



10829 - Secular Evolution at the End of the Hubble Sequence

Cycle: 15, 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) PGC6667	ACS/WFC	1	27-Jun-2007 21:01:05.0	yes
02	(2) NGC6509	WFPC2	1	27-Jun-2007 21:01:08.0	yes
03	(3) NGC4713	ACS/WFC	1	27-Jun-2007 21:01:11.0	yes
04	(4) NGC4519	WFPC2	1	27-Jun-2007 21:01:13.0	yes
05	(5) NGC3906	ACS/WFC	1	27-Jun-2007 21:01:15.0	yes
06	(6) NGC0337	ACS/WFC	1	27-Jun-2007 21:01:17.0	yes
07	(7) IC1291	WFPC2	1	27-Jun-2007 21:01:19.0	yes
08	(8) ESO555-G027	ACS/WFC	1	27-Jun-2007 21:01:21.0	yes
09	(9) PGC3853	ACS/WFC	1	27-Jun-2007 21:01:23.0	yes
10	(10) NGC5964	WFPC2	1	27-Jun-2007 21:01:25.0	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>
11	(11) UGC6930	ACS/WFC	1	27-Jun-2007 21:01:27.0	yes
12	(12) UGC6446	ACS/WFC	1	27-Jun-2007 21:01:29.0	yes
13	(13) NGC4942	WFPC2	1	27-Jun-2007 21:01:30.0	yes
63	(13) NGC4942	WFPC2	1	27-Jun-2007 21:01:32.0	yes
64	(13) NGC4942	WFPC2	1	27-Jun-2007 21:01:34.0	yes
14	(14) NGC4561	ACS/WFC	1	27-Jun-2007 21:01:36.0	yes
15	(15) NGC2805	ACS/WFC	1	27-Jun-2007 21:01:38.0	yes
16	(16) ESO544-G030	ACS/WFC	1	27-Jun-2007 21:01:40.0	yes
17	(17) ESO501-G023	ACS/WFC	1	27-Jun-2007 21:01:42.0	yes
18	(18) UGC1862	ACS/WFC	1	27-Jun-2007 21:01:44.0	yes
19	(19) NGC3794	ACS/WFC	1	27-Jun-2007 21:01:45.0	yes
20	(20) ESO418-G008	ACS/WFC	1	27-Jun-2007 21:01:47.0	yes

22 Total Orbits Used

ABSTRACT

The bulgeless disk galaxies at the end of the Hubble Sequence evolve at a glacial pace relative to their more violent, earlier-type cousins. The causes of their internal, or secular evolution are important because secular evolution represents the future fate of all galaxies in our accelerating Universe and is a key ingredient to understanding galaxy evolution in lower-density environments at present. The rate of secular evolution is largely determined by the stability of the cold ISM against collapse, star formation, and the buildup of a central bulge. Key diagnostics of the ISM's stability are the presence of compact molecular clouds and narrow dust lanes. Surprisingly, edge-on, pure disk galaxies with circular velocities below 120 km/s do not appear to contain such dust lanes. We propose to obtain ACS/WFC F606W images of a well-selected sample of extremely late-type disk galaxies to measure the characteristic scale size of the cold ISM and determine if they possess the unstable, cold ISM necessary to drive secular evolution. Our sample has been carefully constructed to include disk galaxies above and below the critical circular velocity of 120 km/s where the

dust properties of edge-on disks change so remarkably. We will then use surface brightness profiles to search for nuclear star clusters and pseudobulges, which are early indicators that secular evolution is at work, as well as measure the pitch angle of the dust lanes as a function of radius to estimate the central mass concentrations.

OBSERVING DESCRIPTION

Observations of 20 low-surface brightness galaxies, one galaxy per orbit. Each orbit should consist of 3 exposures of approximately equal length through the F606W filter. There is a dither between each exposure to remove the gap between the two chips.

Proposal 10829 - Visit 01 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:49 GMT 2007

Visit	Proposal 10829, Visit 01, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(1)	PGC6667	RA: 01 49 10.3340 (27.2930583d) Dec: -10 03 39.65 (-10.06101d) Equinox: J2000				V=13.8+/-0.3 mean mu_B25 = 24.6 mag/arcsec2		Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(1) PGC6667	(1) PGC6667	ACS/WFC, ACCUM, WFC		F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>748.0 Secs (Pattern 1)] [==>748.0 Secs (Pattern 2)] [==>748.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325										
	<p>The diagram shows the timeline for Orbit 1. Key events include:</p> <ul style="list-style-type: none"> GS Acq at 0 seconds. Exp. 1 starting at approximately 400 seconds. Pointing Maneuver at approximately 1400 seconds. Pointing Maneuver at approximately 2300 seconds. Occultation starting at approximately 3200 seconds, where Unused Visibility = 0. 										

Proposal 10829 - Visit 02 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:50 GMT 2007

Visit	Proposal 10829, Visit 02, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(2)	NGC6509	RA: 17 59 25.2300 (269.8551250d) Dec: +06 17 11.10 (6.28642d) Equinox: J2000				V=13.4+/-0.3 mean mu_B25 = 22.8 mag/arcsec2		Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1		(2) NGC6509	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]		[1]
Orbit Structure	Orbit 1 Server Version: 20070325										
	<p>The diagram illustrates the orbit structure for Orbit 1, showing a timeline from 0 to 5500 seconds. Key events include GS Acq at ~300s, three Exp. 1 exposures at ~400s, ~1300s, and ~2300s, each preceded by a Pointing Maneuver and Overhead. An Unused Visibility = 77 period and an Occultation event occur between 3000s and 3200s.</p>										

Proposal 10829 - Visit 03 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:50 GMT 2007

Visit	Proposal 10829, Visit 03, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(3)	NGC4713	RA: 12 49 57.9800 (192.4915833d) Dec: +05 18 40.69 (5.31130d) Equinox: J2000				V=12.3+/-0.3 mean mu_B25 = 22.8 mag/arcsec2		Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(3) NGC4713		ACS/WFC, ACCUM, WFC		F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>746.0 Secs (Pattern 1)] [==>746.0 Secs (Pattern 2)] [==>746.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325										
	<p>The diagram shows a timeline for Orbit 1 from 0 to 5500 seconds. Key events include: GS Acq at ~200s, Exp. 1 at ~400s, Pointing Maneuver at ~1400s, Exp. 1 at ~1500s, Pointing Maneuver at ~2300s, Exp. 1 at ~2400s, and Unused Visibility = 1 starting at ~3200s. A blue checkered bar highlights the observation period from approximately 400s to 3200s. The x-axis is labeled 'Sec' and has major ticks every 500 units.</p>										

Proposal 10829 - Visit 04 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:51 GMT 2007

Visit	Proposal 10829, Visit 04, scheduling Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false					(1)			
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(4)	NGC4519	RA: 12 33 30.3000 (188.3762500d) Dec: +08 39 17.60 (8.65489d) Equinox: J2000					V=12.5+/-0.3 mean mu_B25 = 23.3 mag/arcsec c2	Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	(4) NGC4519	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]	[1]		
Orbit Structure	Orbit 1 Server Version: 20070325										
	<p>The diagram shows a horizontal timeline for Orbit 1 from 0 to 5500 seconds. A blue checkered bar represents the observation period. Key events are marked with arrows and labels: GS Acq at ~300s, three exposures (Exp. 1) at ~400s, ~1300s, and ~2300s, each preceded by a Pointing Maneuver and followed by Overhead. An Occultation event occurs at ~3100s. The total Unused Visibility is 77 seconds.</p>										

Proposal 10829 - Visit 05 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:51 GMT 2007

Visit	Proposal 10829, Visit 05, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(5)	NGC3906	RA: 11 49 39.8500 (177.4160417d) Dec: +48 25 32.40 (48.42567d) Equinox: J2000				V=13.7+/-0.1 mean mu_B25 = 23.2 mag/arcsec2		Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture		Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(5) NGC3906		ACS/WFC, ACCUM, WFC		F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>763.0 Secs (Pattern 1)] [==>763.0 Secs (Pattern 2)] [==>763.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325										
	<p>The diagram shows a timeline for Orbit 1 from 0 to 5500 seconds. Key events are marked with arrows: GS Acq at ~300s, three 'Exp. 1' exposures at ~400s, ~1400s, and ~2300s, two 'Pointing Maneuvers' at ~1400s and ~2300s, and an 'Occultation' at ~3200s. A blue checkered bar represents the observation period from ~300s to ~3200s. Black bars below the timeline indicate the duration of the pointing maneuvers. The text 'Unused Visibility = 1' is located above the occultation event.</p>										

Proposal 10829 - Visit 06 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:51 GMT 2007

Visit	Proposal 10829, Visit 06, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(6)	NGC0337	RA: 00 59 49.9000 (14.9579167d) Dec: -07 34 43.60 (-7.57878d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=12.1+/-0.3 mean mu_B25 = 22.7 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(6) NGC0337		ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>746.0 Secs (Pattern 1)] [==>746.0 Secs (Pattern 2)] [==>746.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram illustrates the timeline of Orbit 1. Key events include GS Acq at approximately 300 seconds, followed by the first exposure (Exp. 1) at 400 seconds. Two pointing maneuvers occur at approximately 1400 and 2300 seconds. The observation period, indicated by a blue checkered bar, spans from approximately 300 to 3200 seconds. After 3200 seconds, there is a period of unused visibility and occultation.</p>									

Proposal 10829 - Visit 07 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:52 GMT 2007

Visit	Proposal 10829, Visit 07, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(1)	
Fixed Targets	#	Name	Target Coordinates	Targ. Coord. Corrections		Fluxes	Miscellaneous			
	(7)	IC1291	RA: 18 33 52.3400 (278.4680833d) Dec: +49 16 39.90 (49.27775d) Equinox: J2000			V=13.8+/-0.3 mean mu_B25 = 23.5 mag/arcsec2	Reference Frame: ICRS			
<i>Comments: Coordinates measured from GSCII with DS9.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(7) IC1291	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]	[1]	
Orbit Structure	Orbit 1 Server Version: 20070325 Unused Visibility = 128									
	<p>The diagram shows a horizontal timeline from 0 to 5500 seconds. Key events are marked with vertical arrows: GS Acq at ~30s, Exp. 1 at ~40s, Pointing Maneuver at ~110s, Exp. 1 at ~130s, Pointing Maneuver at ~210s, Exp. 1 at ~230s, Pointing Maneuver at ~310s, and Occultation at ~315s. A blue checkered bar spans from approximately 40s to 315s. A green bar is shown at the end of the occultation period. The text 'Unused Visibility = 128' is located in the upper right of the diagram area.</p>									

Proposal 10829 - Visit 08 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:52 GMT 2007

Visit	Proposal 10829, Visit 08, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(8)	ESO555-G027	RA: 06 03 36.6000 (90.9025000d) Dec: -20 39 4.10 (-20.65114d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.6+/-0.3 mean mu_B25 = 23.8 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(8) ESO555-G027		ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>748.0 Secs (Pattern 1)] [==>748.0 Secs (Pattern 2)] [==>748.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p> GS Acq [Exp. 1] Pointing Maneuver [Exp. 1] Pointing Maneuver [Exp. 1] Unused Visibility = 10 Occultation </p> <p>Timeline (seconds): 0, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500</p>									

Proposal 10829 - Visit 09 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:52 GMT 2007

Visit	Proposal 10829, Visit 09, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(9)	PGC3853	RA: 01 05 4.7800 (16.2699167d) Dec: -06 12 44.70 (-6.21242d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=12.6+/-0.3 mean mu_B25 = 24.3 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(9) PGC3853		ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>746.0 Secs (Pattern 1)] [==>746.0 Secs (Pattern 2)] [==>746.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram shows a timeline for Orbit 1 from 0 to 5500 seconds. Key events include:</p> <ul style="list-style-type: none"> GS Acq at approximately 300s. Exp. 1 at approximately 400s. Pointing Maneuver at approximately 1400s. Exp. 1 at approximately 1500s. Pointing Maneuver at approximately 2300s. Exp. 1 at approximately 2400s. Unused Visibility = 1 starting at approximately 3200s. Occultation starting at approximately 3300s. <p>A blue checkered bar highlights the observation period from approximately 400s to 3200s. Black bars below the timeline indicate pointing maneuvers and occultation periods.</p>									

Proposal 10829 - Visit 10 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:52 GMT 2007

Visit	Proposal 10829, Visit 10, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)										
	Patterns	#	Primary Pattern				Secondary Pattern				Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false							(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous		
	(10)	NGC5964	RA: 15 37 36.2000 (234.4008333d) Dec: +05 58 26.60 (5.97406d) Equinox: J2000				V=13.2+/-0.3 mean mu_B25 = 24.8 mag/arcsec c2		Reference Frame: ICRS		
<i>Comments: Coordinates measured from GSCII with DS9.</i>											
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]		Orbit
	1	(10) NGC5964	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]		[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20070325</p> <p>The diagram shows a horizontal timeline from 0 to 5500 seconds. Key events are marked with arrows: GS Acq at ~100s, Exp. 1 at ~400s, Pointing Maneuver at ~1100s, Exp. 1 at ~1300s, Pointing Maneuver at ~2100s, Exp. 1 at ~2300s, Pointing Maneuver at ~2900s, and Occultation at ~3100s. A blue checkered bar spans from approximately 400s to 3100s. A green bar at the end of the timeline is labeled 'Unused Visibility = 77'. The x-axis is labeled 'sec'.</p>										

Proposal 10829 - Visit 11 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:52 GMT 2007

Visit	Proposal 10829, Visit 11, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false						(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(11)	UGC6930	RA: 11 57 17.3800 (179.3224167d) Dec: +49 16 58.00 (49.28278d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=12.9+/-0.3 mean mu_B25 = 24.1 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(11) UGC6930	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO			Pattern 1-1 (1)	700.0 Secs [==>763.0 Secs (Pattern 1)] [==>763.0 Secs (Pattern 2)] [==>763.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									

Proposal 10829 - Visit 12 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:53 GMT 2007

Visit	Proposal 10829, Visit 12, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false						(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(12)	UGC6446	RA: 11 26 40.4400 (171.6685000d) Dec: +53 44 47.50 (53.74653d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.8+/-0.3 mean mu_B25 = 24.5 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(12) UGC6446	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO			Pattern 1-1 (1)	700.0 Secs [==>769.0 Secs (Pattern 1)] [==>769.0 Secs (Pattern 2)] [==>769.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram illustrates the timeline of Orbit 1. The x-axis represents time in seconds, ranging from 0 to 5500. Key events are marked: GS Acq at approximately 300 seconds, followed by three Pointing Manuevers at approximately 1400, 2300, and 3200 seconds. Each pointing maneuver is associated with an exposure (Exp. 1). A blue checkered bar indicates the observation period, which ends at approximately 3300 seconds. A solid black bar indicates the occultation period, which begins at approximately 3300 seconds and continues until the end of the orbit at 5500 seconds. The text 'Unused Visibility = 0' is shown above the occultation period.</p>									

Visit	Proposal 10829, Visit 13, failed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(2)		Pattern Type=WFPC2-LINE	Coordinate Frame=POS-TARG							(1)
		Purpose=DITHER	Pattern Orientation=45							
		Number Of Points=3	Angle Between Sides=							
		Point Spacing=0.354	Center Pattern=false							
		Line Spacing=								
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(13)	NGC4942	RA: 13 04 19.1000 (196.0795833d)	Dec: -07 38 58.00 (-7.64944d)			V=13.6+/-0.3	Reference Frame: ICRS		
			Equinox: J2000				mean mu_B25 = 23.2 mag/arcsec			
		<i>Comments: Coordinates measured from GSCII with DS9.</i>								
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(13) NGC4942	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO			Pattern 1-1 (2)	700.0 Secs	
								[=>600.0 Secs (Pattern 1)]		
								[=>600.0 Secs (Pattern 2)]		[1]
								[=>600.0 Secs (Pattern 3)]		
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram illustrates the timeline for Orbit 1, starting at 0 seconds and ending at 5500 seconds. Key events are marked with arrows and labels: GS Acq at approximately 200s, three exposures (Exp. 1) at approximately 400s, 1300s, and 2300s, three pointing maneuvers at approximately 1100s, 2000s, and 3000s, and an occultation at approximately 3100s. A blue checkered bar represents the observation period from roughly 400s to 3100s. The text 'Unused Visibility = 77' is displayed in the upper right of the diagram area.</p>									

Visit	Proposal 10829, Visit 63, completed Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(13)	NGC4942	RA: 13 04 19.1000 (196.0795833d) Dec: -07 38 58.00 (-7.64944d) Equinox: J2000					V=13.6+/-0.3 mean mu_B25 = 23.2 mag/arcsec c2	Reference Frame: ICRS	
<i>Comments: Coordinates measured from GSCII with DS9.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(13) NGC4942	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]	[1]	
Orbit Structure	Orbit 1 Server Version: 20070325 Unused Visibility = 77									
	<p>The diagram shows a timeline for Orbit 1 from 0 to 5500 seconds. Key events are marked with arrows: GS Acq at ~300s, three Exp. 1 exposures at ~400s, ~1300s, and ~2300s, each preceded by a Pointing Maneuver and followed by Overhead. An Occultation event occurs at ~3100s. A blue checkered bar indicates the observation period from ~300s to ~3100s. The text 'Unused Visibility = 77' is displayed in the upper right.</p>									

Proposal 10829 - Visit 64 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:54 GMT 2007

Visit	Proposal 10829, Visit 64 Diagnostic Status: No Diagnostics Scientific Instruments: WFPC2 Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			Exposures
(2)		Pattern Type=WFPC2-LINE Purpose=DITHER Number Of Points=3 Point Spacing=0.354 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=45 Angle Between Sides= Center Pattern=false						(1)	
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(13)	NGC4942	RA: 13 04 19.1000 (196.0795833d) Dec: -07 38 58.00 (-7.64944d) Equinox: J2000					V=13.6+/-0.3 mean mu_B25 = 23.2 mag/arcsec c2	Reference Frame: ICRS	
<i>Comments: Coordinates measured from GSCII with DS9.</i>										
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(13) NGC4942	WFPC2, IMAGE, WF3-FIX	F606W	CR-SPLIT=NO		Pattern 1-1 (2)	700.0 Secs [=>600.0 Secs (Pattern 1)] [=>600.0 Secs (Pattern 2)] [=>600.0 Secs (Pattern 3)]	[1]	
Orbit Structure	<p>Orbit 1 Server Version: 20070325</p> <p>The diagram shows a horizontal timeline from 0 to 5500 seconds. Key events are marked with arrows: GS Acq at ~100s, three 'Exp. 1' exposures (green boxes) at ~400s, ~1300s, and ~2300s, and three 'Pointing Maneuvers' at ~1100s, ~2100s, and ~3100s. 'Overhead' periods are indicated above the timeline. A blue checkered bar represents the observation period from ~400s to ~3100s. A green bar at the end of the timeline is labeled 'Unused Visibility = 77'. The text 'Occultation' is also present near the end of the observation period.</p>									

Proposal 10829 - Visit 14 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:54 GMT 2007

Visit	Proposal 10829, Visit 14, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(14)	NGC4561	RA: 12 36 8.2000 (189.0341667d) Dec: +19 19 22.20 (19.32283d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=12.9+/-0.3 mean mu_B25 = 21.9 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(14) NGC4561		ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>748.0 Secs (Pattern 1)] [==>748.0 Secs (Pattern 2)] [==>748.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram shows the timeline of Orbit 1. Key events include GS Acq at approximately 30 seconds, the start of the first exposure (Exp. 1) at 40 seconds, a pointing maneuver at 1350 seconds, a second pointing maneuver at 2250 seconds, and an occultation at 3150 seconds. The observation period is indicated by a blue checkered bar, and the remaining time until the end of the orbit (5500 seconds) is labeled as 'Unused Visibility = 7'.</p>									

Proposal 10829 - Visit 15 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:55 GMT 2007

Visit	Proposal 10829, Visit 15, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false						(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(15)	NGC2805	RA: 09 20 20.3400 (140.0847500d) Dec: +64 06 10.70 (64.10297d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=11.9+/-0.3 mean mu_B25 = 24.3 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1		(15) NGC2805	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>783.0 Secs (Pattern 1)] [==>783.0 Secs (Pattern 2)] [==>783.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									

Proposal 10829 - Visit 16 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:55 GMT 2007

Visit	Proposal 10829, Visit 16, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(16)	ESO544-G030	RA: 02 14 56.8000 (33.7366667d) Dec: -20 12 44.00 (-20.21222d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.3+/-0.3 mean mu_B25 = 23.1 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(16) ESO544-G030	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO			Pattern 1-1 (1)	700.0 Secs [==>748.0 Secs (Pattern 1)] [==>748.0 Secs (Pattern 2)] [==>748.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p> GS Acq [Exp. 1] Pointing Maneuver [Exp. 1] Pointing Maneuver [Exp. 1] Unused Visibility = 10 Occultation </p> <p>Timeline (seconds): 0, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 5500</p>									

Proposal 10829 - Visit 17 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:55 GMT 2007

Visit	Proposal 10829, Visit 17, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(17)	ESO501-G023	RA: 10 35 23.2600 (158.8469167d) Dec: -24 45 15.40 (-24.75428d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.2+/-0.3 mean mu_B25 = 24.7 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(17) ESO501-G023	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO			Pattern 1-1 (1)	700.0 Secs [==>748.0 Secs (Pattern 1)] [==>748.0 Secs (Pattern 2)] [==>748.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									

Proposal 10829 - Visit 18 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:55 GMT 2007

Visit	Proposal 10829, Visit 18, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(18)	UGC1862	RA: 02 24 24.8000 (36.1033333d) Dec: -02 09 44.00 (-2.16222d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=14.0+/-0.3 mean mu_B25 = 23.5 mag/arcsec2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(18) UGC1862	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>746.0 Secs (Pattern 1)] [==>746.0 Secs (Pattern 2)] [==>746.0 Secs (Pattern 3)]	[1]	
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram shows a timeline for Orbit 1 from 0 to 5500 seconds. Key events include: GS Acq at ~200s, Exp. 1 at ~400s, Pointing Maneuver at ~1400s, Exp. 1 at ~1500s, Pointing Maneuver at ~2300s, Exp. 1 at ~2400s, and Unused Visibility = 1 starting at ~3200s. A blue checkered bar highlights the observation period from approximately 400s to 3200s. The x-axis is labeled 'Sec' and has major ticks every 500 units.</p>									

Proposal 10829 - Visit 19 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:55 GMT 2007

Visit	Proposal 10829, Visit 19, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=		Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false						(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(19)	NGC3794	RA: 11 40 54.3000 (175.2262500d) Dec: +56 12 6.70 (56.20186d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.9+/-0.3 mean mu_B25 = 23.8 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(19) NGC3794		ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	700.0 Secs [==>776.0 Secs (Pattern 1)] [==>776.0 Secs (Pattern 2)] [==>776.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram illustrates the timeline of Orbit 1. The x-axis represents time in seconds, ranging from 0 to 5500. Key events are marked with arrows and labels: 'GS Acq' at approximately 300 seconds, followed by three 'Exp. 1' exposures at approximately 400, 1400, and 2400 seconds. Two 'Pointing Mansuver' events occur at approximately 1400 and 2400 seconds. A blue checkered bar indicates the observation period from approximately 300 to 3200 seconds. After 3200 seconds, the observation ends, with 'Unused Visibility = 1' and 'Occultation' noted.</p>									

Proposal 10829 - Visit 20 - Secular Evolution at the End of the Hubble Sequence

Thu Jun 28 01:01:56 GMT 2007

Visit	Proposal 10829, Visit 20, completed Diagnostic Status: No Diagnostics Scientific Instruments: ACS/WFC Special Requirements: (none)									
	Patterns	#	Primary Pattern				Secondary Pattern			
(1)		Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=3 Point Spacing=3.011 Line Spacing=				Coordinate Frame=POS-TARG Pattern Orientation=85.28 Angle Between Sides= Center Pattern=false				(1)
Fixed Targets	#	Name	Target Coordinates		Targ. Coord. Corrections		Fluxes		Miscellaneous	
	(20)	ESO418-G008	RA: 03 31 30.6900 (52.8778750d) Dec: -30 12 48.20 (-30.21339d) Equinox: J2000 Comments: Coordinates measured from GSCII with DS9.				V=13.9+/-0.3 mean mu_B25 = 23.1 mag/arcsec c2		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
	1	(20) ESO418-G008	ACS/WFC, ACCUM, WFC	F606W	CR-SPLIT=NO			Pattern 1-1 (1)	700.0 Secs [==>753.0 Secs (Pattern 1)] [==>753.0 Secs (Pattern 2)] [==>753.0 Secs (Pattern 3)]	[1]
Orbit Structure	Orbit 1 Server Version: 20070325									
	<p>The diagram illustrates the orbit structure for Orbit 1. The x-axis represents time in seconds, ranging from 0 to 5500. Key events include: <ul style="list-style-type: none"> GS Acq (Ground Station Acquisition) at 0 seconds. Exp. 1 (Exposure 1) starting at approximately 300 seconds, lasting 753 seconds. Pointing Maneuver blocks between exposures. Exp. 1 starting at approximately 1400 seconds, lasting 753 seconds. Pointing Maneuver blocks between exposures. Exp. 1 starting at approximately 2300 seconds, lasting 753 seconds. Occultation period from approximately 3200 to 3500 seconds. Unused Visibility = 0, indicating the entire orbit was used for the planned activities. </p>									