14878 - WFC3 UVIS contamination using spatial scans

Cycle: 24, Proposal Category: CAL/WFC3

(Availability Mode: RESTRICTED)

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	(2) GD153	WFC3/UVIS	1	07-Feb-2017 21:03:57.0	yes
02	(2) GD153	WFC3/UVIS	1	07-Feb-2017 21:04:01.0	yes
03	(2) GD153	WFC3/UVIS	1	07-Feb-2017 21:04:05.0	yes
04	(2) GD153	WFC3/UVIS	1	07-Feb-2017 21:04:09.0	yes
11	(1) GRW+70D5824	WFC3/UVIS	1	07-Feb-2017 21:04:12.0	yes
12	(1) GRW+70D5824	WFC3/UVIS	1	07-Feb-2017 21:04:15.0	yes

6 Total Orbits Used

ABSTRACT

Goals: Periodically measure the photometric throughput of WFC3 during the cycle in a subset of key filters in the UVIS channel. The data provide a monitor of the stellar flux as a function of time and wavelength as well as check for the presence of possible contaminants on the detector windows. While no contamination effects have been detected with prior data, small amplitude, long-term photometric drifts are present in some filters (Gosmeyer et al., ISR 2014-20). These drifts do not appear to be due to changes in shutter behavior (Sahu et al., ISR 2015-12).

Description of the Observations: Except for the first visit, each visit will obtain subarray observations of a standard star in a subsample of filters in the UVIS, on both UVIS detectors. Given the good repeatability seen in single-line scanned data (~0.1% rms , program 14020), we hope to make a gradual transition to scanned mode for contamination monitoring. This will allow for a more accurate assessment of the counter-intuitive slopes seen in the staring-mode monitor data. Since GRW+70 is suspected to be astrophysically varying in brightness, we expect to use GD153 more often in the future, although GD153 is a relatively new standard for contamination programs (begun during Cycle 23). To make interpretation simple, we try to schedule these visits near in time to similar ones made in staring mode of the same standard stars.

(The first visit will be used to experiment with various multi-line scans to validate simulations of the turn-around regions in the star's trail due to the telescope's trajectory. Subsequently, and based upon those experiments, we will empirically pick the best scan parameters for contamination monitoring and keep repeating scans with those parameters thereafter.)

This is a supplement to Cy24 program 14815 (and its predecessor 14382) which uses static images to monitor the contamination using GD153 in filters: F218W, F225W, F275W, F300X, F336W, F438W, F606W, F814W, G280. The cadence of that is expected to be 1 orbit every 5 weeks for 11 HST orbits in total.

OBSERVING DESCRIPTION
See the abstract.

Scheduling of the visits of this program should be coordinated with those of the traditional staring-mode contamination monitor, programs 14382 & 14815. We will use similar "betweens" to enforce this to the same week in time, but in addition, we ask schedulers, on a "best effort" basis, to try to group this program's visits near in time to the same target's visits from programs 14382 & 14815. A one-week window should suffice, in the abs(epoch of 141815 - epoch of 14878), although the 1-week requirement is ad hoc and can be relaxed if needed for scheduling. This way, any astrophysical variation of the (supposedly constant) fluxes of the target stars will be minimized in differential comparison of the photometry from the two HST programs, because they will be obtained at (nearly) the same epochs. Please do what you can easily, but do not make a huge effort - the "betweens" will enforce our requirements.

Version 5: 2017-01-30 (updated - see Version 6 below)

Lessons learned from Visit 1: single-line scans are preferrable to multi-line scans for this program because A) single line scans are simpler to analyze, especially for cosmic ray identification and interpolation, B) we are not aware of any confusing sources near enough and bright enough to the targets to make multi-line scans' compactness an advantage, C) single-line scans are simpler to reverse in APT and avoid pointing "walk" from accumulated errors of SAMs, small angle manuevers.

Scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan; this is a precaution that may not be strictly necessary.

The 59.9 s exposures are as long as APT allows given that we want BLADE=A, so for simplicity we just use 59.9 s instead of invoking a qesiparm.

We don't worry about the Orient, because there are no stars sufficiently nearby and bright enough to be a concern.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same.
F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same.

In visit 1, with GD153 at 0.125 "/s, the measured peak for F606W is 13,166 e/pixel (not 10,600 e/pixel predicted by scanning ETC); not sure why so different.

Here is an ETC table for 60-s exposures, scanned at 0.125"/s.

GRW+70, V=12.77 (box = 1x9 pixels)

	Peak	Total
F218W	2271	6950
F225W	5910	17857
F275W	5212	15228
F336W	7397	20773
F438W	8420	23166
F606W	18798	53010

F814W 4227 13149

GD153, V=13.4 (box = 1x9 pixels)

	Peak	Total
F218W	2741	8393
F225W	6912	20900
F275W	5576	16303
F336W	6803	19107
F438W	5516	15175
F606W	10594	29865
F814W	2180	6783

Version 6: 2017-02-03

Changes from Version 5:

In order to mitigate any concerns about CTE/CTI:
a) vertical scans instead of horizontal, and = 90.3 degrees to provide 1 pixel shift laterally during a trail of 190 pixels.
b) flash-12 for some of the exposures (the reversed scans on UVIS2)

So the pattern for each visit is a 1-orbit layout planned as follows:

Target = GD153 or GRW+70 (same for either one)

Chip = UVIS2
For filters = F218W thru F814W do begin
Forward scan, no flash
Reverse scan, flash-12

Chip = UVIS1

For filters = F218W thru F814W do begin

no flash

If filter = 218, 275, 438, or 814 then forward scan else reverse scan

Visit

Proposal 14878, GD153 experimental (01), completed Wed Feb 08 02:04:16 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 10-NOV-2016:00:00:00 AND 16-NOV-2016:00:00:00; BETWEEN 05-DEC-2016:00:00:00 AND 16-DEC-2016:00:00:00

Comments: Version 4.1 revision: Visit 01 scheduled in between 05-Dec-2016 and 16-Dec-2016 (was 10-Dec-2016 to 16-Dec-2016 in version 4 but that wouldn't schedule easily).

Diagnostics

(F218W UVIS2 I (01.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S (01.002)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F606W UVIS2 I (01.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F606W UVIS2 S (01.004)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F606W UVIS2 S (01.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W UVIS2 I (01.006)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F225W UVIS2 S (01.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W UVIS2 I (01.008)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F275W UVIS2 S (01.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F814W UVIS2 I (01.010)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F814W UVIS2 S (01.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 I (01.012)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S (01.013)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 3x3 arcsec (01.014)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 0.5x0.5 arcsec (01.015)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 1.8x1.5 arcsec (01.016)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 6x6 arcsec (01.017)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 6x12 arcsec (01.018)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 6x17 arcsec (01.019)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

(F218W UVIS2 S 6x17 arcsec (01.020)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GD153	RA: 12 57 2.3275 (194.2596979d)	Proper Motion RA: -46 mas/yr	V=13.4	Reference Frame: ICRS
		Dec: +22 01 52.65 (22.03129d)	Proper Motion Dec: -204 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

Comments: Values for proper motions are from proposal 14382.
Values for (RA,DEC) are from GAIA release 1 positions for epoch 2015 (propagated back to epoch 2000) using proper motions listed above.
Everything is equinox 2000 (ICRS).
The uncertainties in (RA,DEC) are from proposal 14382 and are probably much larger than the actual uncertainties because GAIA's position is accurate to 0.5 mas.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01); Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs); *[==>]*	***[1]***

Comments: horizontal scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 20,000 e in a scan at 0.125 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail.

F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 2270 e in a scan at 0.125 arcsec/s and a total of 1.6 million e in the entire trail.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2	F218W UVIS2 S	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01); Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs); *[==>]*	***[1]***

Comments: horizontal multi-line scan

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 10,000 e in a scan at 0.25 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail. This particular scan is expected to have a minimum velocity in the turn around region 5.5 times less than the straight aways, so 55,000 e/pixel. That is approaching saturation (63-72).

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3	F606W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01); Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs); *[==>]*	***[1]***

Comments: horizontal scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 20,000 e in a scan at 0.125 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail.

F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 2270 e in a scan at 0.125 arcsec/s and a total of 1.6 million e in the entire trail.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4	F606W UVIS2 S	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01); Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs); *[==>]*	***[1]***

Comments: horizontal multi-line scan

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 10,000 e in a scan at 0.25 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail. This particular scan is expected to have a minimum velocity in the turn around region 5.5 times less than the straight aways, so 55,000 e/pixel. That is approaching saturation (63-72).

5	F606W UVI (2) GD153 S2 S	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.5 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal multi-line scan

This is same as the previous one except the scan line separation is 0.50 arc sec, not 0.25 arcsec. This reduces the maximum flux (by a factor of 2) during the turn around in order to have more margin from saturation.

6	F225W UVI (2) GD153 S2 I	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 20,000 e in a scan at 0.125 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail.

F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 2270 e in a scan at 0.125 arcsec/s and a total of 1.6 million e in the entire trail.

7	F225W UVI (2) GD153 S2 S	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal multi-line scan

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 10,000 e in a scan at 0.25 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail. This particular scan is expected to have a minimum velocity in the turn around region 5.5 times less than the straight aways, so 55,000 e/pixel. That is approaching saturation (63-72).

8	F275W UVI (2) GD153 S2 I	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 20,000 e in a scan at 0.125 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail.

F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 2270 e in a scan at 0.125 arcsec/s and a total of 1.6 million e in the entire trail.

9	F275W UVI (2) GD153 S2 S	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal multi-line scan

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 10,000 e in a scan at 0.25 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail. This particular scan is expected to have a minimum velocity in the turn around region 5.5 times less than the straight aways, so 55,000 e/pixel. That is approaching saturation (63-72).

10	F814W UVI (2) GD153 S2 I	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal scan with exactly 1 pixel of phase diversity perpendicular to the direction of the scan.

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 20,000 e in a scan at 0.125 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail.

F218W is the least sensitive of the filters we will employ for the monitor, so all other images will have more counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 2270 e in a scan at 0.125 arcsec/s and a total of 1.6 million e in the entire trail.

11	F814W UVI (2) GD153 S2 S	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: horizontal multi-line scan

F606W is the most sensitive of the filters we will employ for the monitor, so all other images will have fewer counts per pixel if we keep scan rate etc the same. The ETC predicts peak pixel = 10,000 e in a scan at 0.25 arcsec/s and 60-s exposure yields a total of 11 million e in the entire trail. This particular scan is expected to have a minimum velocity in the turn around region 5.5 times less than the straight aways, so 55,000 e/pixel. That is approaching saturation (63-72).

12	F218W UVI (2) GD153 S2 I	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG -3.75,0; SPATIAL SCAN 0.125,4.073 Degrees,Forward	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: This exposure replicates an earlier exposure to validate repeatability of single-line scans, in trajectory, photometry, and timing with shutter open/close.

13	F218W UVI (2) GD153 S2 S	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.25 Arcsec,6	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Comments: This exposure and the ones following experiment with various S-shaped scans in order to validate our simulations of trajectories. We use F218W simply because we know it has the most margin from saturation.

This exposure replicates an earlier exposure to validate repeatability of S-shaped scans, in trajectory, photometry, and timing with shutter open/close.

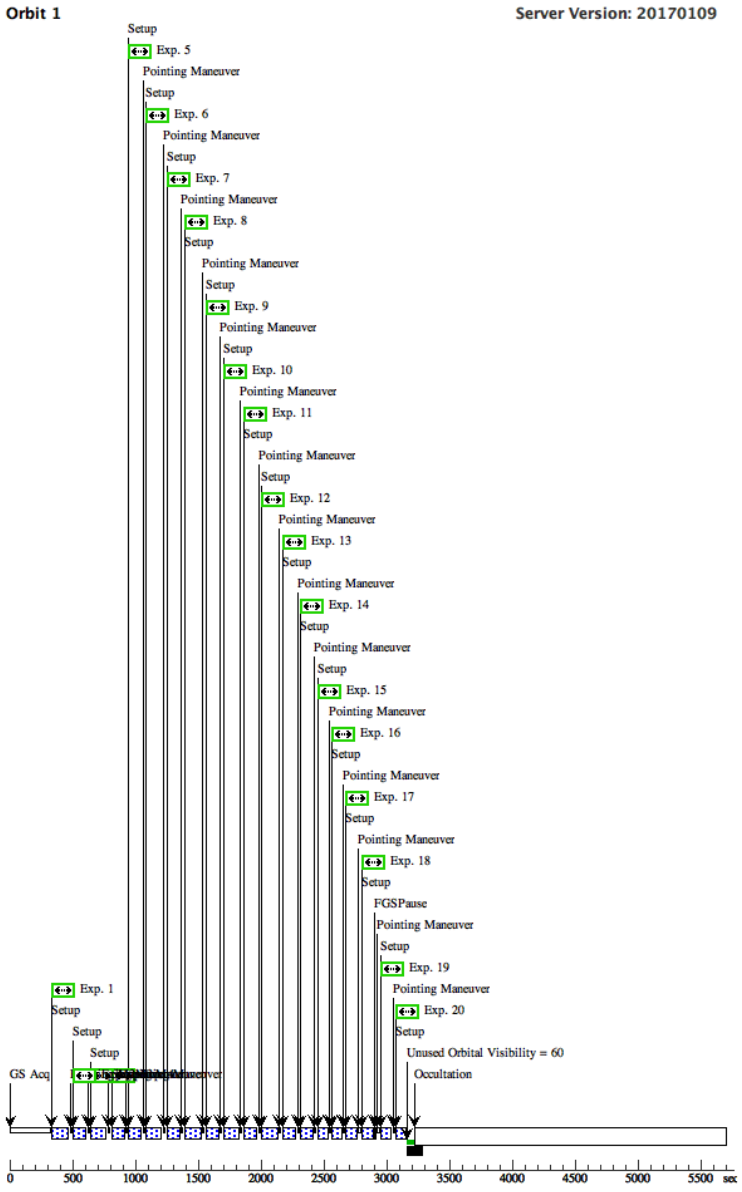
14	F218W UVIS2 S 3x3 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.2,3.77 Degrees,Forward,1.0 Arcsec,4	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
Comments: experimental larger region multi-line scan								
15	F218W UVIS2 S 0.5x0.5 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.08,3.77 Degrees,Forward,0.17 Arcsec,4	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	34 Secs (34 Secs) *[==>]*	***[1]***
Comments: experimental smaller region multi-line scan								
16	F218W UVIS2 S 1.8x1.5 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.25,3.77 Degrees,Forward,0.5 Arcsec,4	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	34 Secs (34 Secs) *[==>]*	***[1]***
Comments: experimental larger region multi-line scan								
17	F218W UVIS2 S 6x6 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.5,3.77 Degrees,Forward,3.0 Arcsec,3	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	45 Secs (45 Secs) *[==>]*	***[1]***
Comments: experimental larger region, faster multi-line scan								
18	F218W UVIS2 S 6x12 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	SPATIAL SCAN 0.5,3.77 Degrees,Forward,3.0 Arcsec,3	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	45 Secs (45 Secs) *[==>]*	***[1]***
Comments: experimental larger region, faster multi-line scan								
19	F218W UVIS2 S 6x17 arcsec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG -8.5,null; SPATIAL SCAN 2.0,3.77 Degrees,Forward,6.0 Arcsec,2; EXP PCS MODE GYRO	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	31 Secs (31 Secs) *[==>]*	***[1]***
Comments: experimental larger region, faster multi-line scan								

Multi-line scans faster than 1"/s (like this one) cannot be on FGS control but instead must use Gyro control, in "implementation requirements" on next page of APT display.

20	F218W UVI S2 S 6x17 ar csec (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=B	POS TARG -8.5,null ; SPATIAL SCAN 2.0 ,3.77 Degrees,Forward,6.0 Arcsec,2; EXP PCS MODE GYRO	Sequence 1-20 Non-Int in GD153 experimental (01) Same Obset in Sequence 1-20 Non-Int in GD153 experimental (01)	31 Secs (31 Secs) *[==>]*	***[1]***

Comments: Same, but Blade=B

Orbit Structure



Visit

Proposal 14878, GD153 (02), implementation Wed Feb 08 02:04:17 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 09-FEB-2017:00:00:00 AND 16-FEB-2017:00:00:00; BETWEEN 11-MAR-2017:00:00:00 AND 18-MAR-2017:00:00:00

Diagnostics

(GD153 (02)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GD153 (02)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GD153 (02)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
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(F218W UVIS2 I (02.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS2 I (02.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS2 I (02.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS2 I (02.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS2 I (02.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS2 I (02.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS2 I (02.013)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F218W UVIS1 I (02.015)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS1 I (02.016)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS1 I (02.017)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS1 I (02.018)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
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(F606W UVIS1 I (02.020)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS1 I (02.021)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GD153	RA: 12 57 2.3275 (194.2596979d)	Proper Motion RA: -46 mas/yr	V=13.4	Reference Frame: ICRS
		Dec: +22 01 52.65 (22.03129d)	Proper Motion Dec: -204 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

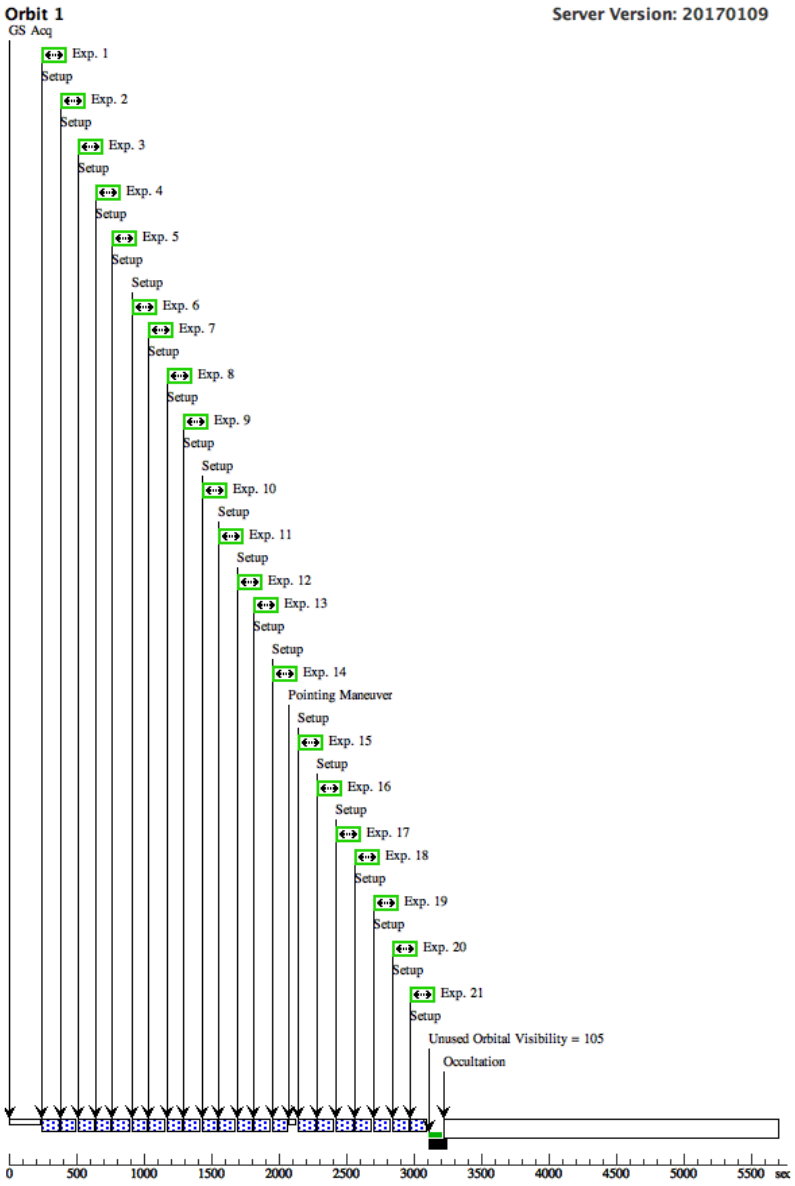
Comments: Values for proper motions are from proposal 14382.
Values for (RA,DEC) are from GAIA release 1 positions for epoch 2015 (propagated back to epoch 2000) using proper motions listed above.
Everything is equinox 2000 (ICRS).
The uncertainties in (RA,DEC) are from proposal 14382 and are probably much larger than the actual uncertainties because GAIA's position is accurate to 0.5 mas.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward; GS ACQ SCENARIO SINGLE	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
2	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
3	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
4	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
5	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
6	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
7	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
8	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
9	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]
10	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) [==>]	[1]

	11	F606W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	12	F606W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	13	F814W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	14	F814W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	15	F218W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	16	F225W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	17	F275W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	18	F336W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	19	F438W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	20	F606W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	21	F814W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (02) Same Obset in Sequence 1-21 Non-Int in GD153 (02)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 14878, GD153 (03), implementation Wed Feb 08 02:04:17 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 09-APR-2017:00:00:00 AND 16-APR-2017:00:00:00; BETWEEN 08-MAY-2017:00:00:00 AND 15-MAY-2017:00:00:00

Diagnostics

(GD153 (03)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
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Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GD153	RA: 12 57 2.3275 (194.2596979d)	Proper Motion RA: -46 mas/yr	V=13.4	Reference Frame: ICRS
		Dec: +22 01 52.65 (22.03129d)	Proper Motion Dec: -204 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

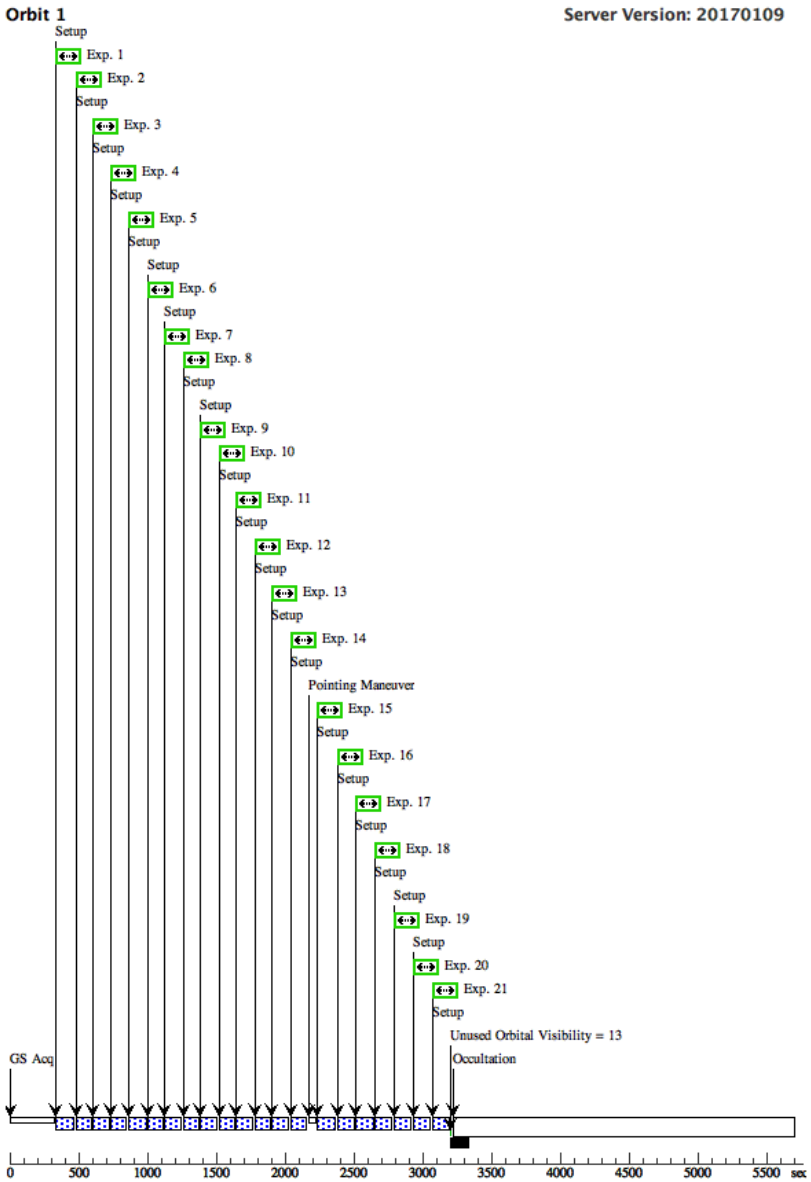
Comments: Values for proper motions are from proposal 14382.
Values for (RA,DEC) are from GAIA release 1 positions for epoch 2015 (propagated back to epoch 2000) using proper motions listed above.
Everything is equinox 2000 (ICRS).
The uncertainties in (RA,DEC) are from proposal 14382 and are probably much larger than the actual uncertainties because GAIA's position is accurate to 0.5 mas.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward; GS ACQ SCENARIO BASE1B3	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
2	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
3	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
4	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
5	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
6	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
7	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
8	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
9	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]
10	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) [==>]	[1]

	11	F606W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	12	F606W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	13	F814W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	14	F814W UVI S2 I (2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	15	F218W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	16	F225W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	17	F275W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	18	F336W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	19	F438W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	20	F606W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	21	F814W UVI S1 I (2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (03) Same Obset in Sequence 1-21 Non-Int in GD153 (03)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Orbit Structure



Proposal 14878 - GD153 (04) - WFC3 UVIS contamination using spatial scans

Visit

Proposal 14878, GD153 (04), implementation Wed Feb 08 02:04:17 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 07-JUL-2017:00:00:00 AND 14-JUL-2017:00:00:00; BETWEEN 05-AUG-2017:00:00:00 AND 12-AUG-2017:00:00:00

Diagnostics

(GD153 (04)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GD153 (04)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GD153 (04)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
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(GD153 (04)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(F218W UVIS2 I (04.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS2 I (04.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS2 I (04.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS2 I (04.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS2 I (04.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS2 I (04.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS2 I (04.013)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F218W UVIS1 I (04.015)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS1 I (04.016)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS1 I (04.017)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS1 I (04.018)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS1 I (04.019)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS1 I (04.020)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS1 I (04.021)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GD153	RA: 12 57 2.3275 (194.2596979d)	Proper Motion RA: -46 mas/yr	V=13.4	Reference Frame: ICRS
		Dec: +22 01 52.65 (22.03129d)	Proper Motion Dec: -204 mas/yr		
		Equinox: J2000	Epoch of Position: 2000		

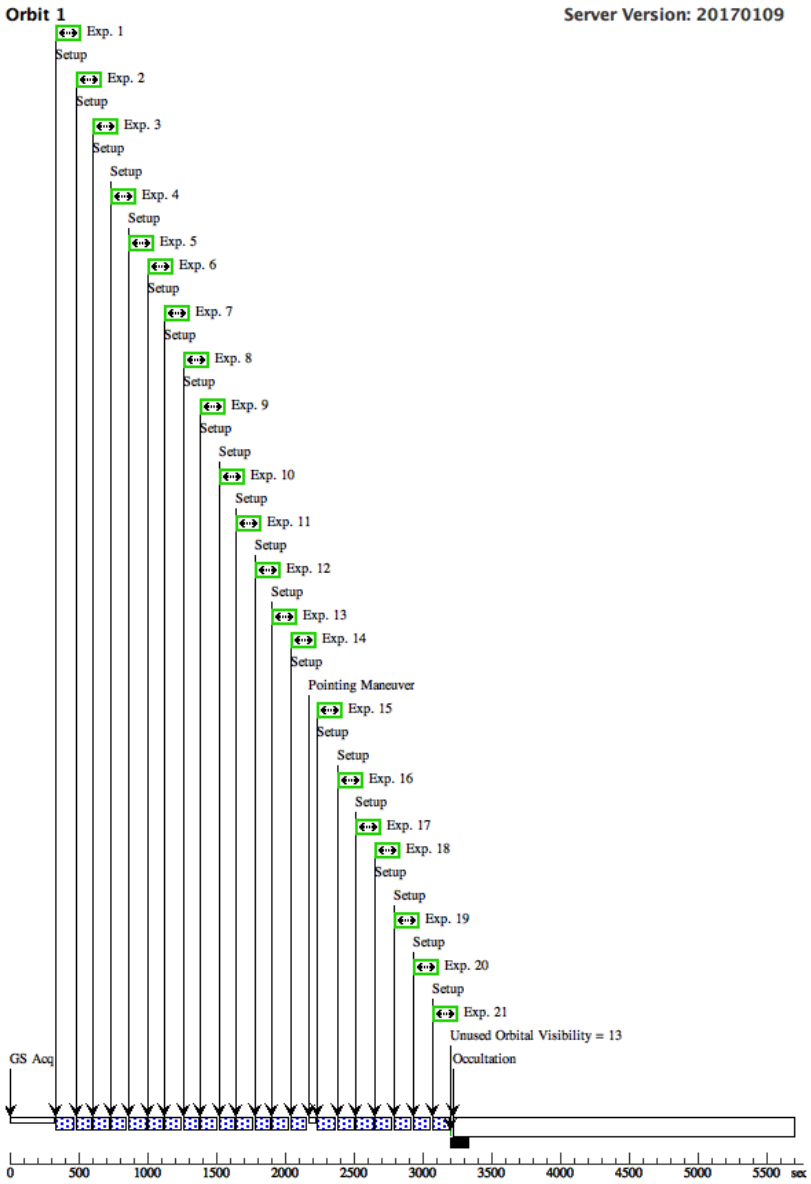
Comments: Values for proper motions are from proposal 14382.
Values for (RA,DEC) are from GAIA release 1 positions for epoch 2015 (propagated back to epoch 2000) using proper motions listed above.
Everything is equinox 2000 (ICRS).
The uncertainties in (RA,DEC) are from proposal 14382 and are probably much larger than the actual uncertainties because GAIA's position is accurate to 0.5 mas.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
2	F218W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
3	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
4	F225W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
5	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
6	F275W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
7	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
8	F336W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
9	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
10	F438W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*
11	F606W UVIS2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	*[1]*

	12	F606W UVI S2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	13	F814W UVI S2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	14	F814W UVI S2 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	15	F218W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	16	F225W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	17	F275W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	18	F336W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	19	F438W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	20	F606W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	21	F814W UVI S1 I	(2) GD153	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GD153 (04) Same Obset in Sequence 1-21 Non-Int in GD153 (04)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 14878, GRW+70 (11), implementation

Wed Feb 08 02:04:17 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 01-MAR-2017:00:00:00 AND 11-MAR-2017:00:00:00

Diagnostics

(GRW+70 (11)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (11)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (11)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
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(GRW+70 (11)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(F218W UVIS2 I (11.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS2 I (11.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS2 I (11.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS2 I (11.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS2 I (11.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS2 I (11.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS2 I (11.013)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F218W UVIS1 I (11.015)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS1 I (11.016)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS1 I (11.017)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS1 I (11.018)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
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(F606W UVIS1 I (11.020)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS1 I (11.021)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRW+70D5824 Alt Name1: PRIMARY	RA: 13 38 51.1700 (204.7132083d) Dec: +70 17 7.85 (70.28551d) Equinox: J2000	Proper Motion RA: -0.0798 sec of time/yr Proper Motion Dec: -0.0262 arcsec/yr Epoch of Position: 1991.25	V=12.77 B-V = -9.0e-2	Reference Frame: WFPC2 OBSERVATIONS

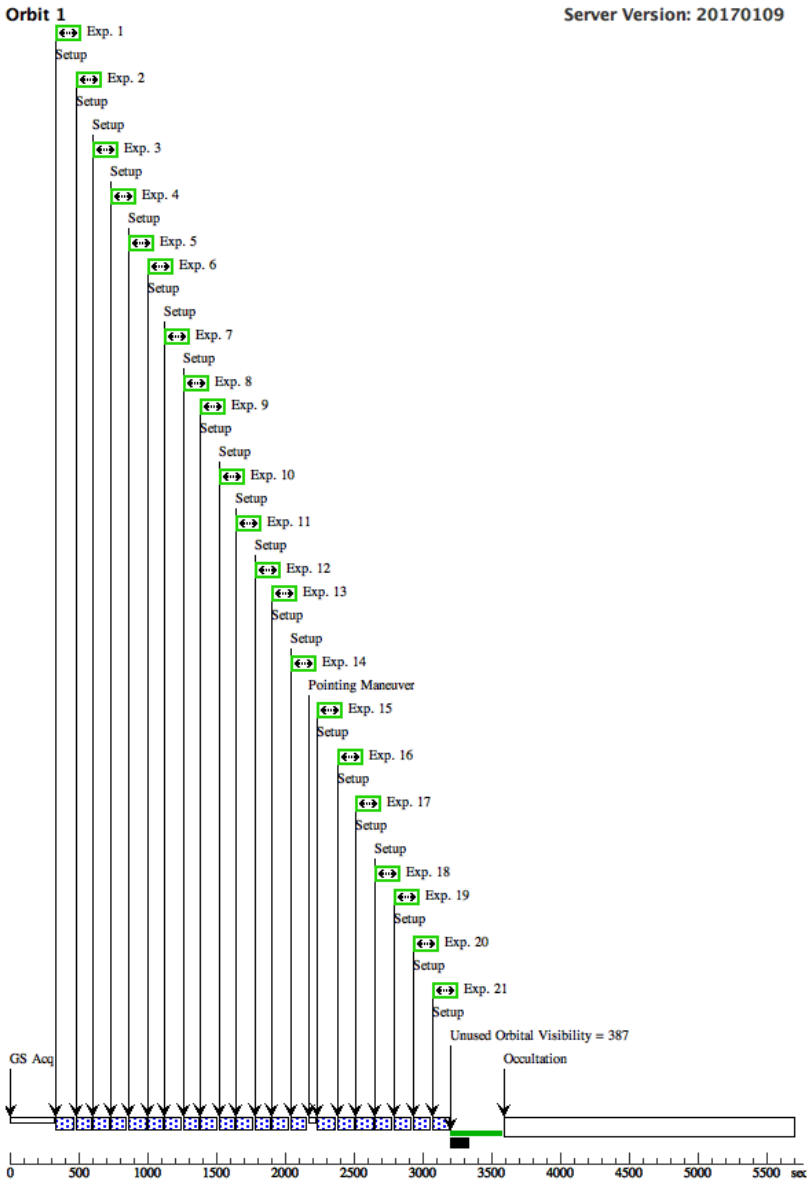
Comments: Values from proposal 14382. These could not be updated with GAIA data release 1 because we did not find this star's data in that release.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
2	F218W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
3	F225W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
4	F225W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
5	F275W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
6	F275W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
7	F336W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
8	F336W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
9	F438W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
10	F438W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]
11	F606W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) [==>]	[1]

	12	F606W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	13	F814W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	14	F814W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	15	F218W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	16	F225W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	17	F275W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	18	F336W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	19	F438W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	20	F606W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	21	F814W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (11) Same Obset in Sequence 1-21 Non-Int in GRW+70 (11)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 14878, GRW+70 (12), implementation Wed Feb 08 02:04:17 GMT 2017

Diagnostic Status: Warning

Scientific Instruments: WFC3/UVIS

Special Requirements: BETWEEN 01-SEP-2017:00:00:00 AND 11-SEP-2017:00:00:00

Diagnostics

(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
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(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(GRW+70 (12)) Warning (Orbit Planner): MERGING RULE VIOLATED DURING AUTOMATIC MERGING
(F218W UVIS2 I (12.001)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS2 I (12.003)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS2 I (12.005)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS2 I (12.007)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS2 I (12.009)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS2 I (12.011)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS2 I (12.013)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F218W UVIS1 I (12.015)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F225W UVIS1 I (12.016)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F275W UVIS1 I (12.017)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F336W UVIS1 I (12.018)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F438W UVIS1 I (12.019)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F606W UVIS1 I (12.020)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser
(F814W UVIS1 I (12.021)) Warning (Form): FLASH level may be too low for this exposure or a short subexposure. See extended explanation in the diagnostic browser

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRW+70D5824 Alt Name1: PRIMARY	RA: 13 38 51.1700 (204.7132083d) Dec: +70 17 7.85 (70.28551d) Equinox: J2000	Proper Motion RA: -0.0798 sec of time/yr Proper Motion Dec: -0.0262 arcsec/yr Epoch of Position: 1991.25	V=12.77 B-V = -9.0e-2	Reference Frame: WFPC2 OBSERVATIONS

Comments: Values from proposal 14382. These could not be updated with GAIA data release 1 because we did not find this star's data in that release.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	F218W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
2	F218W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F218W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
3	F225W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
4	F225W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F225W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
5	F275W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
6	F275W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F275W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
7	F336W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
8	F336W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F336W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
9	F438W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
10	F438W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F438W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]
11	F606W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) [==>]	[1]

	12	F606W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F606W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	13	F814W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	14	F814W UVIS2 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS2-C512C-SUB	F814W	CR-SPLIT=NO; BLADE=A; FLASH=12	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	15	F218W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F218W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	16	F225W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F225W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	17	F275W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F275W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	18	F336W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F336W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	19	F438W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F438W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	20	F606W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F606W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Reverse	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***
	21	F814W UVIS1 I	(1) GRW+70D5824	WFC3/UVIS, ACCUM, UVIS1-C512A-SUB	F814W	CR-SPLIT=NO; BLADE=A	POS TARG 0,-3.75; SPATIAL SCAN 0.1 25,90.3 Degrees,Forward	Sequence 1-21 Non-Int in GRW+70 (12) Same Obset in Sequence 1-21 Non-Int in GRW+70 (12)	59.9 Secs (59.9 Secs) *[==>]*	***[1]***

Orbit Structure