



12287 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved Measurements of D/H

Cycle: 18, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

<i>Visit</i>	<i>Targets used in Visit</i>	<i>Configurations used in Visit</i>	<i>Orbits Used</i>	<i>Last Orbit Planner Run</i>	<i>OP Current with Visit?</i>
01	(1) FEIGE110	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:36.0	yes
02	(2) LSS1274	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:37.0	yes
03	(3) LSE263	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:39.0	yes
04	(4) LSE44	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:41.0	yes

Visit	Targets used in Visit	Configurations used in Visit	Orbits Used	Last Orbit Planner Run	OP Current with Visit?
05	(5) CPD-71D172	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:42.0	yes
06	(6) LB1566	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:43.0	yes
07	(7) LB3241	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:44.0	yes
08	(8) HD191877	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:45.0	yes
09	(9) BD+39D3226	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:45.0	yes
10	(10) PG0038+199	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:46.0	yes
11	(11) HD41161	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:47.0	yes
12	(12) HD53975	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:48.0	yes
13	(13) TD1.32709	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:49.0	yes
14	(14) WD1034+001	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:50.0	yes
15	(15) HD90087	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:51.0	yes
16	(16) JL9	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:52.0	yes
17	(17) LSE234	STIS/CCD STIS/FUV-MAMA	1	18-Aug-2010 15:43:53.0	yes

17 Total Orbits Used

ABSTRACT

Measuring the abundance of deuterium relative to hydrogen in the interstellar medium provides a method to assess the effects of astration and subsequent chemical enrichment of the ISM by supernovae, massive star winds, infalling gas, and mixing. It is now well established that the gas phase of D/H is approximately constant within the Local Bubble, where $\log(N(\text{HI})) < 19.2$. At higher column densities D/H is highly variable, which has been attributed to varying levels of depletion of deuterium onto dust grains and enhancement due to the infall of low-metallicity, deuterium-rich material onto the Galaxy. We request observations of the Lyman-alpha profiles of 17 targets with the focused goal of reducing the greatest contribution to the error in Galactic D/H measurements: the poor determination of $N(\text{HI})$. We will reduce the error on $\log N(\text{HI})$ by an average of nearly a factor of 4. For all targets excellent measurements of $N(\text{DI})$ have already been made from FUSE observations. These new data will leverage off the more than 3 million seconds FUSE devoted to its deuterium program and give far more secure estimates of the level of spatial variability of gas-phase D/H. For 5 targets we will also observe metal lines of O I, Mn II, Mg II, Ni II, and possibly P II. Utilizing a new depletion unification method we will extend previous studies of the expected correlation between observed D/H and levels of depletion of many refractory elements, and this analysis can be applied to the remaining targets if at least one metal column density is known. These results will permit us to substantially improve constraints on models of galactic chemical evolution, including the degree of astration of gas in the Milky Way, relative to primordial estimates of D/H.

OBSERVING DESCRIPTION

These observations are straightforward. I have one target per orbit and all the targets are point sources. The FUV fluxes are generally well-known from previous IUE or FUSE observations. In 4 cases I have specified orient restrictions in order to avoid an anonymous but potentially bright target in the field.

Proposal 12287 - Visit 01 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 01, implementation								Wed Aug 18 19:43:54 GMT 2010	
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(1)	FEIGE110	RA: 23 19 58.4000 (349.9933333d) Dec: -05 09 56.16 (-5.16560d) Equinox: J2000	Proper Motion RA: -7.664461514367915E-4s/yr Proper Motion Dec: -0.004929999999999995"/yr Parallax: 0.00559" Epoch of Position: 2000		V=11.49	Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(1) FEIGE110	STIS/CCD, ACQ, F25ND3	MIRROR				32 Secs	
									[==>]	[1]
	2	acq/peak	(1) FEIGE110	STIS/CCD, ACQ/PEAK, 52X0.05	MIRROR				0.2 Secs	
									[==>]	[1]
	3	G140M	(1) FEIGE110	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=10 0			1734 Secs	
								[==>]	[1]	
Comments: Expected science count rate = 12,013 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505 05001000150020002500300035004000450050005500 sec									

Proposal 12287 - Visit 02 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 02, implementation								Wed Aug 18 19:43:54 GMT 2010	
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: ORIENT 77D TO 184 D; ORIENT 257D TO 5 D									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	LSS1274	RA: 09 18 56.1000 (139.7337500d) Dec: -57 04 37.78 (-57.07716d) Equinox: J2000			V=12.9		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(2) LSS1274	STIS/CCD, ACQ, F28X50LP	MIRROR				0.4 Secs	
									[==>]	[1]
	2	acq/peak	(2) LSS1274	STIS/CCD, ACQ/PEAK, 52X0.05	MIRROR				0.7 Secs	
									[==>]	[1]
	3	G140M	(2) LSS1274	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=70 0			2189 Secs	
									[==>]	[1]
Comments: Expected science count rate = 1,471 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Home Unused Visibility = 0									
	0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec									

Proposal 12287 - Visit 03 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 03, implementation								Wed Aug 18 19:43:54 GMT 2010		
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: ORIENT 287D TO 215 D										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous				
	(3)	LSE263	RA: 19 02 11.7500 (285.5489583d) Dec: -51 30 9.48 (-51.50263d) Equinox: J2000	Proper Motion RA: -1.8206781908084468E-4s/yr Proper Motion Dec: -0.0043"/yr Epoch of Position: 2000		V=11.3	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	acq	(3) LSE263	STIS/CCD, ACQ, F25ND3	MIRROR				15 Secs		
									[==>]	[1]	
	2	acq/peak	(3) LSE263	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				14 Secs		
									[==>]	[1]	
	3	G140M	(3) LSE263	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=14 0			1479 Secs		
									[==>]	[1]	
Comments: The field has been observed with GALEX since it shows that the science target is safe. Therefore, the object labeled unkown in the GSC2 BOT check must be safe for the FUV exposure. Expected science count rate = 7,028 counts/sec.											
Orbit Structure	Orbit 1 GS AcqExp. 1Exp. 2Exp. 2Exp. 3 (Auto-WAVECAL)Exp. 3OccultationUnused Visibility = 0Home								Server Version: 20100505		

Proposal 12287 - Visit 04 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 04, implementation										Wed Aug 18 19:43:54 GMT 2010
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: ORIENT 85D TO 13 D										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(4)	LSE44	RA: 13 52 40.7800 (208.1699167d) Dec: -48 08 22.69 (-48.13964d) Equinox: J2000				V=12.46		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(4) LSE44	STIS/CCD, ACQ, F28X50LP		MIRROR				0.5 Secs	
										[==>]	[1]
	2	acq/peak	(4) LSE44	STIS/CCD, ACQ/PEAK, 52X0.05		MIRROR				0.4 Secs	
										[==>]	[1]
	3	G140M	(4) LSE44	STIS/FUV-MAMA, TIME-TAG, 52X0.05		G140M 1218 A	BUFFER-TIME=30 0			2071 Secs	
									[==>]	[1]	
Comments: Expected science count rate = 3,222 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505										

Proposal 12287 - Visit 05 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Wed Aug 18 19:43:54 GMT 2010

Visit

Proposal 12287, Visit 05, implementation

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/FUV-MAMA, STIS/CCD

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	CPD-71D172	RA: 02 53 30.6900 (43.3778750d) Dec: -71 22 31.76 (-71.37549d) Equinox: J2000	Proper Motion RA: 0.0037157097715392728s/yr Proper Motion Dec: -0.0193"/yr Epoch of Position: 2000	V=10.68	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acq	(5) CPD-71D172	STIS/CCD, ACQ, F25ND3	MIRROR				9 Secs [=>]	[1]
2	acq/peak	(5) CPD-71D172	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR				8 Secs [=>]	[1]
3	G140M	(5) CPD-71D172	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=18 0			1847 Secs [=>]	[1]

Comments: Expected science count rate = 5,506 counts/sec.

Orbit Structure

Orbit 1

Server Version: 20100505

Proposal 12287 - Visit 06 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 06, implementation										Wed Aug 18 19:43:55 GMT 2010
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: (none)										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(6)	LB1566	RA: 00 40 13.3000 (10.0554167d) Dec: -55 01 52.06 (-55.03113d) Equinox: J2000				V=13.1		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(6) LB1566	STIS/CCD, ACQ, F28X50LP		MIRROR				0.9 Secs	
										[==>]	[1]
	2	acq/peak	(6) LB1566	STIS/CCD, ACQ/PEAK, 52X0.05		MIRROR				0.8 Secs	
										[==>]	[1]
	3	G140M	(6) LB1566	STIS/FUV-MAMA, TIME-TAG, 52X0.05		G140M 1218 A	BUFFER-TIME=45 0			2185 Secs	
										[==>]	[1]
Comments: Expected science count rate = 2,156 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Unused Visibility = 0 Home										
	0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec										

Proposal 12287 - Visit 07 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 07, implementation										Wed Aug 18 19:43:55 GMT 2010
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: (none)										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(7)	LB3241	RA: 02 13 11.9300 (33.2997083d) Dec: -49 44 53.75 (-49.74826d) Equinox: J2000		Parallax: 4.5E-4" Epoch of Position: 2000 Radial Velocity: -0.0073 km/sec		V=12.7		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(7) LB3241	STIS/CCD, ACQ, F28X50LP		MIRROR				0.5 Secs	
										[==>]	[1]
	2	acq/peak	(7) LB3241	STIS/CCD, ACQ/PEAK, 52X0.05		MIRROR				0.5 Secs	
										[==>]	[1]
	3	G140M	(7) LB3241	STIS/FUV-MAMA, TIME-TAG, 52X0.05		G140M 1218 A	BUFFER-TIME=30 0			2070 Secs	
										[==>]	[1]
Comments: Expected science count rate = 3,907 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Unused Visibility = 0 Home										
	0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec										

Proposal 12287 - Visit 08 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Wed Aug 18 19:43:55 GMT 2010

Visit	Proposal 12287, Visit 08, implementation Diagnostic Status: No Diagnostics Scientific Instruments: STIS/FUV-MAMA, STIS/CCD Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(8)	HD191877	RA: 20 11 21.0200 (302.8375833d) Dec: +21 52 29.88 (21.87497d) Equinox: J2000	Proper Motion RA: -3.383623865623805E-4s/yr Proper Motion Dec: -0.011810000000000001"/yr Parallax: 0.00011" Epoch of Position: 2000	V=6.26	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(8) HD191877	STIS/CCD, ACQ, F25ND5	MIRROR				30 Secs	
									[==>]	[1]
	2	acq/peak	(8) HD191877	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.9 Secs	
									[==>]	[1]
	3	E140H (127 1)	(8) HD191877	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1271 A				1721 Secs	
									[==>]	[1]
Comments: Expected science count rate = 138,953 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505									

Proposal 12287 - Visit 09 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 09, implementation										Wed Aug 18 19:43:55 GMT 2010									
	Diagnostic Status: No Diagnostics																			
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD																			
	Special Requirements: (none)																			
Fixed Targets	#	Name		Target Coordinates				Targ. Coord. Corrections				Fluxes				Miscellaneous				
	(9)	BD+39D3226		RA: 17 46 31.9000 (266.6329167d) Dec: +39 19 9.10 (39.31919d) Equinox: J2000				Proper Motion RA: 0.001929437282170587s/yr Proper Motion Dec: -0.0026"/yr Parallax: 0.00342" Epoch of Position: 2000				V=10.2				Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture				Spectral Els.		Opt. Params.		Special Reqs.		Groups		Exp. Time/[Actual Dur.]		Orbit		
	1	acq	(9) BD+39D3226	STIS/CCD, ACQ, F25ND3				MIRROR								10 Secs				
																[==>]		[1]		
	2	acq/peak	(9) BD+39D3226	STIS/CCD, ACQ/PEAK, 0.2X0.05ND				MIRROR								5 Secs				
																[==>]		[1]		
	3	E140H (127 1)	(9) BD+39D3226	STIS/FUV-MAMA, ACCUM, 0.2X0.09				E140H 1271 A								1757 Secs				
															[==>]		[1]			
Comments: Expected science count rate = 69,555 counts/sec.																				
Orbit Structure	Orbit 1 Server Version: 20100505 05001000150020002500300035004000450050005500sec																			

Proposal 12287 - Visit 10 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 10, implementation									Wed Aug 18 19:43:55 GMT 2010
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(10)	PG0038+199	RA: 00 41 35.2000 (10.3966667d) Dec: +20 09 18.00 (20.15500d) Equinox: J2000			V=14.5		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(10) PG0038+199	STIS/CCD, ACQ, F28X50LP	MIRROR				2.0 Secs	
									[==>]	[1]
	2	acq/peak	(10) PG0038+199	STIS/CCD, ACQ/PEAK, 52X0.05	MIRROR				3 Secs	
									[==>]	[1]
	3	G140M	(10) PG0038+199	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=80 0			1882 Secs	
								[==>]	[1]	
Comments: Expected science count rate = 1,090 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505 Exp. 1 Pointing Maneuver Exp. 3 (Auto-WAVECAL) Exp. 2 Exp. 3 Occultation Unused Visibility = 0 Home GS Acq 05001000150020002500300035004000450050005500sec									

Proposal 12287 - Visit 11 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 11, implementation						Wed Aug 18 19:43:55 GMT 2010			
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(11)	HD41161	RA: 06 05 52.4600 (91.4685833d) Dec: +48 14 57.43 (48.24929d) Equinox: J2000	Proper Motion RA: -1.9222366330177407E-4s/yr Proper Motion Dec: -0.00174"/yr Parallax: 0.00021" Epoch of Position: 2000	V=6.8	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(11) HD41161	STIS/CCD, ACQ, F25ND3	MIRROR				0.2 Secs	
									[==>]	[1]
	2	acq/peak	(11) HD41161	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				1.3 Secs	
									[==>]	[1]
	3	acq/peak	(11) HD41161	STIS/CCD, ACQ/PEAK, 0.1X0.03	G750L				0.5 Secs	
					7751 A			[==>]	[1]	
	4	E140H (127 1)	(11) HD41161	STIS/FUV-MAMA, ACCUM, 0.1X0.03	E140H				1433 Secs	
					1271 A				[==>]	[1]
Comments: Expected science count rate = 113,125 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505 05001000150020002500300035004000450050005500sec									

Proposal 12287 - Visit 12 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 12, implementation							Wed Aug 18 19:43:55 GMT 2010		
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous				
	(12)	HD53975	RA: 07 06 35.9700 (106.6498750d) Dec: -12 23 38.23 (-12.39395d) Equinox: J2000	Proper Motion RA: -2.539175648698571E-4s/yr Proper Motion Dec: 0.00175"/yr Parallax: 0.00066" Epoch of Position: 2000	V=6.5	Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(12) HD53975	STIS/CCD, ACQ, F25ND5	MIRROR				34 Secs	
									[==>]	[1]
	2	acq/peak	(12) HD53975	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				0.9 Secs	
									[==>]	[1]
	3	acq/peak	(12) HD53975	STIS/CCD, ACQ/PEAK, 0.1X0.03	G750L 7751 A				0.5 Secs	
								[==>]	[1]	
4	E140H (123 4)	(12) HD53975	STIS/FUV-MAMA, ACCUM, 0.1X0.03	E140H 1234 A				1161 Secs		
								[==>]	[1]	
Comments: Expected science count rate = 184,014 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505									

Proposal 12287 - Visit 13 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 13, implementation								Wed Aug 18 19:43:55 GMT 2010	
	Diagnostic Status: No Diagnostics									
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD									
	Special Requirements: (none)									
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(13)	TD1.32709	RA: 09 07 8.1200 (136.7838333d) Dec: -03 06 13.94 (-3.10387d) Equinox: J2000			V=12.0		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(13) TD1.32709	STIS/CCD, ACQ, F25ND3	MIRROR				30 Secs	
									[==>]	[1]
	2	acq/peak	(13) TD1.32709	STIS/CCD, ACQ/PEAK, 52X0.05	MIRROR				0.3 Secs	
									[==>]	[1]
	3	G140M	(13) TD1.32709	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=18 0			1732 Secs	
								[==>]	[1]	
Comments: Expected science count rate = 6,267 counts/sec.										
Orbit Structure	Orbit 1 Server Version: 20100505 05001000150020002500300035004000450050005500sec									

Proposal 12287 - Visit 14 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 14, implementation										Wed Aug 18 19:43:55 GMT 2010
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: (none)										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(14)	WD1034+001	RA: 10 37 3.8100 (159.2658750d) Dec: -00 08 19.31 (-.13870d) Equinox: J2000		Proper Motion RA: -0.0054000158217707055s/yr Proper Motion Dec: 0.032"/yr Epoch of Position: 2000		V=13.2		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	acq	(14) WD1034+001	STIS/CCD, ACQ, F28X50LP		MIRROR				1.0 Secs	
										[==>]	[1]
	2	acq/peak	(14) WD1034+001	STIS/CCD, ACQ/PEAK, 52X0.05		MIRROR				0.9 Secs	
										[==>]	[1]
	3	G140M	(14) WD1034+001	STIS/FUV-MAMA, TIME-TAG, 52X0.05		G140M 1218 A	BUFFER-TIME=30 0			1904 Secs	
									[==>]	[1]	
Comments: Expected science count rate = 3,602 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Home Unused Visibility = 0										
	0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec										

Proposal 12287 - Visit 15 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 15, implementation										Wed Aug 18 19:43:55 GMT 2010
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: (none)										
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(15)	HD90087	RA: 10 22 20.8800 (155.5870000d) Dec: -59 45 19.74 (-59.75548d) Equinox: J2000		Proper Motion RA: -9.397290161604705E-4s/yr Proper Motion Dec: 0.0068"/yr Epoch of Position: 2000		V=7.8		Reference Frame: ICRS		
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	acq	(15) HD90087	STIS/CCD, ACQ, F25ND3	MIRROR				0.5 Secs		
									[==>]		[1]
	2	acq/peak	(15) HD90087	STIS/CCD, ACQ/PEAK, 0.3X0.05ND	MIRROR				3.5 Secs		
									[==>]		[1]
	3	E140H (127 1)	(15) HD90087	STIS/FUV-MAMA, ACCUM, 0.2X0.09	E140H 1271 A				2038 Secs		
								[==>]		[1]	
Comments: Expected science count rate = 61,844 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505										

Proposal 12287 - Visit 16 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 16, implementation									Wed Aug 18 19:43:55 GMT 2010		
	Diagnostic Status: No Diagnostics											
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD											
	Special Requirements: (none)											
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(16)	JL9	RA: 19 08 20.7700 (287.0865417d) Dec: -72 30 34.33 (-72.50954d) Equinox: J2000				V=13.2		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	acq	(16) JL9	STIS/CCD, ACQ, F28X50LP		MIRROR				1.0 Secs		
										[==>]		[1]
	2	acq/peak	(16) JL9	STIS/CCD, ACQ/PEAK, 52X0.05		MIRROR				0.9 Secs		
										[==>]		[1]
	3	G140M	(16) JL9	STIS/FUV-MAMA, TIME-TAG, 52X0.05		G140M 1218 A	BUFFER-TIME=70 0			2315 Secs		
									[==>]		[1]	
Comments: Expected science count rate = 1,699 counts/sec.												
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Unused Visibility = 0 Home 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec											

Proposal 12287 - Visit 17 - Constraining Models of Deuterium Depletion and Galactic Chemical Evolution with Improved ...

Visit	Proposal 12287, Visit 17, implementation								Wed Aug 18 19:43:55 GMT 2010		
	Diagnostic Status: No Diagnostics										
	Scientific Instruments: STIS/FUV-MAMA, STIS/CCD										
	Special Requirements: ORIENT 0.0D TO 108 D; ORIENT 180D TO 288 D										
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes		Miscellaneous			
	(17)	LSE234	RA: 18 13 15.8300 (273.3159583d) Dec: -64 55 16.86 (-64.92135d) Equinox: J2000			V=12.6		Reference Frame: ICRS			
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit	
	1	acq	(17) LSE234	STIS/CCD, ACQ, F28X50LP	MIRROR				0.3 Secs		
									[==>]	[1]	
	2	acq/peak	(17) LSE234	STIS/CCD, ACQ/PEAK, 52X0.05	MIRROR				0.5 Secs		
									[==>]	[1]	
	3	G140M	(17) LSE234	STIS/FUV-MAMA, TIME-TAG, 52X0.05	G140M 1218 A	BUFFER-TIME=23 0				2197 Secs	
										[==>]	[1]
Comments: Even though the GSCS2 BOT check has an unknown object, GALEX indicates the field is safe. Expected science count rate = 5,125 counts/sec.											
Orbit Structure	Orbit 1 Server Version: 20100505 GS Acq Exp. 1 Pointing Maneuver Exp. 2 Exp. 3 (Auto-WAVECAL) Exp. 3 Occultation Unused Visibility = 0 Home 0 500 1000 1500 2000 2500 3000 3500 4000 4500 5000 5500 sec										