15675 - A New Approach to Following Transients with HST: Rolling Snapshots

Cycle: 26, Proposal Category: SNAP

(Availability Mode: AVAILABLE)

INVESTIGATORS

Name	*Institution*	*E-Mail*
Dr. Andrew S. Fruchter (PI) (Contact)	**Space Telescope Science Institute**	**fruchter@stsci.edu**
Dr. David Rubin (CoI)	Space Telescope Science Institute	drubin@stsci.edu
Mr. Kishalay De (CoI)	California Institute of Technology	kde@astro.caltech.edu
Dr. Mansi Kasliwal (CoI)	California Institute of Technology	mansi@astro.caltech.edu

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
T1	(12) PLACEHOLDER-TARGET	WFC3/UVIS	1	10-Apr-2019 11:00:46.0	yes
T2	(12) PLACEHOLDER-TARGET	WFC3/UVIS	1	10-Apr-2019 11:00:47.0	yes
3A	(13) AT2019ABN	WFC3/UVIS	1	10-Apr-2019 11:00:47.0	yes
4A	(14) SN2019BKH	WFC3/UVIS	1	10-Apr-2019 11:00:48.0	yes
5A	(15) SN2018IBB	WFC3/UVIS	1	10-Apr-2019 11:00:49.0	yes
5B	(16) SN2018LNB	WFC3/UVIS	1	10-Apr-2019 11:00:50.0	yes
6A	(17) SN2019CMY	WFC3/UVIS	1	10-Apr-2019 11:00:51.0	yes
6B	(15) SN2018IBB	WFC3/UVIS	1	10-Apr-2019 11:00:52.0	yes
7A	(17) SN2019CMY	WFC3/UVIS	1	10-Apr-2019 11:00:52.0	yes
7B	(18) ZTF18ABFCMJW	WFC3/UVIS	1	10-Apr-2019 11:00:53.0	yes
7C	(19) SN2019CVZ	WFC3/UVIS	1	10-Apr-2019 11:00:54.0	yes

11 Total Orbits Used

ABSTRACT

We are now entering an era in which large scale surveys of the sky will discover numerous transients each night. The number of targets that could benefit from HST observations on timescales of less than three weeks will easily exceed the ability of HST to schedule disruptive ToO observations. Here we propose a variant of snapshot scheduling that would allow transients to be observed as soon as 11 days after discovery with little to no additional overhead compared to a standard snapshot program. We call this new observational approach ``Rolling Snapshots." While any one object will have a low probability of being observed in such a program, the large number of transients available will make it possible to build up statistically significant samples, with the the type of transient and exact observation scheme determined by the science under investigation. Here we ask to use rolling snapshots to obtain WFC3 UV grism spectra of a limited sample of Type Ia, Type II and superluminous supernovae discovered by the Zwicky Transient Facility. This program will allow us to verify that Rolling Snapshots are indeed an efficient use of obsevatory resources and will also give a taste of some of the exciting science the community could undertake with Rolling Snapshots.

OBSERVING DESCRIPTION

In this test program, we are using the WFC3/UVIS grism to obtain UV spectra of transients shortly after outburst. We will use the G280Lgrism and take spectra of 500 seconds (split into two dithers). We will also obtain F350LP images of the field. These images have two purposes. First they will serve as the reference image allowing us to set the wavelength scale of the spectra. However, we expect that in over twenty-five percent of our images the first order spectrum of the transient will land on the zeroth order spectrum of the host galaxy in a region where the zeroth order spectrum is bright enough to contribute noticeable contamination. The F350LP filter has very similar throughput to the zeroth order of the G280 grism. We wish to also test whether subtraction of the F350LP image from first order spectrum can be used to reduce this contamination.

We are using a custom 1024x1024 subarray in order to reduce readout overhead and buffer dumps to decrease the total time used. We need a custom subarray as the G280 can only be used with the UVIS aperture.

Visit

Proposal 15675, Visit T1, withdrawn Wed Apr 10 15:00:54 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ON HOLD

Comments: This is for UVIS2, the preferred chip.

On Hold Comments: Template for future visits.

Generic Targets

#	Name	Criteria	Description
(12)	PLACEHOLDER-TARGET	PI activated	SUPERNOVA

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61.22,-76.22		10 Secs (10 Secs) *[==>]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

2		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61.22,-76.22		250 Secs (250 Secs) *[==>]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

3		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-76		250 Secs (250 Secs) *[==>]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

4		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -61,-76		100 Secs (100 Secs) *[==>]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

	5	(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -61.22,-70.22	100 Secs (100 Secs) *[==>]*	*[1]*

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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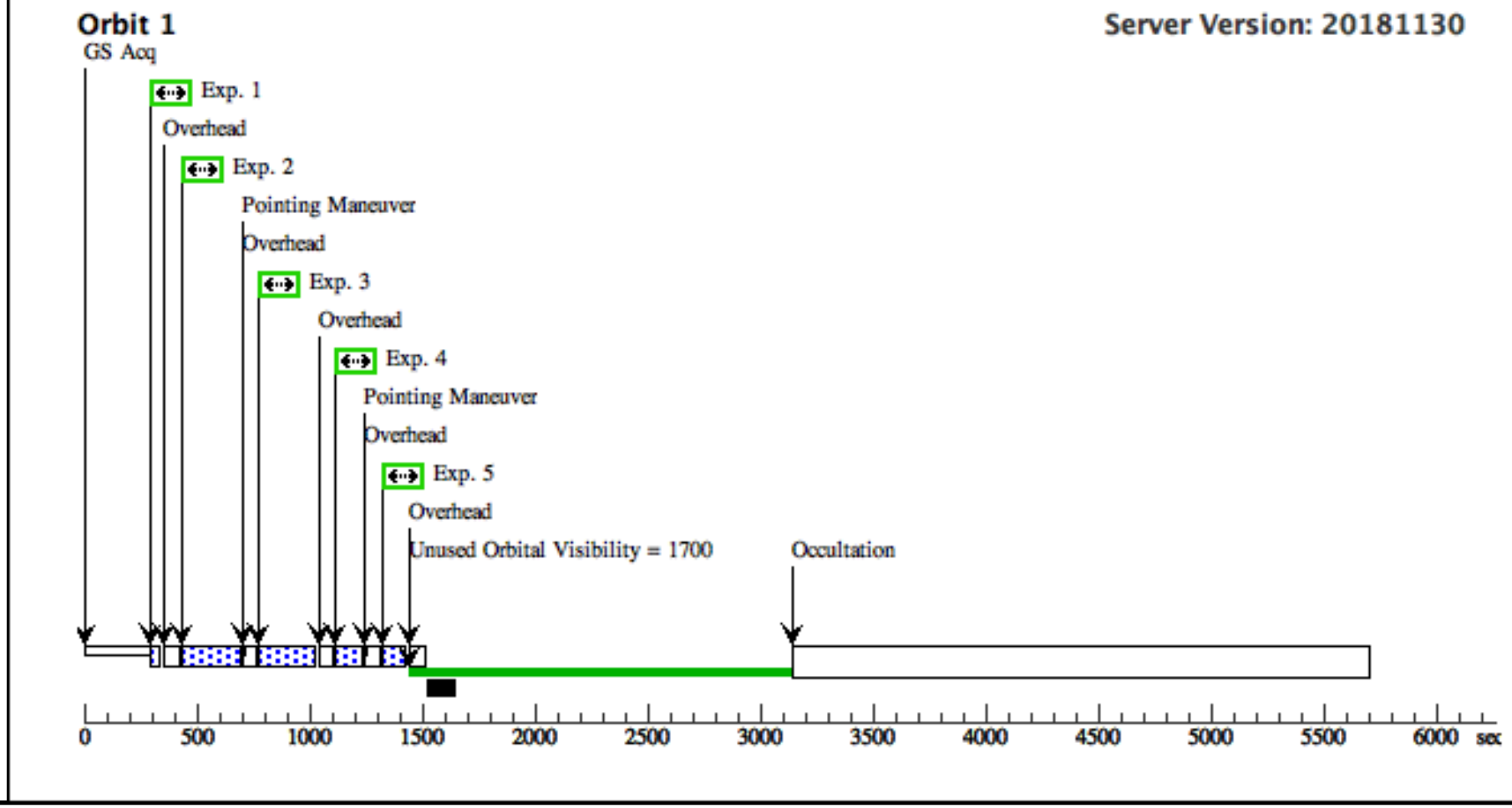
Orbit Structure



Visit

Proposal 15675, Visit T2, withdrawn Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: ON HOLD

Comments: This is for UVIS1, to be used only if UVIS2 won't schedule because of the large POSTARG.

On Hold Comments: Template for future visits.

Generic Targets

#	Name	Criteria	Description
(12)	PLACEHOLDER-TARGET	PI activated	SUPERNOVA

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=1539; FLASH=12	POS TARG -61.22,49.22		10 Secs (10 Secs) *[==>]*	***[1]***

Comments: The nominal position is 512.0, 3581 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, 49".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=1539	POS TARG -61.22,49.22		250 Secs (250 Secs) *[==>]*	***[1]***

Comments: The nominal position is 512.0, 3581 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, 49".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=1539	POS TARG -61,49		250 Secs (250 Secs) *[==>]*	***[1]***

Comments: The nominal position is 512.0, 3581 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, 49".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
4		(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=1539; FLASH=5	POS TARG -61,49		100 Secs (100 Secs) *[==>]*	***[1]***

Comments: The nominal position is 512.0, 3581 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, 49".0. This was slightly refined in Aladin.

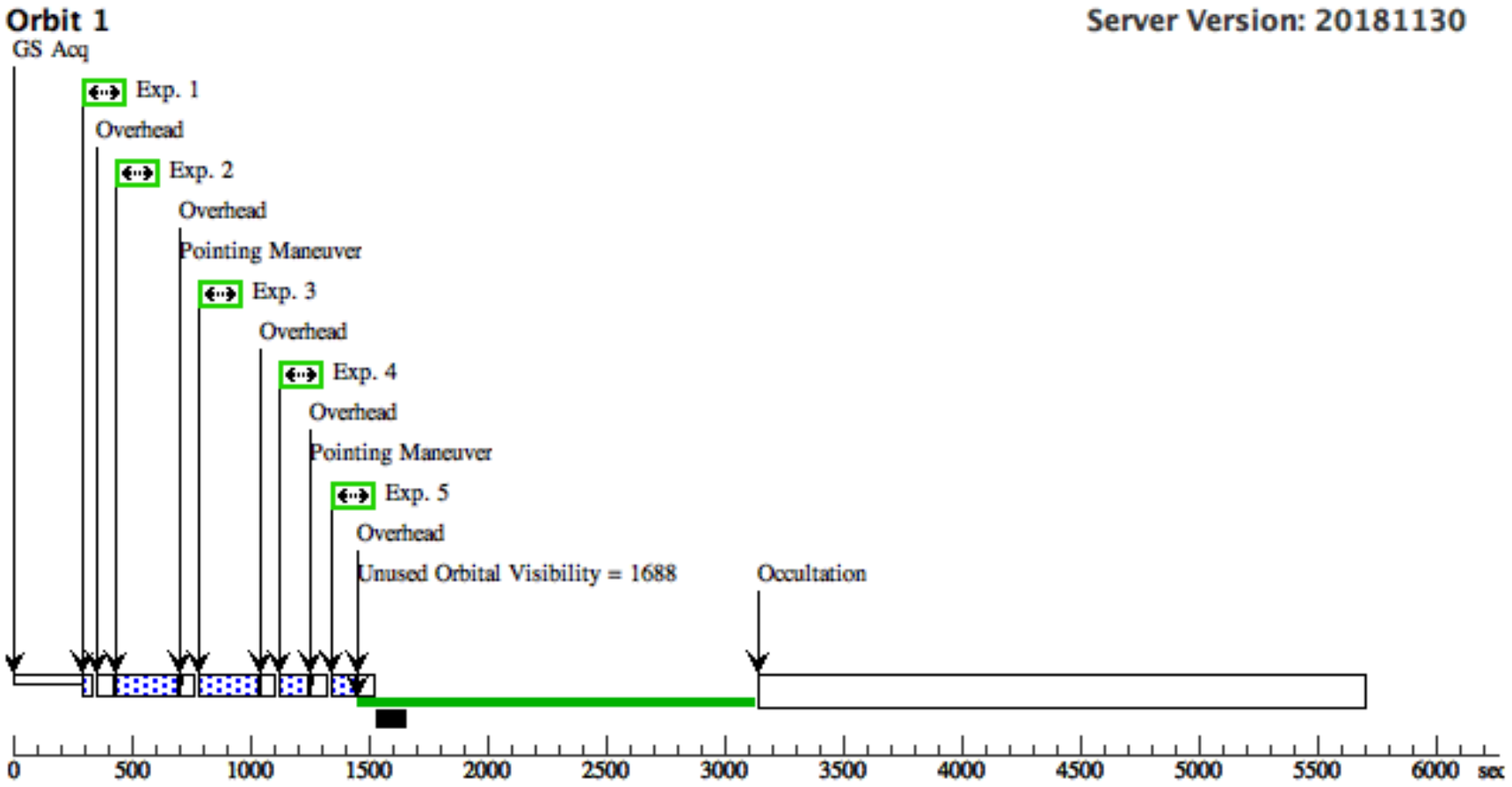
From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

	5	(12) PLACEHOLDER-TARGET	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=1539; FLASH=5	POS TARG -61.22,49.22	100 Secs (100 Secs) *[==>]*	*[1]*

Comments: The nominal position is 512.0, 3581 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, 49".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

Orbit Structure



Visit

Proposal 15675, Visit 3A, completed Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 18-MAR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(13)	AT2019ABN	RA: 13 29 42.4000 (202.4266667d) Dec: +47 11 16.60 (47.18794d) Equinox: J2000		V=18	Reference Frame: ICRS

Comments:
Category=STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(13) AT2019ABN	WFC3/UVIS, ACCUM, UVIS	F275W	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-76	Pattern 1, Exps 1-1 in Visit 3A (1)	200 Secs (400 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(13) AT2019ABN	WFC3/UVIS, ACCUM, UVIS	F336W	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-76	Pattern 1, Exps 2-2 in Visit 3A (1)	150 Secs (300 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

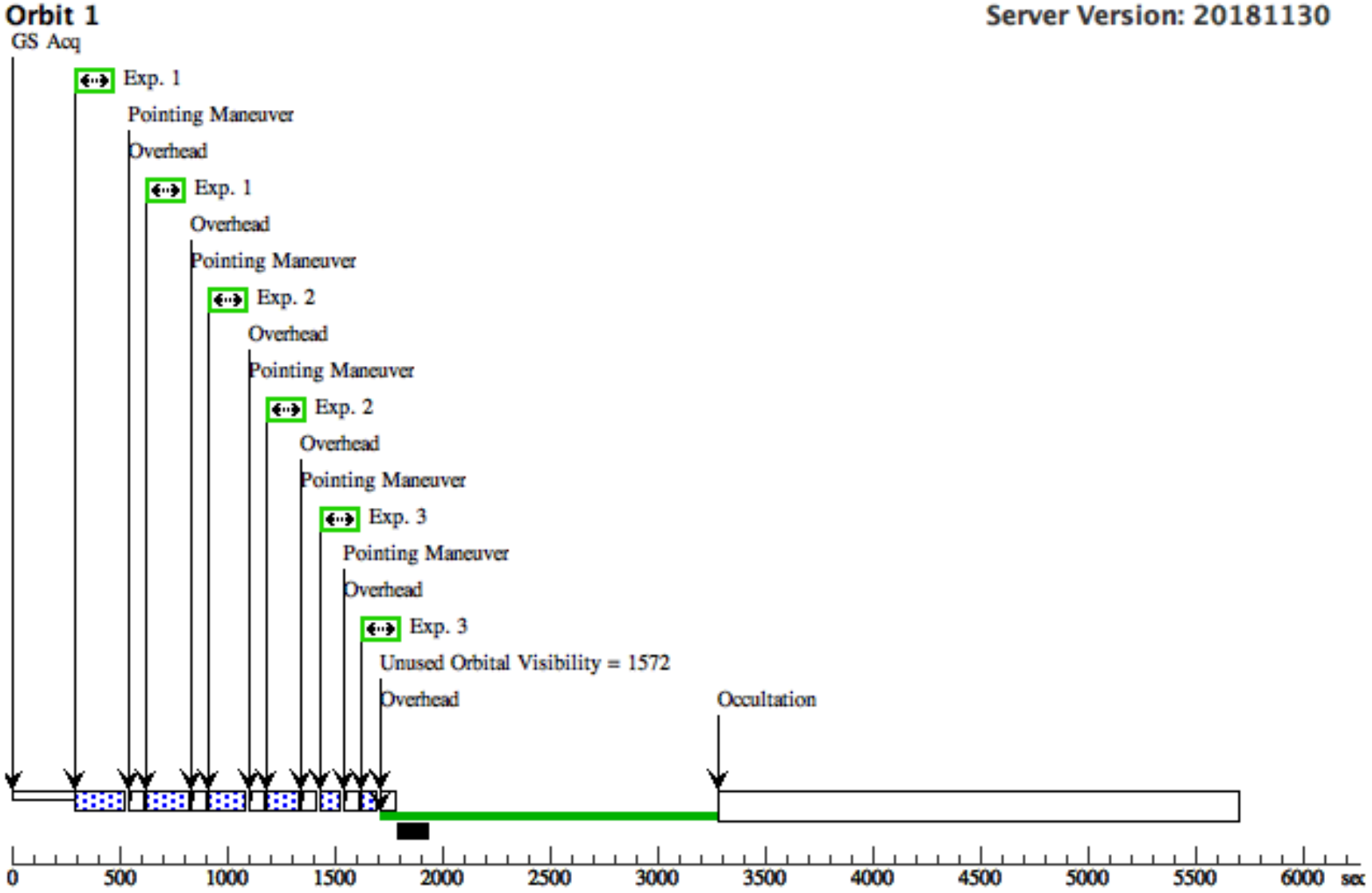
From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(13) AT2019ABN	WFC3/UVIS, ACCUM, UVIS	F814W	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-76	Pattern 1, Exps 3-3 in Visit 3A (1)	75 Secs (150 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

Orbit Structure



Visit

Proposal 15675, Visit 4A, completed Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 25-MAR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(14)	SN2019BKH	RA: 13 08 57.3100 (197.2387917d) Dec: +28 16 51.90 (28.28108d) Equinox: J2000		V=18	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA, SUPERNOVA TYPE IA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(14) SN2019BKH	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61.22,-76.22	Pattern 1, Exps 1-1 in Visit 4A (1)	50 Secs (100 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(14) SN2019BKH	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61.22,-76.22	Pattern 1, Exps 2-2 in Visit 4A (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(14) SN2019BKH	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -61,-76	Pattern 1, Exps 3-3 in Visit 4A (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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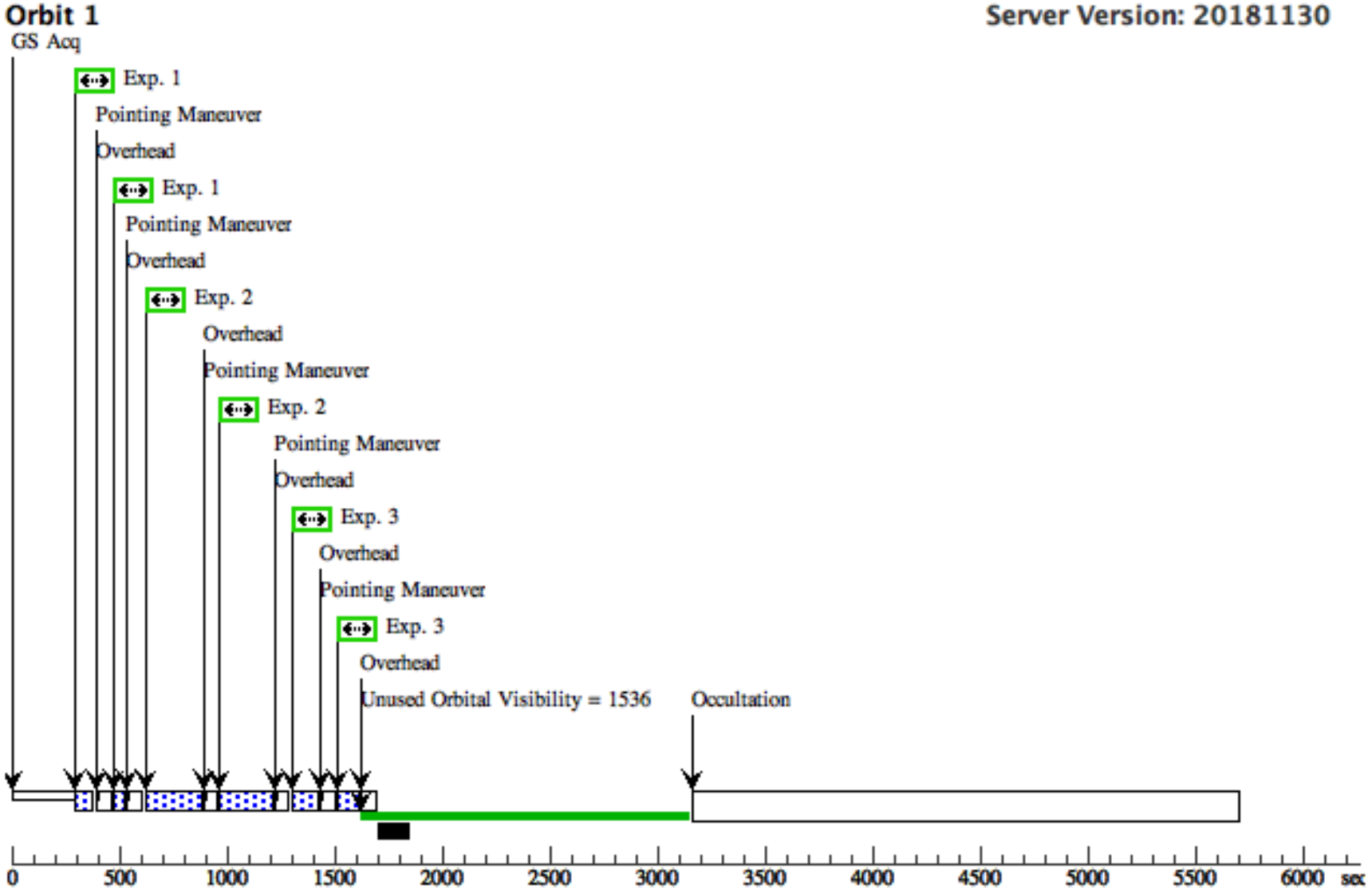
Orbit Structure



Visit

Proposal 15675, Visit 5A, implementation Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 21-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	SN2018IBB	RA: 04 38 56.9300 (69.7372083d) Dec: -20 39 44.20 (-20.66228d) Equinox: J2000		V=20	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61.22,-76.22	Pattern 1, Exps 1-1 in Visit 5A (1)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61.22,-76.22	Pattern 1, Exps 2-2 in Visit 5A (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

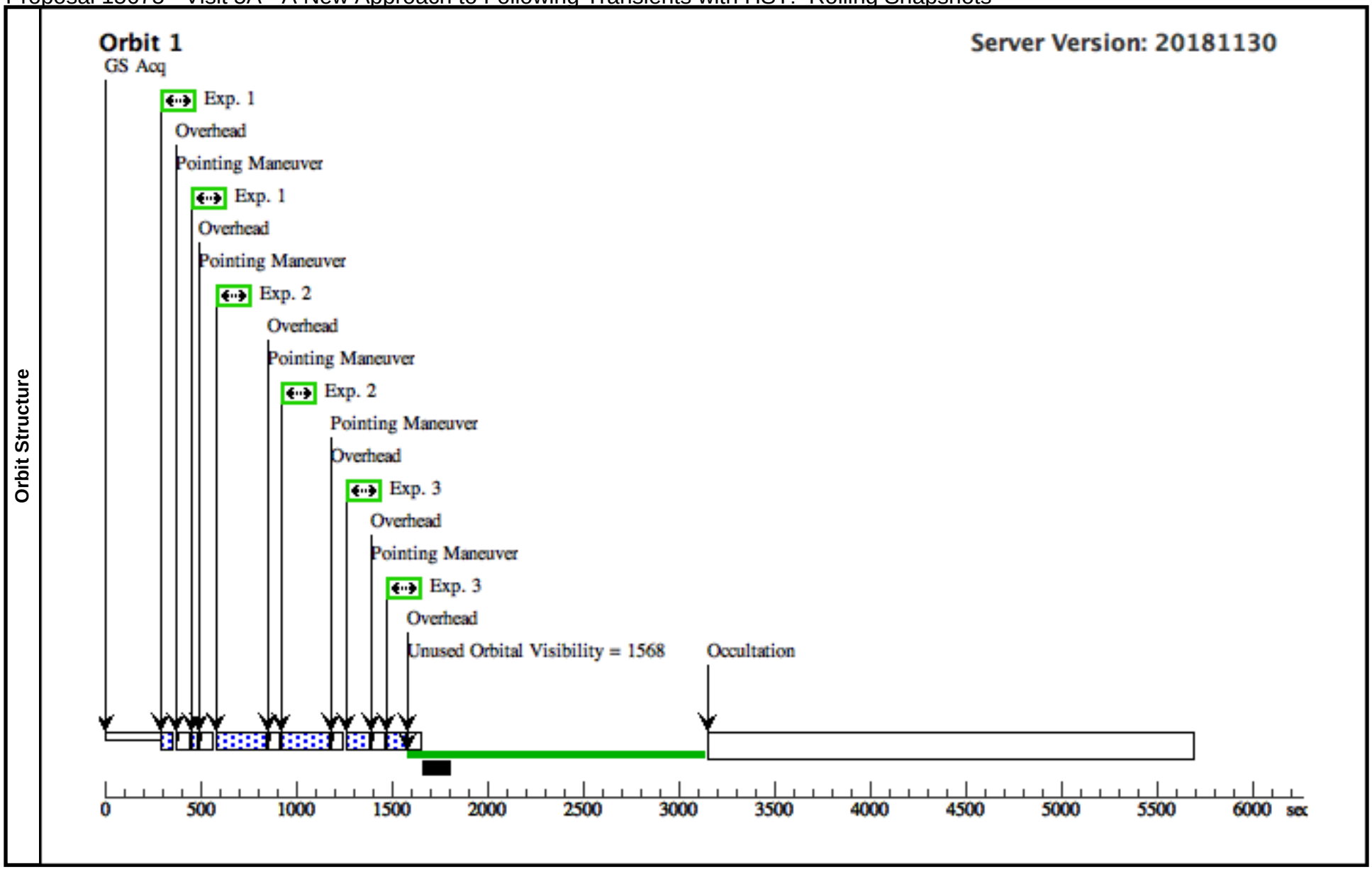
Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -61,-76	Pattern 1, Exps 3-3 in Visit 5A (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 3
Overhead
Pointing Maneuver
Exp. 3
Overhead
Unused Orbital Visibility = 1568
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15675, Visit 5B, implementation Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 07-APR-2019:00:00:00; ON HOLD

Comments: This is for UVIS2, the preferred chip.

On Hold Comments: This SN has been fading rapidly, so we are removing it from observation

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(16)	SN2018LNB	RA: 10 38 32.7500 (159.6364583d) Dec: +48 16 31.00 (48.27528d) Equinox: J2000		V=18.5	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(16) SN2018LNB	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61.22,-76.22	Pattern 1, Exps 1-1 in Visit 5B (1)	15 Secs (30 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(16) SN2018LNB	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61.22,-76.22	Pattern 1, Exps 2-2 in Visit 5B (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

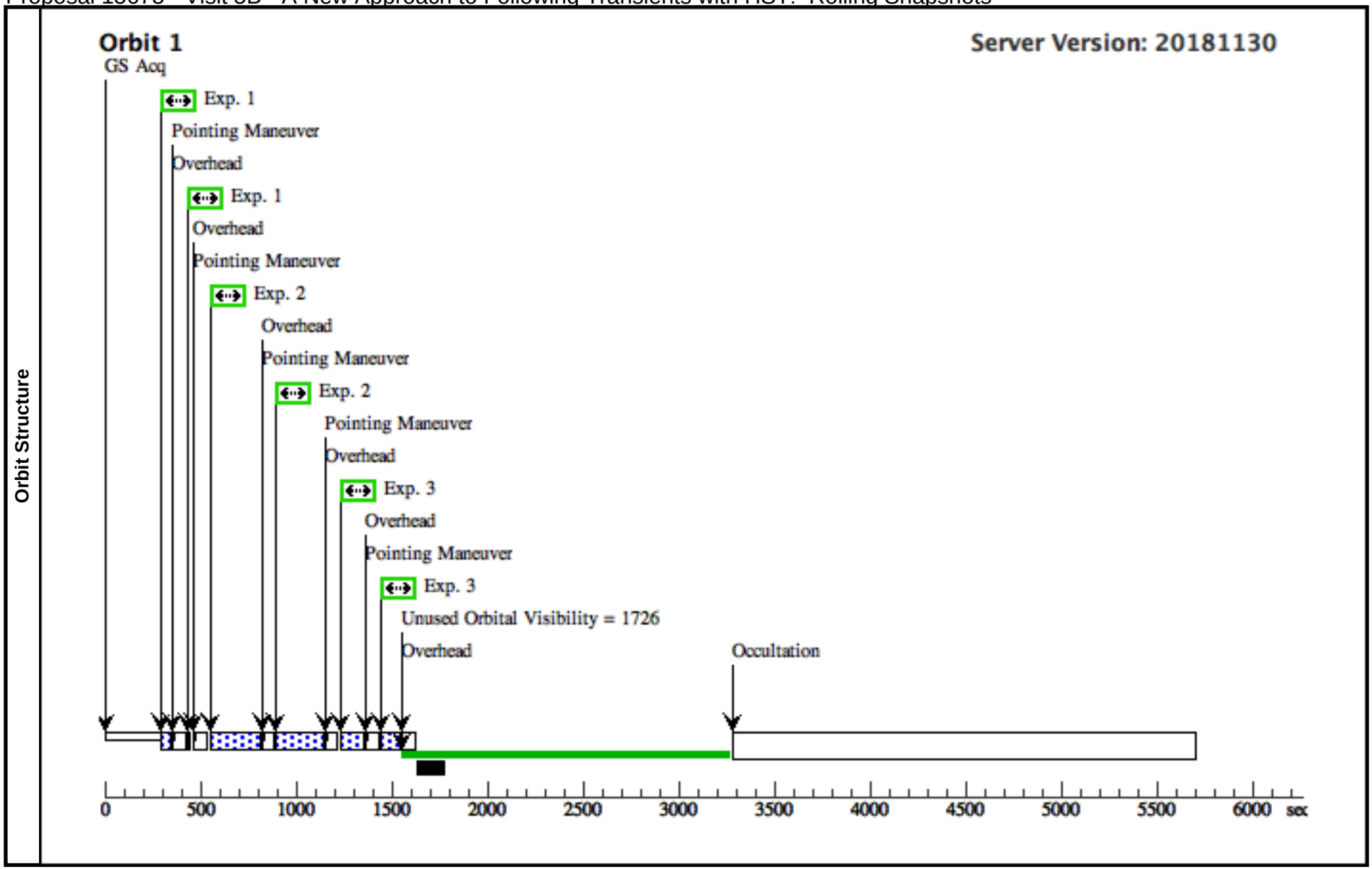
Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(16) SN2018LNB	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -61,-76	Pattern 1, Exps 3-3 in Visit 5B (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 3
Overhead
Pointing Maneuver
Exp. 3
Unused Orbital Visibility = 1726
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15675, Visit 6A, scheduling Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 21-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	SN2019CMY	RA: 15 08 50.8400 (227.2118333d) Dec: +40 42 49.50 (40.71375d) Equinox: J2000		V=18	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-80	Pattern 1, Exps 1-1 in Visit 6A (1)	50 Secs (100 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-80	Pattern 1, Exps 2-2 in Visit 6A (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

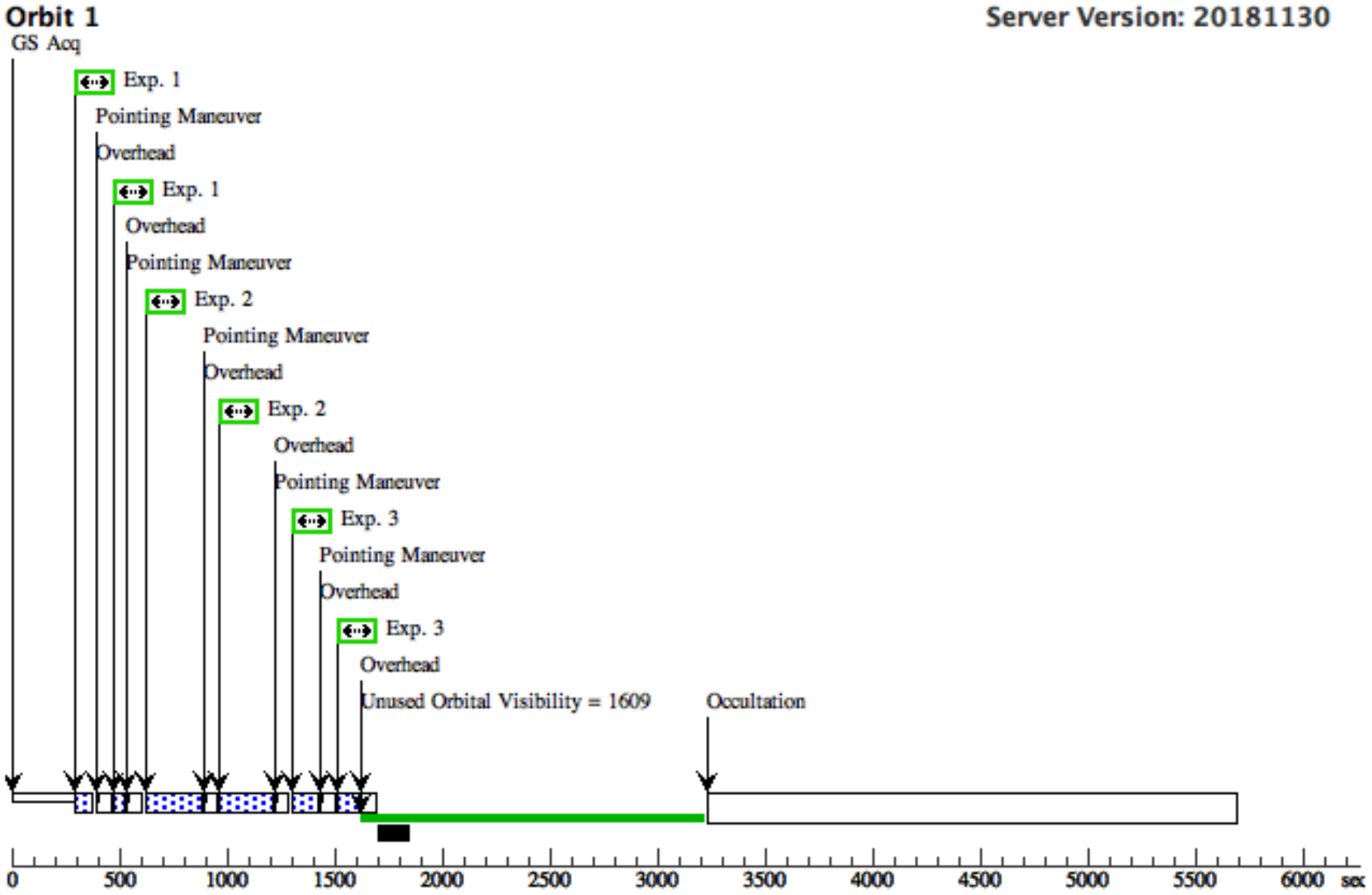
#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -59,-76	Pattern 1, Exps 3-3 in Visit 6A (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -59" -76".

Orbit Structure



Visit

Proposal 15675, Visit 6B, scheduling Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 21-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(15)	SN2018IBB	RA: 04 38 56.9300 (69.7372083d) Dec: -20 39 44.20 (-20.66228d) Equinox: J2000		V=20	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-80	Pattern 1, Exps 1-1 in Visit 6B (1)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-80	Pattern 1, Exps 2-2 in Visit 6B (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

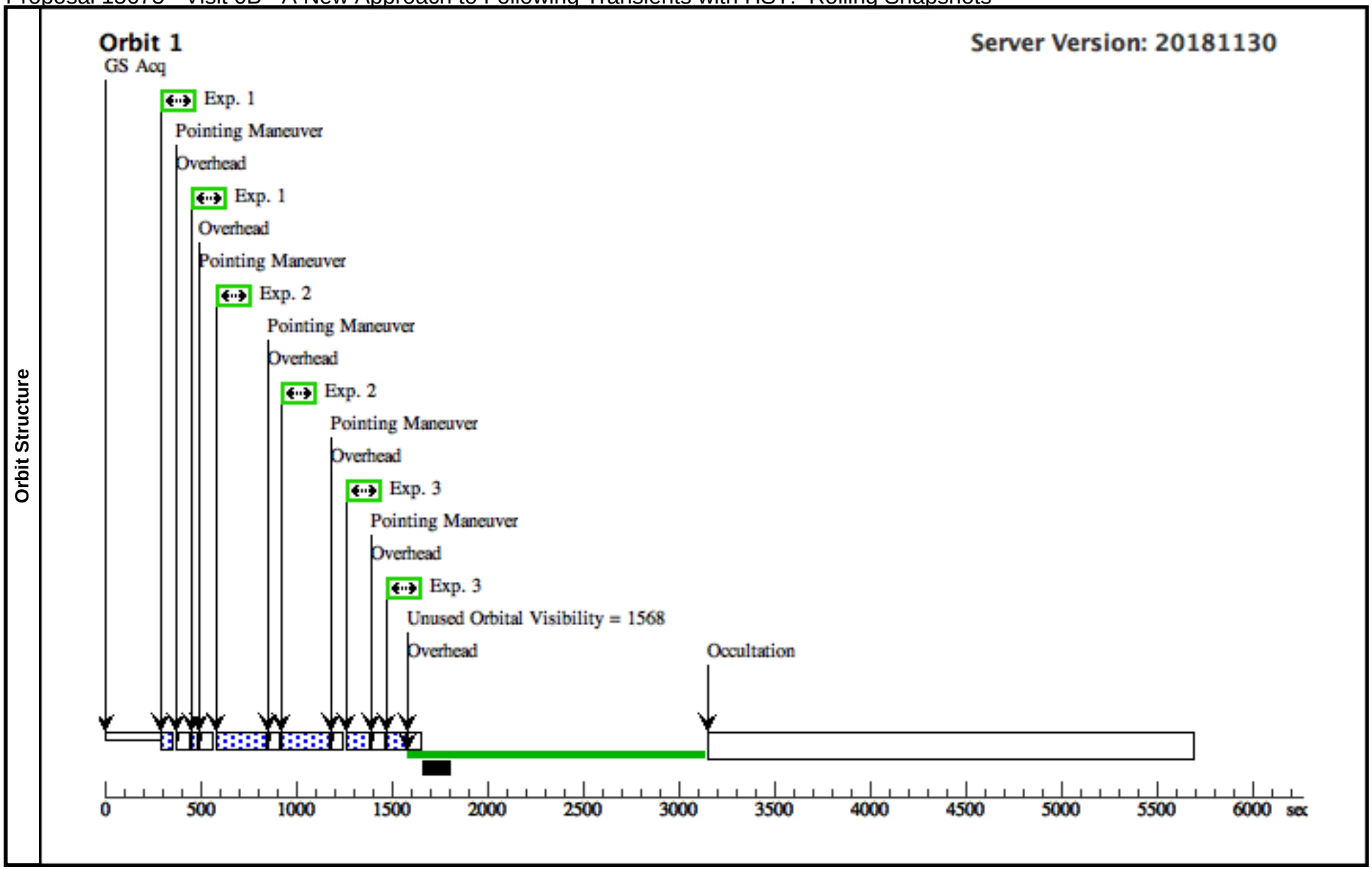
DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(15) SN2018IBB	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -59,-76	Pattern 1, Exps 3-3 in Visit 6B (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -59" -76".


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 3
Pointing Maneuver
Overhead
Exp. 3
Unused Orbital Visibility = 1568
Overhead
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15675, Visit 7A Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 28-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(17)	SN2019CMY	RA: 15 08 50.8400 (227.2118333d) Dec: +40 42 49.50 (40.71375d) Equinox: J2000		V=18	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-80	Pattern 1, Exps 1-1 in Visit 7A (1)	50 Secs (100 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-80	Pattern 1, Exps 2-2 in Visit 7A (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

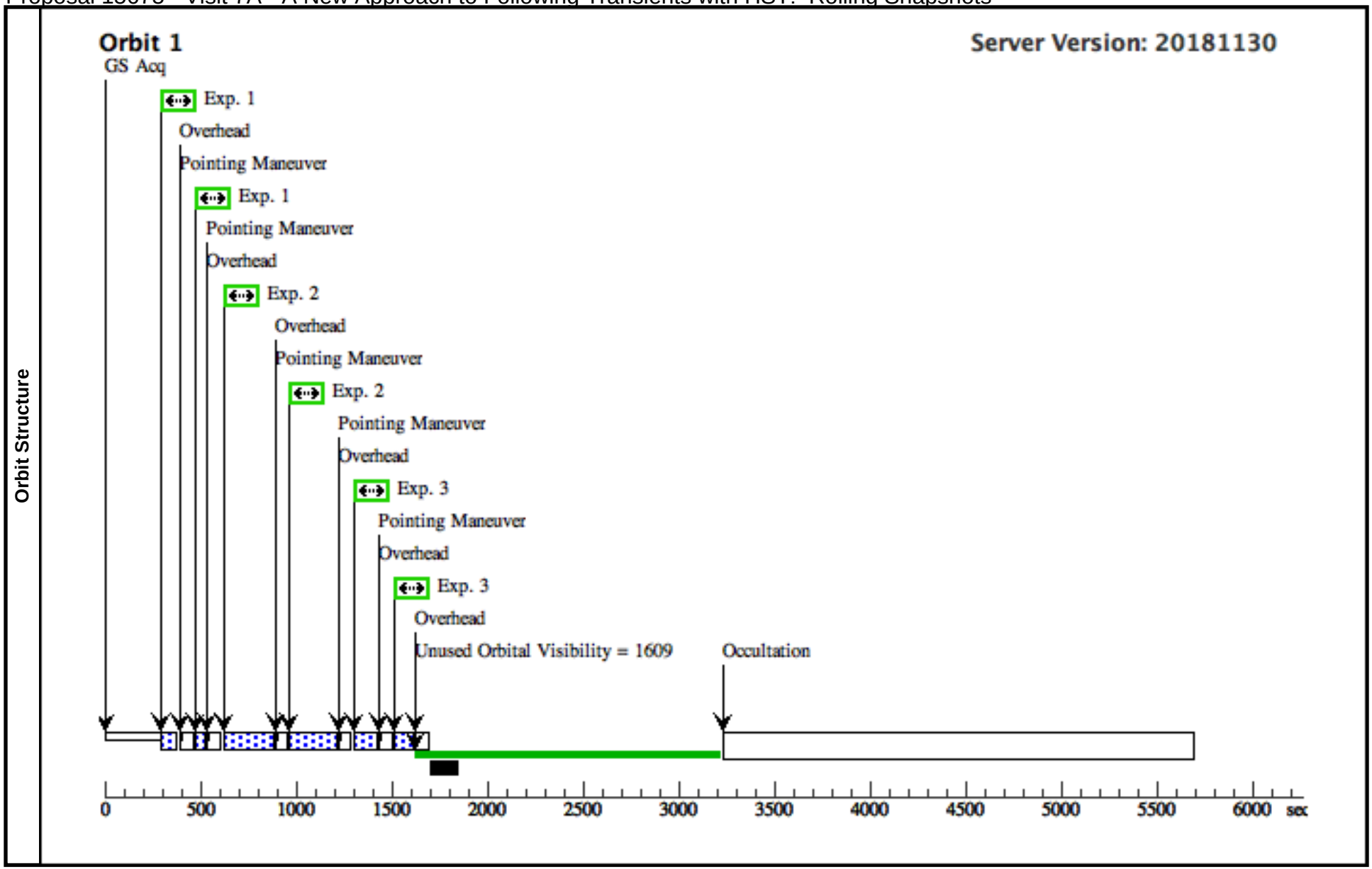
DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(17) SN2019CMY	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -59,-76	Pattern 1, Exps 3-3 in Visit 7A (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -59" -76".


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 2
Pointing Maneuver
Overhead
Exp. 3
Pointing Maneuver
Overhead
Exp. 3
Overhead
Unused Orbital Visibility = 1609
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15675, Visit 7B Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 28-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(18)	ZTF18ABFCMJW	RA: 17 36 46.7419 (264.1947579d) Dec: +50 32 52.17 (50.54782d) Equinox: J2000		V=20	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(18) ZTF18ABFCMJW	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-80	Pattern 1, Exps 1-1 in Visit 7B (1)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(18) ZTF18ABFCMJW	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-80	Pattern 1, Exps 2-2 in Visit 7B (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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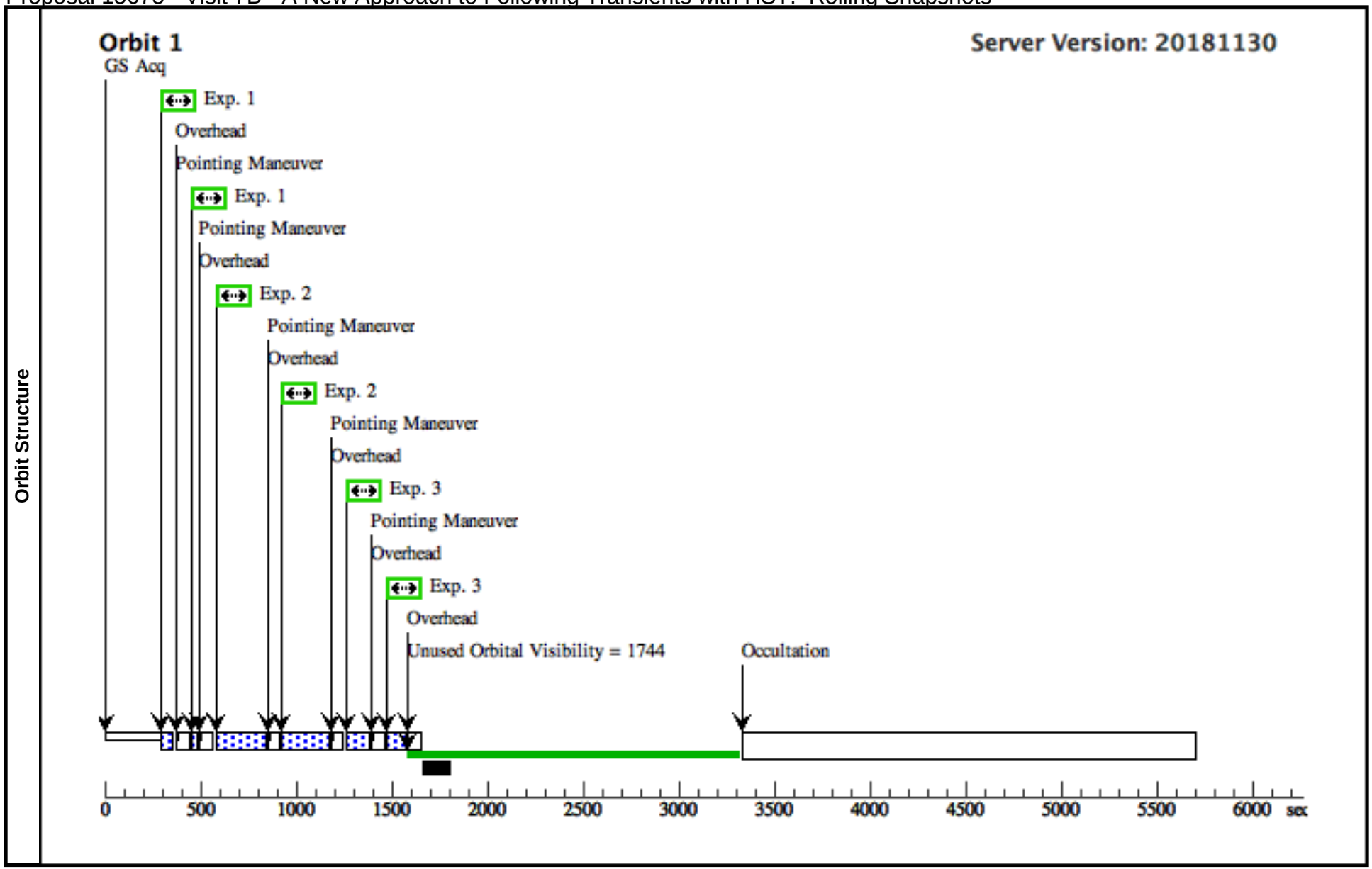
DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(18) ZTF18ABFCMJW	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -59,-76	Pattern 1, Exps 3-3 in Visit 7B (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -59" -76".


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Overhead
Pointing Maneuver
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 3
Pointing Maneuver
Overhead
Exp. 3
Overhead
Unused Orbital Visibility = 1744
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec

Visit

Proposal 15675, Visit 7C Wed Apr 10 15:00:55 GMT 2019

Diagnostic Status: No Diagnostics

Scientific Instruments: WFC3/UVIS

Special Requirements: BEFORE 28-APR-2019:00:00:00

Comments: This is for UVIS2, the preferred chip.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=WFC3-UVIS-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=0.145 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=46.84 Angle Between Sides= Center Pattern=false		(1), (2), (3)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(19)	SN2019CVZ	RA: 16 30 54.0869 (247.7253621d) Dec: +46 35 18.43 (46.58845d) Equinox: J2000		V=19	Reference Frame: ICRS

Comments:
Category=EXT-STAR
Description=[SUPERNOVA TYPE II]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(19) SN2019CVZ	WFC3/UVIS, ACCUM, UVIS	F300X	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=12	POS TARG -61,-80	Pattern 1, Exps 1-1 in Visit 7C (1)	30 Secs (60 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
2		(19) SN2019CVZ	WFC3/UVIS, ACCUM, UVIS	G280	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513	POS TARG -61,-80	Pattern 1, Exps 2-2 in Visit 7C (1)	250 Secs (500 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

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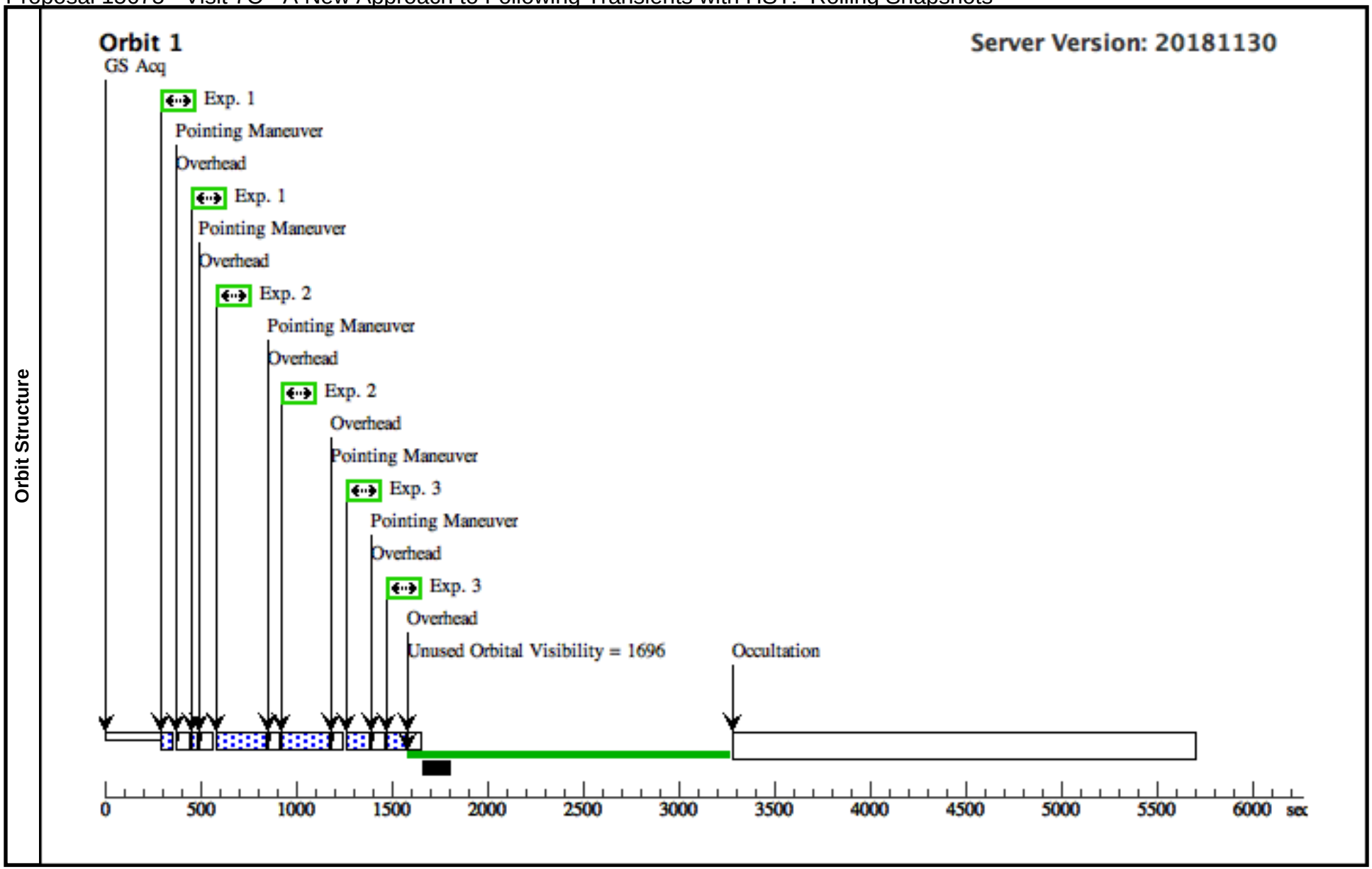
DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -61" -80".

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
3		(19) SN2019CVZ	WFC3/UVIS, ACCUM, UVIS	F350LP	SIZEAXIS1=1024; SIZEAXIS2=1024; CENTERAXIS1=515; CENTERAXIS2=513; FLASH=5	POS TARG -59,-76	Pattern 1, Exps 3-3 in Visit 7C (1)	100 Secs (200 Secs) *[==>(Pattern 1)]* *[==>(Pattern 2)]*	***[1]***

Comments: We are effectively duplicating the UVIS2-C1K1C-SUB aperture, but using the UVIS aperture appropriate for G280. The nominal position is 537.0, 512.0 while for UVIS, it's 2073.0, 250.0 (or effectively 2073.0, 2332). So we want a POSTARG of -61".0, -72".0. This was slightly refined in Aladin.

From SB: One minor comment I'd have is to consider shifting the area for the subarray readout slightly to the left, in order to include the left overscan i.e. decrease CENTERAXIS1 by 23. By including the overscan columns in the subarray, the calibration software can compute the correction using the image itself rather than using a default look-up value. Note: 23 not 25 is the number of overscan pixels for a subarray. New note: CENTERAXIS includes overscan, so use 513. DR note: 515 to stop the warnings.

DR Note: Moving an additional 4" to better remove offset between F350LP and G280 to -59" -76".


Orbit Structure
Orbit 1
Server Version: 20181130
GS Acq
Exp. 1
Pointing Maneuver
Overhead
Exp. 1
Pointing Maneuver
Overhead
Exp. 2
Pointing Maneuver
Overhead
Exp. 2
Overhead
Pointing Maneuver
Exp. 3
Pointing Maneuver
Overhead
Exp. 3
Overhead
Unused Orbital Visibility = 1696
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
6000
sec