14185 - Imaging the extended star formation in the host galaxy of a millimeter bright quasar at z=6.13ii

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) ULAS-J1319+0950	WFC3/IR	1	08-Oct-2015 21:37:50.0	yes
02	(1) ULAS-J1319+0950	WFC3/IR	1	08-Oct-2015 21:37:54.0	yes
03	(1) ULAS-J1319+0950	WFC3/IR	1	08-Oct-2015 21:37:56.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
04	(1) ULAS-J1319+0950	WFC3/IR	1	08-Oct-2015 21:37:59.0	yes
05	(1) ULAS-J1319+0950	WFC3/IR	1	08-Oct-2015 21:38:01.0	yes
06	(2) PSF-SDSS-J1303+1047	WFC3/IR	1	08-Oct-2015 21:38:07.0	yes

6 Total Orbits Used

ABSTRACT

The detections of strong dust continuum, molecular CO, and [C II] emission from quasars at z~6 at millimeter and radio wavelengths provide the first evidence of SMBH-galaxy coevolution in the most distant universe. We here propose HST WFC3/IR J(F125W) and H(F160W) observations to image the UV stellar continuum from the host galaxy of a millimeter bright quasar ULAS J1319+0950 at z=6.13. We have obtained ALMA high resolution image of the [C II] fine structure line and dust continuum emission from this object, which reveals intense star formation in the central ~1" (5 kpc) region of the quasar host galaxy. The WFC3/IR observations we propose here will map the rest-frame 1500A~2500A stellar continuum emission from the starburst quasar host. We will measure the UV-based star formation rate and surface density, and compare the distribution of the UV stellar emission to the resolved [C II] line and dust continuum emission from ALMA. This is an important consistency check of the massive star formation inferred from the millimeter observation and will allow us to map the dust extinction and investigate the relation between star formation rate and the [C II] line emission in the extreme AGN-starburst environment. Moreover, the color measured with the two WFC3/IR bands will constrain the slope of the UV continuum, which is sensitive to the local dust extinction, age, and metallicity of the young quasar host galaxy. These will allow a comprehensive study of the distributed star formation in the earliest quasar host galaxies for the first time and, thus, set key constraints on our models of SMBH-galaxy co-evolution at the earliest epoch.

OBSERVING DESCRIPTION

This is a six-orbit package to observe a z=6.13 quasar ULAS J1319+0950, and a nearby star for quasar PSF modeling and subtraction, in J (F125W) and H (F160W) bands. The package consists of 5 orbits quasar observations and 1 orbits of PSF star observations.

Visit1 : One-orbit observation of the quasar ULAS J1319+0950 in F125W and F160W. We will use a 6-point dither pattern in boths bands.
Visit2 : One-orbit observation of the quasar ULAS J1319+0950 in F125W and F160W. We will use the same 6-point dither pattern and POS-TARG offsets as in Visit1.
Visit3 : One-orbit observation of the quasar ULAS J1319+0950 in F125W and F160W. We will use the same 6-point dither pattern and POS-TARG

offsets as in Visit1.

Visit4 : One-orbit observation of the quasar ULAS J1319+0950 in F125W and F160W. We will use the same 6-point dither pattern and POS-TARG offsets as in Visit1.

Visit5 : One-orbit observation of the quasar ULAS J1319+0950 in F125W and F160W. We will use the same 6-point dither pattern and POS-TARG offsets as in Visit1.

Visit6 : One-orbit observation of a PSF star in F125W and F160W. We will use the same 6-point dither pattern as is used in the quasar observation with different POS-TARG offsets.

Visit

Proposal 14185, Visit 01, implementation Fri Oct 09 01:38:09 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: (none)

Comments: 1st orbit of quasar host galaxy observation.
To ensure maximum thermal stability (and thus PSF stability) for these PSF-sensitive observations, we request one of the following constraints, if possible and if they do not interfere with the schedulability of other programs.

1) If our observations occur directly after an SAA transit, that the telescope be slewed to our initial pointing before the SAA transit, allowing thermal settling to occur during the transit.
2) Our observations occur directly after observations on a nearby target, to minimize the change in pointing angle (and thus thermal settling time) at the beginning of our observations.

Fixed Targets

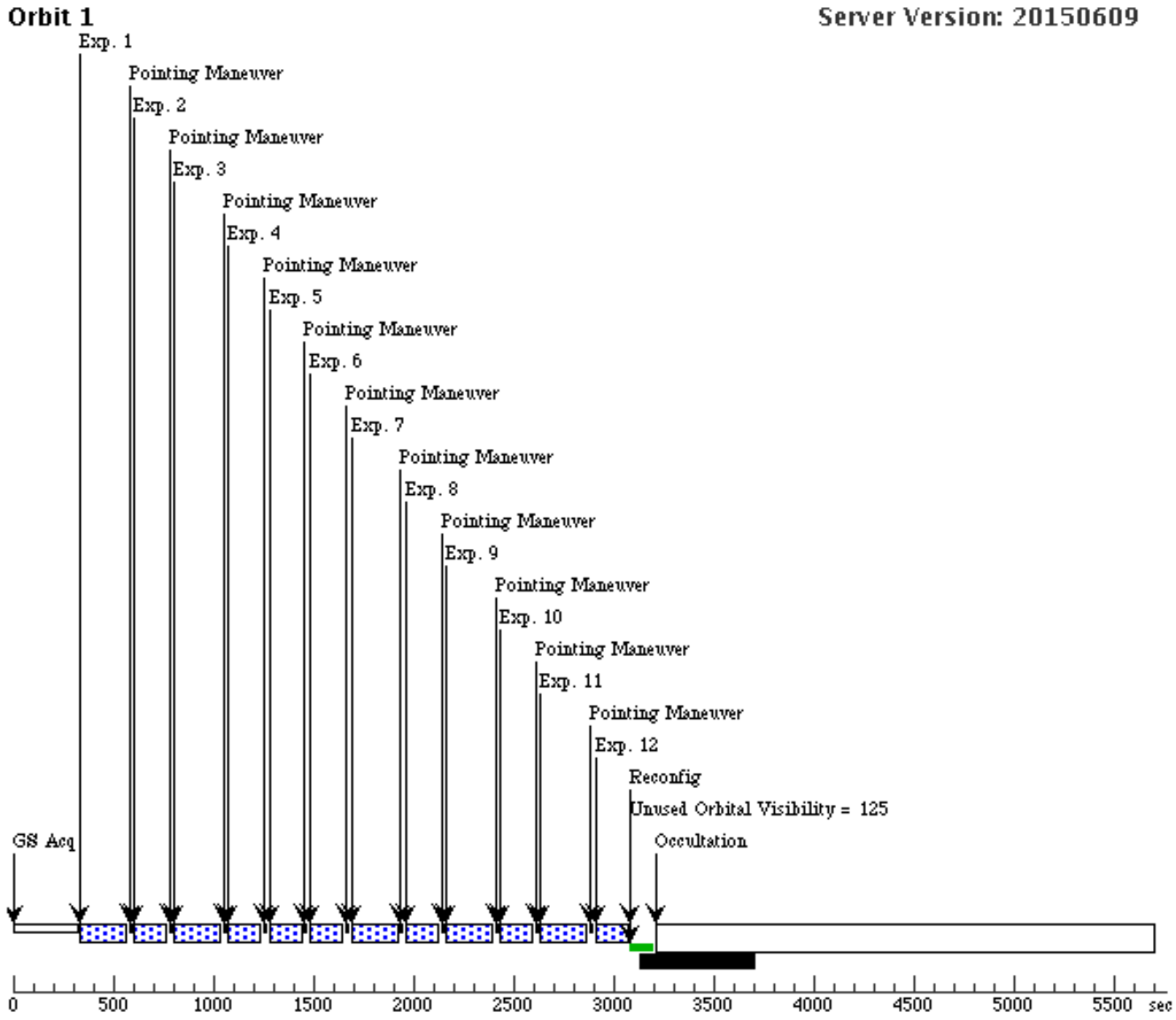
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	ULAS-J1319+0950	RA: 13 19 11.2900 (199.7970417d) Dec: +09 50 51.40 (9.84761d) Equinox: J2000		V=(?) Y_vega=19.23, J_vega=18.69, H_vega=18.32, K_vega=17.54	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1319 J Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.355,-2.422; GS ACQ SCENARIO BASE1B3	Sequence 1-12 Non-Int in Visit 01	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
2	J1319 H Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	SAMP-SEQ=SPARS25; NSAMP=7	POS TARG 0.6775,1.211	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
3	J1319 J Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.3098,-1.1706	Sequence 1-12 Non-Int in Visit 01	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
4	J1319 H Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7227,2.4624	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
5	J1319 J Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG -1.2647,0.0807	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
6	J1319 H Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7678,3.7137	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
7	J1319 J Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.06775,-2.422	Sequence 1-12 Non-Int in Visit 01	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
8	J1319 H Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.10025,1.211	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
9	J1319 J Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1129,-1.1706	Sequence 1-12 Non-Int in Visit 01	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
10	J1319 H Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1454,2.4624	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
11	J1319 J Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1581,0.0807	Sequence 1-12 Non-Int in Visit 01	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
12	J1319 H Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1906,3.7137	Sequence 1-12 Non-Int in Visit 01	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14185, Visit 02, implementation Fri Oct 09 01:38:10 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: AFTER 01 BY 0.8 Orbits TO 1.2 Orbits

Comments: 2nd orbit of quasar host galaxy observation

Fixed Targets

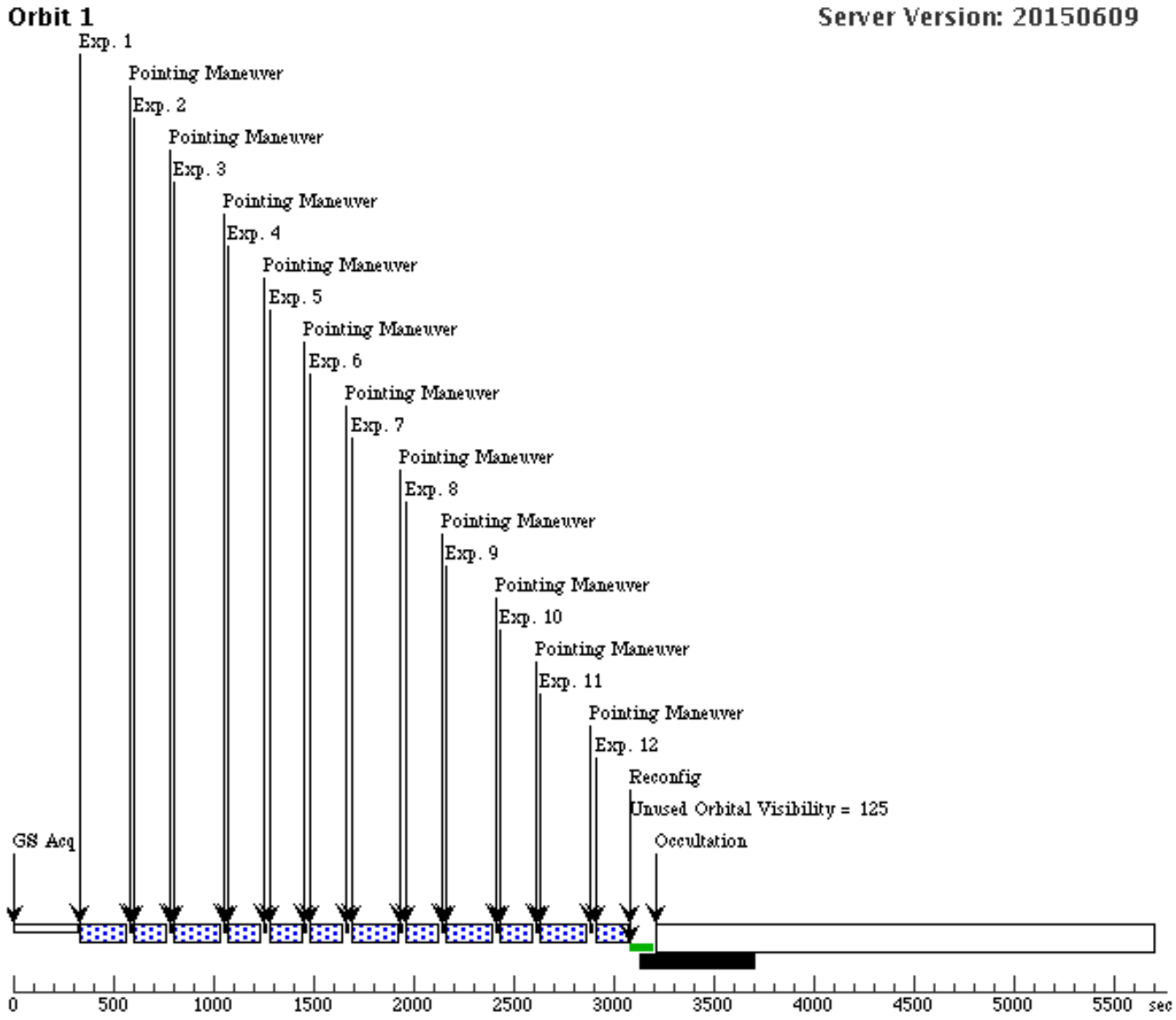
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	ULAS-J1319+0950	RA: 13 19 11.2900 (199.7970417d) Dec: +09 50 51.40 (9.84761d) Equinox: J2000		V=(?) Y_vega=19.23, J_vega=18.69, H_vega=18.32, K_vega=17.54	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1319 J Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.355,-2.422; GS ACQ SCENARIO BASE1B3	Sequence 1-12 Non-Int in Visit 02	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
2	J1319 H Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	SAMP-SEQ=SPARS25; NSAMP=7	POS TARG 0.6775,1.211	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
3	J1319 J Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.3098,-1.1706	Sequence 1-12 Non-Int in Visit 02	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
4	J1319 H Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7227,2.4624	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
5	J1319 J Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG -1.2647,0.0807	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
6	J1319 H Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7678,3.7137	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
7	J1319 J Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.06775,-2.422	Sequence 1-12 Non-Int in Visit 02	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
8	J1319 H Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.10025,1.211	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
9	J1319 J Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1129,-1.1706	Sequence 1-12 Non-Int in Visit 02	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
10	J1319 H Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1454,2.4624	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
11	J1319 J Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1581,0.0807	Sequence 1-12 Non-Int in Visit 02	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
12	J1319 H Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1906,3.7137	Sequence 1-12 Non-Int in Visit 02	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14185, Visit 03, implementation Fri Oct 09 01:38:10 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: AFTER 02 BY 0.8 Orbits TO 1.2 Orbits

Comments: 3rd orbit of quasar host galaxy observation

Fixed Targets

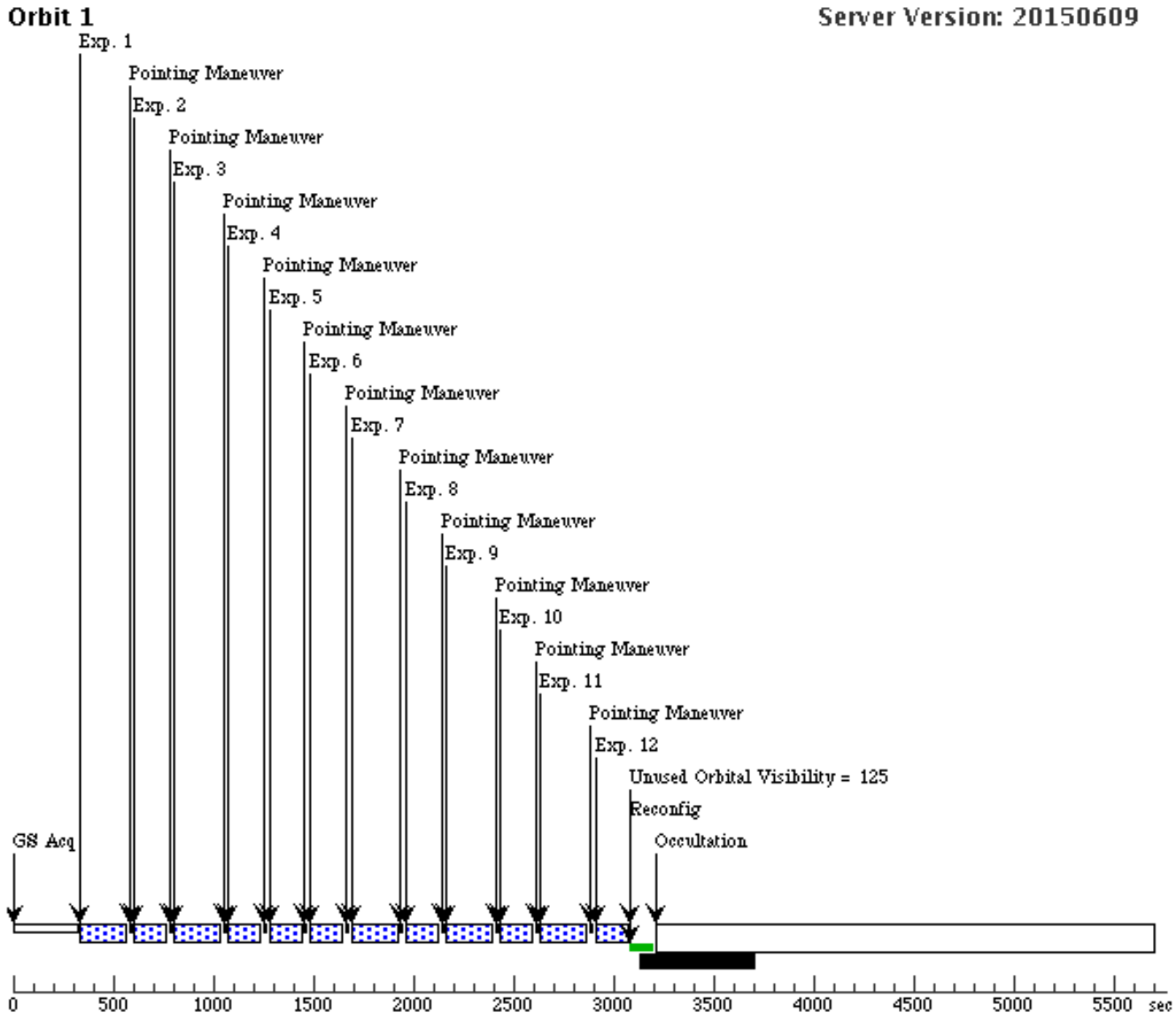
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	ULAS-J1319+0950	RA: 13 19 11.2900 (199.7970417d) Dec: +09 50 51.40 (9.84761d) Equinox: J2000		V=(?) Y_vega=19.23, J_vega=18.69, H_vega=18.32, K_vega=17.54	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1319 J Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.355,-2.422; GS ACQ SCENARIO BASE1B3	Sequence 1-12 Non-Int in Visit 03	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
2	J1319 H Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	SAMP-SEQ=SPARS25; NSAMP=7	POS TARG 0.6775,1.211	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
3	J1319 J Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.3098,-1.1706	Sequence 1-12 Non-Int in Visit 03	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
4	J1319 H Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7227,2.4624	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
5	J1319 J Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG -1.2647,0.0807	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
6	J1319 H Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7678,3.7137	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
7	J1319 J Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.06775,-2.422	Sequence 1-12 Non-Int in Visit 03	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
8	J1319 H Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.10025,1.211	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
9	J1319 J Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1129,-1.1706	Sequence 1-12 Non-Int in Visit 03	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
10	J1319 H Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1454,2.4624	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
11	J1319 J Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1581,0.0807	Sequence 1-12 Non-Int in Visit 03	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
12	J1319 H Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1906,3.7137	Sequence 1-12 Non-Int in Visit 03	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14185, Visit 04, implementation Fri Oct 09 01:38:10 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: AFTER 03 BY 0.8 Orbits TO 1.2 Orbits

Comments: 4th orbit of quasar host galaxy observation

Fixed Targets

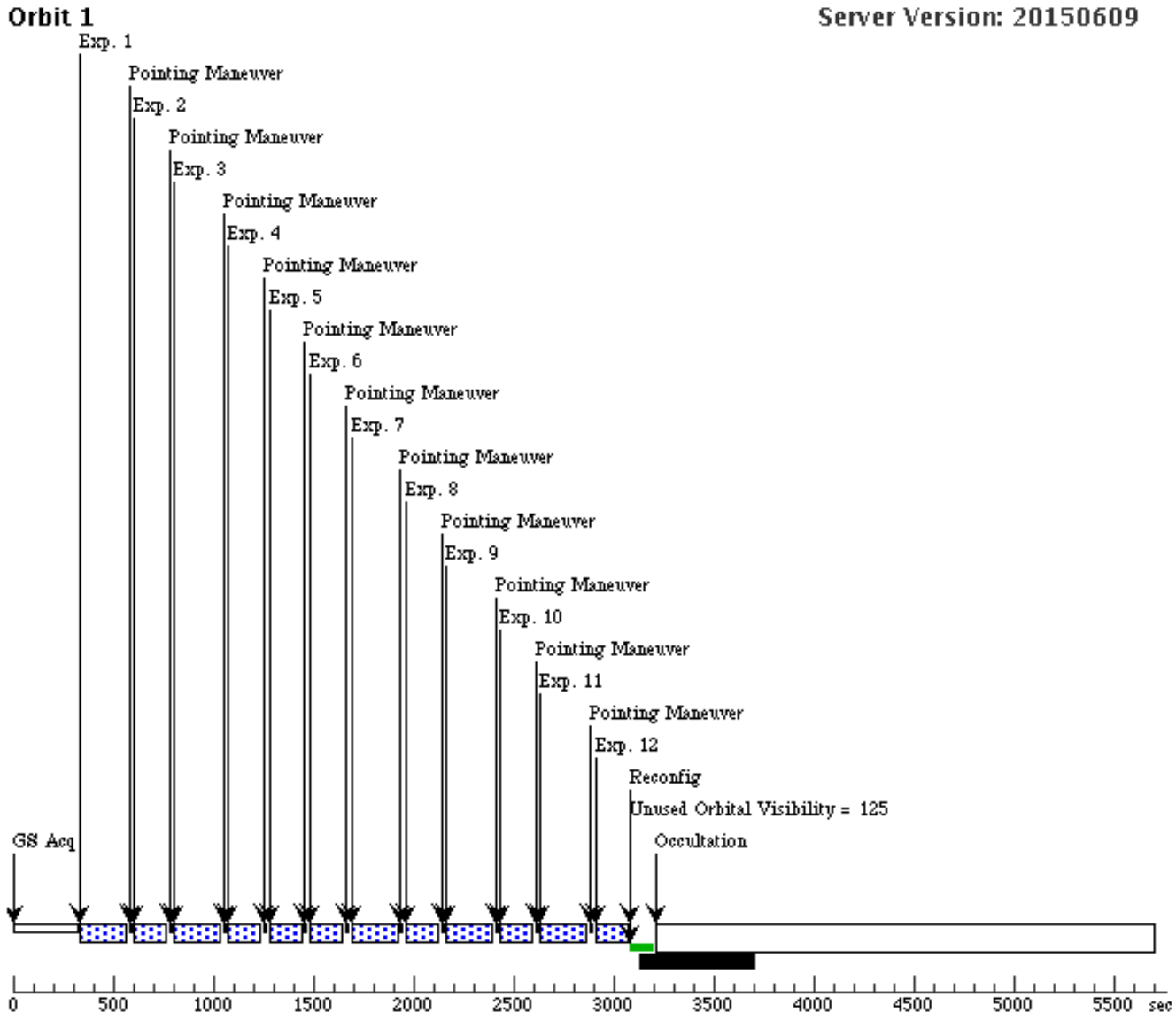
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	ULAS-J1319+0950	RA: 13 19 11.2900 (199.7970417d) Dec: +09 50 51.40 (9.84761d) Equinox: J2000		V=(?) Y_vega=19.23, J_vega=18.69, H_vega=18.32, K_vega=17.54	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1319 J Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.355,-2.422; GS ACQ SCENARIO BASE1B3	Sequence 1-12 Non-Int in Visit 04	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
2	J1319 H Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	SAMP-SEQ=SPARS25; NSAMP=7	POS TARG 0.6775,1.211	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
3	J1319 J Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.3098,-1.1706	Sequence 1-12 Non-Int in Visit 04	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
4	J1319 H Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7227,2.4624	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
5	J1319 J Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG -1.2647,0.0807	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
6	J1319 H Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7678,3.7137	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
7	J1319 J Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.06775,-2.422	Sequence 1-12 Non-Int in Visit 04	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
8	J1319 H Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.10025,1.211	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
9	J1319 J Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1129,-1.1706	Sequence 1-12 Non-Int in Visit 04	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
10	J1319 H Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1454,2.4624	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
11	J1319 J Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1581,0.0807	Sequence 1-12 Non-Int in Visit 04	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
12	J1319 H Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1906,3.7137	Sequence 1-12 Non-Int in Visit 04	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14185, Visit 05, implementation Fri Oct 09 01:38:10 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: AFTER 04 BY 0.8 Orbits TO 1.2 Orbits

Comments: 5th orbit of quasar host galaxy observation

Fixed Targets

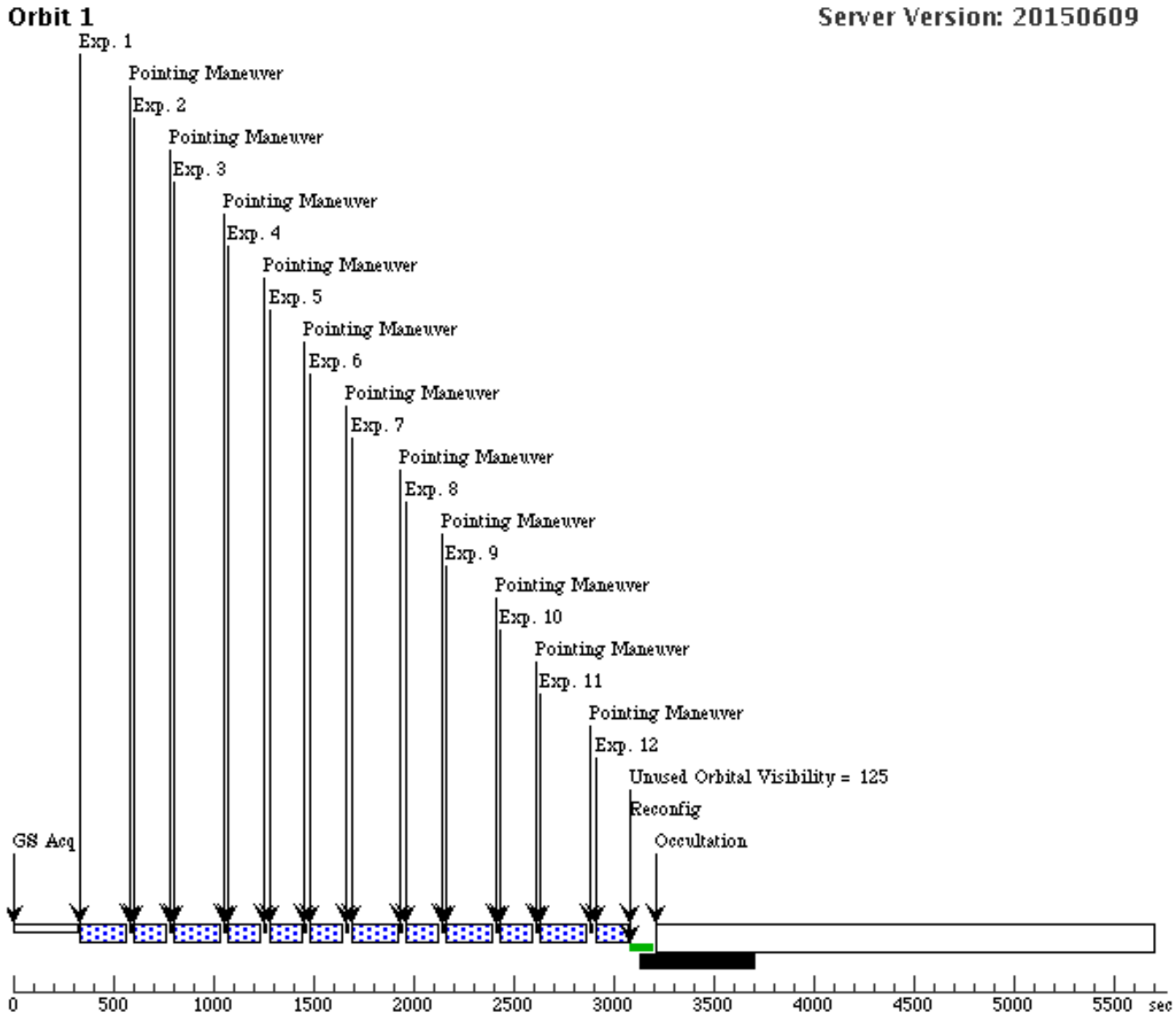
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	ULAS-J1319+0950	RA: 13 19 11.2900 (199.7970417d) Dec: +09 50 51.40 (9.84761d) Equinox: J2000		V=(?) Y_vega=19.23, J_vega=18.69, H_vega=18.32, K_vega=17.54	Reference Frame: SIMBAD

Comments: This object was generated by the targetselector and retrieved from the SIMBAD database.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	J1319 J Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.355,-2.422; GS ACQ SCENARIO BASE1B3	Sequence 1-12 Non-Int in Visit 05	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
2	J1319 H Dither 0	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	SAMP-SEQ=SPARS25; NSAMP=7	POS TARG 0.6775,1.211	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
3	J1319 J Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG -1.3098,-1.1706	Sequence 1-12 Non-Int in Visit 05	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
4	J1319 H Dither 1	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7227,2.4624	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
5	J1319 J Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG -1.2647,0.0807	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
6	J1319 H Dither 2	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 0.7678,3.7137	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
7	J1319 J Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.06775,-2.422	Sequence 1-12 Non-Int in Visit 05	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
8	J1319 H Dither 3	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.10025,1.211	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
9	J1319 J Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1129,-1.1706	Sequence 1-12 Non-Int in Visit 05	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
10	J1319 H Dither 4	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1454,2.4624	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*
11	J1319 J Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F125W	NSAMP=10; SAMP-SEQ=SPARS25	POS TARG 0.1581,0.0807	Sequence 1-12 Non-Int in Visit 05	207.144286 Secs (207.144 Secs) *[==>]*	*[1]*
12	J1319 H Dither 5	(1) ULAS-J1319+0950	WFC3/IR, MULTIACCUM, IRSUB512-FIX	F160W	NSAMP=7; SAMP-SEQ=SPARS25	POS TARG 2.1906,3.7137	Sequence 1-12 Non-Int in Visit 05	138.380533 Secs (138.381 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 14185, Visit 06, implementation Fri Oct 09 01:38:10 GMT 2015

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: AFTER 05 BY 0.8 D TO 1.2 D

Comments: PSF star observation

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	PSF-SDSS-J1303+1047	RA: 13 03 8.9100 (195.7871250d) Dec: +10 47 51.87 (10.79774d) Equinox: J2000		V=(?) Y_vega=16.76, J_vega=16.45, H_vega=15.99, K_vega=15.96	Reference Frame: ICRS

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	PSF J Dither 0	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -4.7425,-2.4220	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
2	PSF J Dither 0	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -1.355,-2.4220	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
3	PSF J Dither 0	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 2.0325,-2.422	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
4	PSF H Dither 0	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	SAMP-SEQ=SPARS10; NSAMP=6	POS TARG -2.710,1.211	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs)	
								[==>]	***[1]***
5	PSF H Dither 0	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	SAMP-SEQ=SPARS10; NSAMP=6	POS TARG 0.6775,1.211	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs)	
								[==>]	***[1]***
6	PSF J Dither 1	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -4.6973,-1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
7	PSF J Dither 1	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -1.3098,-1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
8	PSF J Dither 1	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 2.0777,-1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
9	PSF H Dither 1	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=5; SAMP-SEQ=SPARS10	POS TARG -2.6648,2.4624	Sequence 1-30 Non-Int in Visit 06	29.663763 Secs (29.664 Secs)	
								[==>]	***[1]***
10	PSF H Dither 1	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=5; SAMP-SEQ=SPARS10	POS TARG 0.7227,2.4624	Sequence 1-30 Non-Int in Visit 06	29.663763 Secs (29.664 Secs)	
								[==>]	***[1]***
11	PSF J Dither 2	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -4.6522,0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
12	PSF J Dither 2	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -1.2647,0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
13	PSF J Dither 2	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 2.1228,0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***
14	PSF H Dither 2	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=5; SAMP-SEQ=SPARS10	POS TARG -2.6197,3.7137	Sequence 1-30 Non-Int in Visit 06	29.663763 Secs (29.664 Secs)	
								[==>]	***[1]***
15	PSF H Dither 2	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=5; SAMP-SEQ=SPARS10	POS TARG 0.7678,3.7137	Sequence 1-30 Non-Int in Visit 06	29.663763 Secs (29.664 Secs)	
								[==>]	***[1]***
16	PSF J Dither 3	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -3.31975,-2.422	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs)	
								[==>]	***[1]***

	17	PSF J Dither 3	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 0.06775, -2.422	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	18	PSF J Dither 3	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 3.45525, -2.422	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	19	PSF H Dither 3	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=6; SAMP-SEQ=SPARS10	POS TARG -1.28725,1.211	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***
	20	PSF H Dither 3	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=6; SAMP-SEQ=SPARS10	POS TARG 2.10025, 1.211	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***
	21	PSF J Dither 4	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -3.2746, -1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	22	PSF J Dither 4	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 0.1129,-1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	23	PSF J Dither 4	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 3.5004,-1.1706	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	24	PSF H Dither 4	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=6; SAMP-SEQ=SPARS10	POS TARG -1.2421, 2.4624	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***
	25	PSF H Dither 4	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	NSAMP=6; SAMP-SEQ=SPARS10	POS TARG 2.1454,2.4624	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***
	26	PSF J Dither 5	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG -3.2294, 0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	27	PSF J Dither 5	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 0.1581,0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	28	PSF J Dither 5	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F125W	NSAMP=11; SAMP-SEQ=SPARS5	POS TARG 3.5456,0.0807	Sequence 1-30 Non-Int in Visit 06	23.77008 Secs (23.77 Secs) *[==>]*	 ***[1]***
	29	PSF H Dither 5	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	SAMP-SEQ=SPARS10; NSAMP=6	POS TARG -1.1969, 3.7137	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***
	30	PSF H Dither 5	(2) PSF-SDSS-J1303+1047	WFC3/IR, MULTIACCUM, IRSUB256-FIX	F160W	SAMP-SEQ=SPARS10; NSAMP=6	POS TARG 2.1906, 3.7137	Sequence 1-30 Non-Int in Visit 06	37.01025 Secs (37.01 Secs) *[==>]*	 ***[1]***

Orbit Structure