



13735 - A New Dwarf Galaxy Associated with an Ultra-Compact High Velocity Cloud

Cycle: 22, Proposal Category: GO

(UV Initiative)

(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) HVC274PT68	ACS/WFC	2	20-Jun-2015 21:00:51.0	yes
02	(1) HVC274PT68	WFC3/UVIS	1	20-Jun-2015 21:00:54.0	yes
52	(1) HVC274PT68	WFC3/UVIS	1	20-Jun-2015 21:00:55.0	yes

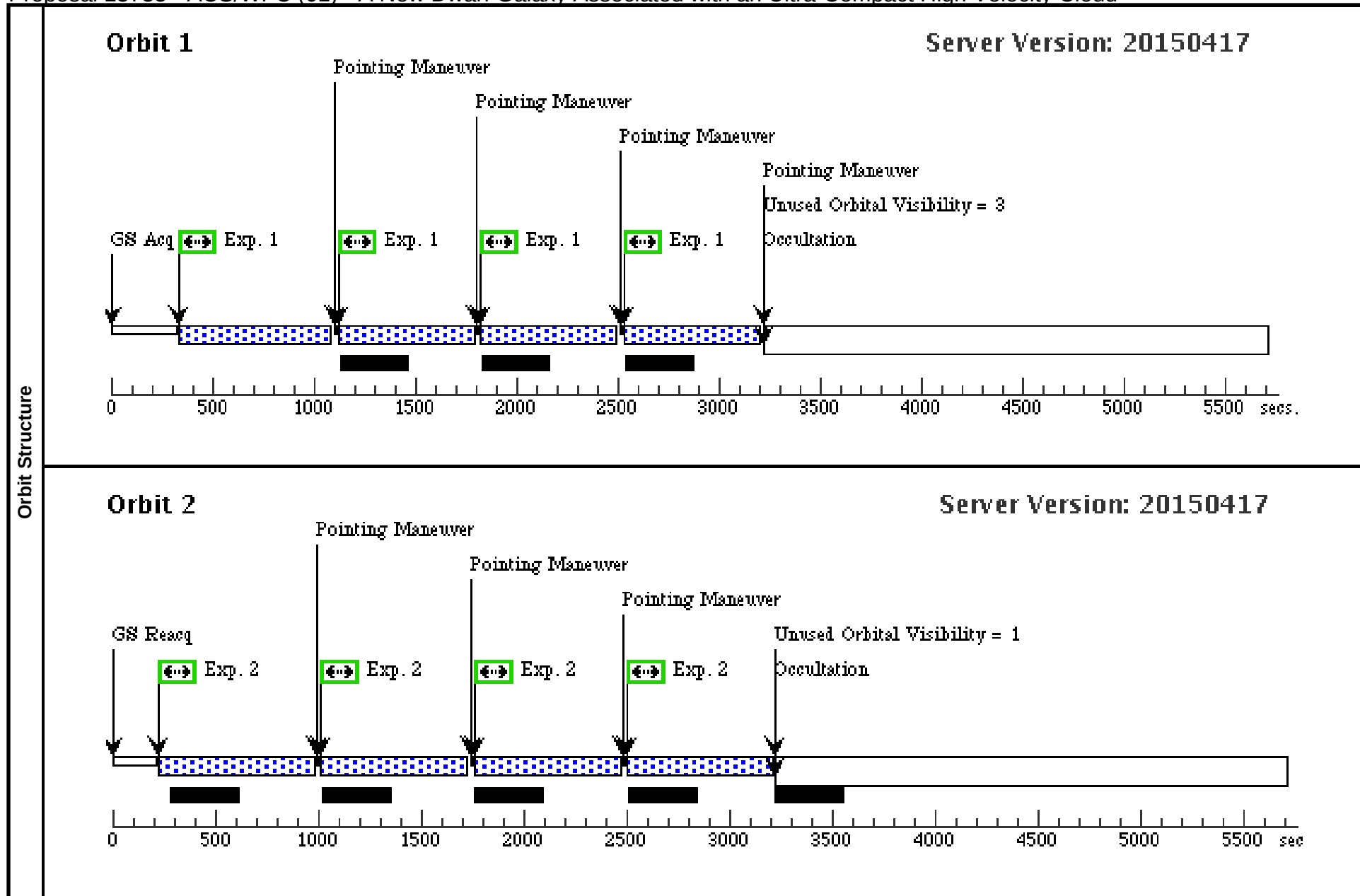
4 Total Orbits Used

ABSTRACT

We request three filter HST imaging to study the properties of what may be the faintest gas-rich dwarf galaxy known ($M_V \sim -5$). This galaxy will provide crucial information on how the very lowest mass galaxies form in isolation, unaffected by local environment. It will provide a useful reference object for interpreting the ultrafaint dwarfs in the Local Group, and help to populate the poorly known luminosity function of faint galaxies in the Local Volume. The galaxy was found through deep ground based imaging of a ultracompact high velocity HI cloud, however with current data we can only constrain that it likely lies within the local volume at a distance of < 4.5 Mpc. We propose to combine optical and UV imaging to determine the galaxy's distance, extent, current metallicity, and star formation history.

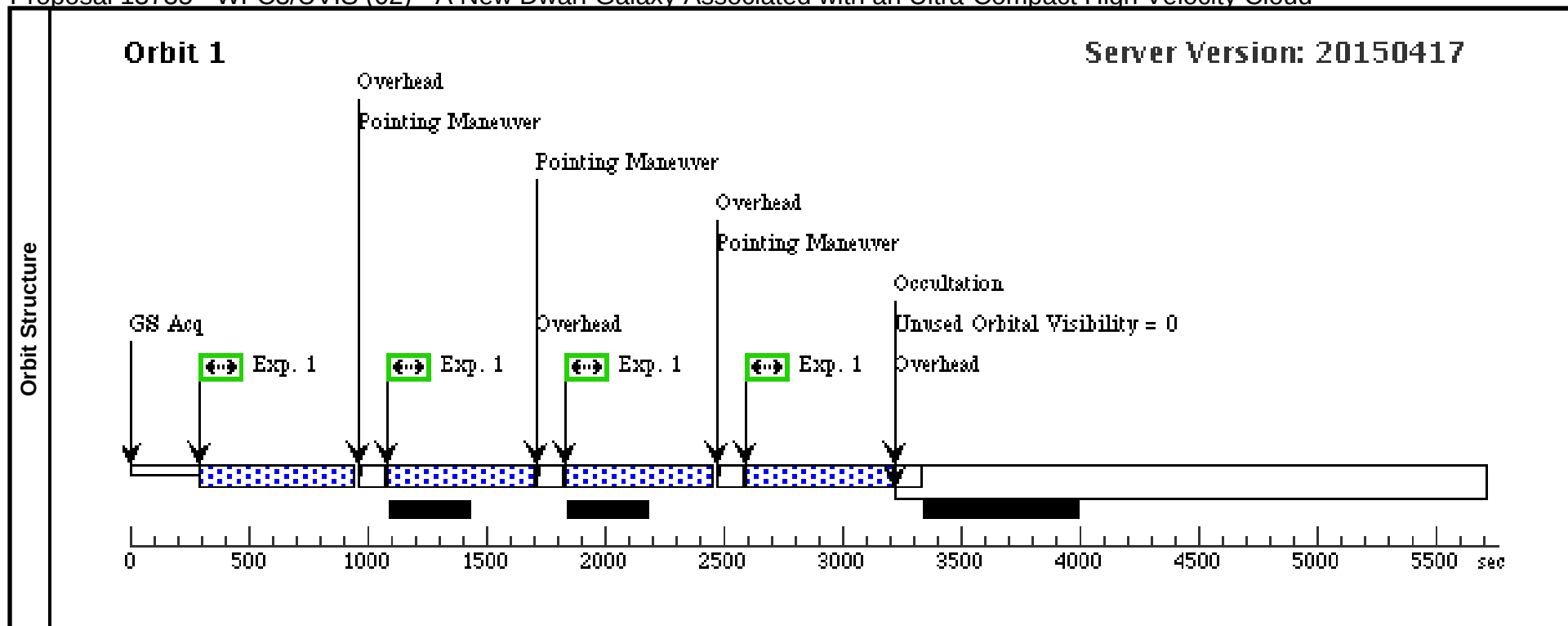
Proposal 13735 - ACS/WFC (01) - A New Dwarf Galaxy Associated with an Ultra-Compact High Velocity Cloud

Visit	Proposal 13735, ACS/WFC (01), completed Sun Jun 21 01:00:57 GMT 2015									
	Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: ORIENT 94.5D TO 270 D									
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(3)	Pattern Type=ACS-WFC-DITHER-BOX Coordinate Frame=POS-TARG Pattern Orientation=20.67 Purpose=DITHER Angle Between Sides=69.05 Number Of Points=4 Center Pattern=false Point Spacing=0.265 Line Spacing=0.187							(1), (2)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(1)	HVC274PT68	RA: 12 21 54.0550 (185.4752292d) Dec: +13 27 40.37 (13.46121d) Equinox: J2000		Radial Velocity: -225 km/sec		V=22.0+/-0.5		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	ACS F606W (1)	HVC274PT68	ACS/WFC, ACCUM, WFC1	F606W			Pattern 3, Exps 1-1 in ACS/WFC (01) (3)	550 Secs (2196 Secs)	
									[==>549.0 Secs (Pattern 1)]	
									[==>549.0 Secs (Pattern 2)]	
									[==>549.0 Secs (Pattern 3)]	
									[==>549.0 Secs (Pattern 4)]	[1]
	2	ACS F814W (1)	HVC274PT68	ACS/WFC, ACCUM, WFC1	F814W			Pattern 3, Exps 2-2 in ACS/WFC (01) (3)	550 Secs (2336 Secs)	
									[==>584.0 Secs (Pattern 1)]	
									[==>584.0 Secs (Pattern 2)]	
									[==>584.0 Secs (Pattern 3)]	
									[==>584.0 Secs (Pattern 4)]	[2]



Proposal 13735 - WFC3/UVIS (02) - A New Dwarf Galaxy Associated with an Ultra-Compact High Velocity Cloud

Visit	Proposal 13735, WFC3/UVIS (02), failed Sun Jun 21 01:00:57 GMT 2015									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(4)	Pattern Type=WFC3-UVIS-DITHER-BOX Coordinate Frame=POS-TARG Pattern Orientation=23.884 Purpose=DITHER Angle Between Sides=81.785 Number Of Points=4 Center Pattern=false Point Spacing=0.173 Line Spacing=0.112							(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(1)	HVC274PT68	RA: 12 21 54.0550 (185.4752292d) Dec: +13 27 40.37 (13.46121d) Equinox: J2000		Radial Velocity: -225 km/sec		V=22.0+/-0.5		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	WFC3 F275 W	(1) HVC274PT68	WFC3/UVIS, ACCUM, UVIS1	F275W	FLASH=12.0		Pattern 4, Exps 1-1 in WFC3/UVIS (02) (4)	550 Secs (2480 Secs) [==>620.0 Secs (Pattern 1)] [==>620.0 Secs (Pattern 2)] [==>620.0 Secs (Pattern 3)] [==>620.0 Secs (Pattern 4)]	[1]



Proposal 13735 - WFC3/UVIS (52) - A New Dwarf Galaxy Associated with an Ultra-Compact High Velocity Cloud

Visit	Proposal 13735, WFC3/UVIS (52) Sun Jun 21 01:00:57 GMT 2015									
	Diagnostic Status: No Diagnostics Scientific Instruments: WFC3/UVIS Special Requirements: (none)									
Patterns	#	Primary Pattern				Secondary Pattern			Exposures	
	(4)	Pattern Type=WFC3-UVIS-DITHER-BOX Coordinate Frame=POS-TARG Pattern Orientation=23.884 Purpose=DITHER Angle Between Sides=81.785 Number Of Points=4 Center Pattern=false Point Spacing=0.173 Line Spacing=0.112							(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(1)	HVC274PT68	RA: 12 21 54.0550 (185.4752292d) Dec: +13 27 40.37 (13.46121d) Equinox: J2000		Radial Velocity: -225 km/sec		V=22.0+/-0.5		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1	WFC3 F275 W	(1) HVC274PT68	WFC3/UVIS, ACCUM, UVIS1	F275W	FLASH=12.0		Pattern 4, Exps 1-1 in WFC3/UVIS (52) (4)	550 Secs (2480 Secs) [==>620.0 Secs (Pattern 1)] [==>620.0 Secs (Pattern 2)] [==>620.0 Secs (Pattern 3)] [==>620.0 Secs (Pattern 4)]	[1]

