POS=4</td> <td></td> <td></td> <td>777 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>5</td> <td>GJ876_G16 0Ma (COS.sp.182 854)</td> <td>(2) GJ876</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G160M 1589 A</td> <td>BUFFER-TIME=13 10; FP-POS=2</td> <td></td> <td></td> <td>1420 Secs [==&gt;]</td> <td>[2]</td> </tr> <tr> <td>6</td> <td>GJ876_G16 0Mb (COS.sp.182 854)</td> <td>(2) GJ876</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G160M 1623 A</td> <td>BUFFER-TIME=12 49; FP-POS=2</td> <td></td> <td></td> <td>1359 Secs [==&gt;]</td> <td>[2]</td> </tr> </tbody> </table>										#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	GJ876_AC Q_SRCH (COS.ta.182 853)	(2) GJ876	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2			30 Secs [==>]	[1]	2	GJ876_AC Q_IMG (COS.ta.182 853)	(2) GJ876	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs [==>]	[1]	3	GJ876_G13 0Ma (COS.sp.182 852)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=11 30; FP-POS=4			1240 Secs [==>]	[1]	4	GJ876_G13 0Mb (COS.sp.182 852)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=66 7; FP-POS=4			777 Secs [==>]	[1]	5	GJ876_G16 0Ma (COS.sp.182 854)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=13 10; FP-POS=2			1420 Secs [==>]	[2]	6	GJ876_G16 0Mb (COS.sp.182 854)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=12 49; FP-POS=2			1359 Secs [==>]	[2]
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																																																						
1	GJ876_AC Q_SRCH (COS.ta.182 853)	(2) GJ876	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2			30 Secs [==>]	[1]																																																																						
2	GJ876_AC Q_IMG (COS.ta.182 853)	(2) GJ876	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs [==>]	[1]																																																																						
3	GJ876_G13 0Ma (COS.sp.182 852)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=11 30; FP-POS=4			1240 Secs [==>]	[1]																																																																						
4	GJ876_G13 0Mb (COS.sp.182 852)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=66 7; FP-POS=4			777 Secs [==>]	[1]																																																																						
5	GJ876_G16 0Ma (COS.sp.182 854)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=13 10; FP-POS=2			1420 Secs [==>]	[2]																																																																						
6	GJ876_G16 0Mb (COS.sp.182 854)	(2) GJ876	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=12 49; FP-POS=2			1359 Secs [==>]	[2]																																																																						



Proposal 12464 - Visit 04 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:07 GMT 2011

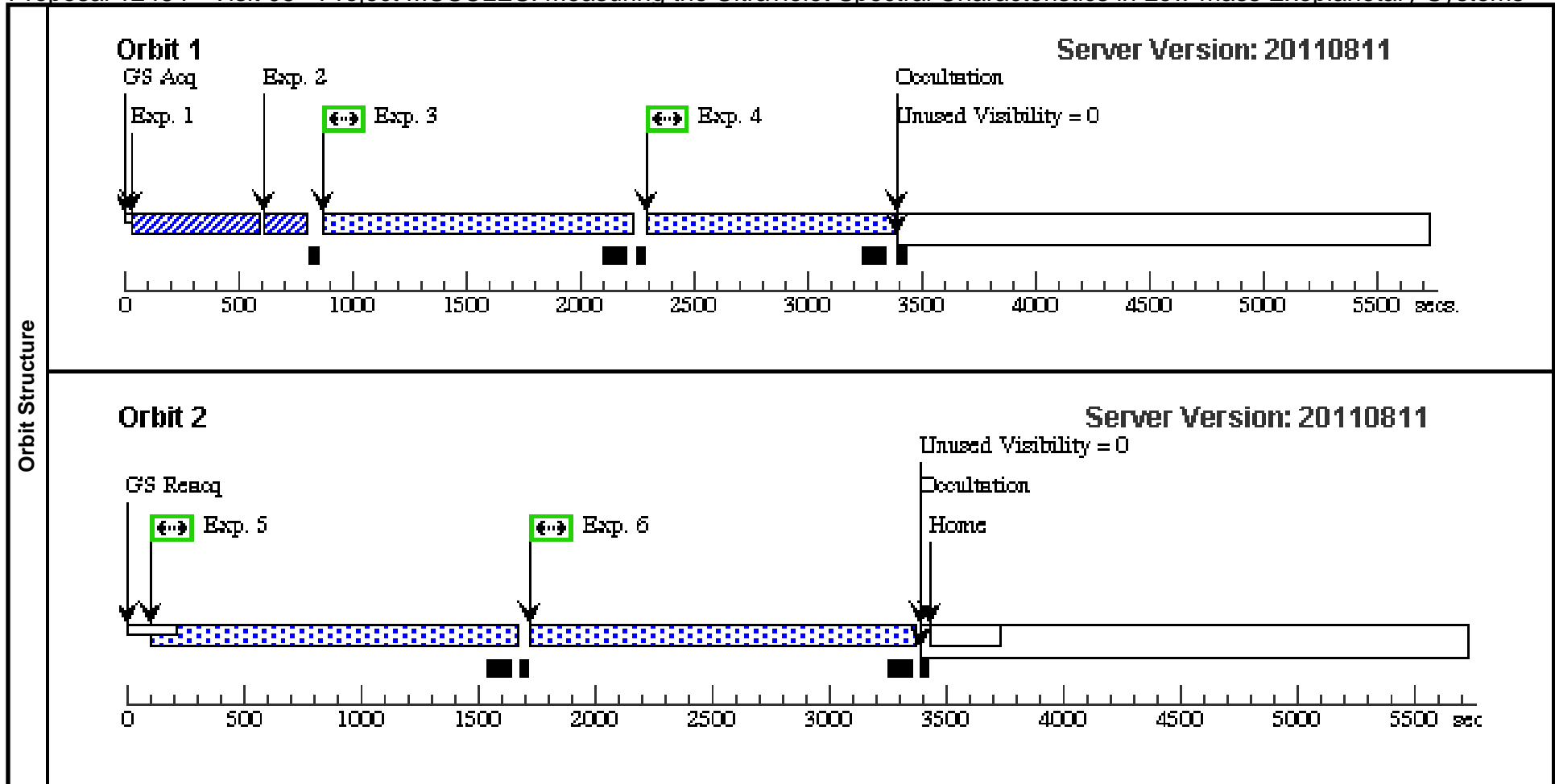
<b>Visit</b>	<p><b>Proposal 12464, Visit 04, implementation</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: STIS/CCD, STIS/FUV-MAMA, STIS/NUV-MAMA</p> <p>Special Requirements: (none)</p> <p><i>Comments: ETC runs for template M-star at 4.7 pc</i></p> <p><i>TA ETC for a Kurucz &amp; Castelli M5 star.</i></p>										
	<b>Fixed Targets</b>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
(2)		GJ876	RA: 22 53 16.7335 (343.3197229d) Dec: -14 15 49.32 (-14.26370d) Equinox: J2000	Proper Motion RA: 959.84 mas/yr Proper Motion Dec: -675.33 mas/yr Parallax: 0.21328" Epoch of Position: 2000 Radial Velocity: 8.7 km/sec	V=10.18+/-1 (GJ876, M5, d=4.7pc)	Reference Frame: ICRS					
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Updated - kf - 06/13/11</i></p> <p><i>Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</i></p>											
<b>Exposures</b>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	GJ876_STIS _ACQ (STIS.ta.233 241)	(2) GJ876	STIS/CCD, ACQ, F28X500II	MIRROR				11.0 Secs [==>]	[1]	
	<p><i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i></p>										
	2	GJ876_STIS _ACQ/PEA K (STIS.sp.23 7454)	(2) GJ876	STIS/CCD, ACQ/PEAK, 52X0.1	G430L 4300 A				3.2 Secs [==>]	[1]	
	<p><i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i></p> <p><i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i></p>										
3	GJ876_G14 0M (STIS.sp.18 2860)	(2) GJ876	STIS/FUV-MAMA, TIME-TAG, 52X0.1	G140M 1222 A		BUFFER-TIME=55 0			1138 Secs [==>]	[1]	
4	GJ876_G23 0L (STIS.sp.18 2856)	(2) GJ876	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A		BUFFER-TIME=29 0			267 Secs [==>]	[1]	



Proposal 12464 - Visit 05 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:08 GMT 2011

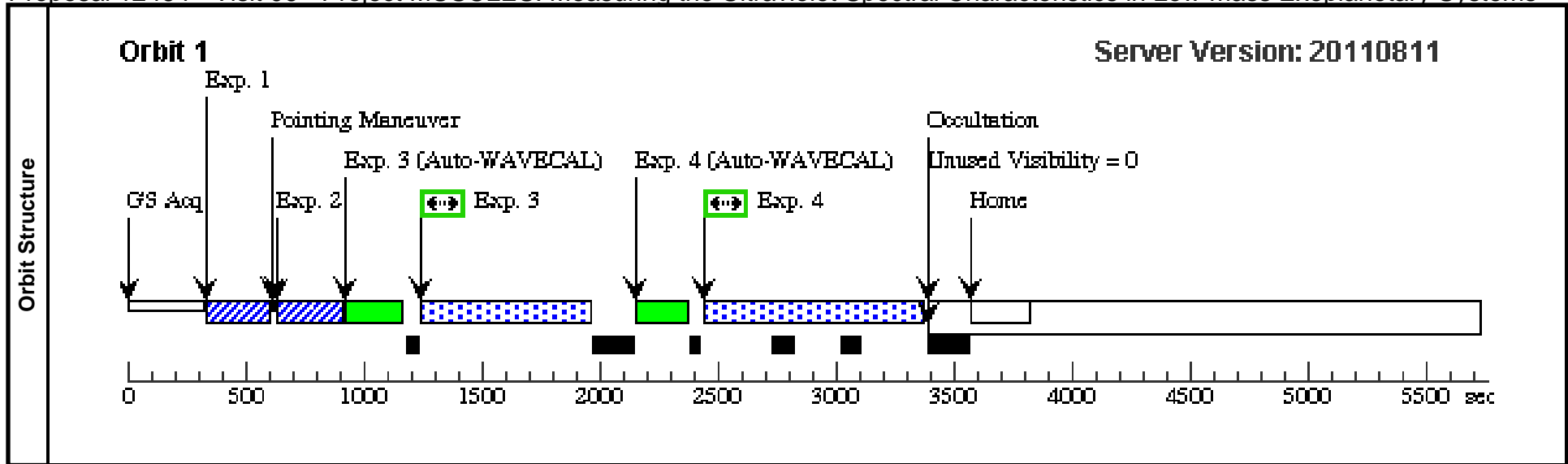
<b>Visit</b>	<b>Proposal 12464, Visit 05, implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: COS/NUV, COS/FUV Special Requirements: (none) <i>Comments: ETC runs for template M-star at 4.9 pc</i>																																																																														
	<b>Diagnosics</b> (Visit 05) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.																																																																														
<b>Fixed Targets</b>	<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>(3)</td> <td>GJ832</td> <td>RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000</td> <td>Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec</td> <td>V=8.67 (GJ832, M1.5, d=4.9pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i>                  Updated kf - 06/13/11                  Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</p>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	GJ832	RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000	Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec	V=8.67 (GJ832, M1.5, d=4.9pc)	Reference Frame: ICRS																																																									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																																																																									
(3)	GJ832	RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000	Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec	V=8.67 (GJ832, M1.5, d=4.9pc)	Reference Frame: ICRS																																																																										
<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GJ832_AC Q_SRCH (COS.ta.182 863)</td> <td>(3) GJ832</td> <td>COS/NUV, ACQ/SEARCH, PSA</td> <td>MIRRORB</td> <td>SCAN-SIZE=2</td> <td></td> <td></td> <td>30 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>2</td> <td>GJ832_AC Q_IMG (COS.ta.182 863)</td> <td>(3) GJ832</td> <td>COS/NUV, ACQ/IMAGE, PSA</td> <td>MIRRORB</td> <td></td> <td></td> <td></td> <td>30 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>3</td> <td>GJ832_G13 0Ma (COS.sp.182 861)</td> <td>(3) GJ832</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1300 A</td> <td>BUFFER-TIME=10 90; FP-POS=4</td> <td></td> <td></td> <td>1200 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>4</td> <td>GJ832_G13 0Mb (COS.sp.182 861)</td> <td>(3) GJ832</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G130M 1327 A</td> <td>BUFFER-TIME=85 3; FP-POS=4</td> <td></td> <td></td> <td>963 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>5</td> <td>GJ832_G16 0Ma (COS.sp.182 864)</td> <td>(3) GJ832</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G160M 1589 A</td> <td>BUFFER-TIME=12 90; FP-POS=2</td> <td></td> <td></td> <td>1400 Secs [==&gt;]</td> <td>[2]</td> </tr> <tr> <td>6</td> <td>GJ832_G16 0Mb (COS.sp.182 864)</td> <td>(3) GJ832</td> <td>COS/FUV, TIME-TAG, PSA</td> <td>G160M 1623 A</td> <td>BUFFER-TIME=14 25; FP-POS=2</td> <td></td> <td></td> <td>1525 Secs [==&gt;]</td> <td>[2]</td> </tr> </tbody> </table>										#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	GJ832_AC Q_SRCH (COS.ta.182 863)	(3) GJ832	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2			30 Secs [==>]	[1]	2	GJ832_AC Q_IMG (COS.ta.182 863)	(3) GJ832	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs [==>]	[1]	3	GJ832_G13 0Ma (COS.sp.182 861)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=10 90; FP-POS=4			1200 Secs [==>]	[1]	4	GJ832_G13 0Mb (COS.sp.182 861)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=85 3; FP-POS=4			963 Secs [==>]	[1]	5	GJ832_G16 0Ma (COS.sp.182 864)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=12 90; FP-POS=2			1400 Secs [==>]	[2]	6	GJ832_G16 0Mb (COS.sp.182 864)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=14 25; FP-POS=2			1525 Secs [==>]	[2]
#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																																																						
1	GJ832_AC Q_SRCH (COS.ta.182 863)	(3) GJ832	COS/NUV, ACQ/SEARCH, PSA	MIRRORB	SCAN-SIZE=2			30 Secs [==>]	[1]																																																																						
2	GJ832_AC Q_IMG (COS.ta.182 863)	(3) GJ832	COS/NUV, ACQ/IMAGE, PSA	MIRRORB				30 Secs [==>]	[1]																																																																						
3	GJ832_G13 0Ma (COS.sp.182 861)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=10 90; FP-POS=4			1200 Secs [==>]	[1]																																																																						
4	GJ832_G13 0Mb (COS.sp.182 861)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G130M 1327 A	BUFFER-TIME=85 3; FP-POS=4			963 Secs [==>]	[1]																																																																						
5	GJ832_G16 0Ma (COS.sp.182 864)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=12 90; FP-POS=2			1400 Secs [==>]	[2]																																																																						
6	GJ832_G16 0Mb (COS.sp.182 864)	(3) GJ832	COS/FUV, TIME-TAG, PSA	G160M 1623 A	BUFFER-TIME=14 25; FP-POS=2			1525 Secs [==>]	[2]																																																																						



Proposal 12464 - Visit 06 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:09 GMT 2011

<b>Visit</b>	<b>Proposal 12464, Visit 06, implementation</b> <b>Diagnostic Status: Warning</b> Scientific Instruments: STIS/CCD, STIS/FUV-MAMA, STIS/NUV-MAMA Special Requirements: (none) <i>Comments: ETC runs for template M-star at 4.9 pc</i> <i>TA ETC for a Kurucz &amp; Castelli M2 star.</i>																																																																						
	<b>Diagnosics</b> (Visit 06) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS																																																																						
<b>Fixed Targets</b>	<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>(3)</td> <td>GJ832</td> <td>RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000</td> <td>Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec</td> <td>V=8.67 (GJ832, M1.5, d=4.9pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(3)	GJ832	RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000	Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec	V=8.67 (GJ832, M1.5, d=4.9pc)	Reference Frame: ICRS	<i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i> <i>Updated kf - 06/13/11</i> <i>Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</i>																																																									
	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																																																																	
(3)	GJ832	RA: 21 33 33.9753 (323.3915638d) Dec: -49 00 32.42 (-49.00901d) Equinox: J2000	Proper Motion RA: -46.05 mas/yr Proper Motion Dec: -817.63 mas/yr Parallax: 0.20187" Epoch of Position: 2000 Radial Velocity: 18.0 km/sec	V=8.67 (GJ832, M1.5, d=4.9pc)	Reference Frame: ICRS																																																																		
<b>Exposures</b>	<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GJ832_STIS _ACQ (STIS.ta.233 242)</td> <td>(3) GJ832</td> <td>STIS/CCD, ACQ, F28X500II</td> <td>MIRROR</td> <td></td> <td></td> <td></td> <td>2.0 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> <i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> </td> </tr> <tr> <td>2</td> <td>GJ832_STIS _ACQ/PEA K (STIS.sp.23 7455)</td> <td>(3) GJ832</td> <td>STIS/CCD, ACQ/PEAK, 52X0.1</td> <td>G430L 4300 A</td> <td></td> <td></td> <td></td> <td>0.75 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> <i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i>  <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i> </td> </tr> <tr> <td>3</td> <td>GJ832_G14 0M (STIS.sp.18 2865)</td> <td>(3) GJ832</td> <td>STIS/FUV-MAMA, TIME-TAG, 52X0.1</td> <td>G140M 1222 A</td> <td>BUFFER-TIME=50 0</td> <td></td> <td></td> <td>700 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td>4</td> <td>GJ832_G23 0L (STIS.sp.18 2866)</td> <td>(3) GJ832</td> <td>STIS/NUV-MAMA, TIME-TAG, 52X0.1</td> <td>G230L 2376 A</td> <td>BUFFER-TIME=29 0</td> <td></td> <td></td> <td>917 Secs [==&gt;]</td> <td>[1]</td> </tr> </tbody> </table>	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	GJ832_STIS _ACQ (STIS.ta.233 242)	(3) GJ832	STIS/CCD, ACQ, F28X500II	MIRROR				2.0 Secs [==>]	[1]	<i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i>										2	GJ832_STIS _ACQ/PEA K (STIS.sp.23 7455)	(3) GJ832	STIS/CCD, ACQ/PEAK, 52X0.1	G430L 4300 A				0.75 Secs [==>]	[1]	<i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i>										3	GJ832_G14 0M (STIS.sp.18 2865)	(3) GJ832	STIS/FUV-MAMA, TIME-TAG, 52X0.1	G140M 1222 A	BUFFER-TIME=50 0			700 Secs [==>]	[1]	4	GJ832_G23 0L (STIS.sp.18 2866)	(3) GJ832	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A	BUFFER-TIME=29 0			917 Secs [==>]	[1]
	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																																													
	1	GJ832_STIS _ACQ (STIS.ta.233 242)	(3) GJ832	STIS/CCD, ACQ, F28X500II	MIRROR				2.0 Secs [==>]	[1]																																																													
	<i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i>																																																																						
	2	GJ832_STIS _ACQ/PEA K (STIS.sp.23 7455)	(3) GJ832	STIS/CCD, ACQ/PEAK, 52X0.1	G430L 4300 A				0.75 Secs [==>]	[1]																																																													
<i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i>																																																																							
3	GJ832_G14 0M (STIS.sp.18 2865)	(3) GJ832	STIS/FUV-MAMA, TIME-TAG, 52X0.1	G140M 1222 A	BUFFER-TIME=50 0			700 Secs [==>]	[1]																																																														
4	GJ832_G23 0L (STIS.sp.18 2866)	(3) GJ832	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A	BUFFER-TIME=29 0			917 Secs [==>]	[1]																																																														



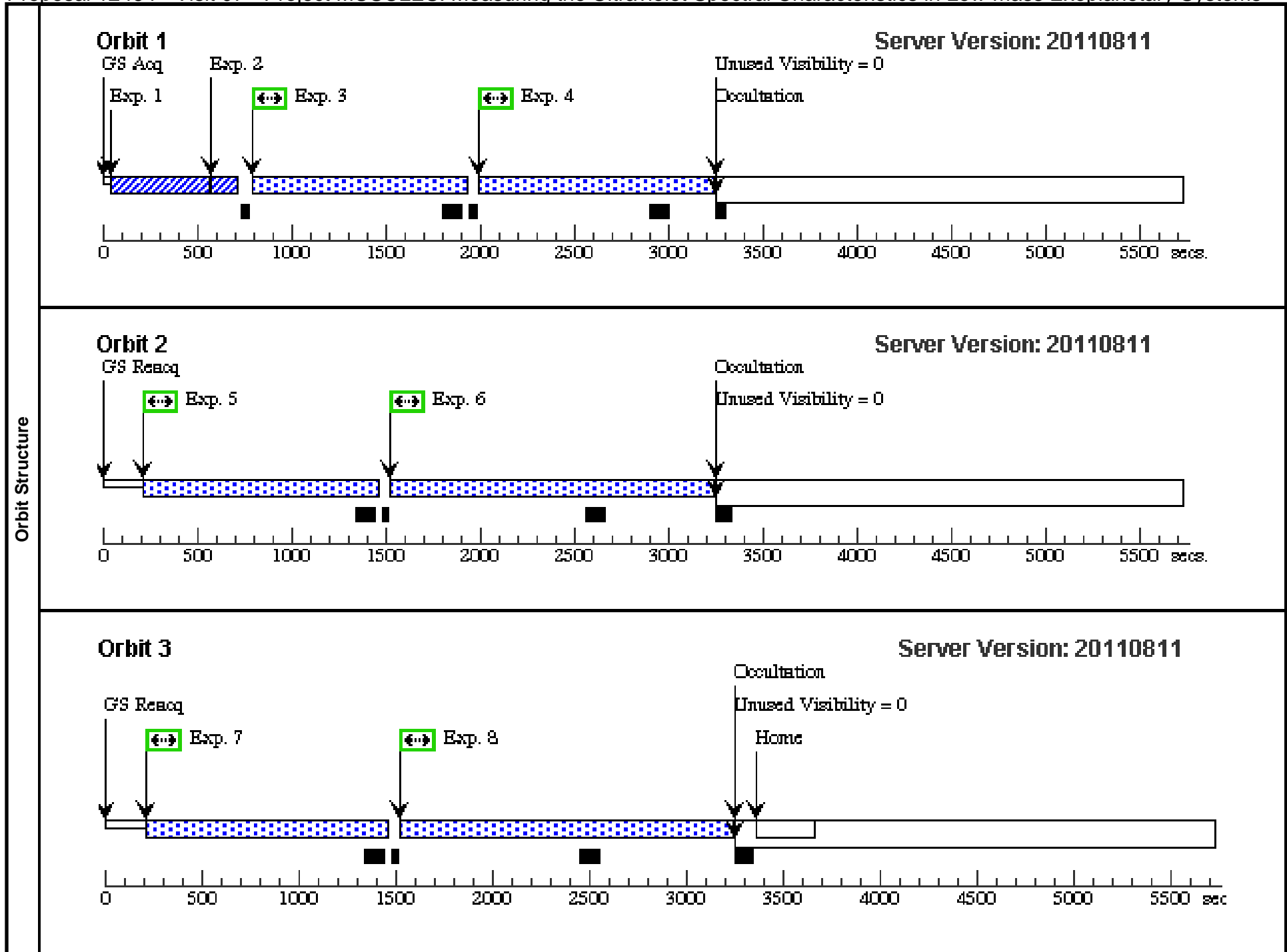
Proposal 12464 - Visit 07 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:10 GMT 2011

<b>Visit</b>	<p><b>Proposal 12464, Visit 07, implementation</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: COS/NUV, COS/FUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: ETC runs for template M-star at 10.3 pc</i></p>												
<b>Diagnostics</b>	<p>(Visit 07) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.</p>												
<b>Fixed Targets</b>	<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>(4)</td> <td>GJ436</td> <td>RA: 11 42 11.0937 (175.5462238d) Dec: +26 42 23.65 (26.70657d) Equinox: J2000</td> <td>Proper Motion RA: 896.07 mas/yr Proper Motion Dec: -813.54 mas/yr Parallax: 0.09861" Epoch of Position: 2000 Radial Velocity: 10 km/sec</td> <td>V=10.68 (GJ436, M3.5, d=10.3pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Updated kf - 06/13/11</i></p> <p><i>Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</i></p>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(4)	GJ436	RA: 11 42 11.0937 (175.5462238d) Dec: +26 42 23.65 (26.70657d) Equinox: J2000	Proper Motion RA: 896.07 mas/yr Proper Motion Dec: -813.54 mas/yr Parallax: 0.09861" Epoch of Position: 2000 Radial Velocity: 10 km/sec	V=10.68 (GJ436, M3.5, d=10.3pc)	Reference Frame: ICRS
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous								
(4)	GJ436	RA: 11 42 11.0937 (175.5462238d) Dec: +26 42 23.65 (26.70657d) Equinox: J2000	Proper Motion RA: 896.07 mas/yr Proper Motion Dec: -813.54 mas/yr Parallax: 0.09861" Epoch of Position: 2000 Radial Velocity: 10 km/sec	V=10.68 (GJ436, M3.5, d=10.3pc)	Reference Frame: ICRS								

Proposal 12464 - Visit 07 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

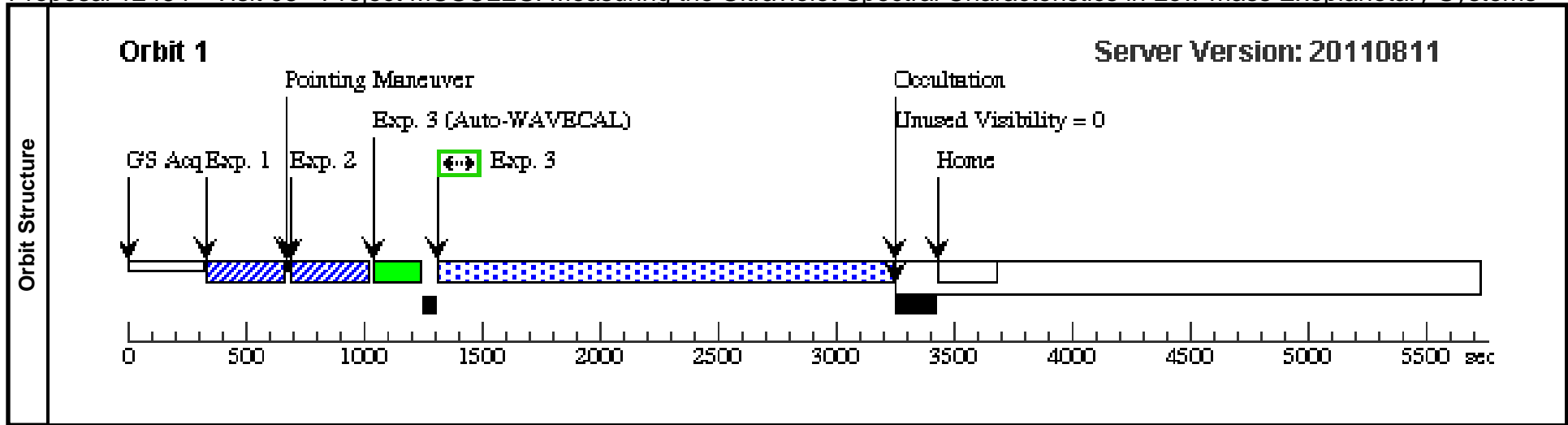
Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	GJ436_AC Q_SRCH (COS.ta.182 869)	(4) GJ436	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2			20 Secs [==>]	[1]
	2	GJ436_AC Q_IMG (COS.ta.182 869)	(4) GJ436	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				20 Secs [==>]	[1]
	3	GJ436_G13 0M_FP2 (COS.sp.182 868)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=87 0; FP-POS=2			980 Secs [==>]	[1]
	4	GJ436_G13 0M_FP3 (COS.sp.182 868)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=87 0; FP-POS=3			1191 Secs [==>]	[1]
	5	GJ436_G13 0M_FP4 (COS.sp.182 868)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=10 90; FP-POS=4			1200 Secs [==>]	[2]
	6	GJ436_G16 0M_FP2 (COS.sp.182 870)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=89 0; FP-POS=2			1551 Secs [==>]	[2]
	7	GJ436_G16 0M_FP3 (COS.sp.182 870)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=10 90; FP-POS=3			1200 Secs [==>]	[3]
	8	GJ436_G16 0M_FP4 (COS.sp.182 870)	(4) GJ436	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=89 0; FP-POS=4			1662 Secs [==>]	[3]



Proposal 12464 - Visit 08 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:11 GMT 2011

<b>Visit</b>	<p><b>Proposal 12464, Visit 08, implementation</b></p> <p><b>Diagnostic Status: No Diagnostics</b></p> <p>Scientific Instruments: STIS/CCD, STIS/NUV-MAMA</p> <p>Special Requirements: (none)</p> <p><i>Comments: ETC runs for template M-star at 10.3 pc</i></p> <p><i>TA ETC for a Kurucz &amp; Castelli M2 star.</i></p>									
	<b>Fixed Targets</b>	<b>#</b>	<b>Name</b>	<b>Target Coordinates</b>	<b>Targ. Coord. Corrections</b>	<b>Fluxes</b>	<b>Miscellaneous</b>			
(4)		GJ436	RA: 11 42 11.0937 (175.5462238d) Dec: +26 42 23.65 (26.70657d) Equinox: J2000	Proper Motion RA: 896.07 mas/yr Proper Motion Dec: -813.54 mas/yr Parallax: 0.09861" Epoch of Position: 2000 Radial Velocity: 10 km/sec	V=10.68 (GJ436, M3.5, d=10.3pc)	Reference Frame: ICRS				
<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>Updated kf - 06/13/11</i></p> <p><i>Found that there was an ERROR in the Simbad reporting of the new Hipparchos coordinates (2007A&amp;A...474..653V). Corrected following discussion with Karla Peterson, kf - 07/25/11.</i></p>										
<b>Exposures</b>	<b>#</b>	<b>Label (ETC Run)</b>	<b>Target</b>	<b>Config,Mode,Aperture</b>	<b>Spectral Els.</b>	<b>Opt. Params.</b>	<b>Special Reqs.</b>	<b>Groups</b>	<b>Exp. Time/[Actual Dur.]</b>	<b>Orbit</b>
	1	GJ436_STIS _ACQ (STIS.ta.233 010)	(4) GJ436	STIS/CCD, ACQ, F28X500II	MIRROR				18.0 Secs [==>]	[1]
	<p><i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i></p>									
	2	GJ436_STIS _ACQ/PEA K (STIS.sp.23 7456)	(4) GJ436	STIS/CCD, ACQ/PEAK, 52X0.1	G430L 4300 A				4.7 Secs [==>]	[1]
<p><i>Comments: Target Acq changed to OII filter after concerns of saturation with GTO targets. kf - 08/18/11</i></p> <p><i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i></p>										
3	GJ436_G23 0L (STIS.sp.18 2874)	(4) GJ436	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A		BUFFER-TIME=10 00			1916 Secs [==>]	[1]



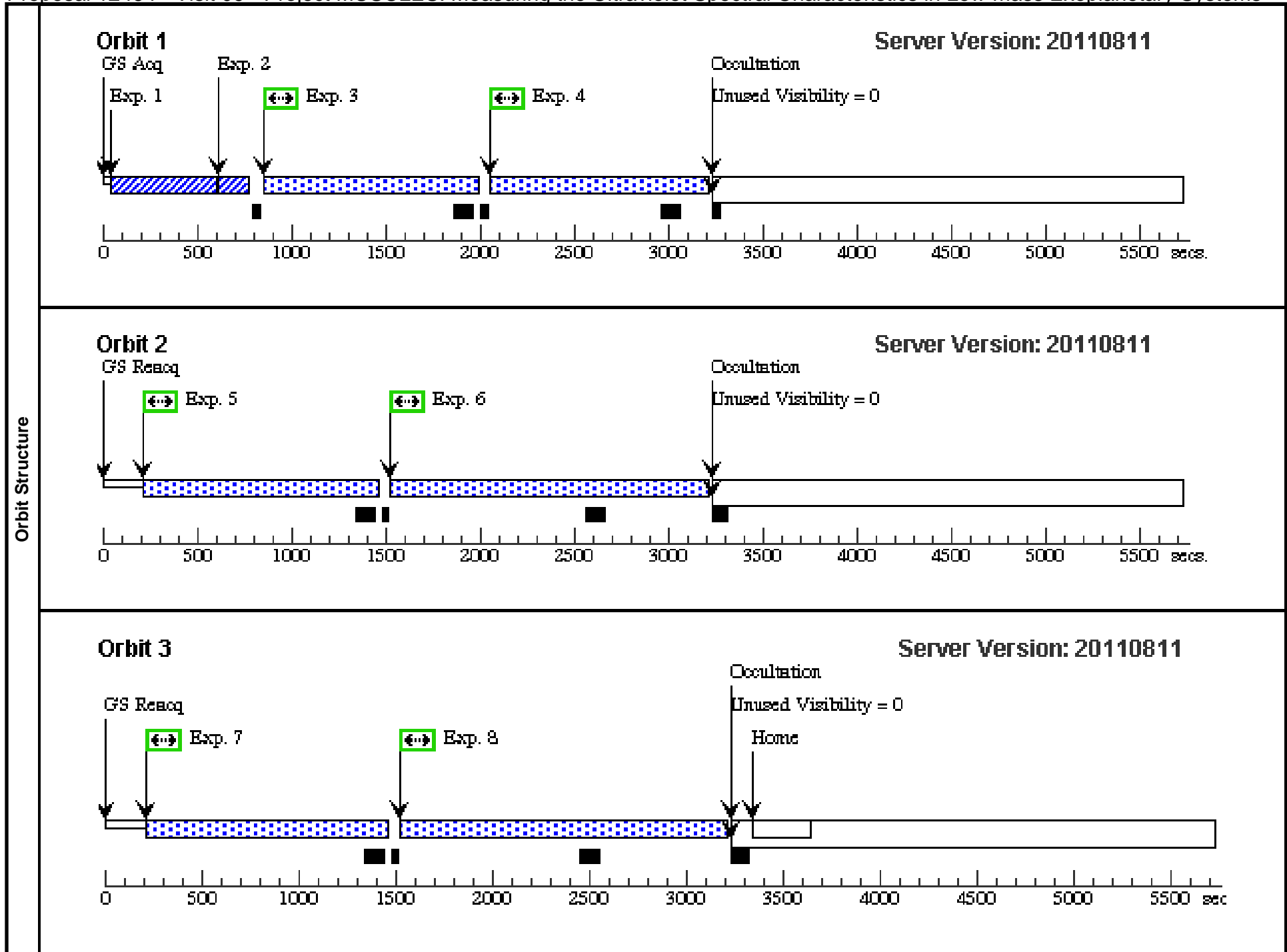
Proposal 12464 - Visit 09 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:12 GMT 2011

<b>Visit</b>	<p><b>Proposal 12464, Visit 09, implementation</b></p> <p><b>Diagnostic Status: Warning</b></p> <p>Scientific Instruments: COS/NUV, COS/FUV</p> <p>Special Requirements: (none)</p> <p><i>Comments: ETC runs for template M-star at 13.0 pc</i></p>																	
<b>Diagnostics</b>	<p>(Visit 09) Warning (Form): For the best data quality, it is strongly recommended that all four FP-POS positions be used when observing at a given COS CENWAVE setting.</p>																	
<b>Fixed Targets</b>	<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>(5)</td> <td>GJ1214</td> <td>RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000</td> <td>Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000</td> <td>V=14.67 (GJ1214, M6, d=13.0pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table>	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(5)	GJ1214	RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000	Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000	V=14.67 (GJ1214, M6, d=13.0pc)	Reference Frame: ICRS	<p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>CHECK proper motion epoch from : 2005AJ....129.1483L, Lepine &amp; Share, AJ, 2005</i></p> <p><i>\S6.3 Positions and Proper Motions</i> <i>"Positions are given in 2000.0 epoch in the ICRS system"</i></p>				
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous													
(5)	GJ1214	RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000	Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000	V=14.67 (GJ1214, M6, d=13.0pc)	Reference Frame: ICRS													

Proposal 12464 - Visit 09 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Exposures	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	GJ1214_AC Q_SRCH (COS.ta.182 877)	(5) GJ1214	COS/NUV, ACQ/SEARCH, PSA	MIRRORA	SCAN-SIZE=2			30 Secs [==>]	[1]
	2	GJ1214_AC Q_IMG (COS.ta.182 877)	(5) GJ1214	COS/NUV, ACQ/IMAGE, PSA	MIRRORA				30 Secs [==>]	[1]
	3	GJ1214_G1 30M_FP2 (COS.sp.182 875)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=87 0; FP-POS=2			980 Secs [==>]	[1]
	4	GJ1214_G1 30M_FP3 (COS.sp.182 875)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=87 0; FP-POS=3			1108 Secs [==>]	[1]
	5	GJ1214_G1 30M_FP4 (COS.sp.182 875)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G130M 1300 A	BUFFER-TIME=10 90; FP-POS=4			1200 Secs [==>]	[2]
	6	GJ1214_G1 60M_FP2 (COS.sp.182 878)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=89 0; FP-POS=2			1528 Secs [==>]	[2]
	7	GJ1214_G1 60M_FP3 (COS.sp.182 878)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=10 90; FP-POS=3			1200 Secs [==>]	[3]
	8	GJ1214_G1 60M_FP4 (COS.sp.182 878)	(5) GJ1214	COS/FUV, TIME-TAG, PSA	G160M 1589 A	BUFFER-TIME=89 0; FP-POS=4			1639 Secs [==>]	[3]



Proposal 12464 - Visit 10 - Project MUSCLES: Measuring the Ultraviolet Spectral Characteristics in Low-mass Exoplanetary Systems

Wed Oct 19 01:03:13 GMT 2011

<b>Visit</b>	<b>Proposal 12464, Visit 10, implementation</b> <b>Diagnostic Status: No Diagnostics</b> Scientific Instruments: STIS/CCD, STIS/NUV-MAMA Special Requirements: (none) <i>Comments: ETC runs for template M-star at 13.0 pc</i> <i>TA ETC for a Kurucz &amp; Castelli M5 star.</i>																																																																					
	<b>Fixed Targets</b>	<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>(5)</td> <td>GJ1214</td> <td>RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000</td> <td>Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000</td> <td>V=14.67 (GJ1214, M6, d=13.0pc)</td> <td>Reference Frame: ICRS</td> </tr> </tbody> </table> <p><i>Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.</i></p> <p><i>CHECK proper motion epoch from : 2005AJ....129.1483L, Lepine &amp; Share, AJ, 2005</i></p> <p><i>\S6.3 Positions and Proper Motions</i>  <i>"Positions are given in 2000.0 epoch in the ICRS system"</i></p>										#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous	(5)	GJ1214	RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000	Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000	V=14.67 (GJ1214, M6, d=13.0pc)	Reference Frame: ICRS																																															
#		Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous																																																																
(5)	GJ1214	RA: 17 15 18.9400 (258.8289167d) Dec: +04 57 49.70 (4.96381d) Equinox: J2000	Proper Motion RA: 585 mas/yr Proper Motion Dec: -752 mas/yr Parallax: 0.0772" Epoch of Position: 2000	V=14.67 (GJ1214, M6, d=13.0pc)	Reference Frame: ICRS																																																																	
<b>Exposures</b>	<table border="1"> <thead> <tr> <th>#</th> <th>Label (ETC Run)</th> <th>Target</th> <th>Config,Mode,Aperture</th> <th>Spectral Els.</th> <th>Opt. Params.</th> <th>Special Reqs.</th> <th>Groups</th> <th>Exp. Time/[Actual Dur.]</th> <th>Orbit</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>GJ1214_STI (5) GJ1214 S_ACQ (STIS.ta.182 879)</td> <td>(5) GJ1214</td> <td>STIS/CCD, ACQ, F28X50OIII</td> <td>MIRROR</td> <td></td> <td></td> <td></td> <td>7.5 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> <i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i>  <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i> </td> </tr> <tr> <td>2</td> <td>GJ1214_STI (5) GJ1214 S_ACQ/PE AK (STIS.ta.237 457)</td> <td>(5) GJ1214</td> <td>STIS/CCD, ACQ/PEAK, 52X0.1</td> <td>MIRROR</td> <td></td> <td></td> <td></td> <td>0.3 Secs [==&gt;]</td> <td>[1]</td> </tr> <tr> <td colspan="10"> <i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i>  <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i>  <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i>  <i>This is the only target faint enough to do the ACQ/PEAK in "MIRROR" mode (the rest needed to be done spectroscopically).</i> </td> </tr> <tr> <td>3</td> <td>GJ1214_G2 (5) GJ1214 30L (STIS.sp.18 2880)</td> <td>(5) GJ1214</td> <td>STIS/NUV-MAMA, TIME-TAG, 52X0.1</td> <td>G230L 2376 A</td> <td>BUFFER-TIME=12 00</td> <td></td> <td></td> <td>2063 Secs [==&gt;]</td> <td>[1]</td> </tr> </tbody> </table>										#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	1	GJ1214_STI (5) GJ1214 S_ACQ (STIS.ta.182 879)	(5) GJ1214	STIS/CCD, ACQ, F28X50OIII	MIRROR				7.5 Secs [==>]	[1]	<i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i>										2	GJ1214_STI (5) GJ1214 S_ACQ/PE AK (STIS.ta.237 457)	(5) GJ1214	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.3 Secs [==>]	[1]	<i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i> <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i> <i>This is the only target faint enough to do the ACQ/PEAK in "MIRROR" mode (the rest needed to be done spectroscopically).</i>										3	GJ1214_G2 (5) GJ1214 30L (STIS.sp.18 2880)	(5) GJ1214	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A	BUFFER-TIME=12 00			2063 Secs [==>]	[1]
	#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit																																																												
	1	GJ1214_STI (5) GJ1214 S_ACQ (STIS.ta.182 879)	(5) GJ1214	STIS/CCD, ACQ, F28X50OIII	MIRROR				7.5 Secs [==>]	[1]																																																												
	<i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i>																																																																					
2	GJ1214_STI (5) GJ1214 S_ACQ/PE AK (STIS.ta.237 457)	(5) GJ1214	STIS/CCD, ACQ/PEAK, 52X0.1	MIRROR				0.3 Secs [==>]	[1]																																																													
<i>Comments: Target Acq changed to OIII filter after concerns of saturation with GTO targets. kf - 08/18/11</i> <i>NOTE: this target is redder and more distant than other MUSCLES targets, so we were forced to go to the OIII filter.</i> <i>Added ACQ/PEAK following discussions with CS Rachel Osten - kf - 09/08/11</i> <i>This is the only target faint enough to do the ACQ/PEAK in "MIRROR" mode (the rest needed to be done spectroscopically).</i>																																																																						
3	GJ1214_G2 (5) GJ1214 30L (STIS.sp.18 2880)	(5) GJ1214	STIS/NUV-MAMA, TIME-TAG, 52X0.1	G230L 2376 A	BUFFER-TIME=12 00			2063 Secs [==>]	[1]																																																													

