16486 - The Symbiotic Recurrent Nova T CrB as it Approaches its Next Eruption

Cycle: 28, Proposal Category: GO

(Availability Mode: AVAILABLE)

INVESTIGATORS

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VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) V-T-CRB	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Aug-2022 11:00:14.0	yes
1A	(1) V-T-CRB	S/C	1	17-Aug-2022 11:00:15.0	yes
02	(2) VISIT02-V-T-CRB	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Aug-2022 11:00:16.0	yes
0E	(2) VISIT02-V-T-CRB	S/C	1	17-Aug-2022 11:00:17.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
0F	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Aug-2022 11:00:18.0	yes
51	(4) VISIT51-V-T-CRB	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Aug-2022 11:00:20.0	yes
5C	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/CCD STIS/FUV-MAMA STIS/NUV-MAMA	2	17-Aug-2022 11:00:22.0	yes
5D	(4) VISIT51-V-T-CRB	S/C	1	17-Aug-2022 11:00:22.0	yes
52	(4) VISIT51-V-T-CRB	STIS/CCD STIS/NUV-MAMA	1	17-Aug-2022 11:00:23.0	yes
5E	(4) VISIT51-V-T-CRB	S/C	1	17-Aug-2022 11:00:24.0	yes
5F	(6) VISIT52-V-T-CRB-SAFE-TARGET	STIS/CCD STIS/NUV-MAMA	1	17-Aug-2022 11:00:25.0	yes

16 Total Orbits Used

ABSTRACT

Since 2014, the symbiotic recurrent nova T Coronae Borealis has been in a high accretion rate state, rapidly accumulating the hydrogen-rich fuel that the massive white dwarf in this system will need for its next nova eruption, expected within several years. T CrB is evolving within this high state, with the optical light showing a gradual fading. XMM observations in 2017, 2018, and 2020, however, suggested that the accretion rate remained relatively constant. The observed differences appear to be caused by changes in the intrinsic absorber, probably related to the accretion disk wind. We therefore propose a set of two joint XMM -HST observations to monitor the accretion rate through the Keplerian disk and the boundary layer, and the amount of X-ray/UV absorber during this crucial period.

OBSERVING DESCRIPTION

This proposal aims to obtain ultraviolet spectroscopy during two epochs of XMM observations. We have been given 100ks XMM time which will be split between an observation around August 2021 and February 2022.

The target, T CrB is a nearby recurrent nova which had eruptions in 1866 and 1946, 80 years apart, and is expected to have another eruption around the 2024. Recurrent novae have been sshown to have nearly identical lightcurves around their eruptions. This is especially important when planning HST observations, since we can follow brightnesss changes and compare them to the historical light curve - that from the 1936-1950 period. T CrB presented in the years prior to the nova eruption of 1946 a slow change in brightness above some shorter period variability which was within a magnitude of the overall light curve evolution. Initially it showed a brightening lasting a few years, then a dip in brightness lasting about a year, followed by the eruption of the 1946 nova.
The current observations have shown an increase in brightness which can be matched to that in the years prior to the 1946 eruption. So far, a dimming has not been seen, suggesting the eruption is still more than a year in the future. However, our plan extends to February next year at which time the dimming may have commenced.

Our original planning assumed the brightness seen with IUE in the 1978-1997 period, and thus our planning was off. At its current brightnesss, COS FUV cannot be used, and we have adopted our plan to use STIS for two orbits in the August 2021 timeframe, and also two STIS orbits in the February 2022 timeframe. Should the brightness drop to 0.35 times the current brightness, when COS can be used safely for the FUV, we will request the TTRB for changing configuration of the FUV to COS which at that time will give better S/N, but maintain STIS for NUV spectroscopy..

Important Notes:

*** based on the historic light curve of this nova, the current brightening by ~2.5 mag can be expected to be followed some time in the next two years by a brightness dip. We have provided two plans: for the current brightness, spectroscopy with STIS only, while (if it happens during this project) after a sufficient loss of brightness occurs, we will switch to COS for FUV, STIS for NUV spectroscopy.

*** We have split our 4 orbits to two orbits each, for the two epochs of coordinated XMM observations.

*** the first epoch of XMM observation would likely be in the mid July 2021 to the beginning of October period during HST Cycle 28; the second epoch would likely be in the Mid January 2022 to the beginning of March that year during HST cycle 29.

*** We will maintain monitoring of T CrB with the Swift XRT and UVOT instruments, and will request daily cadence prior to the planned HST observations. In addition we plan to have a ground-based observation campaign. This should provide the necessary information for a go/no go and for which planned setup to use.

*** HST contact is Co-PI Paul Kuin

*** reduced gyro : we should be able to handle an acq each orbit without problem. Jitter may affect the flux inside the slit, but the line ratios will still be of use.

Visit

Proposal 16486, xmm_epoch_1 (01), failed Wed Aug 17 15:00:25 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: BETWEEN 09-AUG-2021:00:00:00 AND 27-AUG-2021:00:00:00

Comments: Coordinated XMM observation

This should be scheduled in evening-local time. Flags need to be cleared during the work day.

Diagnostics

(xmm_epoch_1 (01)) Warning (Orbit Planner): USE OFFSET NOT SPECIFIED ON ALL EXPOSURES

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

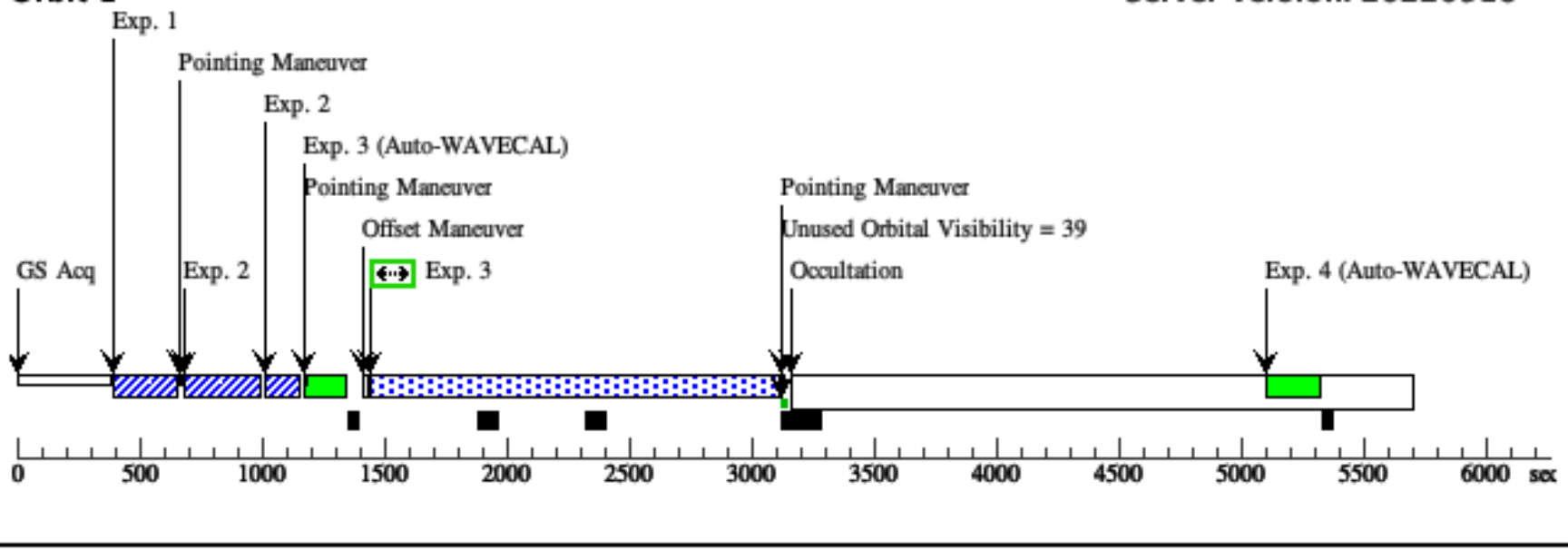
The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

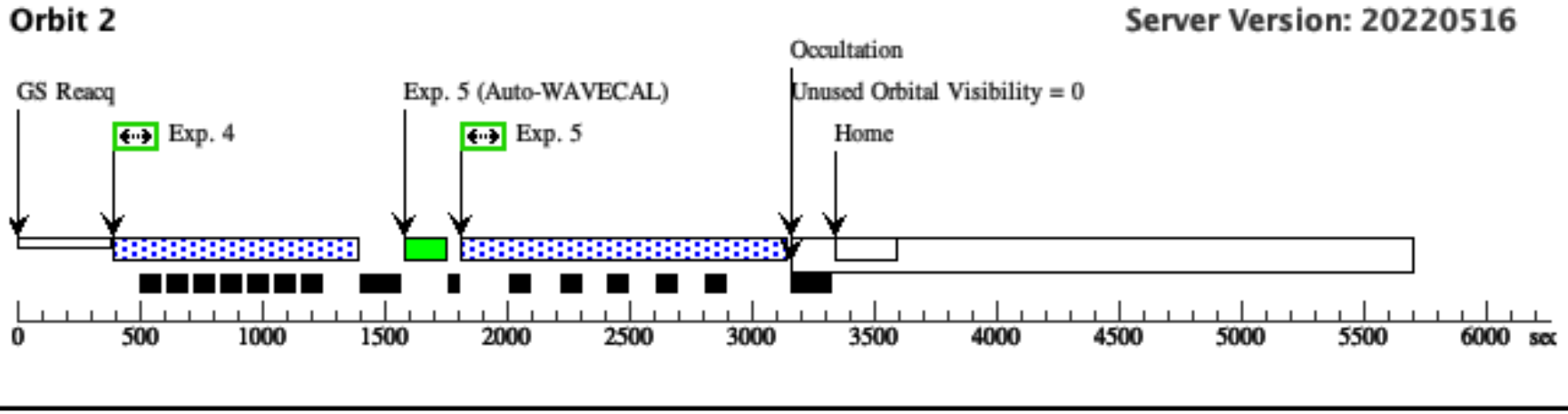
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(1) V-T-CRB	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	 ***[1]***
2	Acq-peak (STIS.ta.1474210)	(1) V-T-CRB	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	STIS-FUV (STIS.sp.1474230)	(1) V-T-CRB	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=440	USE OFFSET V01SAF		1500 Secs (1650 Secs) *[==>1650.0 Secs]*	 ***[1]***
4	STIS-NUV2700 (STIS.sp.1474178)	(1) V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110	USE OFFSET V01SAF		500 Secs (980 Secs) *[==>980.0 Secs]*	 ***[2]***
5	STIS-NUV1978 (STIS.sp.1474179)	(1) V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199	USE OFFSET V01SAF		600 Secs (1316 Secs) *[==>1316.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16486, S/C (1A), completed Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: S/C

Special Requirements: PCS MODE GYRO

Comments: This visit allocates and sets up the safe position offset slot for science visit 01 which will use that slot. This S/C visit should go earlier in the week while science visit 01 will be at least 3 days later. The S/C visit will contain only 1 exposure. Note: weekends are to be avoided since the CS must clear the target within 24 hours of HST execution.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

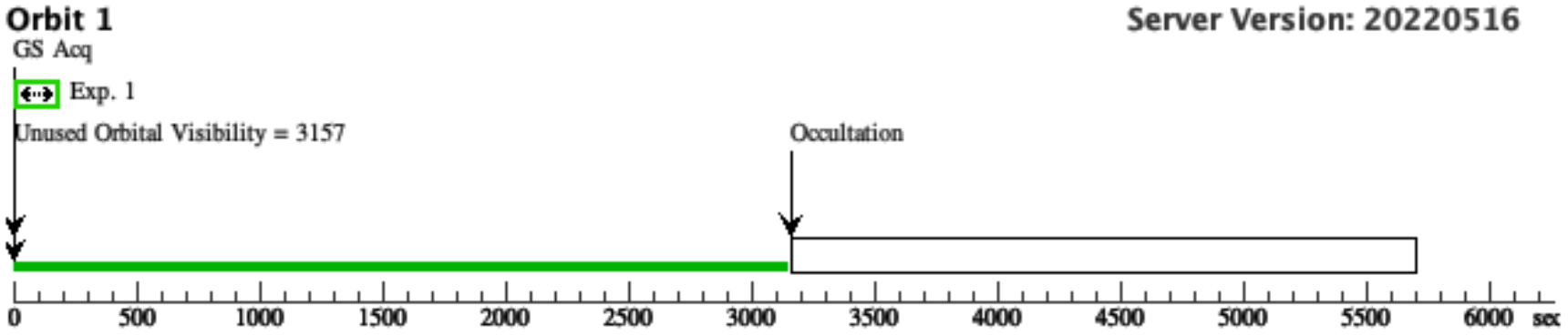
The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(1) V-T-CRB	S/C, DATA, V1			POS TARG -213.63 2400,-224.787900; SAVE OFFSET V01 SAF; SPEC COM INSTR ECSLOTSET; QESIPARM ANGL E 204.8; QESIPARM DIST 9. 797		5 Secs (5 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16486, xmm_epoch_2 (02), completed Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: SCHED 50%; BETWEEN 01-MAR-2022:00:00:00 AND 31-MAR-2022:00:00:00

Comments: Coordinated XMM observation

This should be scheduled in the evening-local time. Flags need to be cleared during the work cay Weekends are to be avoided since the CS must clear the target within 24 hours of HST execution

Diagnostics

(xmm_epoch_2 (02)) Warning (Orbit Planner): USE OFFSET NOT SPECIFIED ON ALL EXPOSURES

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	VISIT02-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

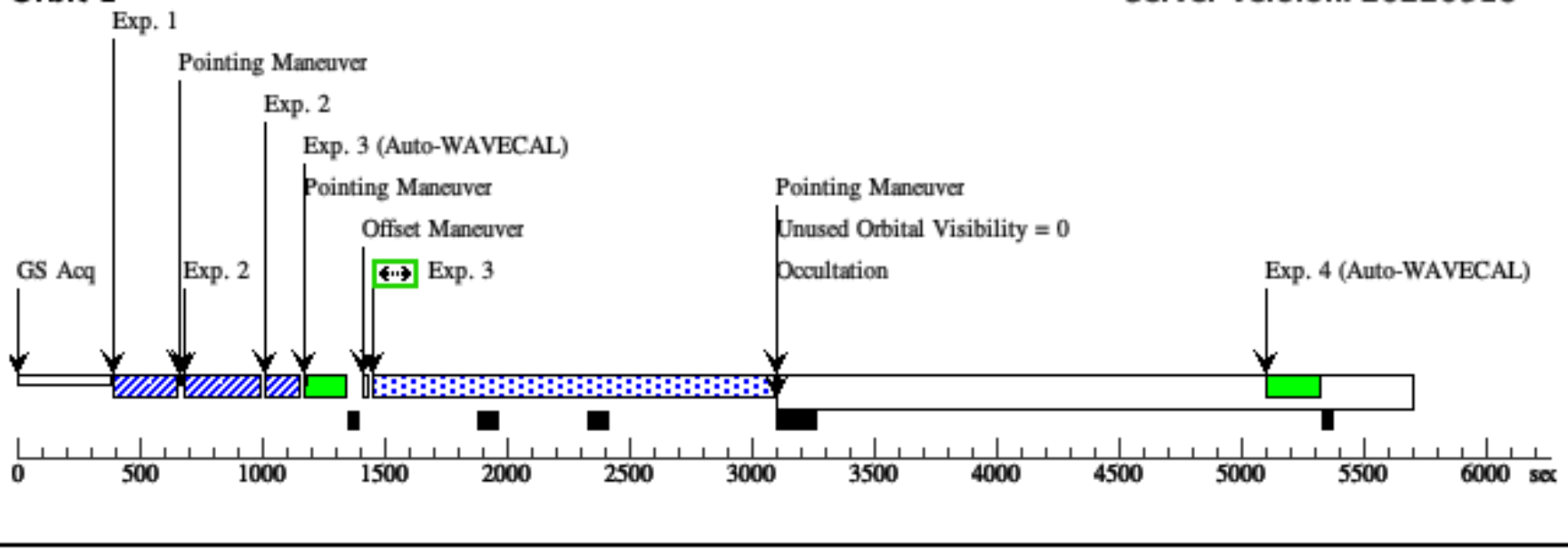
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

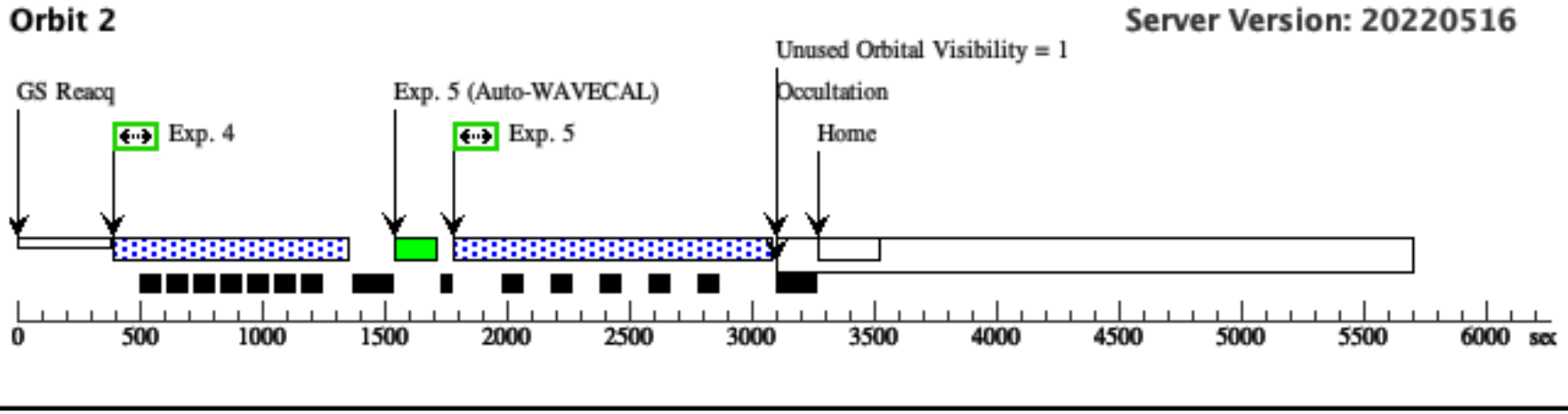
This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(2) VISIT02-V-T-CRB	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	*[1]*
2	Acq-peak (STIS.ta.1474210)	(2) VISIT02-V-T-CRB	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	*[1]*
3	STIS-FUV (STIS.sp.1474230)	(2) VISIT02-V-T-CRB	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=440	USE OFFSET V02SAF		1500 Secs (1622 Secs) *[==>1622.0 Secs]*	*[1]*
4	STIS-NUV2700 (STIS.sp.1474178)	(2) VISIT02-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110	USE OFFSET V02SAF		500 Secs (948 Secs) *[==>948.0 Secs]*	*[2]*
5	STIS-NUV1978 (STIS.sp.1474179)	(2) VISIT02-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199	USE OFFSET V02SAF		600 Secs (1284 Secs) *[==>1284.0 Secs]*	*[2]*

Orbit Structure





Visit

Proposal 16486, S/C visit for visit 02 (0E), completed Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: S/C

Special Requirements: (none)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	VISIT02-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

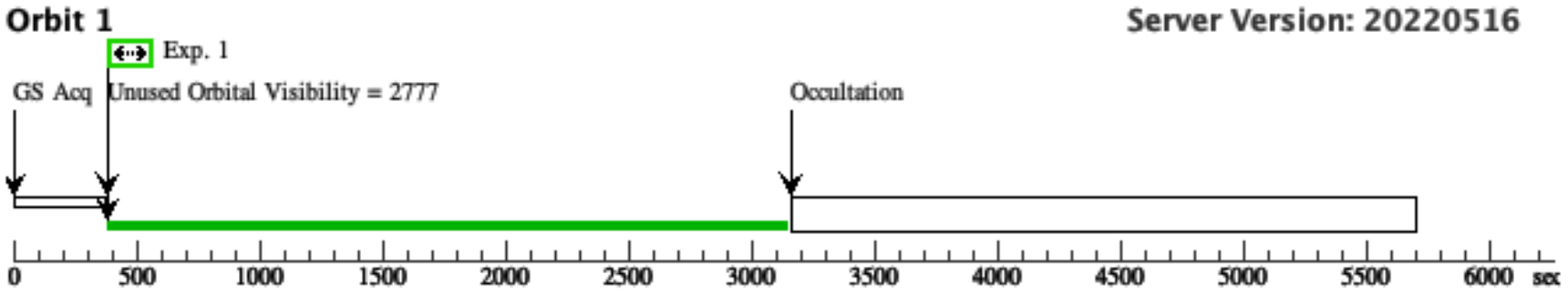
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(2) VISIT02-V-T-CRB	S/C, DATA, V1			POS TARG -213.6324,-224.7879; SAVE OFFSET V02 SAF; SPEC COM INSTR ECSLOTSET; QESIPARM ANGLE 224.2; QESIPARM DIST 13.5		5 Secs (5 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16486, BOP visit for visit 02 (0F), withdrawn Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: SCHED 50%; BETWEEN 01-MAR-2022:00:00:00 AND 31-MAR-2022:00:00:00

Comments: This visit is for BOP checking the safe target only and should not execute onboard HST.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	VISIT02-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

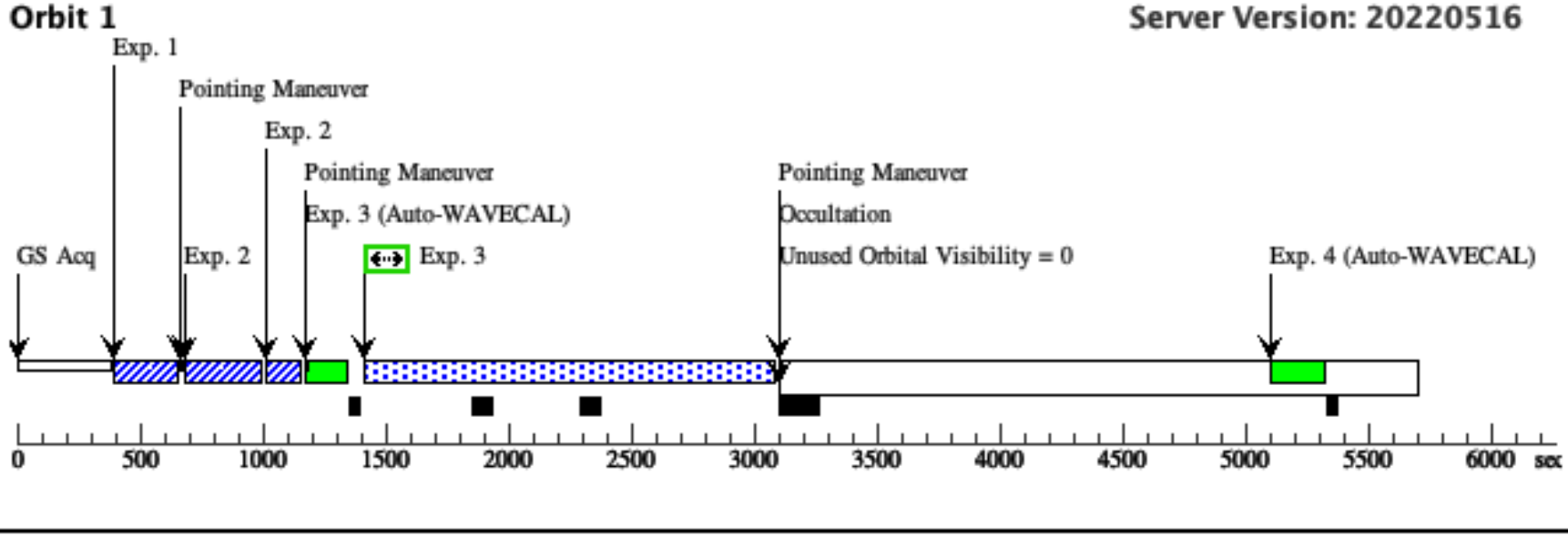
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	VISIT02-V-T-CRB-SAFE-TARGET	Offset from VISIT02-V-T-CRB RA Offset: -0.7 Secs Dec Offset: -9.764 Arcsec		V=10.+/-1.	Offset Position (VISIT02-V-T-CRB-SAFE-TARGET)

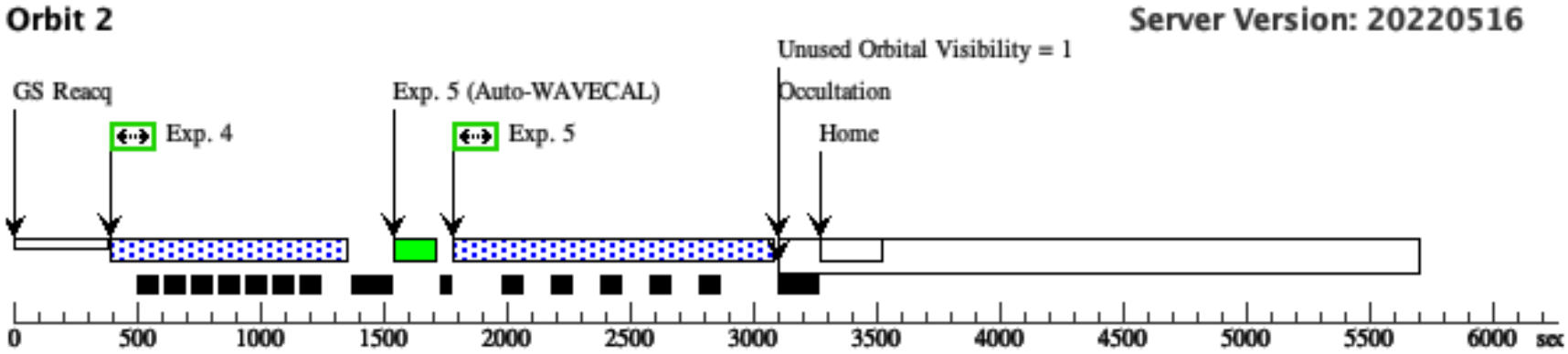
Comments: This target is a blank piece of sky which is the bright object safe pointing and is 13.63" away at PA 224.2 degrees from VISIT02-V-T-CRB
Category=UNIDENTIFIED
Description=[BLANK FIELD]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	 ***[1]***
2	Acq-peak (STIS.ta.1474210)	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	STIS-FUV (STIS.sp.1474230)	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=440			1500 Secs (1659 Secs) *[==>1659.0 Secs]*	 ***[1]***
4	STIS-NUV2700 (STIS.sp.1474178)	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110			500 Secs (948 Secs) *[==>948.0 Secs]*	 ***[2]***
5	STIS-NUV1978 (STIS.sp.1474179)	(3) VISIT02-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199			600 Secs (1284 Secs) *[==>1284.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16486, xmm_epoch_1 (51), completed Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: BETWEEN 01-JUL-2022:00:00:00 AND 31-JUL-2022:00:00:00

Comments: Coordinated XMM observation, retake

This should be scheduled in evening-local time. Flags need to be cleared during the work day.

Diagnostics

(xmm_epoch_1 (51)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(xmm_epoch_1 (51)) Warning (Orbit Planner): USE OFFSET NOT SPECIFIED ON ALL EXPOSURES

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

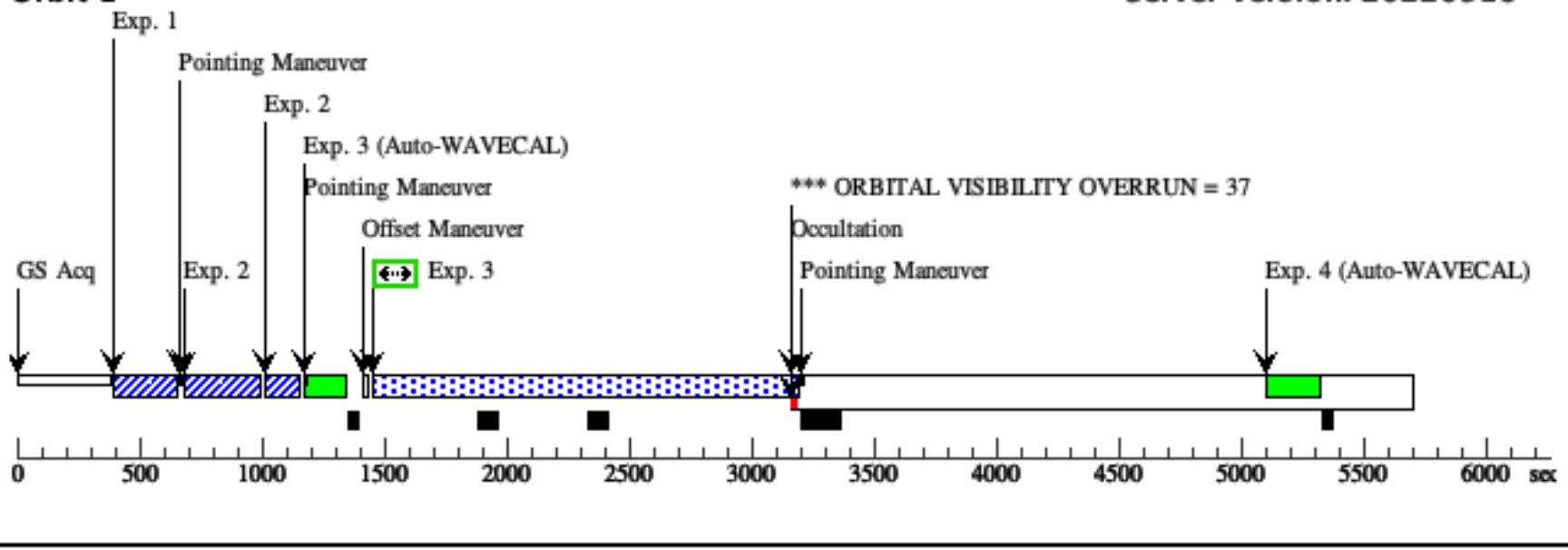
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

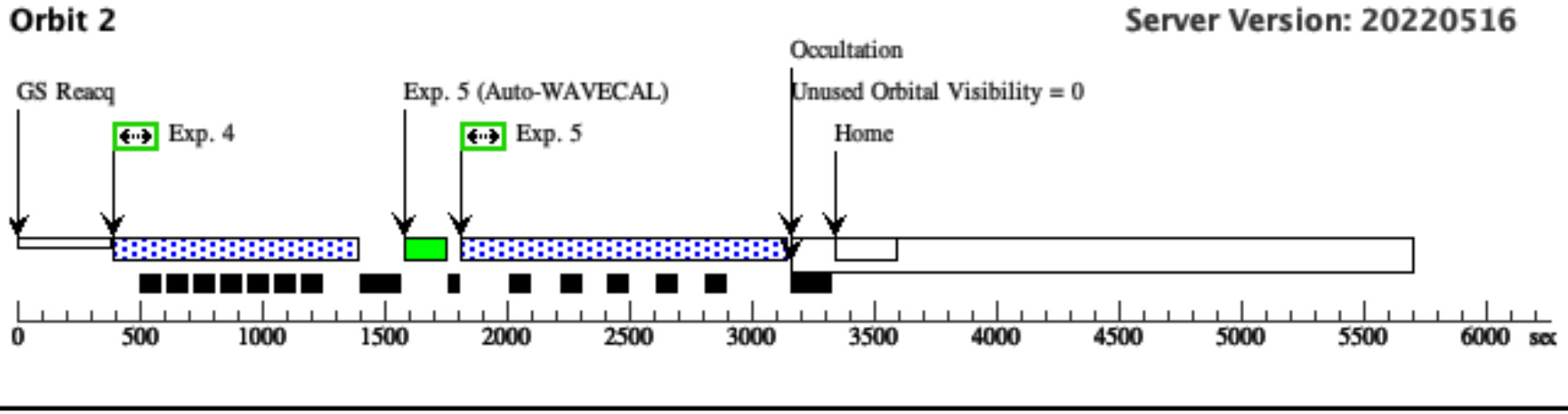
This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(4) VISIT51-V-T-CRB	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	*[1]*
2	Acq-peak (STIS.ta.1474210)	(4) VISIT51-V-T-CRB	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	*[1]*
3	STIS-FUV (STIS.sp.1474230)	(4) VISIT51-V-T-CRB	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=440	USE OFFSET V51SAF		1500 Secs (1722 Secs) *[==>1722.0 Secs]*	*[1]*
4	STIS-NUV2700 (STIS.sp.1474178)	(4) VISIT51-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110	USE OFFSET V51SAF		500 Secs (980 Secs) *[==>980.0 Secs]*	*[2]*
5	STIS-NUV1978 (STIS.sp.1474179)	(4) VISIT51-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199	USE OFFSET V51SAF		600 Secs (1316 Secs) *[==>1316.0 Secs]*	*[2]*

Orbit Structure





Visit

Proposal 16486, BOP visit for Visit 51 (5C), withdrawn Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD, STIS/FUV-MAMA

Special Requirements: BETWEEN 01-JUL-2022:00:00:00 AND 31-JUL-2022:00:00:00

Comments: Coordinated XMM observation, retake

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	VISIT51-V-T-CRB-SAFE-TARGET	Offset from VISIT51-V-T-CRB RA Offset: -0.96 Secs Dec Offset: -3.922 Arcsec		V=10.+/-1.	Offset Position (VISIT51-V-T-CRB-SAFE-TARGET)

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

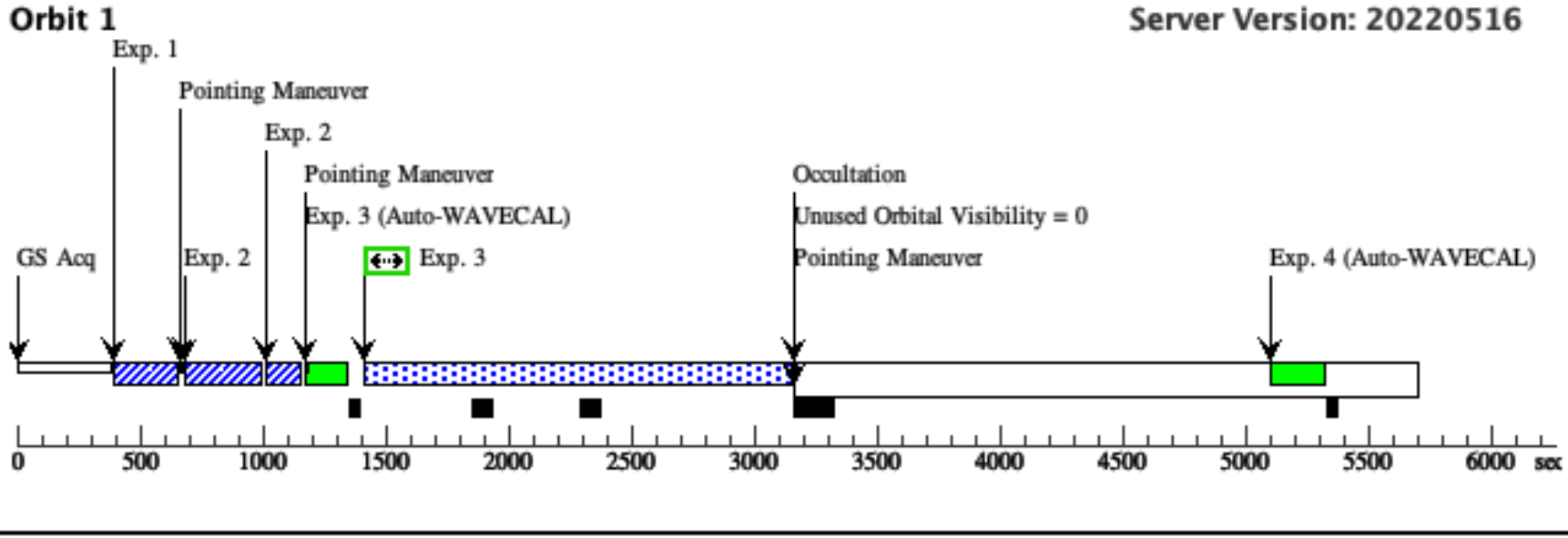
This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec

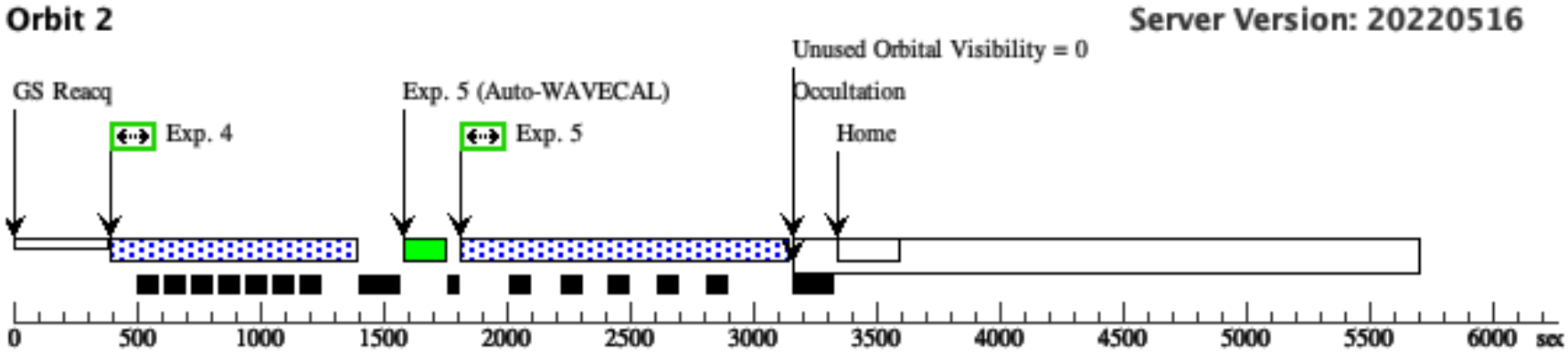
This target is a blank piece of sky which is the bright object safe pointing and is 13.61" away at PA 253.3 degrees from V-T-CRB
Category=UNIDENTIFIED
Description=[BLANK FIELD]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	 ***[1]***
2	Acq-peak (STIS.ta.1474210)	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	STIS-FUV (STIS.sp.1474230)	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/FUV-MAMA, TIME-TAG, 0.2X0.06	E140M 1425 A	BUFFER-TIME=440			1500 Secs (1722 Secs) *[==>1722.0 Secs]*	 ***[1]***
4	STIS-NUV2700 (STIS.sp.1474178)	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110			500 Secs (980 Secs) *[==>980.0 Secs]*	 ***[2]***
5	STIS-NUV1978 (STIS.sp.1474179)	(5) VISIT51-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199			600 Secs (1316 Secs) *[==>1316.0 Secs]*	 ***[2]***

Orbit Structure





Visit

Proposal 16486, S/C visit for visit 51 (5D), completed Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: S/C

Special Requirements: (none)

Comments: This visit allocates and sets up the safe position offset slot for visit 51 which will use that slot. This S/C visit should go earlier in the week while visit 51 will be at least 3 days later. This S/C visit will only contain one exposure

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

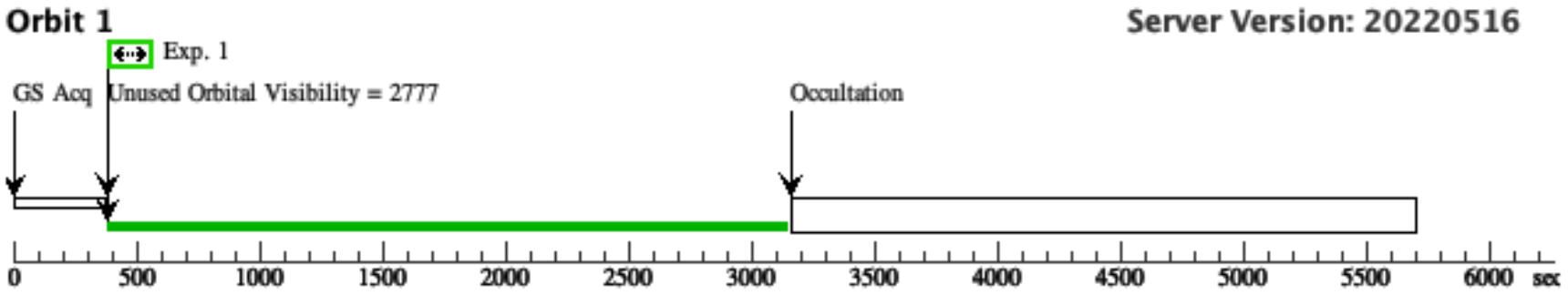
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) VISIT51-V-T-CRB	S/C, DATA, V1			POS TARG -213.6324,-224.7879; SAVE OFFSET V51 SAF; SPEC COM INSTR ECSLOTSET; QESIPARM ANGLE 253.3; QESIPARM DIST 13.61		5 Secs (5 Secs) *[==>]*	***[1]***

Orbit Structure



Visit

Proposal 16486, retake NUV (52), implementation Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: Warning

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Comments: retake NUV spectra - acquisition failed in visit 51

This should be scheduled in evening-local time. Flags need to be cleared during the work day.

Diagnostics

(retake NUV (52)) Warning (Orbit Planner): USE OFFSET NOT SPECIFIED ON ALL EXPOSURES

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

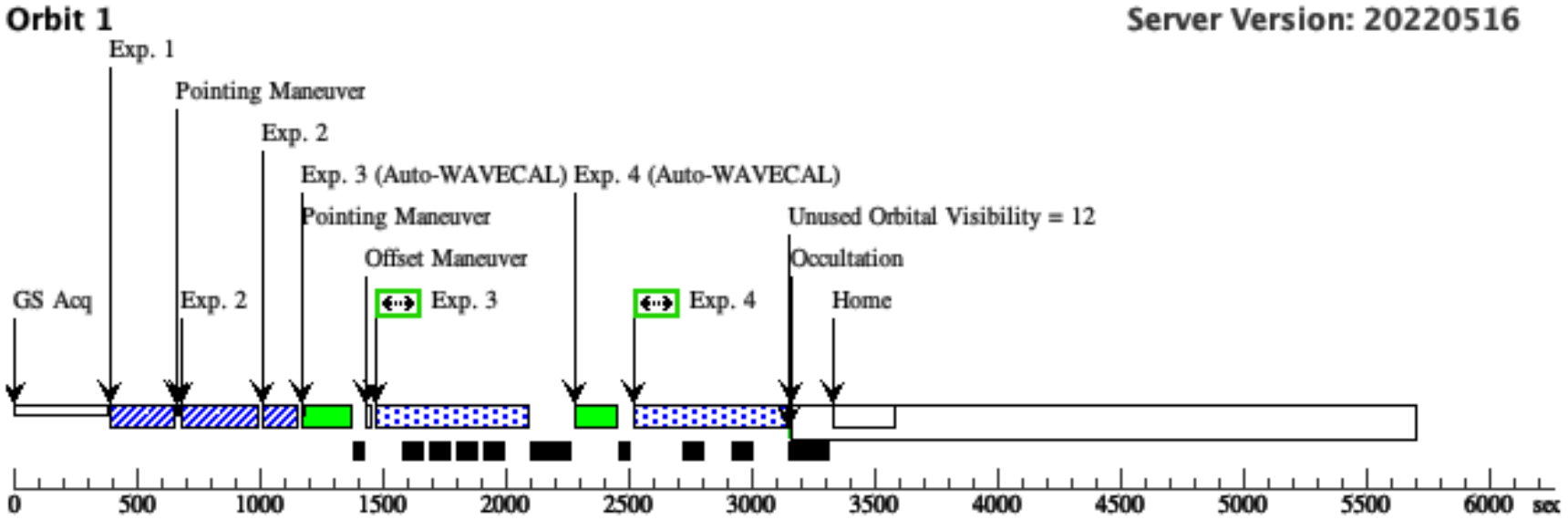
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(4) VISIT51-V-T-CRB	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	 ***[1]***
2	Acq-peak (STIS.ta.1474210)	(4) VISIT51-V-T-CRB	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	STIS-NUV2700 (STIS.sp.1474178)	(4) VISIT51-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110	USE OFFSET V52SAF		600 Secs (600 Secs) *[==>]*	 ***[1]***
4	STIS-NUV1978 (STIS.sp.1474179)	(4) VISIT51-V-T-CRB	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199	USE OFFSET V52SAF		600 Secs (600 Secs) *[==>]*	 ***[1]***

Orbit Structure



Visit

Proposal 16486, S/C visit for visit 52 (5E), implementation Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: S/C

Special Requirements: (none)

Comments: This visit allocates and sets up the safe position offset slot for visit 52 which will use that slot. This S/C visit should go earlier in the week while visit 52 will be at least 3 days later. This S/C visit will only contain one exposure.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

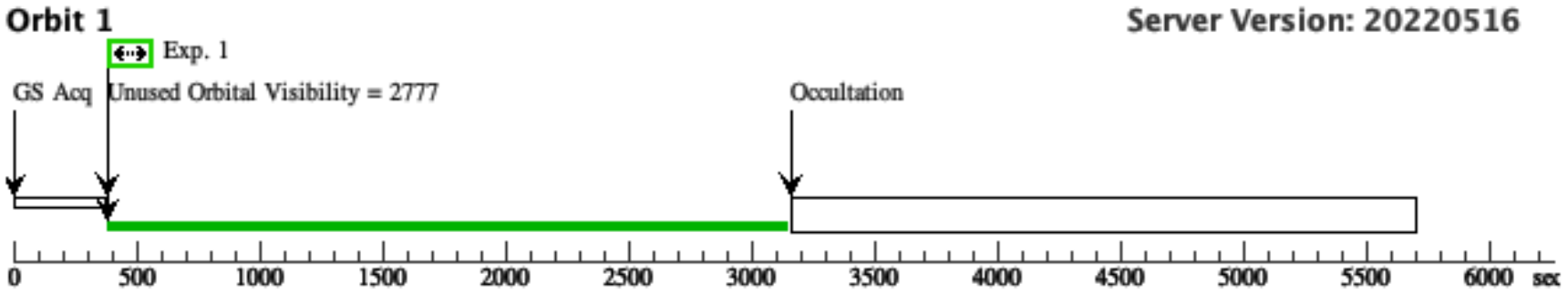
I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1		(4) VISIT51-V-T-CRB	S/C, DATA, V1			POS TARG -213.63240000,-224.78790000; SAVE OFFSET V52SAF; SPEC COM INSTRECSLOTSET; QESIPARM ANGLE 217.2; QESIPARM DIST 13.81		5 Secs (5 Secs) *[==>]*	*[1]*

Orbit Structure



Visit

Proposal 16486, SCIENCETARGET-BOP-ONLY (5F), implementation Wed Aug 17 15:00:26 GMT 2022

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/NUV-MAMA, STIS/CCD

Special Requirements: (none)

Comments: This visit is for BOP checking the safe target only and should not execute onboard HST.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	VISIT51-V-T-CRB	RA: 15 59 30.1571 (239.8756546d) Dec: +25 55 12.80 (25.92022d) Equinox: J2000	Proper Motion RA: -3.1279988960043075E-4 sec of time/yr Proper Motion Dec: 0.012364 arcsec/yr Epoch of Position: 2015.5	V=10.+/-1.	Reference Frame: ICRS

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

The V magnitude has been varying between 10.5 and 9.5 the past 700 days (AAVSO). In 1946 the nova eruption reached a magnitude of 2. For this recurrent nova the 1946 eruption was preceded by a brightening over several years, followed by a dip in brightness lasting a year. We are confident this helps reduce risk, because recurrent novae eruptions have nearly identical light curves.

I calculated the proper motion correction using a different PM I got from SIMBAD, and entered the differences with your tools value as an estimate of the error in RA and Dec.

This copy was created in order to allow editing of the uncertainty values which is necessary to increase the allowed distance of offset slew for STIS visitss
The original uncertainty values for this target are: RA = 0.003 Arcsec ; Dec = 0.08 Arcsec
Category=STAR
Description=[RECURRENT NOVA]
Extended=NO

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	VISIT52-V-T-CRB-SAFE-TARGET	Offset from VISIT51-V-T-CRB RA Offset: -0.61 Secs Dec Offset: -11.0 Arcsec		V=10.+/-1.	Offset Position (VISIT52-V-T-CRB-SAFE-TARGET)

Comments: This target is a blank piece of sky which is the bright object safe pointing and is 8.348 arcseconds away at a PA 217.2 degrees from VISIT51-V-T-CRB.
Category=UNIDENTIFIED
Description=[BLANK FIELD]
Extended=NO

Exposures

#	Label (ETC Run)	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Acq (STIS.ta.1474167)	(6) VISIT52-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ, F28X50OII	MIRROR	ACQTYPE=POINT			1 Secs (1 Secs) *[==>]*	 ***[1]***
2	Acq-peak (STIS.ta.1474210)	(6) VISIT52-V-T-CRB-SAFE-TARGET	STIS/CCD, ACQ/PEAK, 0.2X0.05ND	MIRROR	SIZEAXIS2=32			1 Secs (1 Secs) *[==>]*	 ***[1]***
3	STIS-NUV2700 (STIS.sp.1474178)	(6) VISIT52-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 2707 A	BUFFER-TIME=110			600 Secs (600 Secs) *[==>]*	 ***[1]***
4	STIS-NUV1978 (STIS.sp.1474179)	(6) VISIT52-V-T-CRB-SAFE-TARGET	STIS/NUV-MAMA, TIME-TAG, 0.2X0.2	E230M 1978 A	BUFFER-TIME=199			600 Secs (600 Secs) *[==>]*	 ***[1]***

Orbit Structure