17456 - Travelling Through Time in the Beta Pictoris Disk: Exploring the Frequency of Protoplanet Collisions

Cycle: 31, Proposal Category: GO

(Availability Mode: SUPPORTED)

INVESTIGATORS

Name	*Institution*
Dr. Kevin Wagner (PI) (Contact)	**University of Arizona**
Prof. Daniel Apai (CoI)	University of Arizona
Arin Avsar (CoI)	University of Arizona

VISITS

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:16.0	yes
02	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:18.0	yes
03	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:20.0	yes
04	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:21.0	yes
05	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:23.0	yes
55	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:25.0	yes
06	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:27.0	yes
56	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:28.0	yes
07	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:30.0	yes
08	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:32.0	yes
09	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:33.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
57	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:35.0	yes
58	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:36.0	yes
59	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:38.0	yes
10	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:40.0	yes
11	(2) ALPHA-PIC	STIS/CCD	1	10-Apr-2025 15:00:41.0	yes
12	(1) BETA-PIC	STIS/CCD	1	10-Apr-2025 15:00:43.0	yes

17 Total Orbits Used

ABSTRACT

Debris disks represent the end-stages of planet formation. Similar to the moon-forming impact and the collosion that stripped the mantle of Mercury during our own solar system's late stages of formation, major collisions between planetesimals and protoplanets shape the end products of mature planetary systems. Giant planets perturb the orbits of planetesimals, increasing the rate of collisions and the generation of micron-sized dust. These are blown out by radiation pressure to replenish the dust of the outer disk on timescales of centuries, and therefore measuring the surface density distribution of the outer disk can reveal the historical rate of collisions. There is evidence for at least one giant impact in the most nearby debris disk around Beta Pictoris having occurred in the past decades (due to the presence of CO gas which photo-dissociates within ~100 years). This suggests that such events may be even more common than previously thought. STIS images from 1997-2012 confirm the evidence of a recent impact, but only cover a quarter of the possible outer working angle. We propose to revisit the system with STIS to characterize the surface density distribution of the outer disk and thus the system's collision history over the past four centuries. By repeating the earlier observations with the optimal large outer working angle (43") orientation and occulting mask combination, we will recover surface density modulations of <20% at 200-400 au for the first time, representing collisions occurring from ~1860-1960. These observations will provide an entirely new set of constraints on the collision dynamics of the end stages of planet formation in the Beta Pictoris system.

OBSERVING DESCRIPTION

The proposed observations aim to obtain a STIS coronagraphic image of the Beta Pictoris debris disk with a goal of imaging disk structures at the furthest extent possible with HST.

Based on the comparison of the reduced 1997 and 2012 data and a set of PSF stars from other programs we identified that the following strategy

provides the best quality data and best comparison to the earlier data sets:

We will observe the two targets using three single-orbit visits that are linked both in time and orientation angles (01, 02, 03) for each configuration (wedge A/B, disk NE/SW orientations). Three orbits x four configurations results in the twelve total orbits (one per visit) grouped into sets of three. Visits (04, 05, 06), (07, 08, 09), (10, 11, 12) are similarly grouped. We describe a single visit group below.

The three visits must be scheduled "back-to-back" in sequential visibility periods, each uninterrupted by Earth occultation -- hence the AFTER scheduling requirements of 0.5 to 1.5 orbit (start-to-start) times on Visits 02 and 03.

In Visit 01 we observe our science target (Beta Pic). In Visit 02 we will observe our PSF calibration target (Alpha Pic). The Alpha Pic visit (02) MUST be scheduled in time in between Visits 01 and 03. In Visit 03 we again observe Beta Pic, but at an orientation angle differing from the absolute orientation specified for Visit 01.

We begin each Visit with an on-board autonomous coronagraphic target acquisition. Target acquisition exposure times were chosen to provide SNR ~ 100 in the central pixel of the target acq images. In all cases we use the F25ND5 filter due to the brightness of our target stars.

First orbit: We will observe Beta Pic at one of two wedge-occulted locations. We will obtain a series of identical 60 second exposures. Absolute orientation is set such that the disk's maximum extent is visible along the line joining the occulting wedge position and the corner of the detector.

Second Orbit: Carry out the same observing sequence as in Orbit 1 on the PSF star Alpha Pictoris.
In this visit we observe our PSF template calibration star. In order to minimize variations in PSF structure from thermal driven changes in OTA wavefront errors, we constrain the orientation of this calibration target which is nearby in the sky to our science target (similar spacecraft attitude and sun angle) to be in between the orientations of Visit 01 and 03.

Third Orbit: Repeat the observations of Beta Pic (1st orbit) but at a different spacecraft orientation.
Orientation: Visit 1 +13 degrees (13 degrees is optimal for WedgeA, while -5-10 degrees is optimal for WedgeB). Orientation restrictions for (03) are somewhat relaxed - this was necessary to enable schedulability.

The three orbits MUST be executed back-to-back to minimize the changes in the instrumental PSF and the spacecraft/instrument state.

READOUT: We require full-frame readouts in order to image the maximal extent of the disk that is possible with STIS coronagraphy.

EXPOSURE TIMES:
Individual coronagraphic exposure timesare set to 60s with CR-SPLIT=8 to enable a greater dynamic range to be extracted from sub-expsosures. We can tolerate some saturation in the inner regions, even in the first sub-exposure, but we cannot tolerate saturation of the diffraction spikes outside of a radius of 10" from the target in the first sub-exposure. Based on existing data, we expect a count rate of ~70 DN/sec in the diffraction spikes at 10" from Beta Pic (Alpha Pic is slightly brighter), which even in 60 second exposures should be will within the detector's linear regime.

ORIENTATIONS:
The observations are sensitive to the roll angles: the correct angles are necessary to ensure that the disk is optimally placed such that its furthest extent can be imaged in the corner of the detector. Separate diagrams will be emailed to our PC to assist in the verification of our approach.

DISK AND SPACECRAFT ORIENTATIONS:
The "northern" semi-major axis of the nearly-edge on Beta Pic disk is at a celestial position angle of appx 29 deg.
(The inner disk itself is warped and PAs varying by a few degrees appear in the literature, depending upon how and at what distances measures have been made. For our observation planning we adopt 29 deg).

If a suitable GS pair cannot be found to enable this geometry, we would later suggest possible specific alternates depending upon schedualbility with more restrictive differential roll ranges with trades in science return.

Visit

Proposal 17456, NE - BPic - Wedge A - Roll 1 (01), scheduling Thu Apr 10 19:00:43 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 128D TO 130 D

Comments: Timing: Must be executed in sequential orbit immediately prior to Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - BPic - Wedge A - Roll 1 (01)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

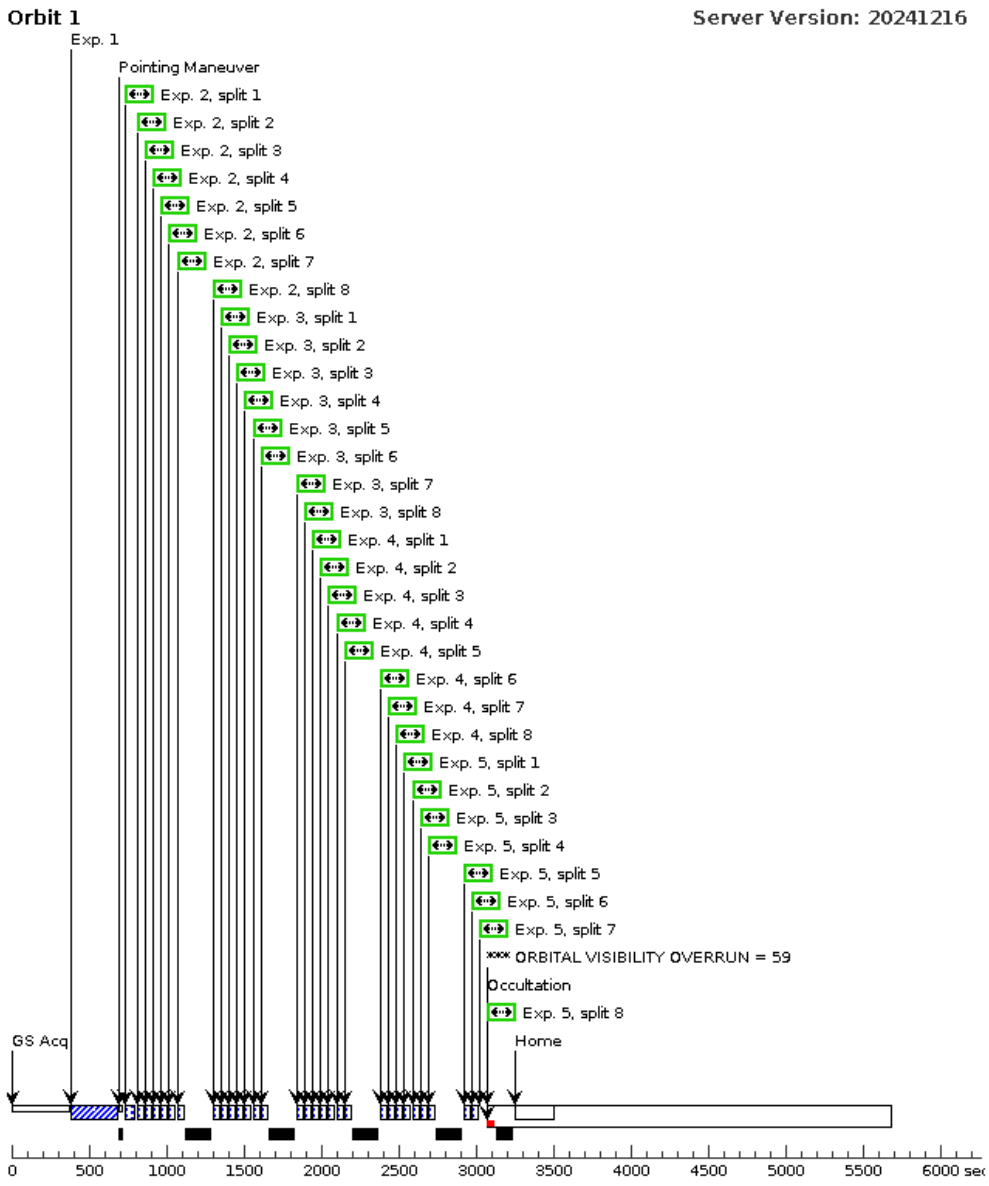
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***

Orbit Structure



Visit

Proposal 17456, NE - APic - WedgeA (02), scheduling Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 130D TO 138 D; AFTER 03 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 03 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - APic - WedgeA (02)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
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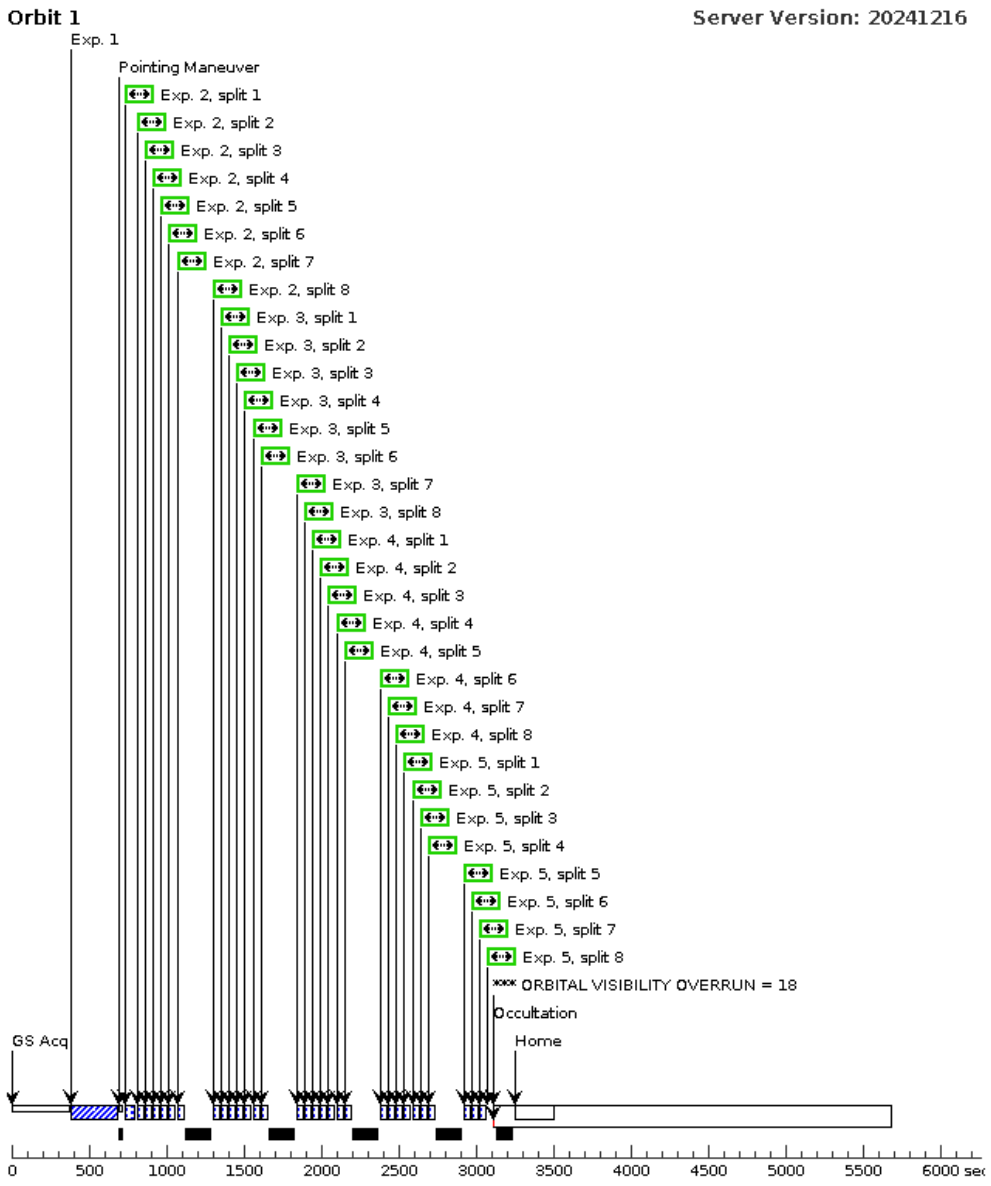
Orbit Structure



Visit

Proposal 17456, NE - BPic - WedgeA - Roll 2 (03), scheduling Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 6D TO 15D FROM 01; AFTER 01 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately after Visit 01 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - BPic - WedgeA - Roll 2 (03)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(NE - BPic - WedgeA - Roll 2 (03)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
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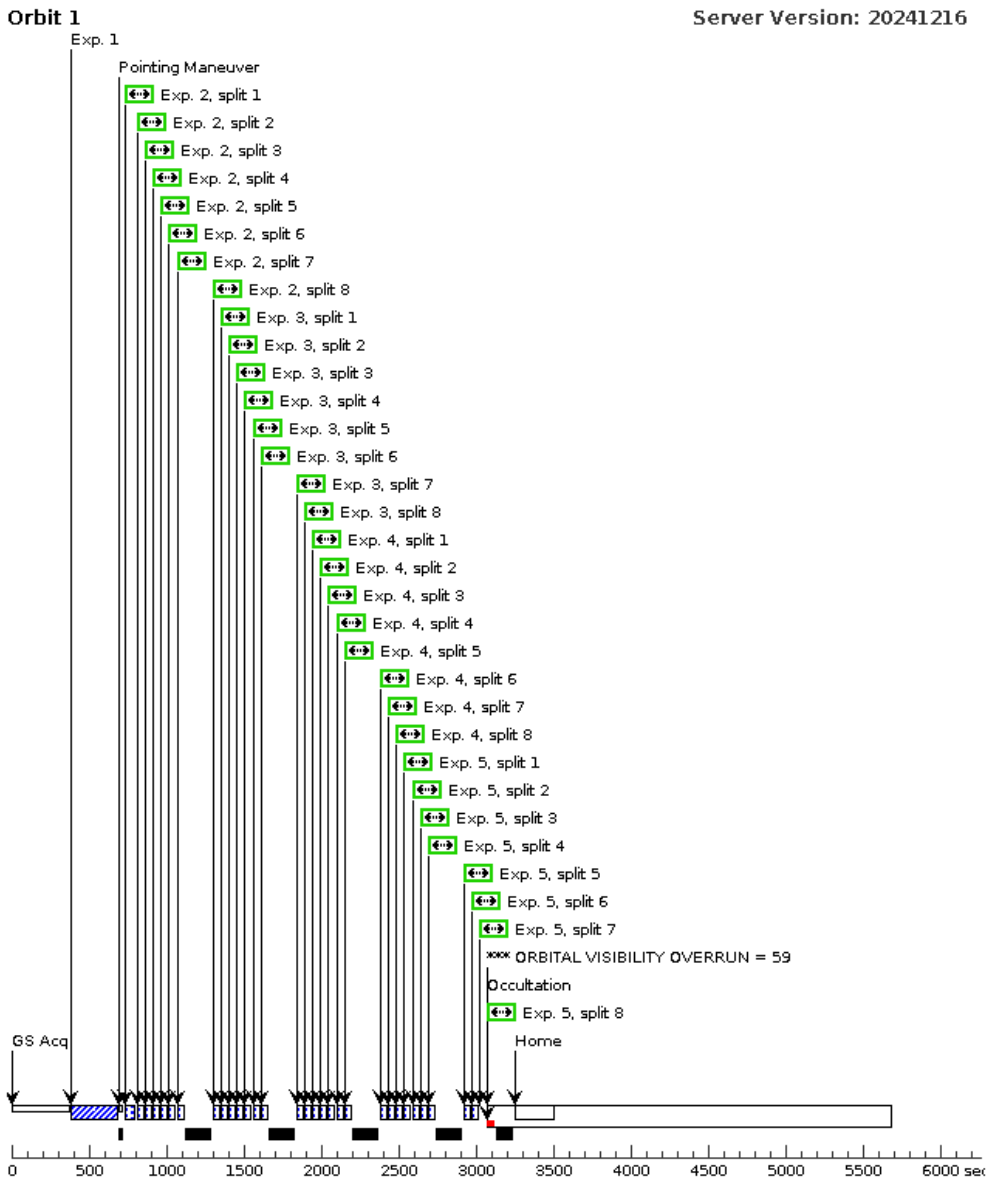
Orbit Structure



Visit

Proposal 17456, NE - BPic - Wedge B - Roll 1 (04), completed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 108D TO 110 D

Comments: Timing: Must be executed in sequential orbit immediately prior to Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - BPic - Wedge B - Roll 1 (04)) Warning (Form): Gyro Mode overrides default value of 1G.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
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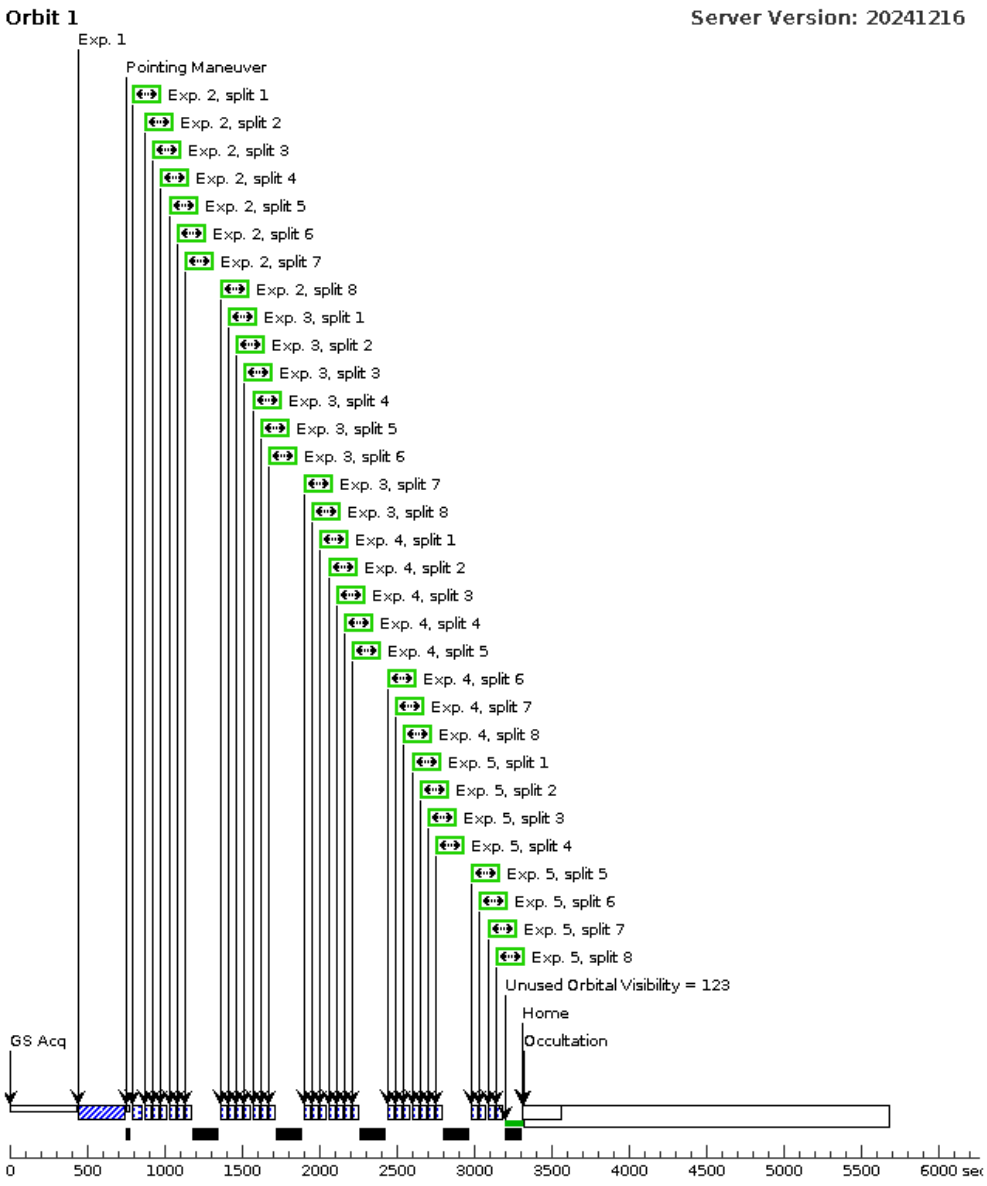
								[==>(Split 8)]	

Orbit Structure



Visit

Proposal 17456, NE - APic - WedgeB (05), failed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 103D TO 108 D; AFTER 04 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 01 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - APic - WedgeB (05)) Warning (Form): Gyro Mode overrides default value of 1G.

Fixed Targets

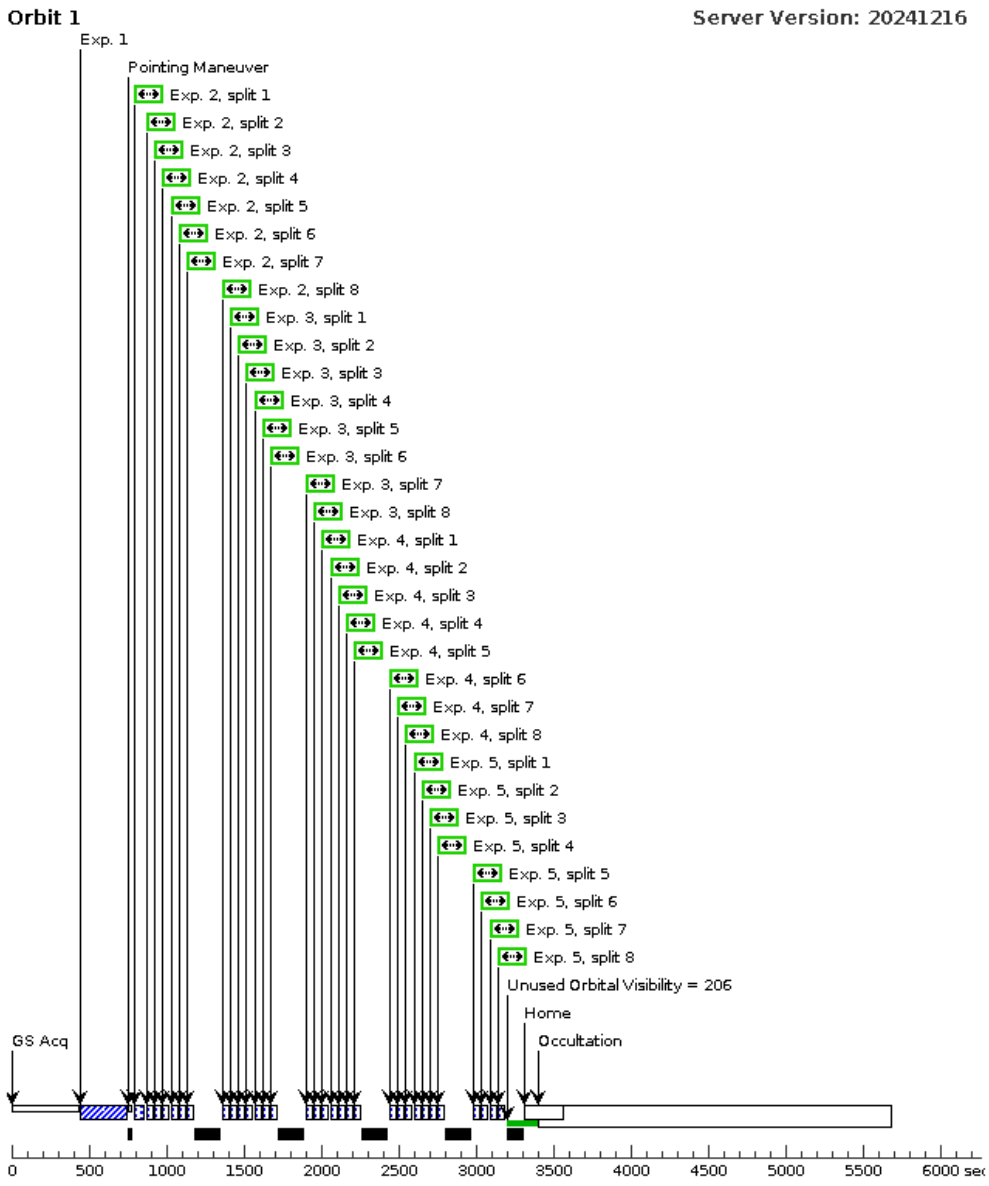
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	

Orbit Structure



Visit

Proposal 17456, NE - APic - WedgeB (55), implementation Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 134D TO 134 D; AFTER 56 BY 0.8 Orbits TO 1.2 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 01 with only intervening inter-visit Earth occultation.

HOPR repeat of visit 05.

Diagnostics

(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - APic - WedgeB (55)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS

Fixed Targets

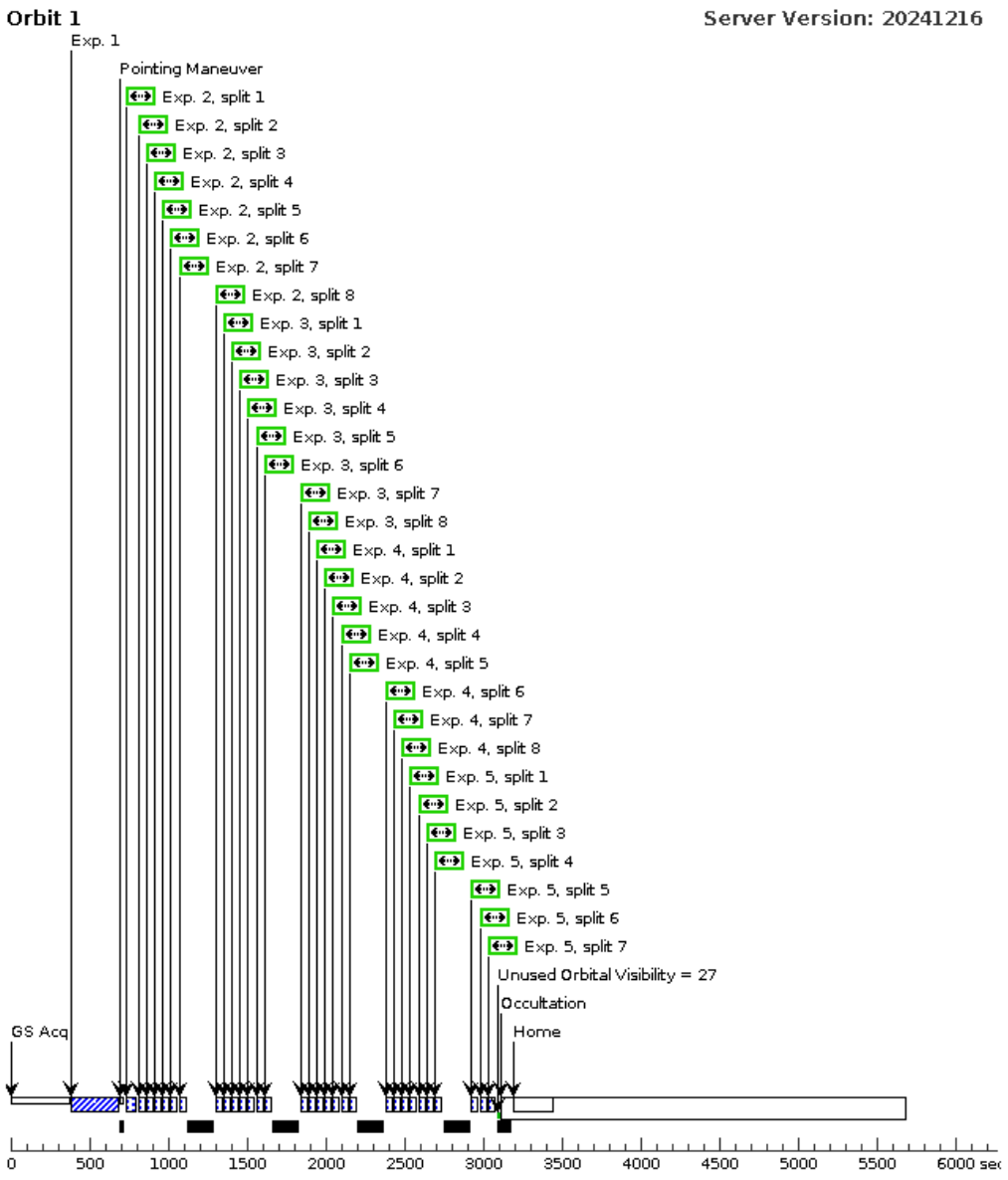
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=7; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	

Orbit Structure



Visit

Proposal 17456, NE - BPic - WedgeB - Roll 2 (06), failed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT -10D TO -5D FROM 04; AFTER 05 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately after Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(NE - BPic - WedgeB - Roll 2 (06)) Warning (Form): Gyro Mode overrides default value of 1G.

(NE - BPic - WedgeB - Roll 2 (06)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

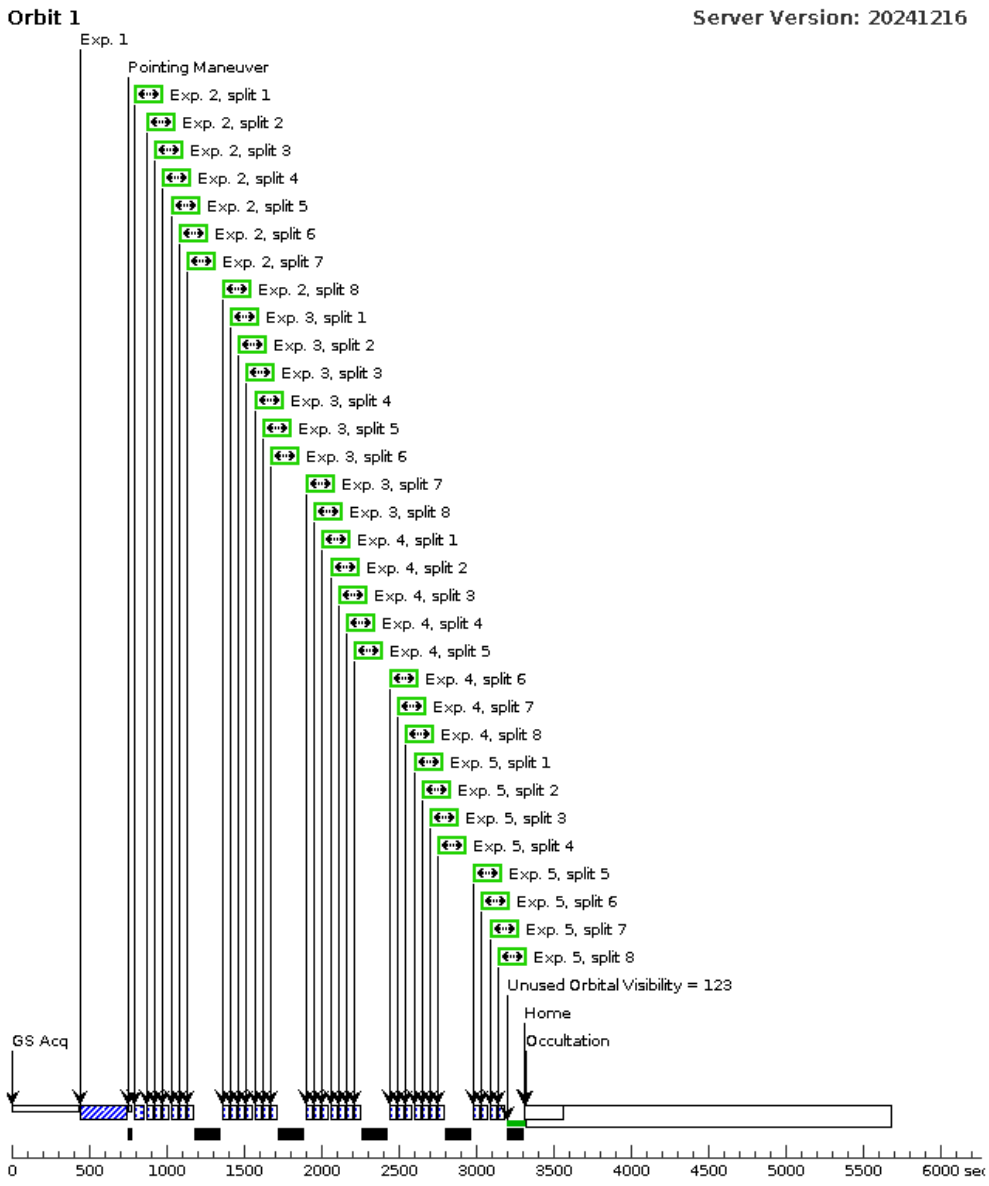
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***

Orbit Structure



Visit

Proposal 17456, NE - BPic - WedgeB - Roll 2 (56), implementation Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 134D TO 134 D

Comments: Timing: Must be executed in sequential orbit immediately after Visit 02 with only intervening inter-visit Earth occultation.

HOPR repeat of visit 06.

Diagnostics

(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS
(NE - BPic - WedgeB - Roll 2 (56)) Warning (Orbit Planner): STIS EXPOSURE TIME ROUNDED DOWN TO NEAREST 0.1 SECONDS

Fixed Targets

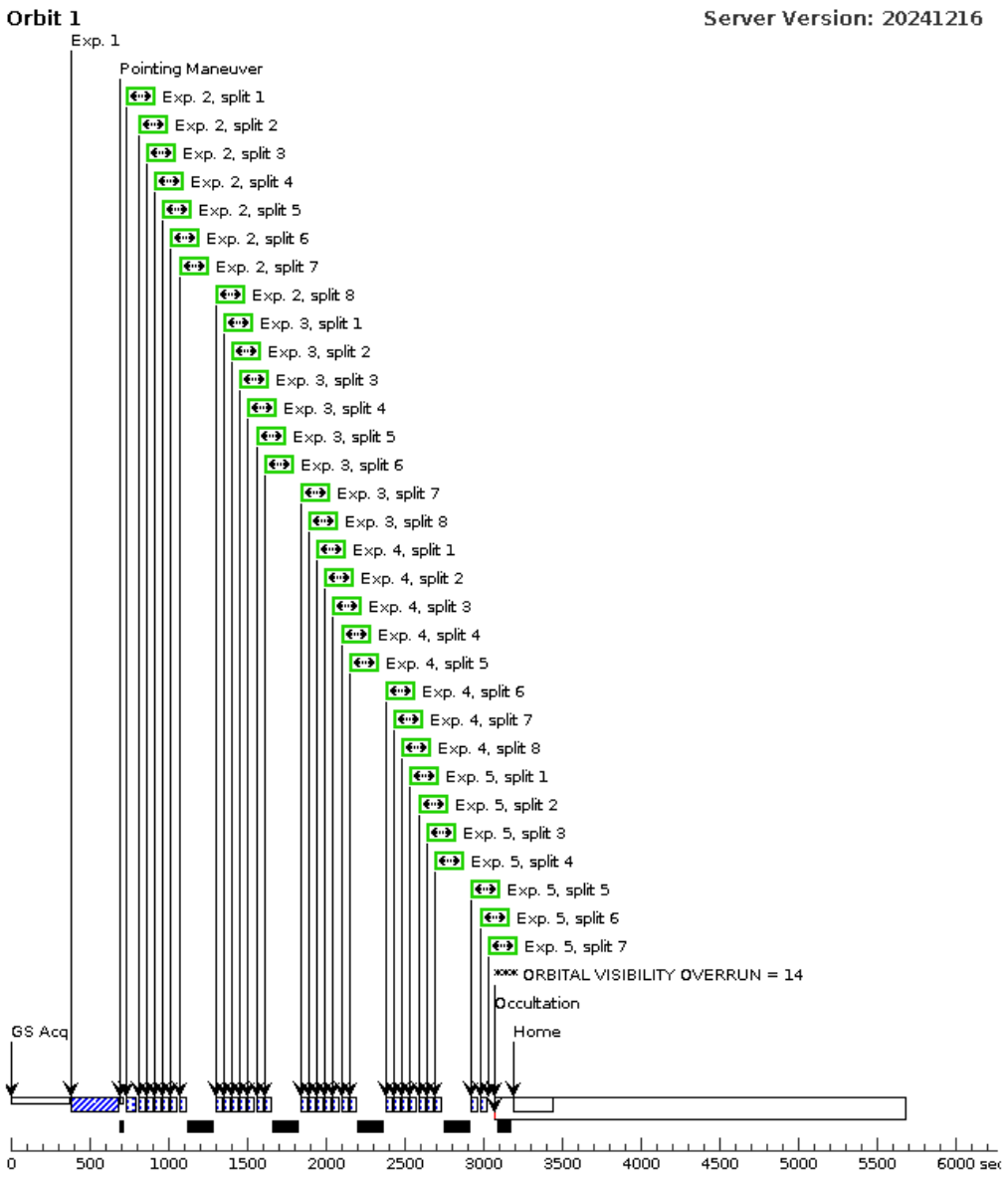
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=7; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - Wedge A - Roll 1 (07), failed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 308D TO 311 D

Comments: Timing: Must be executed in sequential orbit immediately prior to Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - BPic - Wedge A - Roll 1 (07)) Warning (Form): Gyro Mode overrides default value of 1G.

Fixed Targets

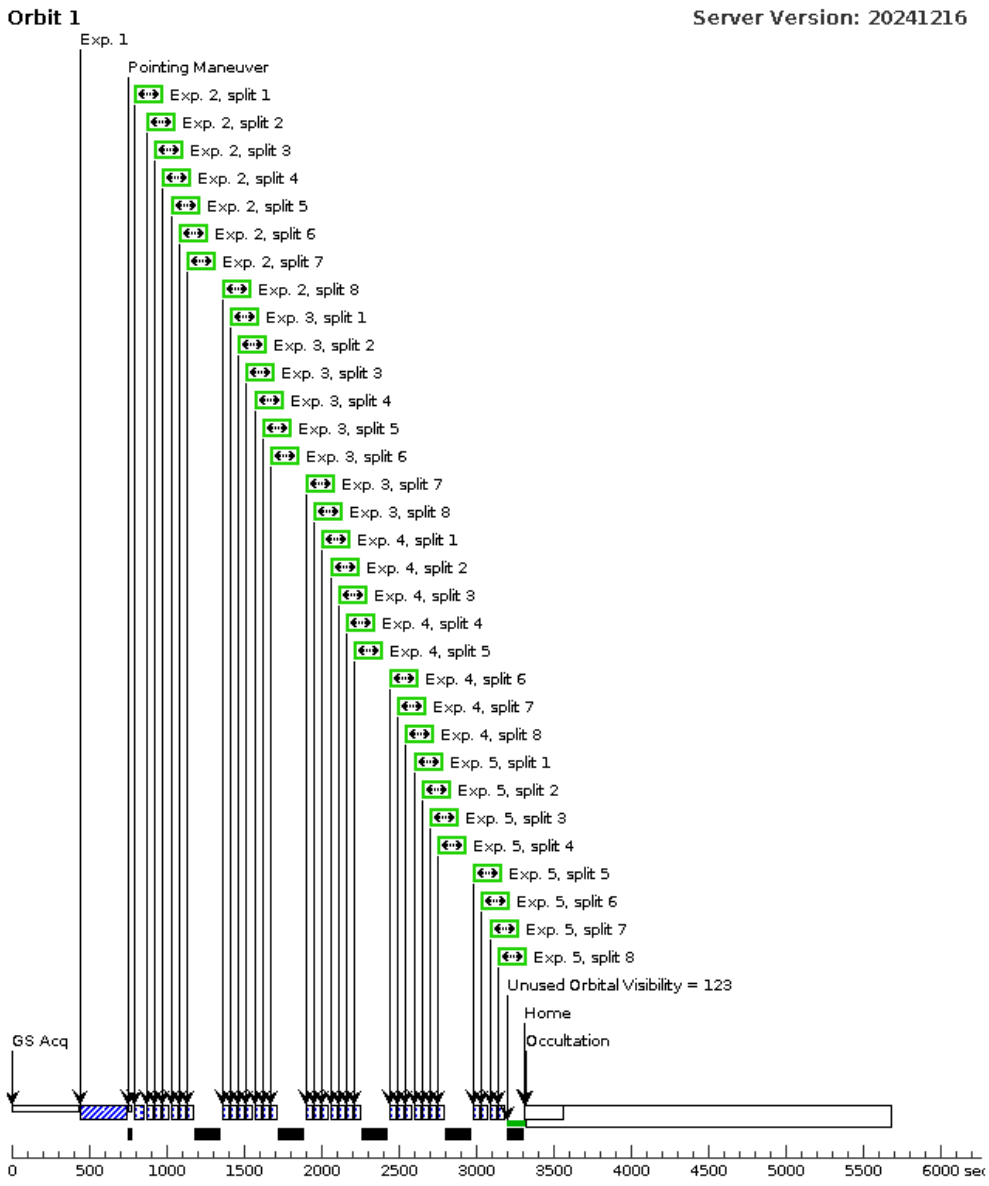
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***

Orbit Structure



Visit

Proposal 17456, SW - APic - WedgeA (08), failed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 310D TO 320 D; AFTER 07 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 01 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - APic - WedgeA (08)) Warning (Form): Gyro Mode overrides default value of 1G.

Fixed Targets

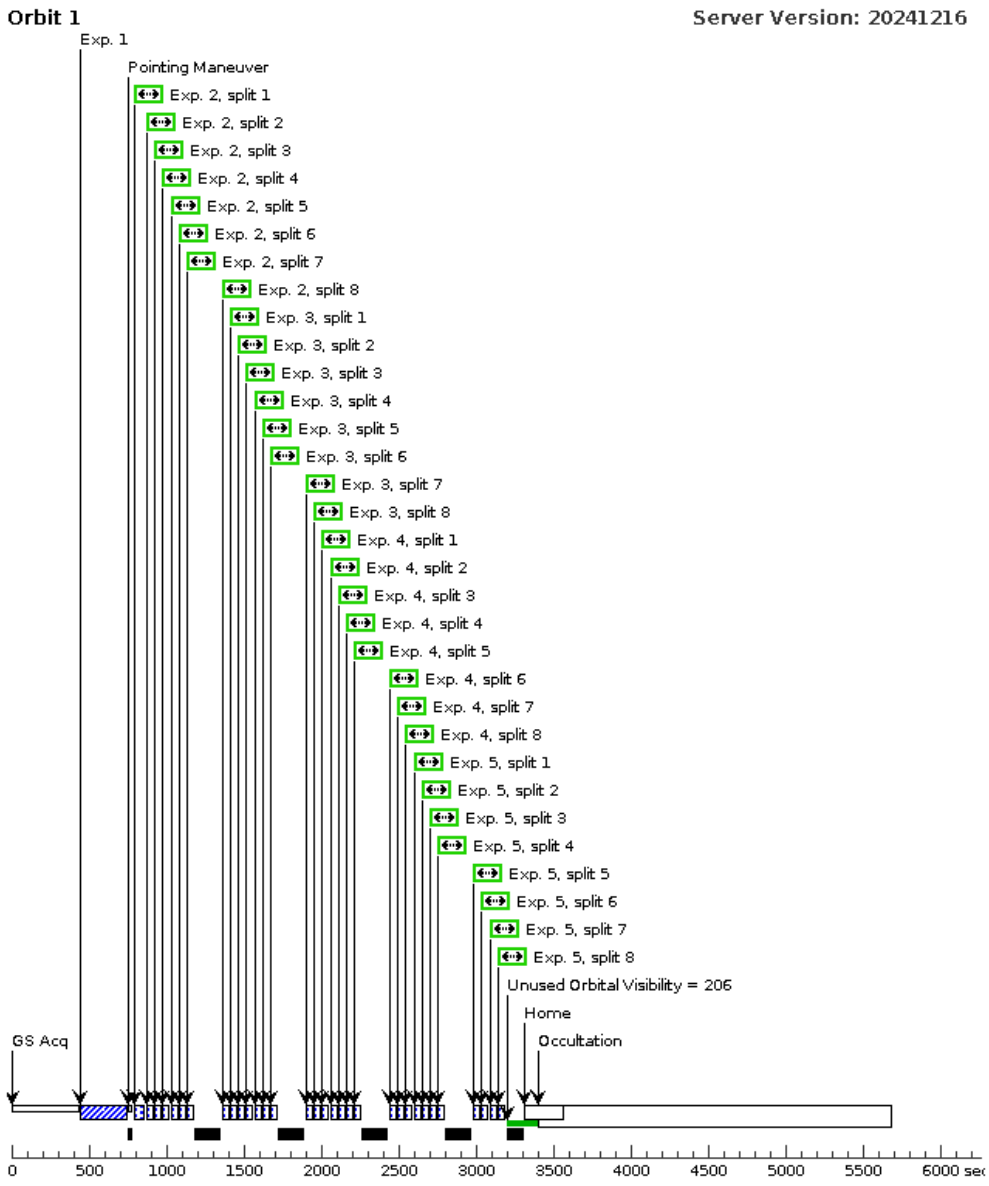
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - WedgeA - Roll 2 (09), failed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; GUID TOL 0.005"; GYRO MODE 3GOBAD; ORIENT 12D TO 15.5D FROM 07; AFTER 08 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately after Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - BPic - WedgeA - Roll 2 (09)) Warning (Form): Gyro Mode overrides default value of 1G.

(SW - BPic - WedgeA - Roll 2 (09)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR		GS ACQ SCENARIO BASE1BE		3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
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								[==>(Split 6)]	
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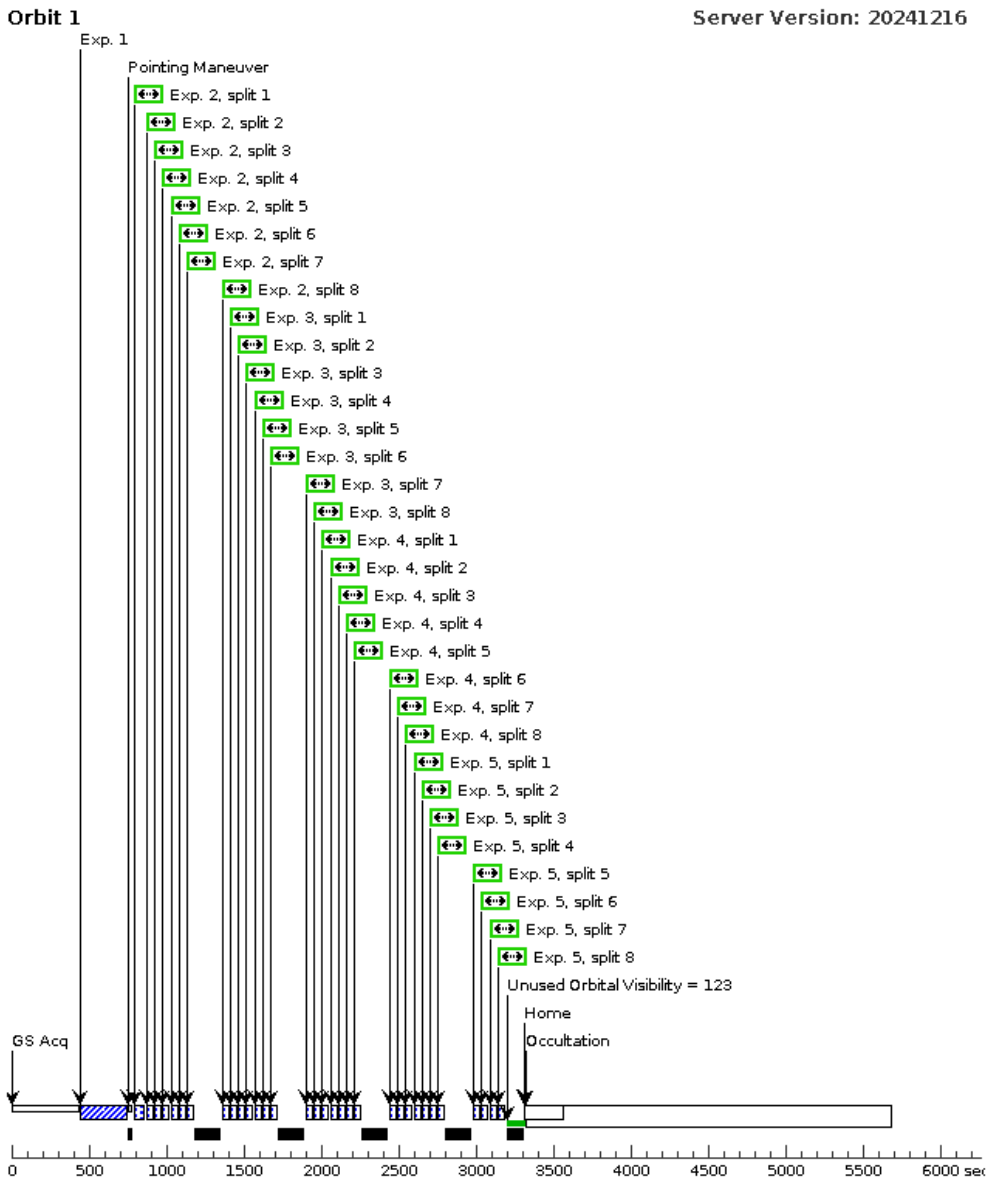
								[==>(Split 8)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - Wedge A - Roll 1 (57), implementation Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 308D TO 311 D

Comments: Timing: Must be executed in sequential orbit immediately prior to Visit 02 with only intervening inter-visit Earth occultation.

HOPR repeat of visit 7

Fixed Targets

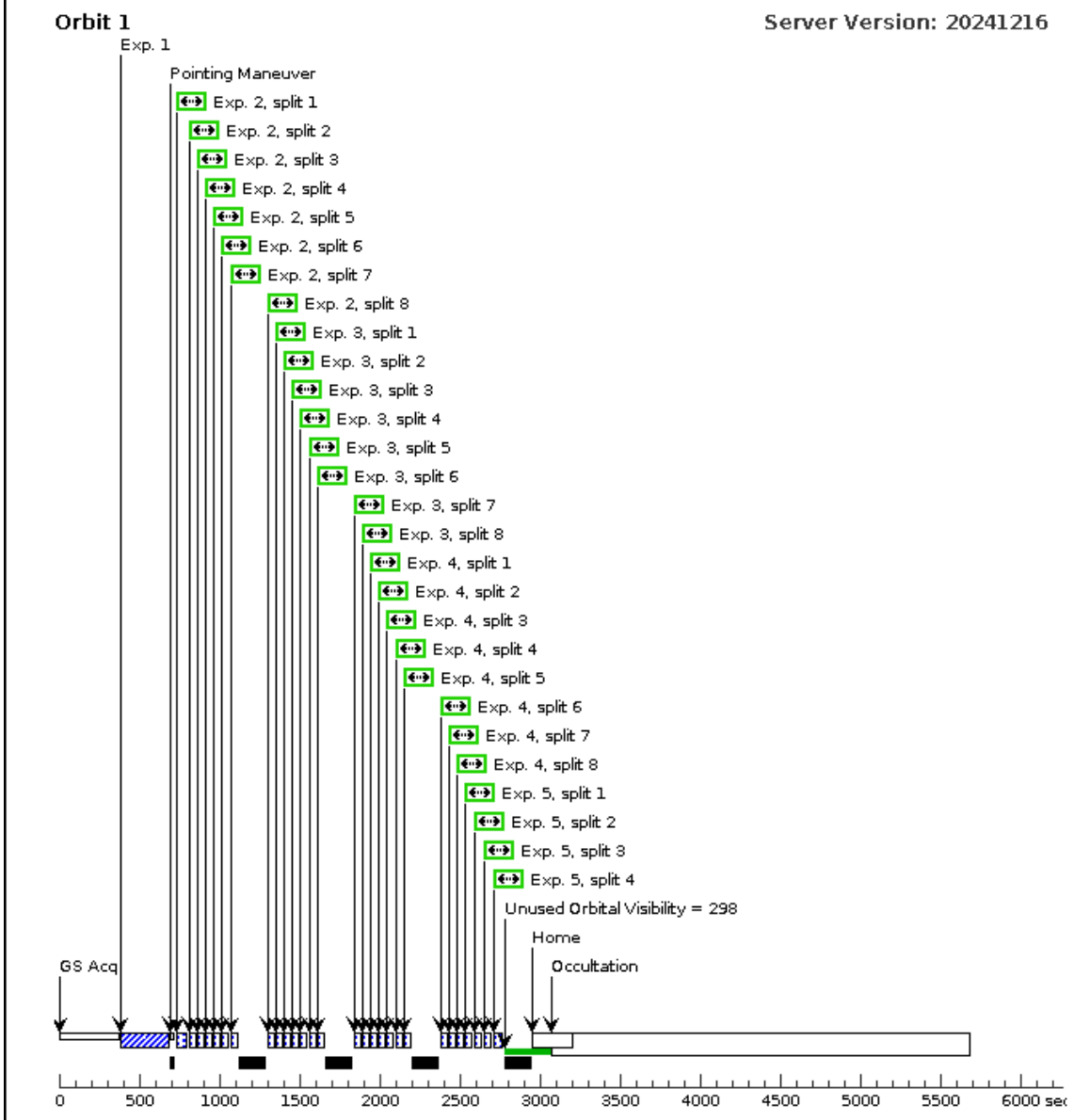
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=4; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	

Orbit Structure



Visit

Proposal 17456, SW - APic - WedgeA (58), implementation Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: No Diagnostics

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 290D TO 300 D; AFTER 57 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 01 with only intervening inter-visit Earth occultation.

HOPR repeat of visit 8

Fixed Targets

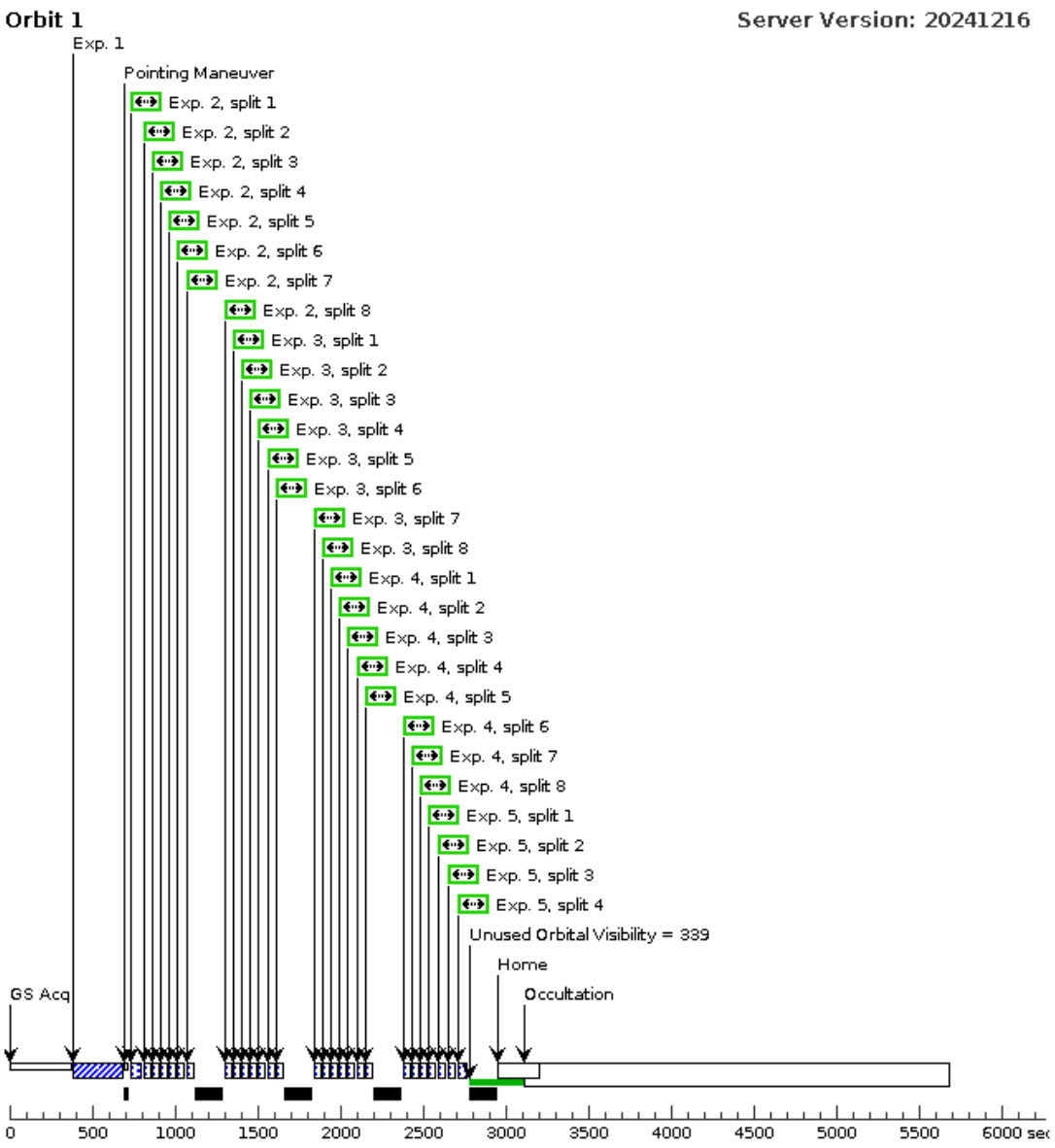
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=4; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - WedgeA - Roll 2 (59), implementation Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Informational

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 12D TO 15.5D FROM 57; AFTER 58 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately after Visit 02 with only intervening inter-visit Earth occultation.

HOPR repeat of visit 09

Diagnostics

(SW - BPic - WedgeA - Roll 2 (59)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

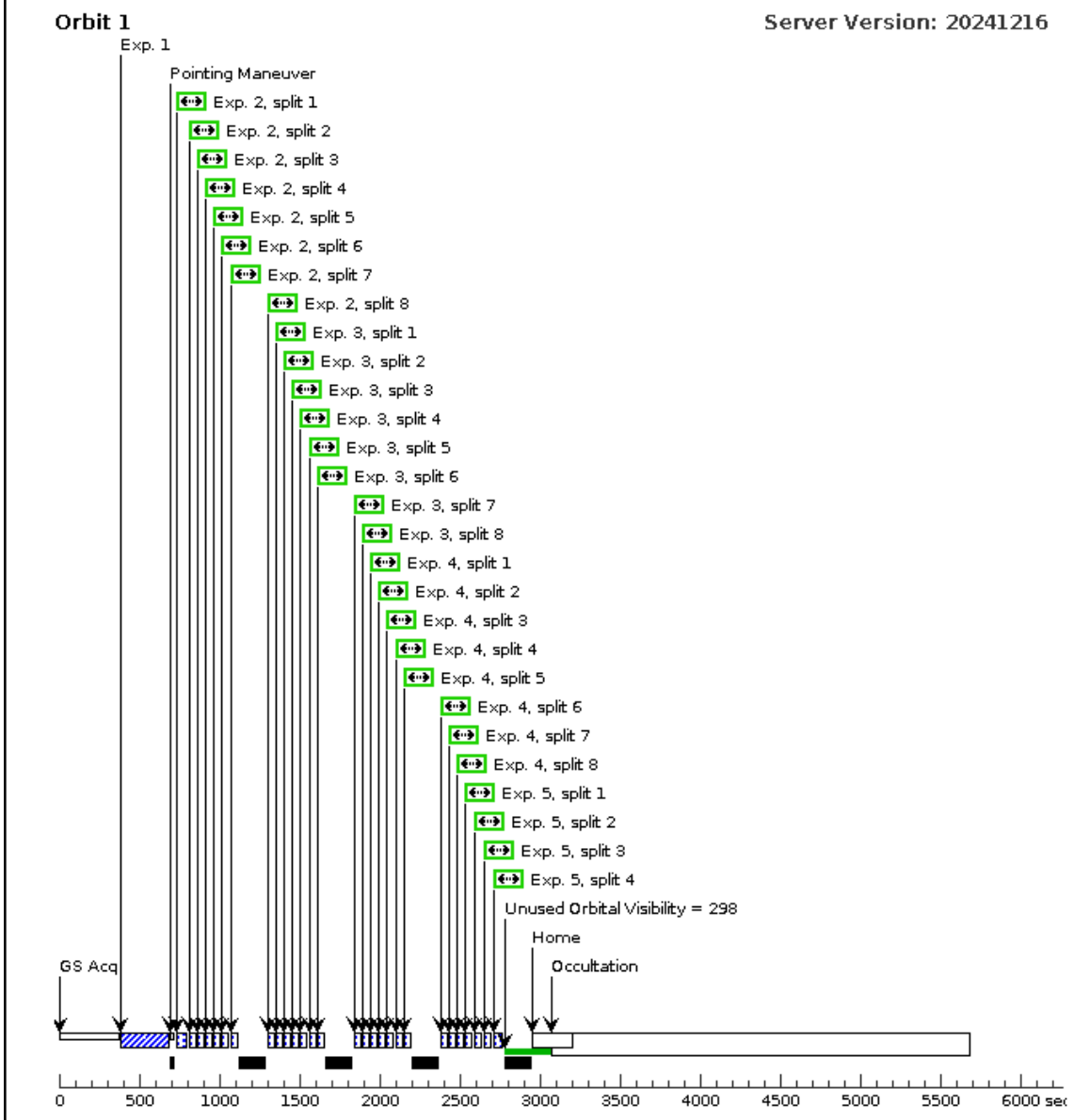
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEA1.8	MIRROR	CR-SPLIT=4; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - Wedge B - Roll 1 (10), completed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 288D TO 290 D

Comments: Timing: Must be executed in sequential orbit immediately prior to Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - BPic - Wedge B - Roll 1 (10)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

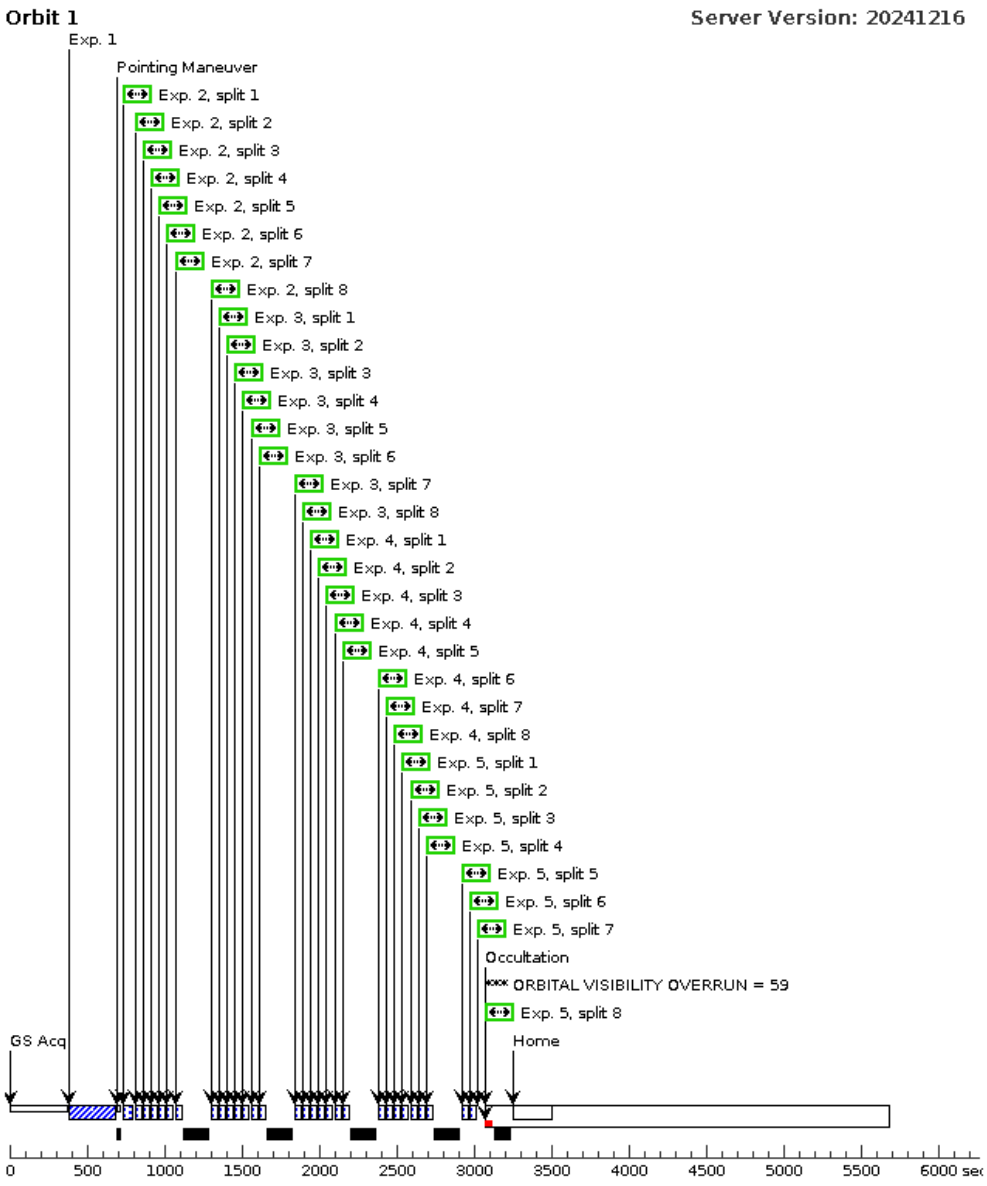
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)] *[==>(Split 2)]* *[==>(Split 3)]* *[==>(Split 4)]* *[==>(Split 5)]* *[==>(Split 6)]* *[==>(Split 7)]* *[==>(Split 8)]*	***[1]***

Orbit Structure



Visit

Proposal 17456, SW - APic - WedgeB (11), completed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT 283D TO 288 D; AFTER 10 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately following Visit 01 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - APic - WedgeB (11)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

Fixed Targets

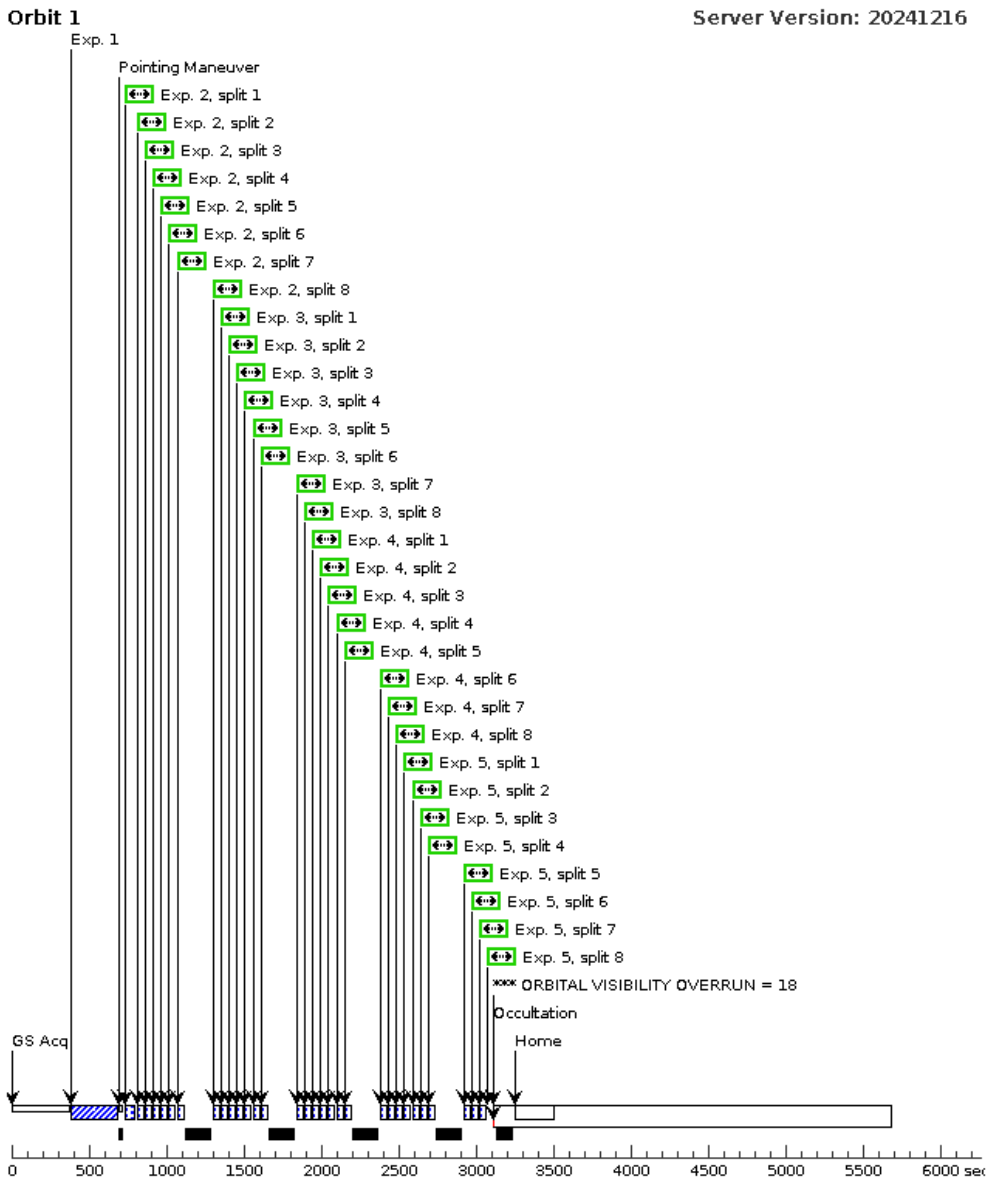
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	ALPHA-PIC	RA: 06 48 11.4600 (102.0477500d)	Proper Motion RA: -66.07 mas/yr	V=3.30	Reference Frame: ICRS
	Alt Name1: HD50241	Dec: -61 56 29.00 (-61.94139d)	Proper Motion Dec: 242.97 mas/yr	B=3.48	
		Equinox: J2000	Parallax: 0.03378"		
			Epoch of Position: 2000		

Comments: PSF calibrator for Beta Pictoris
Category=CALIBRATION
Description=[POINT SPREAD FUNCTION]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(2) ALPHA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(2) ALPHA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	

Orbit Structure



Visit

Proposal 17456, SW - BPic - WedgeB - Roll 2 (12), completed Thu Apr 10 19:00:44 GMT 2025

Diagnostic Status: Warning

Scientific Instruments: STIS/CCD

Special Requirements: PCS MODE FINE; ORIENT -10D TO -5D FROM 10; AFTER 11 BY 0.5 Orbits TO 1.5 Orbits

Comments: Timing: Must be executed in sequential orbit immediately after Visit 02 with only intervening inter-visit Earth occultation.

Diagnostics

(SW - BPic - WedgeB - Roll 2 (12)) Warning (Orbit Planner): ORBITAL VISIBILITY OVERRUN

(SW - BPic - WedgeB - Roll 2 (12)) Informational (Form): The Visit Planner and Spike may produce different schedulability results.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	BETA-PIC	RA: 05 47 17.0877 (86.8211988d) Dec: -51 03 59.45 (-51.06651d) Equinox: J2000	Proper Motion RA: 4.65 mas/yr Proper Motion Dec: 83.10 mas/yr Parallax: 0.05144" Epoch of Position: 2000	V=3.86 B=4.03	Reference Frame: ICRS

Comments: Beta Pictoris, debris disk: semi-major axis P.A.: +30.8 degree (E of N)
A6V
Category=STAR
Description=[A4-A9 V-IV]

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time (Total)/[Actual Dur.]	Orbit
1	Exposure 1 - ACQ	(1) BETA-PIC	STIS/CCD, ACQ, F25ND5	MIRROR				3.1 Secs (3.1 Secs)	
								[==>]	***[1]***
2		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
3		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
4		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	
5		(1) BETA-PIC	STIS/CCD, ACCUM, WEDGEB1.8	MIRROR	CR-SPLIT=8; GAIN=4			60 Secs (60 Secs)	
								[==>(Split 1)]	***[1]***
								[==>(Split 2)]	
								[==>(Split 3)]	
								[==>(Split 4)]	
								[==>(Split 5)]	
								[==>(Split 6)]	
								[==>(Split 7)]	
								[==>(Split 8)]	

Orbit Structure