



15375 - Do the outflow properties in the most luminous quasars correlate with X-ray radiative output and host dynamical state?

Cycle: 25, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

<i>Name</i>	<i>Institution</i>	<i>E-Mail</i>
Dr. Luca Zappacosta (PI) (ESA Member) (Contact)	INAF, Osservatorio Astronomico di Roma	luca.zappacosta@oa-roma.inaf.it
Dr. Marco Chiaberge (CoI) (ESA Member)	Space Telescope Science Institute - ESA	marcoc@stsci.edu
Dr. Enrico Piconcelli (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Roma	piconcelli@oa-roma.inaf.it
Dr. Fabrizio Fiore (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Roma	fiore@oa-roma.inaf.it
Dr. Giustina Vietri (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Roma	giustina.vietri@oa-roma.inaf.it
Dr. Marcella Brusa (CoI) (ESA Member)	Universita di Bologna	marcella.brusa3@unibo.it
Dr. Andrea Comastri (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Bologna	andrea.comastri@oabo.inaf.it
Prof. Alessandro Marconi (CoI) (ESA Member)	Universita di Firenze	marconi@arcetri.astro.it
Dr. Chiara Feruglio (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Trieste	feruglio@oats.inaf.it
Dr. Cristian Vignali (CoI) (ESA Member)	Universita di Bologna	cristian.vignali@unibo.it
Ms. Silvia Martocchia (CoI) (ESA Member)	Liverpool John Moores University	s.martocchia@2016.ljmu.ac.uk
Dr. Federica Duras (CoI) (ESA Member)	Universita' degli Studi Roma Tre	federica.duras@gmail.com
Dr. Angela Bongiorno (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Roma	angela.bongiorno@oa-roma.inaf.it
Dr. Manuela Bischetti (CoI) (ESA Member)	INAF, Osservatorio Astronomico di Roma	manuela.bischetti@oa-roma.inaf.it

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) J123641.45+655442.1	WFC3/IR	1	06-Sep-2017 20:02:10.0	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>
02	(2) J095841.21+282729.5	WFC3/IR	1	06-Sep-2017 20:02:11.0	yes

2 Total Orbits Used

ABSTRACT

We are following up the multiwavelength properties of the WISSH sample of hyperluminous MIR-selected Type 1 quasars at $z \sim 2-3$. In these objects we expect both powerful AGN feedback and galaxy mergers to manifest themselves in full force. We are finding in LBT/LUCI near infrared data that they are composed by two populations showing powerful mutually exclusive outflows in [OIII] and CIV. Interestingly they seem to show a dichotomy in their X-ray luminosities. Furthermore a HST-WFC3 follow-up of a WISSH quasar with [OIII] outflows show no sign of galaxy mergers. We propose here Chandra (280 ks) and HST (6 orbits) observations of WISSH quasars with the aim of establishing whether the two populations are linked to: (i) different quasar X-ray output and (ii) distinct host dynamical state.

OBSERVING DESCRIPTION

We observe the two accepted targets in our program with WFC3-IR and the F160W filter which, for the redshift of our targets ($z \sim 3.4$), covers the region of the 4000Å break. The requested exposure time is one orbit.

We will perform a four point box dither pattern and use STEP sequences.

The target is a point source (a quasar) and the main goal of the observations is to detect its faint host galaxy.

The observing strategy is the same we used in our previous program 14908 to observe another QSO at a similar redshift. For J123641.45 (Visit 1) we use a STEP100 sequence to better take advantage of the longer orbit visibility of this target. For Visit 2 we use STEP200, as in 14908.

Proposal 15375 - Visit 01 - Do the outflow properties in the most luminous quasars correlate with X-ray radiative output and host dyna...

Visit	Proposal 15375, Visit 01										Thu Sep 07 00:02:12 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)	J123641.45+655442.1	RA: 12 36 41.4000 (189.1725000d) Dec: +65 54 42.10 (65.91169d) Equinox: J2000				V=17.8		Reference Frame: ICRS				
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]		Orbit		
	1		(1) J123641.45+655442.1	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=STEP100; NSAMP=13		Pattern 1, Exps 1-1 in Visit 01 (1)	699.232615 Secs (2796.93 Secs) [=>(Pattern 1)] [=>(Pattern 2)] [=>(Pattern 3)] [=>(Pattern 4)]		[1]		
Orbit Structure	Orbit 1												Server Version: 20170613
	The diagram illustrates the orbit structure for Orbit 1, spanning from 0 to 5500 seconds. Key events and phases are marked: GS Acq: Ground Station Acquisition at approximately 0 seconds. Exp. 1: Exposure 1 at approximately 350 seconds. Pointing Maneuver: Three pointing maneuvers occur at approximately 1100, 1800, and 2600 seconds. Reconfig: Reconfiguration event at approximately 3400 seconds. Occultation: Occultation event at approximately 3500 seconds. Unused Orbital Visibility: 158 seconds of unused visibility time. The timeline is marked with ticks every 500 seconds.												

Visit	Proposal 15375, Visit 02 Thu Sep 07 00:02:13 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	
	(2)	J095841.21+282729.5	RA: 09 58 41.2000 (149.6716667d) Dec: +28 27 29.50 (28.45819d) Equinox: J2000				V=18.5		Reference Frame: ICRS	
Exposures	#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
	1		(2) J095841.21+282729.5	WFC3/IR, MULTIACCUM, IR-FIX	F160W	SAMP-SEQ=STEP200; NSAMP=10		Pattern 1, Exps 1-1 in Visit 02 (1)	599.231134 Secs (2396.925 Secs) [==>(Pattern 1)] [==>(Pattern 2)] [==>(Pattern 3)] [==>(Pattern 4)]	[1]
Orbit Structure	Orbit 1 Server Version: 20170613									