14908 - Probing the merger-induced feedback scenario in hyper-luminous quasars

Cycle: 24, 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) SDSSJ1326-0005	WFC3/IR	1	14-Feb-2017 21:15:37.0	yes
02	(1) SDSSJ1326-0005	WFC3/IR	1	14-Feb-2017 21:15:38.0	yes

2 Total Orbits Used

ABSTRACT

We are following up through multiwavelength observations the WISSH sample of hyperluminous MIR-selected Type 1 quasars at z~2.5-3.5. In these objects we expect powerful quasar feedback and galaxy mergers to manifest themselves in full force. We are finding the WISSH quasars to exhibit a mixture of two populations with powerful winds in different gas phases (OIII or CIV). They also seem to show a dichotomy in their X-ray luminosities and UV/X-ray slope. We propose here XMM and HST observations of three WISSH quasars showing powerful OIII outflows in order to establish whether (i) they have higher X-ray-to-MIR and X-ray-to-UV luminosity ratios compared to the CIV-wind population and (ii) powerful quasars in the blow-out phase are linked to mergers.

OBSERVING DESCRIPTION

We observe the only accepted target in our program (SDSS J1326-0005) with WFC3-IR and the F160W filter which, for the redshift of our target (z~3.3), covers the region of the 4000A break. The requested exposure time is one orbit.
We will perform a four point box dither pattern and use SPARS sampling.
The target is a point source (a quasar) and the main goal of the observations is to detect its faint host galaxy.

According to the ETC, this observation will allow us to reach a S/N~6 in a 3x3 box for a galaxy surface brightness of mAB=25. For the HST/ETC simulation we used the spectrum of a merging galaxy (Arp 220). This is sufficient to clearly observe the morphology of the galaxies hosting these quasars.

Visit

Proposal 14908, Visit 01, implementation

Wed Feb 15 02:15:39 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=11.44 Line Spacing=7.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

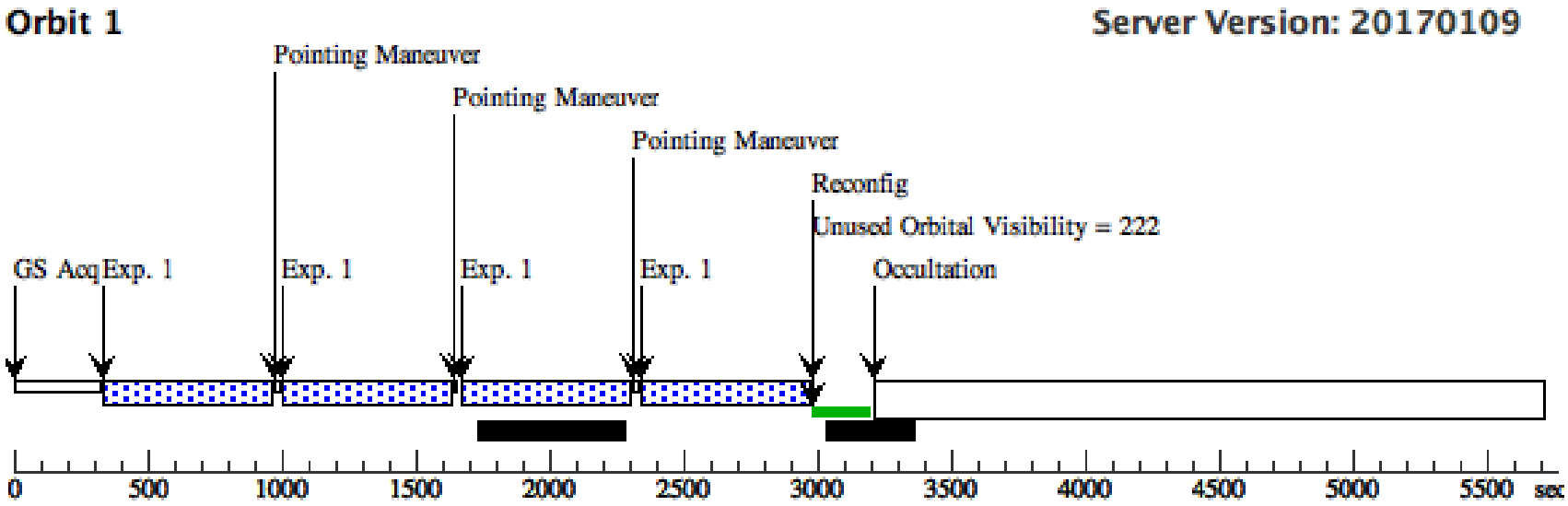
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ1326-0005	RA: 13 26 54.9600 (201.7290000d) Dec: -00 05 30.16 (-.09171d) Equinox: J2000		V=20.81	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SDSSJ1326-0005	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=STEP200; NSAMP=10		Pattern 1, Exps 1-1 in Visit 01 (1)	599.231134 Secs (2396.925 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*

Orbit Structure



Visit

Proposal 14908, Visit 02 Wed Feb 15 02:15:39 GMT 2017

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=WFC3-IR-DITHER-BOX-MIN Purpose=DITHER Number Of Points=4 Point Spacing=11.44 Line Spacing=7.3	Coordinate Frame=POS-TARG Pattern Orientation=18.528 Angle Between Sides=74.653 Center Pattern=false		(1)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	SDSSJ1326-0005	RA: 13 26 54.9600 (201.7290000d) Dec: -00 05 30.16 (-.09171d) Equinox: J2000		V=20.81	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) SDSSJ1326-0005	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=STEP200; NSAMP=10		Pattern 2, Exps 1-1 in Visit 02 (2)	599.231134 Secs (2396.925 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	*[1]*

Orbit Structure