16407 - WFC3 IR Grisms: Wavelength Calibration and Stability

Cycle: 28, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Debopam Som (PI) (Contact)	**Space Telescope Science Institute**	**dsom@stsci.edu**
Dr. Norbert Pirzkal (CoI) (Contact)	Space Telescope Science Institute - ESA - JWST	npirzkal@stsci.edu
Dr. Nikolay Nikolov (CoI) (Contact)	Space Telescope Science Institute	nnikolov@stsci.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) VY2-2	WFC3/IR	1	12-May-2021 11:00:13.0	yes
51	(1) VY2-2	WFC3/IR	1	12-May-2021 11:00:15.0	yes

2 Total Orbits Used

ABSTRACT

This program will observe PN VY2-2 near the center of the field and at additional positons using the WFC3 IR G102 and G141 grisms. The data will be used to calculate wavelength solutions for the grisms, and will be compared with those derived from previous programs:

15727

15586

14993

14543

14385

14023

13582

13580

13093

12703

12356

to monitor for potential time evolution of the calibration.

OBSERVING DESCRIPTION

Observations of wavelength calibrator VY2-2. Observations taken at the center of the field as well as with postargs of (-30,+30) and (-30,-30) in F098M, F105W, F140W, F160W, G102 and G141

Visit

Proposal 16407, G102 and G141 (01), failed Wed May 12 15:00:16 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: BETWEEN 01-APR-2021:00:00:00 AND 01-JUL-2021:00:00:00

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	VY2-2	RA: 19 24 22.2390 (291.0926625d)	Proper Motion RA: -20.263 mas/yr	V=13.8	Reference Frame: ICRS
	Alt Name1: PK045-02D1	Dec: +09 53 56.26 (9.89896d)	Proper Motion Dec: -6.921 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

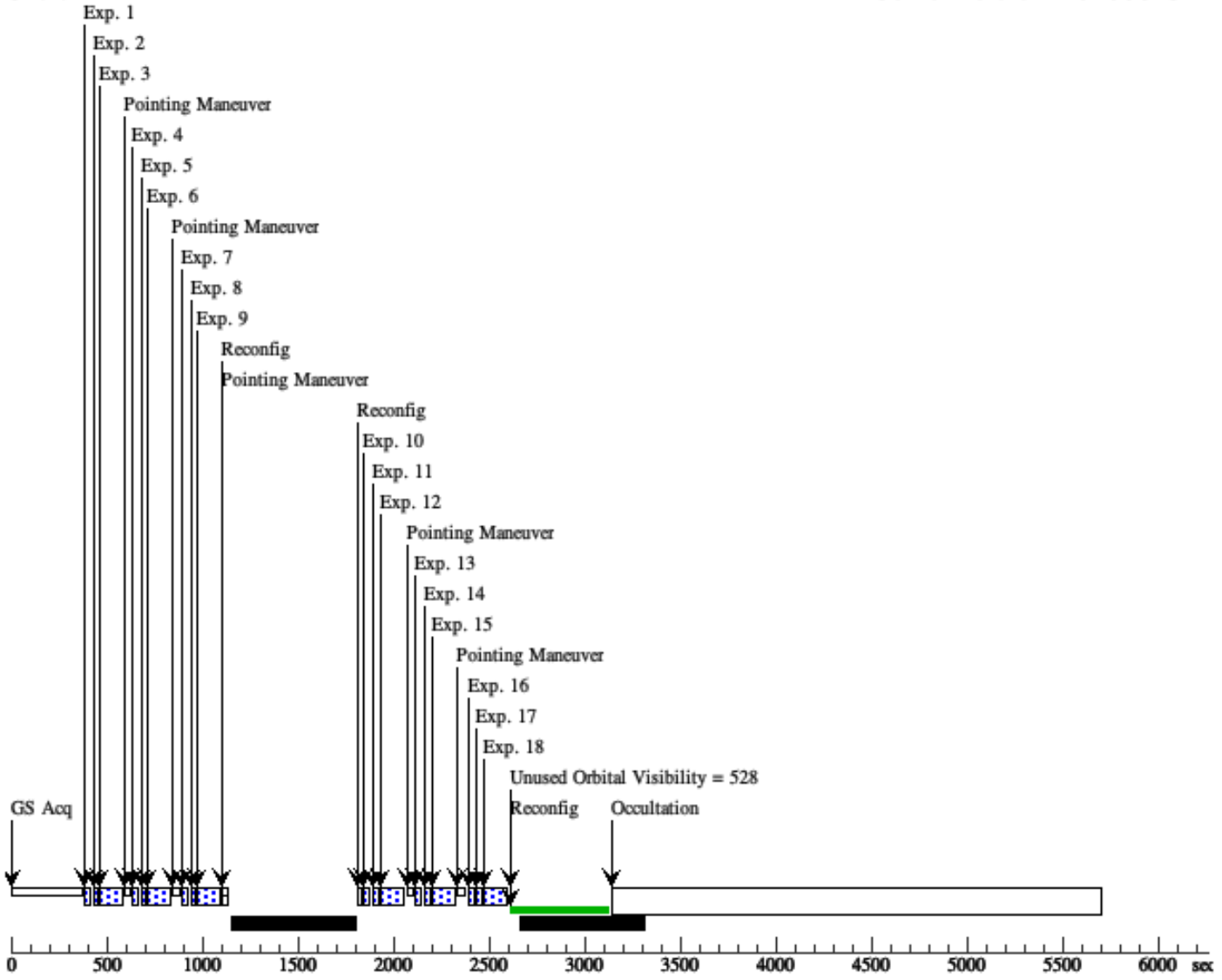
Comments:
Category=STAR
Description=[PLANETARY NEBULA CENTRAL STAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	In Center F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]
2	In Center F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
3	In Center G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]
4	In -30 +30 F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]
5	In -30 +30 F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
6	In -30 +30 G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]
7	In -30 -30 F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]
8	In -30 -30 F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
9	In -30 -30 G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]
10	In Center F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]
11	In Center F140W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
12	In Center G141	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]
13	In -30 +30 F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]
14	In -30 +30 F140W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
15	In -30 +30 G141	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]
16	In -30 -30 F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (01)	5.864582 Secs (5.865 Secs) [==>]	[1]

	17	In -30 -30 F 140W (1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=1 POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (01)	2.932291 Secs (2.932 Secs) [==>]	[1]
	18	In -30 -30 G 141 (1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5 POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (01)	102.934351 Secs (102.934 Secs) [==>]	[1]

Orbit Structure



Visit

Proposal 16407, G102 and G141 (51) Wed May 12 15:00:16 GMT 2021

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/IR

Special Requirements: BETWEEN 11-MAY-2021:00:00:00 AND 15-AUG-2021:00:00:00

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	VY2-2	RA: 19 24 22.2390 (291.0926625d)	Proper Motion RA: -20.263 mas/yr	V=13.8	Reference Frame: ICRS
	Alt Name1: PK045-02D1	Dec: +09 53 56.26 (9.89896d)	Proper Motion Dec: -6.921 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

Comments:
Category=STAR
Description=[PLANETARY NEBULA CENTRAL STAR]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	In Center F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*
2	In Center F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) *[==>]*	*[1]*
3	In Center G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -20,0	Sequence 1-3 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) *[==>]*	*[1]*
4	In -30 +30 F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*
5	In -30 +30 F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) *[==>]*	*[1]*
6	In -30 +30 G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,+30	Sequence 4-6 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) *[==>]*	*[1]*
7	In -30 -30 F098M	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F098M	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*
8	In -30 -30 F105W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F105W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) *[==>]*	*[1]*
9	In -30 -30 G102	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G102	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,-30	Sequence 7-9 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) *[==>]*	*[1]*
10	In Center F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*
11	In Center F140W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) *[==>]*	*[1]*
12	In Center G141	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -20,0	Sequence 10-12 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) *[==>]*	*[1]*
13	In -30 +30 F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*
14	In -30 +30 F140W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID; NSAMP=1	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) *[==>]*	*[1]*
15	In -30 +30 G141	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS25; NSAMP=5	POS TARG -30,+30	Sequence 13-15 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) *[==>]*	*[1]*
16	In -30 -30 F160W	(1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F160W	SAMP-SEQ=RAPID; NSAMP=2	POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (51)	5.864582 Secs (5.865 Secs) *[==>]*	*[1]*

	17	In -30 -30 F 140W (1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	F140W	SAMP-SEQ=RAPID ; NSAMP=1 POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (51)	2.932291 Secs (2.932 Secs) [==>]	[1]
	18	In -30 -30 G 141 (1) VY2-2	WFC3/IR, MULTIACCUM, GRISM1024	G141	SAMP-SEQ=SPARS 25; NSAMP=5 POS TARG -30,-30	Sequence 16-18 Non-Int in G102 and G141 (51)	102.934351 Secs (102.934 Secs) [==>]	[1]

Orbit Structure