14358 - Extremely Luminous Dusty Quasars with Unobscured UV Emission: Dual AGN or Extreme Single AGN Systems?

Cycle: 23, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) WISEA-J011601.41-050504.1	WFC3/IR WFC3/UVIS	1	10-Oct-2015 21:42:10.0	yes
02	(2) WISEA-J022052.13+013711.4	WFC3/IR WFC3/UVIS	1	10-Oct-2015 21:42:12.0	yes
03	(3) W0204-0506	WFC3/IR WFC3/UVIS	1	10-Oct-2015 21:42:13.0	yes

3 Total Orbits Used

ABSTRACT

The WISE mission has recently unveiled a new class of hyper-luminous infrared galaxies powered by heavily obscured AGN. These hot, dust-obscured galaxies, or Hot DOGs, are extremely rare (1 per 30 sq. deg.) and predominantly at high-redshift (1.5<z<4.6). An SED analysis reveals that a small fraction of Hot DOGs have excess UV/optical emission consistent with an unobscured type 1 AGN, with a luminosity of, however, only 1% of that of the obscured AGN responsible for the IR emission. This excess may be caused by a second AGN in the system, by extreme star-formation or by the luminous obscured central engine itself. We propose a joint Chandra and Hubble program that will disentangle these scenarios and determine the physical nature of the blue excess in these unique and exciting objects.

OBSERVING DESCRIPTION

For each target we will obtain imaging in the F555W (UVIS) and F160W (IR) bands. We will obtain two exposures per band with 20.0" dithers between them.

Visit

Proposal 14358, W0116-0505 Visit (01), implementation Sun Oct 11 01:42:14 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=3.025 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.045 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

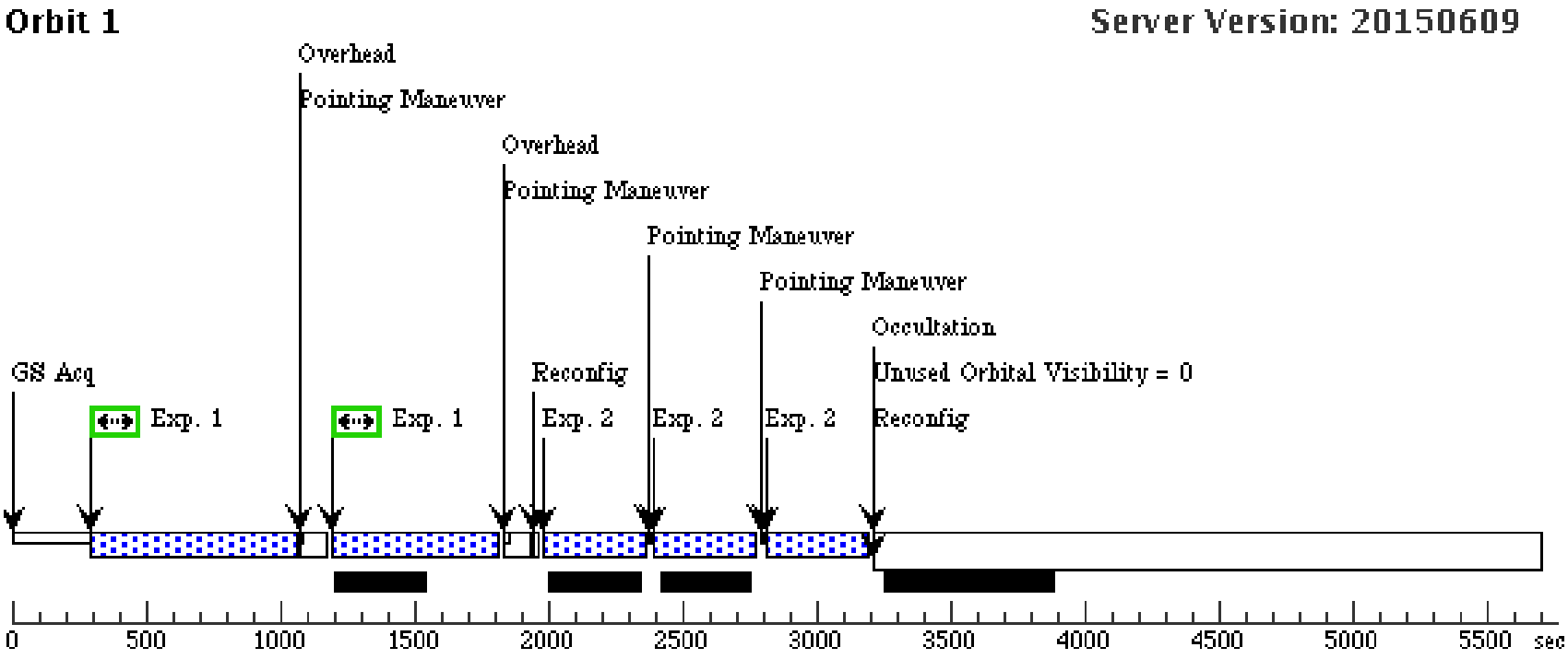
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	WISEA-J011601.41-050504.1	RA: 01 16 1.4110 (19.0058792d) Dec: -05 05 4.09 (-5.08447d) Equinox: J2000	Redshift: 3.173	V=21.5	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F555W	(1) WISEA-J011601.41-050504.1	WFC3/UVIS, ACCUM, UVIS	F555W			Pattern 2, Exps 1-1 in W0116-0505 Visit (01) (2)	558 Secs (1364 Secs) *[==>738.0 Secs (Pattern 1)]* *[==>626.0 Secs (Pattern 2)]*	***[1]***
2	F160W	(1) WISEA-J011601.41-050504.1	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 1, Exps 2-2 in W0116-0505 Visit (01) (1)	352.939501 Secs (1058.819 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 14358, W0220+0137 Visit (02), implementation Sun Oct 11 01:42:15 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=3.025 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.045 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

Fixed Targets

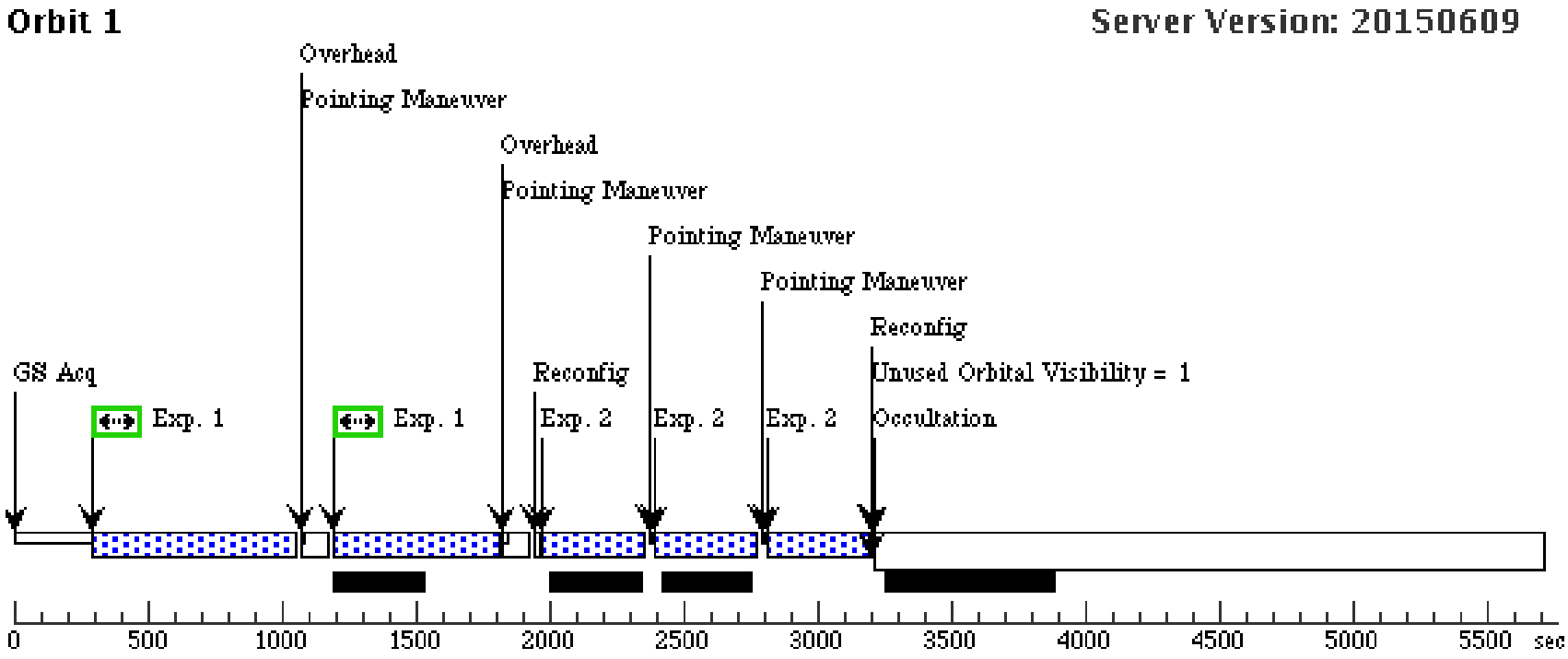
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	WISEA-J022052.13+013711.4	RA: 02 20 52.1200 (35.2171667d) Dec: +01 37 11.60 (1.61989d) Equinox: J2000	Redshift: 3.122	V=21.8	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F555W	(2) WISEA-J022052.13+013711.4	WFC3/UVIS, ACCUM, UVIS	F555W			Pattern 2, Exps 1-1 in W0220+0137 Visit (02) (2)	558 Secs (1360 Secs) *[==>735.0 Secs (Pattern 1)]* *[==>625.0 Secs (Pattern 2)]*	***[1]***
2	F160W	(2) WISEA-J022052.13+013711.4	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 1, Exps 2-2 in W0220+0137 Visit (02) (1)	352.939501 Secs (1058.819 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***

Orbit Structure



Visit

Proposal 14358, W0204-0506 Visit (03), implementation Sun Oct 11 01:42:15 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR, WFC3/UVIS

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-LINE-3PT Purpose=DITHER Number Of Points=3 Point Spacing=3.025 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=41.788 Angle Between Sides= Center Pattern=false		(2)
(2)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.045 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1)

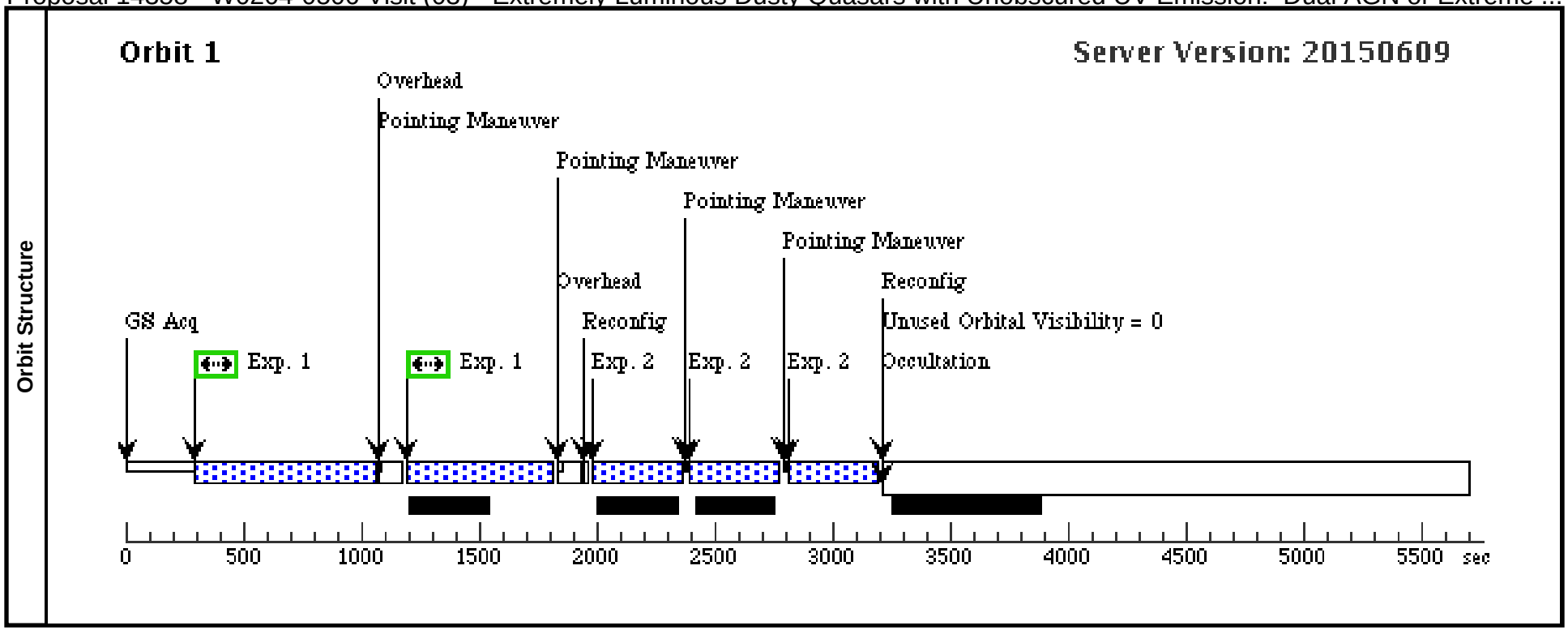
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	W0204-0506	RA: 02 04 46.1280 (31.1922000d) Dec: -05 06 40.82 (-5.11134d) Equinox: J2000	Redshift: 2.100	V=22.7	Reference Frame: ICRS

Comments: Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F555W	(3) W0204-0506	WFC3/UVIS, ACCUM, UVIS	F555W			Pattern 2, Exps 1-1 in W0204-0506 Visit (03) (2)	558 Secs (1364 Secs) *[==>738.0 Secs (Pattern 1)]* *[==>626.0 Secs (Pattern 2)]*	***[1]***
2	F160W	(3) W0204-0506	WFC3/IR, MULTIACCUM, IR	F160W	NSAMP=15; SAMP-SEQ=SPARS25		Pattern 1, Exps 2-2 in W0204-0506 Visit (03) (1)	352.939501 Secs (1058.819 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]*	***[1]***


Orbit Structure
Orbit 1
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Overhead
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Pointing Maneuver
Overhead
Reconfig
Reconfig
GS Acq
Unused Orbital Visibility = 0
Exp. 1
Exp. 1
Exp. 2
Exp. 2
Exp. 2
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec