11155 - Dust Grain Evolution in Herbig Ae Stars: NICMOS Coronagraphic Imaging and Polarimetry

Cycle: 16, Proposal Category: GO

(Availability Mode: SUPPORTED)

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?*
10	(1) HD31293	NIC2	1	29-May-2008 21:01:38.0	yes

Visit	*Targets used in Visit*	*Configurations used in Visit*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
11	(1) HD31293	NIC2	1	29-May-2008 21:01:47.0	yes
20	(2) HD97048	NIC2	1	29-May-2008 21:01:55.0	yes
21	(2) HD97048	NIC2	1	29-May-2008 21:02:06.0	yes
30	(3) HD100546	NIC2	1	29-May-2008 21:02:13.0	yes
31	(3) HD100546	NIC2	1	29-May-2008 21:02:20.0	yes
40	(4) HD141569	NIC2	1	29-May-2008 21:02:26.0	yes
41	(4) HD141569	NIC2	1	29-May-2008 21:02:31.0	yes
50	(5) HD142527	NIC2	1	29-May-2008 21:02:38.0	yes
51	(5) HD142527	NIC2	1	29-May-2008 21:02:47.0	yes
60	(6) PDS-453	NIC2	1	29-May-2008 21:02:53.0	yes
61	(6) PDS-453	NIC2	1	29-May-2008 21:03:00.0	yes
70	(7) PDS-144N	NIC2	1	29-May-2008 21:03:05.0	yes
71	(7) PDS-144N	NIC1	1	29-May-2008 21:03:09.0	yes
80	(8) HIP70890	NIC2	1	29-May-2008 21:03:17.0	yes
81	(9) HIP36208	NIC2	1	29-May-2008 21:03:23.0	yes
82	(10) HIP57548	NIC2	1	29-May-2008 21:03:29.0	yes
90	(5) HD142527	NIC2	1	29-May-2008 21:03:35.0	yes
91	(6) PDS-453	NIC2	1	29-May-2008 21:03:41.0	yes

19 Total Orbits Used

ABSTRACT

We propose to take advantage of the sensitive coronagraphic capabilities of NICMOS to obtain multiwavelength coronagraphic imaging and polarimetry of primordial dust disks around young intermediate-mass stars (Herbig Ae stars), in order to advance our understanding of how dust grains are assembled into larger bodies. Because the polarization of scattered light is strongly dependent on scattering particle size and composition, coronagraphic imaging polarimetry with NICMOS provides a uniquely powerful tool for measuring grain properties in spatially resolved circumstellar disks. It is widely believed that planets form via the gradual accretion of planetesimals in gas-rich, dusty circumstellar disks, but the connection between this suspected process and the circumstellar disks that we can now observe around other stars remains very uncertain. Our proposed observations, together with powerful 3-D radiative transfer codes, will enable us to quantitatively determine dust grain properties as a function of location within disks, and thus to test whether dust grains around young stars are in fact growing in size during the putative planet-formation epoch. HST imaging polarimetry of Herbig Ae stars will complement and extend existing polarimetric studies of disks around lower-mass T Tauri stars and debris disks around older main-sequence stars. When combined with these previous studies, the proposed research will help us establish the influence of stellar mass on the growth of dust grains into larger planetesimals, and ultimately to planets. Our results will also let us calibrate models of the thermal emission from these disks, a critical need for validating the properties of more distant disks inferred on the basis of spectral information alone.

OBSERVING DESCRIPTION

We will use the coronagraphic polarimetry mode of NICMOS to obtain imaging polarimetry of circumstellar disks which ave been previously imaged, but without the polarizers. We will also obtain coronagraphic F110W imaging for those targets which lack archival F110W data.

We are observing 10 targets (7 science targets and 3 PSF calibration targets) using NICMOS. All targets will be observed using NICMOS camera 2 coronagraphic polarimetry, with one exception. That exception is the edge-on disk PDS 144N, whose special geometry means that it can be observed without a coronagraph; for PDS 144N only we obtain non-coronagraphic NIC1 and NIC2 imaging polarimetry.

This program is a followup and continuation of coronagraphic polarimetry of T Tauri and debris disk stars in GO 10847 and 10852. The observing strategy, Visit structure, and orientation constraints in general follow directly from the methods used in those prior visits, plus the addition of F110W imaging and a few other exceptions as noted below.

For each of our coronagraphic science targets (AB Auriga, HD 97048, HD 100546, HD 141569, HD 142527, PDS 453) we will obtain observations in two single-orbit visits. For each target, the first visit of each pair carries one or more allowable absolute orientation ranges (listed in order of preference). The second visit in each visit pair is linked with an ORIENT FROM requirement to the first visit in each pair. We number the visit pairs for the science targets as (10, 11),(20, 21).... for the science targets, with the first digit of the visit number corresponding to a specific target. Our PSF calibration targets (visits 80,81, 82) are unconstrained in orientation. The NICMOS observing strategy (definition of the visit structures and exposures within) is very similar for all visit pairs, differing only in (a) orientation requirements, (b) target acquisition filters and exposure times, (c) whether F110W imaging is obtained in addition to the POL*L observations, and (d) multiaccum sample-sequences used for post-coronagraphic (direct) imaging.

Because our science targets are all very red (in general with H-K > 0.5), we want equally red PSF stars - but these stars must also be bright, and they should be unpolarized. We therefore have chosen three nearby M dwarfs (Proxima Centauri, Luyten's Star, and Ross 128), which are appropriately bright on account of their proximity, and are expected to be unpolarized. They are not quite as red as our science targets, but it has not yet proven possible to identify any redder PSF star candidates which satisfy our other criteria.

NICMOS VISIT STRUCTURE (EXPOSURES)
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We describe first the visit structure for our coronagraphic observations (all targets except PDS 144N), then describe separately the observations for PDS 144N.

Each coronagraphic visit begins with a target acquisition (ACQ) exposure (exp #1). All targets are bright stars with well-established ICRS coordinates. Most science targets have small proper motion; our PSF stars are nearby unpolarized stars and hence have larger proper motions, which we have been sure to include properly. Our ACQ exposure times are designed to reach an exposure depth of 77,000 electrons in the central pixel of the PSF. Acquisition filters differ for different targets to achieve this goal. After target acquisition and the re-centering slew, we take three sets of (POL0, POL120, POL240) images, sequentially. Rather than repeating each polarizer three times then moving on to the next polarizer, we cycle

through the POL filter sets in the same order three times. This strategy provides for some mitigation of the potential effects of image persistence decay and PSF instability during data reduction. We recognize that repetitively operating the filter wheel mechanism incurs a small amount of additional overhead, however, this is an acceptable trade given that it provides an ability to reduce otherwise uncorrectable instrumental systematics. In all cases, for all targets (including our calibration targets) we use STEP64 multiaccum sampling with NSAMP=11 or 12 (192 or 256s integration time per multiaccum). The total number of samples (NSAMP) varies between 11 and 12, even within a single orbit, to "fit the visibility period" after the entire visit is initially constructed. *IF* in implementation the actual visibility periods are shorter than APT is modeling them, our PC is free to adjust (downward) any NSAMP=12 observation to NSAMP=11 in any visit as required.

Following the coronagraphic polarimetry, for all but one target, we obtain a deep F110W coronagraphic image, using STEP64/NSAMP=16 (for a total of 526 s). HD 141569 already has archival F110W imaging so for it we skip this step, and adjust upwards the exposure times for the POL*L observations to fill the orbit. Following the last coronagraphic exposure we take four "out of hole" dithered (with POS TARGS) SCAMRR/NSAMP=20 exposures using POL240L and F110W (at each of two dither positions). We do this to determine, observationally, the flux density scaling of the underlying (unpolarized) component of the stellar PSF between our disk targets and our unpolarized calibration targets/ PSF references. For most targets, these observations will be saturated in the central pixel of the stellar PSF, and flux density measures will be made in the wings of the PSF.

For PDS 144N, which does not need to be observed coronagraphically, we instead obtain one orbit each of NIC1 imaging polarimetry and NIC2 imaging polarimetry. In each orbit, we obtain a set of POL0, POL120, POL240 images at each of four dither positions. Again, these use STEP64 multiaccum with NSAMP=11. We employ a NIC-SPIRAL-DITH pattern, rotated 22.5 degrees and with dither step sizes chosen individually for the NIC1 and NIC2 orbits such that offsets are non-integral multiples of the pixel size, to better sample the PSF. As above, we use STEP64 multiaccum readouts. We do not obtain F110W imaging for PDS144 since that already exists in the archive. PDS 144N is the northern (and fainter) star of a 5" binary; as discussed below we use ORIENT constraints to avoid having either diffraction spikes or the NIC1 polarizer ghosts from the brighter star interfere with our view of PDS 144N.

VISIT LEVEL ORIENTATION SPECIFICATIONS
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Without regard to "schedulability", we describe the orientation requirements for the science targets which would optimize the science return. We have used these criteria to define both the absolute and relative orientation requirements for all visits. In some cases, the optimal orientations were found to be non-schedulable. In those cases we individually considered the possible trades and assigned schedulable orientations (based upon the APT 16.2.2 Visit Planner). We provide multiple absolute orientation ranges for the first visit in each visit pair for all science targets. We comment on the possibilities for alternate differential (Orient From) requirements (which cannot be entered via APT 16.2.2) which may be implemented by our Program Coordinator if needed.

CORONAGRAPHIC SCIENCE TARGETS (1-6):

We are polarimetrically observing scattered light from inclined circumstellar disks about Herbig Ae stars. The orientations, morphologies, and spatial extent are well established for all of the disks from previous (HST/AO) observations. Below we describe both the rational for the given preferred absolute orientation ranges on the first visit of each visit-pair, and give the allowable relative (orient from) ranges on the second visit of each visit pair. In some cases the preferred (best) orientations are not actually achievable (as informed by APT) in 2GM.

"OPTIMUM" ABSOLUTE ORIENTATIONS (1st Visit in pairs):

The NICMOS coronagraphic obscuration is asymmetrically placed in the NIC2 aperture, near one corner of the field of view. Specifically, the coronagraphic obscuration is at (X, Y)[SIAF] = (5.5", 3.3") from the (-X,+Y) edge of the FOV. If there were no field dependent coronagraphic polarimetric artifacts, for the first visit, we would ideally orient the disk MAJOR axis (where the disk is visible to a larger angular extent) along the image X[SIAF] axis. This would place the disk minor axis along the image Y axis, with the star 3.3" from the edge of the detector in the Y direction. Such an orientation provides imaging of the four symmetric sectors of the disk with minimum interference from the HST+NICMOS diffraction spikes. The preferred orientation provides the optimum information on: (a) the dark disk mid-plane between the brighter upper and lower scattering lobes, in the direction of forward scattering along the disk minor axis, (b) the back-scattered light from the upper lobe of the disk, and (c) the disk ansae located on the major axes. Understanding (a) is critical to investigating the (possible) segregation of grain populations with scale height above (and below) the mid-plane. Taken together, (a-c) enable us to study the grain polarization and scattering efficiencies with illumination angle, which

constrains their physical properties. Because the disk above (and below) the mid-plane is brighter on the minor axis, the disk there is seen with higher SNR, and to a larger radial extent when compared to the opposite direction. Hence, we would preferentially orient the disks with the observable mid-plane azimuthally straddling the Y[SIAF] axis. The opposite (180 degree different) orientation should also be acceptable, given the angular extent of these disks as imaged earlier with shorter wavelength broadband coronagraphy - but still risks truncating part of disk by the edge of array, given the deeper integrations of this program compared to previous observations. Given that the ideal orientations may not be achievable, we have determined that the disks can be oriented (in the first of each visit pairs) with the MINOR axis on the image horizontal (X axis), although this is much less preferred. In that case, the outer portion (r >3.3") of the disk major axis (which would be along the Y axis, and therefore closer to the edge of the FOV) would be truncated by the array edge. With the minor axis oriented along the X-axis, we potentially risk losing information at larger radii, reducing our ability to analyze any asymmetries in the azimuthal direction at the disk ansae; however, there is a low expectation for observing such asymmetries given the earlier broadband imaging.

ARTIFACT AVOIDANCE (1st Visit in pairs): The above is for the ideal case, however, our NICMOS coronagraphic polarization calibration program revealed the existence of an instrumental polarization artifact which appears ~3.2" from the occulted target at an SIAF position angle of ~177 deg CCW from image +Y axis (i.e., nearly "below" the obscuration, slightly toward the image -X direction). The polarization artifact has an angular extent ~11 deg. Therefore, for the first visits, we specify orientations which avoid placing the both the major and minor axes directly through this artifact. To account for this artifact, we orient the disk axes so they are "tilted" w.r.t. the SIAF axes, at a minimum of 8 deg CCW in SIAF. We prefer that the incremental rotation to compensate for the polarization artifact be as small as possible (hence we have provided for rotational parity), but also recognize the difficulties in finding suitable scheduling windows (which APT does not model with high fidelity), and are allowing for a tolerance in the absolute orientation up to 20 degrees. Thus, the absolute orientations provided allow for a rotation of the disk axes from 8 to 28 degrees CCW from the SIAF axes.

DERIVED ORIENTATION RANGE REQUIREMENTS:
For the first visit in each visit pair we thus provide four orientation ranges which typically differ by 90 degrees (although all four are not always achievable due to scheduling constraints), but note that not all have equal preference. We provide all four recognizing the difficulties often encountered in scheduling. The orientations are given in order of preference in each Visit definition, should more than one scheduling window be found. SPECIFICALLY, in the Visits, given:

PA_MINOR_FORWARD = Position angle of the minor axis bifurcating the disk mid-plane (forward scattering direction)
AND
Absolute Orientation Tolerance: 0 to 20 degrees from Preferential.

Then, the orientation ranges (in SIAF) in order of preference, are as follows (unless otherwise stated in Visit level comments):
SIAF_RANGE (CCW from SIAF +Y axis) to place PA_MINOR_FORWARD:
(1) 188 to 208 deg CCW
(2, 3) 98 to 118 deg *OR* 278 to 298 deg
(4) 8 to 28 Note:

SIAF orientation ranges (2) and (3) have equal preferential weight. We then compute an allowable orientation range for each target, given its PA_MINOR_FORWARD angle as measured from previous HST or AO data:

ABSOLUTE_ORIENT_RANGE = (PA_MINOR_FORWARD - SIAF_RANGE +APER_REF) mod 360

where APER_REF == Aperture Reference angle = 224.5 degrees for NIC2

RELATIVE ORIENTATIONS (2nd Visit of the visit pairs):

Because we are taking polarimetric observations, the second visit of each visit pair should ideally: (a) have the target "rotated" into a different quadrant of the array, i.e., an orientation differing in absolute value by at least 90 degrees w.r.t to the first visit, and (b) not be near an antipodal angle (i.e., not too close to 180 degrees apart). Additional preferences are to (c) maximize the area of the disk to be observed without corruption (degradation) by the HST diffraction spikes when combining the two visits and (d) sample in the 2nd visit the area which might be degraded by the artifact discussed above. For the ideal case, the second visit would be differentially oriented 135 deg or 225 deg RELATIVE TO THE FIRST VISIT

(either would be equally acceptable) to maximize the azimuthal area sampled using both visits. However, given the polarimetric artifact, doing so would rotate part of the region of the disk affected by the artifact in the 1st visit onto a diffraction spike in the 2nd visit. To avoid this, the ORIENT FROM angle in the first case should not exceed 125 deg. In order to assure sufficient azimuthal sampling (such that at the full disk is unaffected by diffraction spikes in at least one of the two visits) the ORIENT FROM should not be less than 120 (90 + 30) degrees. This puts a fairly restrictive ORIENT FROM range of 120 to 125 on the second visit. The second possible orient range is correspondingly 210 to 215 deg. Either ORIENT FROM is equally acceptable. Other constraints appear when scheduling has proved impossible.

VISIT PAIR ORIENT/ORIENT-FROM CONSTRAINTS:
Whenever possible, we have provided (up to) FOUR possible ORIENTATION RANGES for each target (differing by 90 degrees, each with a tolerance of 0 to 20 degrees), each constrained by TWO linked ORIENT FROM requirements. Thus, their are can be up to EIGHT possible combinations of orientations which would be acceptable. We note that the APT front-end software however only allows for a single Orient From specification on a linked visit. Hence, while we supply only one input as a scheduling requirement, our proposal program coordinator may freely select between a (120 to 125) or (210 to 215) degree Orient From requirement. (As a final note, we have found that APT expects input of ORIENT FROM angles only in the range of -180 to + 180 degrees, so the specification of the 210 to 215 degree range is input as -150 to -145 deg.)

PDS 144

The one science target which is an exception to the above strategy is PDS 144N. The edge-on geometry of this system naturally blocks the central star, so that the disk is observable without coronagraphy. We therefore can observe it with both NIC1 and NIC2 imaging polarimetry, without regard or concern for any of the above-discussed orientation constraints. However, PDS 144N is in a binary system, with a brighter star (also Herbig Ae) located 5.5 arcsec away at a position angle of 210 degrees relative to PDS 144N. (Conversely, PDS 144N is at a position angle of 30 degrees relative to the brighter PDS 144S). We wish to prevent the diffraction spikes from bright PDS 144S from landing on top of the fainter PDS 144N. In addition, the NIC1 polarizers suffer from ghosts which extend several arcseconds from any bright point source; these also should not be allowed to fall on PDS 144N. We have therefore applied suitable absolute ORIENT constraints to prevent either the diffraction spikes or the NIC1 polarizer ghosts from falling on top of PDS 144N.

As these are non-coronagraphic observations, the two visits to PDS 144N (one with NIC1, one with NIC2) are not linked via any sort of orient from constraints. They do have the same absolute orientation constraints and *if possible* could be scheduled in adjacent orbits.

PSF/Polarimetric Calibration Targets

Our PSF/Polarimetric calibration targets carry NO absolute orientation requirements.

TIMING LINKAGES
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There are *NO* timing linkages between any of the visits. However, *if possible*, where consistent with the above Orient constraints, if both visits to a given target may be obtained in adjacent orbits, we request that they be so scheduled, in order to minimize temporal variations in the PSF. However, we recognize that in most cases the required Orient constraints preclude obtaining observations in this manner.

Also, *if possible*, i.e., if multiple scheduling windows exist, we would REQUEST the execution of at least one of our NICMOS PSF/polarimetric calibration target visits as early in Cycle 16 as possible. This will allow us to evaluate the effectiveness of our calibration strategy when the first science data imagery are acquired, and if necessary revise our strategy accordingly.

REAL TIME JUSTIFICATION
We have NO realtime requirements.

CALIBRATION JUSTIFICATION
Three of our visits are designed to obtain high SNR polarimetric observations of PSF calibrators / unpolarized standard stars. The need for this was addressed in our Phase I proposal, and 3 orbits were granted to obtain these data. These observations are taken using only AVAILABLE instrument

and spacecraft capabilities, and need NO special resources from STScI to obtain or provide the data. I.e., the observations are conducted in a manner identical to those which would be obtained for science targets.

ADDITIONAL COMMENTS

1. We are investigating the POSSIBILITY of replacing one of our PSF/unpolarized standard stars with a calibrator of larger H-K color index. Identifying such beasts, particularly of sufficient brightness, has thus far yielded no suitable candidates. We wish to retain that "option" of substituting one of our calibration targets, until such an option would be precluded by intruding into the development of an integrated scheduling plan. As this is a calibration observation (as identified in our Phase I proposal to the TAC) we believe such a substitution may be authorized by the programs Contact Scientist (or Program Coordinator) without a formal request to the TTRB.

2. Our exposure sequences in each visibility period (visit) are wrapped in a SEQ-NON INT requirement. As implied by this requirement: (a) the order of execution should not be permuted, as the ordering of exposures has been designed to permit the identification, and mitigation, of image persistence, (b) the Visit should not be split into two visibility periods -- all exposures MUST be obtained under a single guide star and coronagraphic target acquisition within a single unocculted visibility period.

3. IF possible we request SAA un-impacted orbits.

Visit

Proposal 11155, Visit 10, completed Fri May 30 01:03:45 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 164.5D TO 184.5 D; ORIENT 254.5D TO 274.5 D; ORIENT 74.5D TO 94.5 D; ORIENT 344.5D TO 4.5 D

Comments: AB Aurigae, first visit. Disk semi-minor axis at 148 degrees (Fukugawa et al. 2004)

Absolute orientation constraints derived as described in the observations descripion. APT shows the two linked visits are not schedulable using either an ORIENT FROM constraint of -150 to -145 degrees for visit 11, or an ORIENT FROM of 120 to 125 either. Therefore, for Visit 11 ONLY we have relaxed our optimal ORIENT FROM constraint to allow an orientation of -140 to -135 (ten degrees less rotation than optimal) in order to allow scheduling. APT shows the two linked visits as schedulable using the modified (non-optimal) constraint.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD31293	RA: 04 55 45.8445 (73.9410188d)	Parallax: 0.00693"	V=7.06	Reference Frame: ICRS
	Alt Name1: AB-AUR	Dec: +30 33 4.29 (30.55119d)	Epoch of Position: 2000.0	J=5.936,	
	Alt Name2: IRAS04525+3028	Equinox: J2000		H=5.062,	
				K=4.23,	
				H-K=0.832	

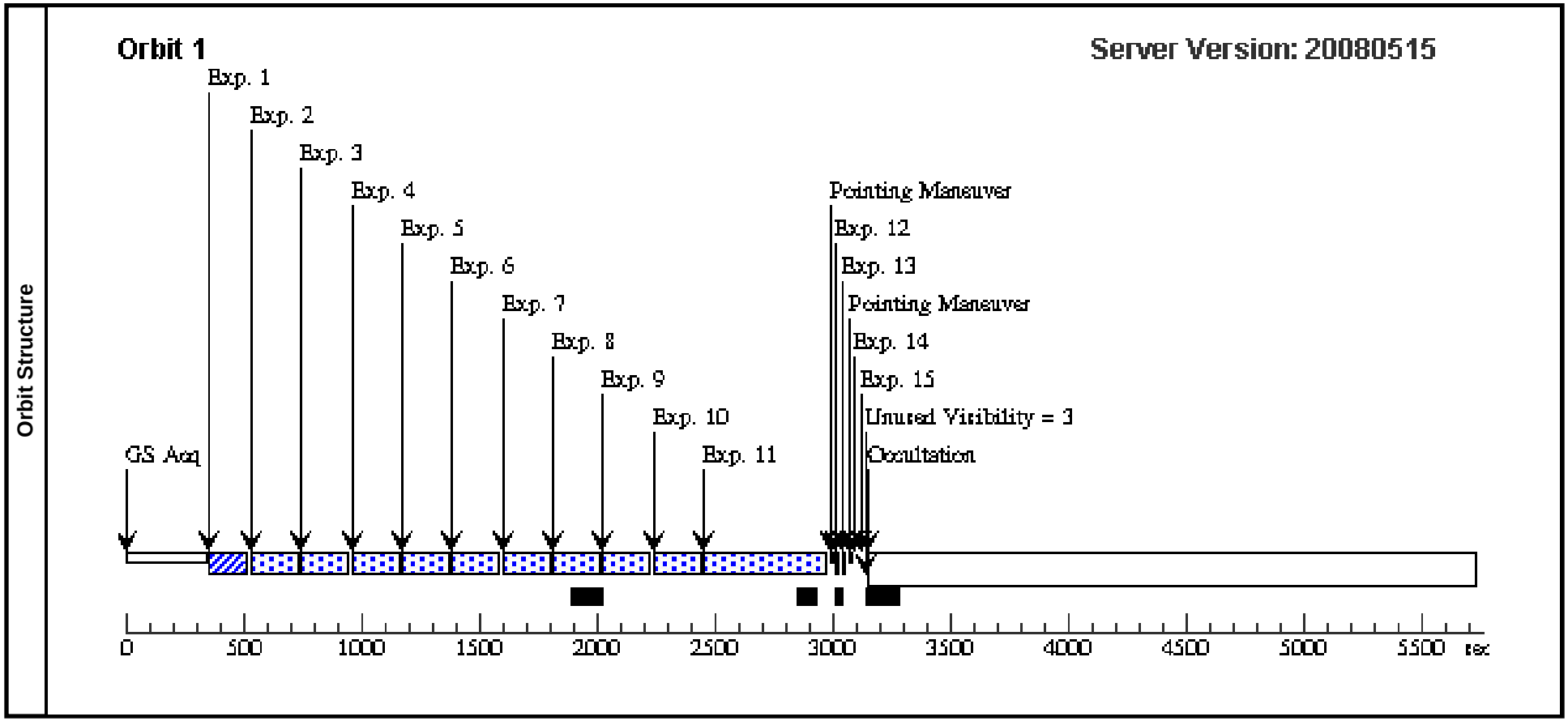
Comments: Herbig Ae star with circumstellar disk. SpT=A1

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(1) HD31293	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.5 Secs [==>]	[1]
2	pol0 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
3	pol120 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
4	pol240 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
5	pol0 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
6	pol120 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
7	pol240 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
8	pol0 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]
9	pol120 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	[==>]	[1]

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 3
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 11, completed Fri May 30 01:03:46 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT -140.0D TO -135.0D FROM 10

Comments: Disk semi-minor axis at 158 degrees (Fukugawa et al. 2004)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	HD31293	RA: 04 55 45.8445 (73.9410188d)	Parallax: 0.00693"	V=7.06	Reference Frame: ICRS
	Alt Name1: AB-AUR	Dec: +30 33 4.29 (30.55119d)	Epoch of Position: 2000.0	J=5.936,	
	Alt Name2: IRAS04525+3028	Equinox: J2000		H=5.062,	
				K=4.23,	
				H-K=0.832	

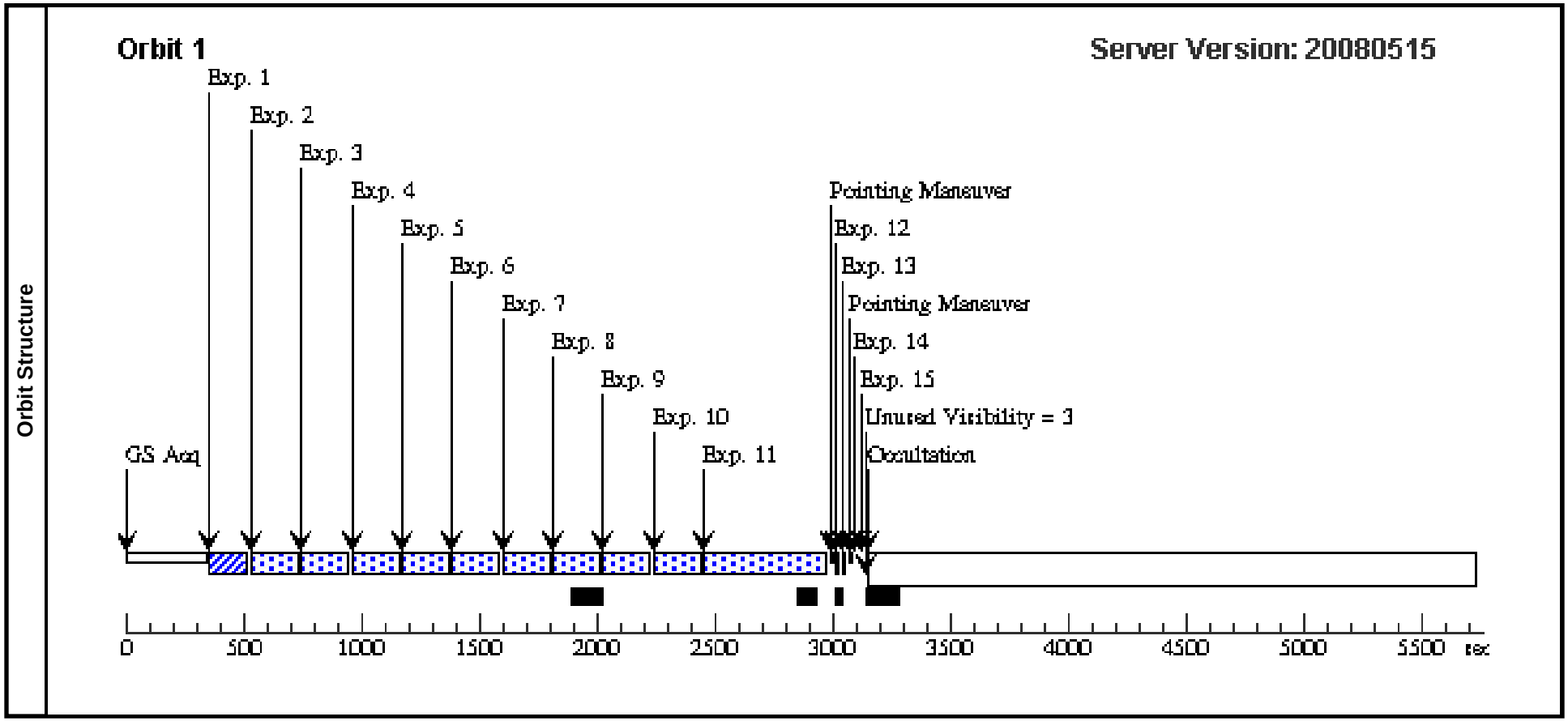
Comments: Herbig Ae star with circumstellar disk. SpT=A1

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(1) HD31293	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.5 Secs	
								[==>]	***[1]***
2	pol0 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11	f110w	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(1) HD31293	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 3
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 20, scheduling Fri May 30 01:03:47 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 286.5D TO 306.5 D; ORIENT 16.5D TO 36.5 D; ORIENT 196.5D TO 216.5 D; ORIENT 106.5D TO 126.5 D

Comments: HD 97048, first visit. Disk minor axis is at 270 +-5 degrees (Lagage et al. 2006, Doucet et al. 2007)

Absolute orientation constraints derived as described in the Observations Description. The two visits are linked with an ORIENT FROM of 120-125, which APT shows as schedulable using adjacent orbits, but -150 to -145 is also acceptable if schedulable.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD97048	RA: 11 08 3.3183 (167.0138262d) Dec: -77 39 17.49 (-77.65486d) Equinox: J2000		V=8.46 J=7.267, H=6.665, K=5.941, H-K=0.724	Reference Frame: ICRS

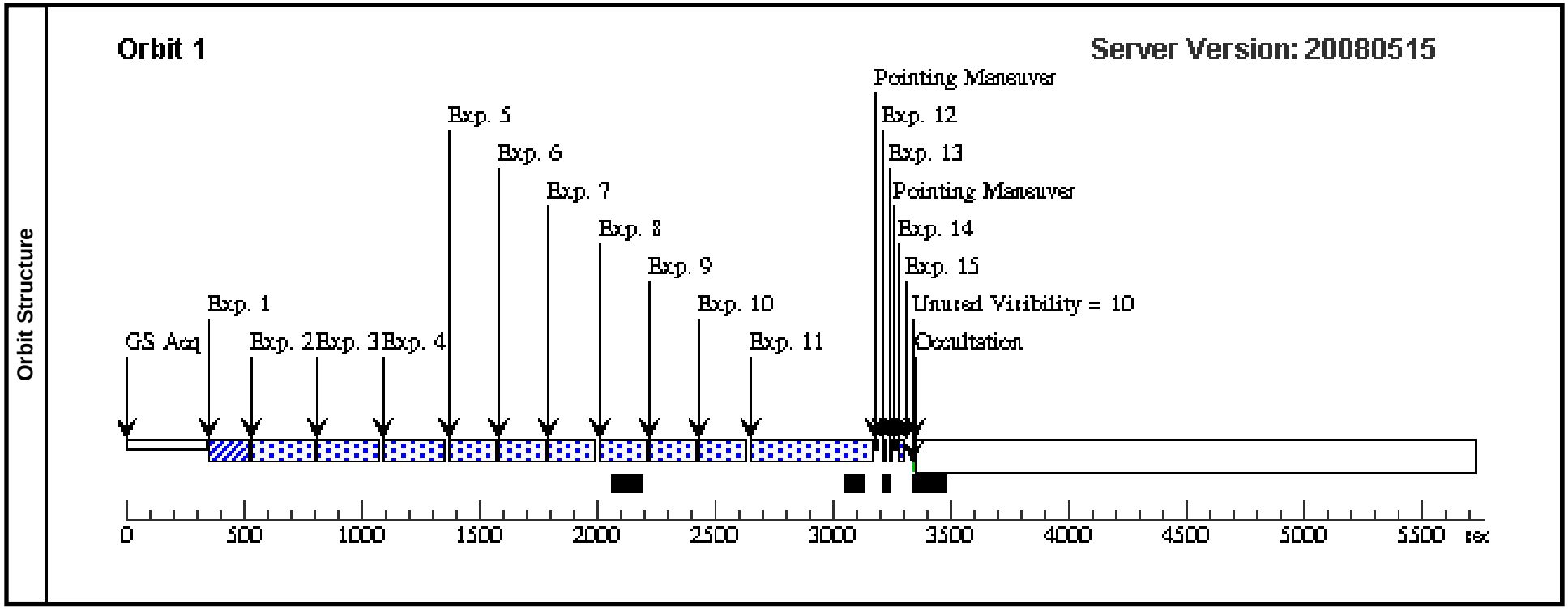
Comments: Herbig Ae star with circumstellar disk. SpT=A0

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(2) HD97048	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	2.7 Secs *[==>]*	 ***[1]***
2	pol0 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 10
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 21, completed Fri May 30 01:03:48 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 120.0D TO 125.0D FROM 20

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	HD97048	RA: 11 08 3.3183 (167.0138262d) Dec: -77 39 17.49 (-77.65486d) Equinox: J2000		V=8.46 J=7.267, H=6.665, K=5.941, H-K=0.724	Reference Frame: ICRS

Comments: Herbig Ae star with circumstellar disk. SpT=A0

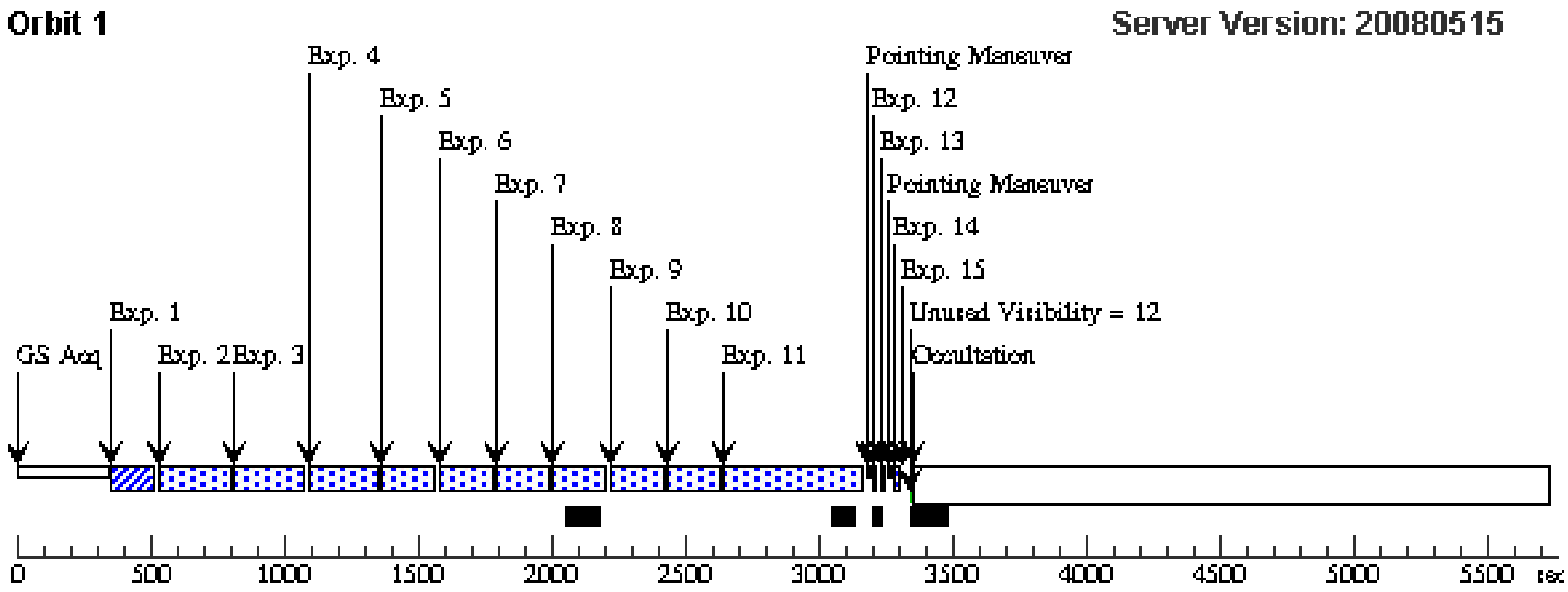
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(2) HD97048	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	2.0 Secs *[==>]*	 ***[1]***
2	pol0 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11	f110w	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	*[1]*
12	unocc f110w position 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
13	unocc pol0L position 1	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
14	unocc pol0L position 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
15	unocc f110w position 2	(2) HD97048	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11155, Visit 30, completed Fri May 30 01:03:48 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 63.5D TO 83.5 D; ORIENT 153.5D TO 173.5 D; ORIENT 333.5D TO 353.5 D; ORIENT 243.5D TO 263.5 D

Comments: HD 100546, first visit. Disk semi-minor axis at 47 degrees (Grady et al. 2001)

Absolute orientation constraints derived as described in the Observations Description. The two visits are linked with an ORIENT FROM of 120-125, which APT shows as schedulable using adjacent orbits, but -150 to -145 is also acceptable if schedulable.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HD100546	RA: 11 33 25.4408 (173.3560033d) Dec: -70 11 41.24 (-70.19479d) Equinox: J2000	Proper Motion RA: -0.003878s/yr Proper Motion Dec: -0.00005"/yr Epoch of Position: 2000.0	V=6.698 J=6.425, H=5.962, K=5.418, H-K=0.544	Reference Frame: ICRS

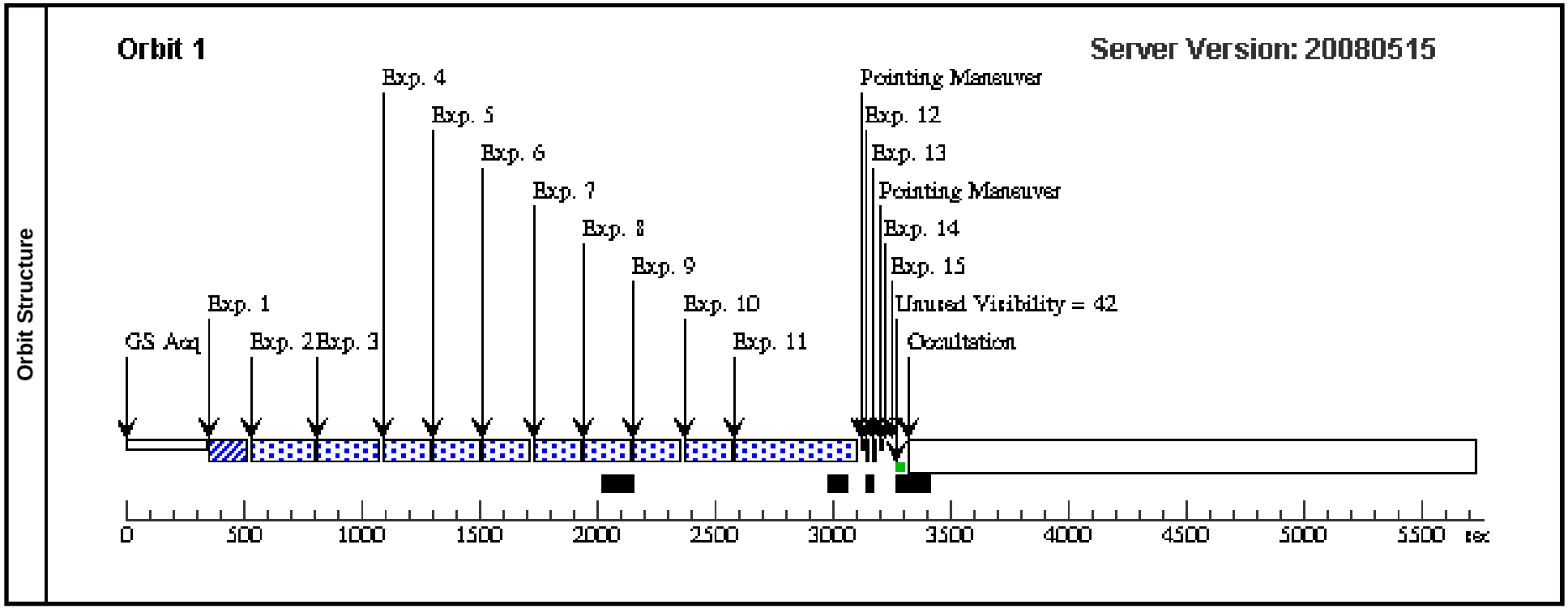
Comments: Herbig Ae star with circumstellar disk. SpT=B9

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(3) HD100546	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	1.1 Secs *[==>]*	 ***[1]***
2	pol0 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 42
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 31, completed Fri May 30 01:03:49 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 120.0D TO 125.0D FROM 30

Comments: Disk semi-minor axis at 47 degrees (Grady et al. 2001)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(3)	HD100546	RA: 11 33 25.4408 (173.3560033d) Dec: -70 11 41.24 (-70.19479d) Equinox: J2000	Proper Motion RA: -0.003878s/yr Proper Motion Dec: -0.00005"/yr Epoch of Position: 2000.0	V=6.698 J=6.425, H=5.962, K=5.418, H-K=0.544	Reference Frame: ICRS

Comments: Herbig Ae star with circumstellar disk. SpT=B9

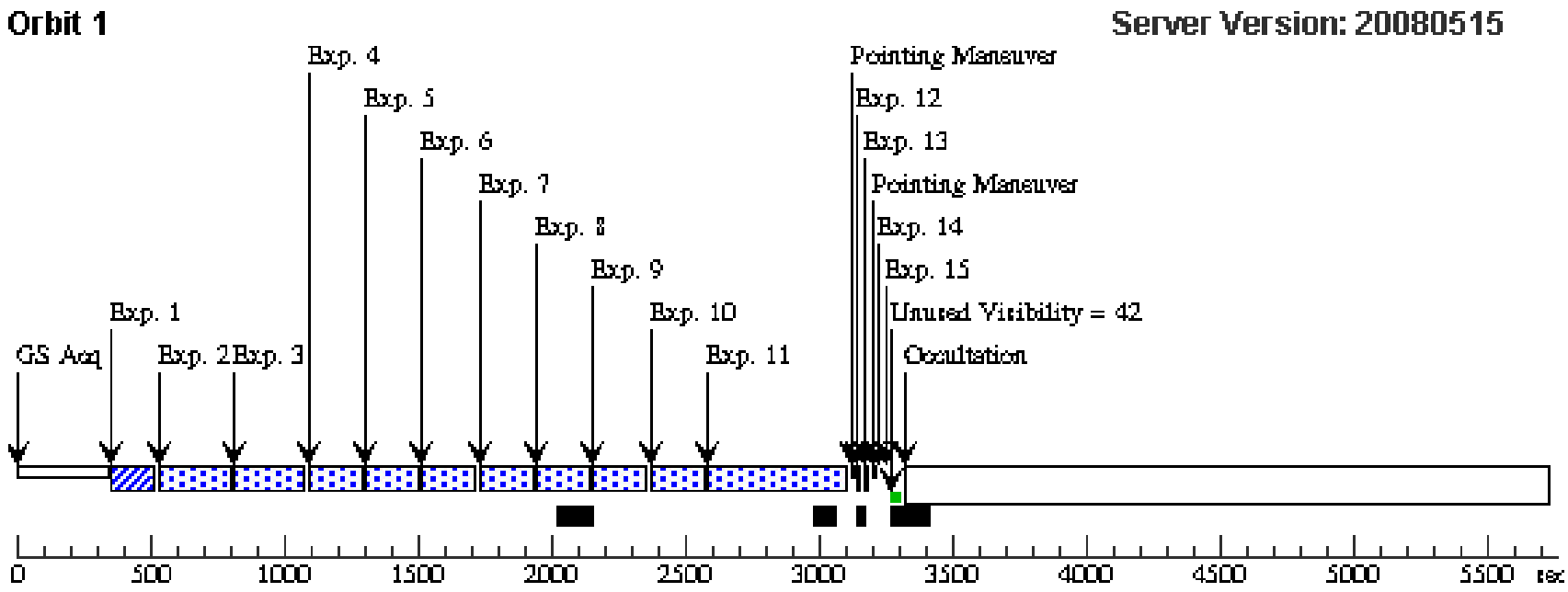
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(3) HD100546	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	1.1 Secs *[==>]*	 ***[1]***
2	pol0 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11	f110w	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	*[1]*
12	unocc f110w position 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
13	unocc pol0L position 1	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
14	unocc pol0L position 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*
15	unocc f110w position 2	(3) HD100546	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11155, Visit 40, completed Fri May 30 01:03:49 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 102.5D TO 122.5 D; ORIENT 192.5D TO 212.5 D; ORIENT 12.5D TO 32.5 D; ORIENT 282.5D TO 302.5 D

Comments: HD 141569, first visit. Disk semi-minor axis at 86 degrees (Weinberger et al. 1999)

Absolute orientation constraints derived as described in the Observations Description. The two visits are linked with an ORIENT FROM of 120-125, which APT shows as schedulable, but -150 to -145 is also acceptable if schedulable.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD141569	RA: 15 49 57.7489 (237.4906204d) Dec: -03 55 16.36 (-3.92121d) Equinox: J2000		V=7 J=6.872, H=6.861, K=6.821, H-K=0.0400	Reference Frame: ICRS

Comments: Herbig Ae star with circumstellar disk. SpT=A0

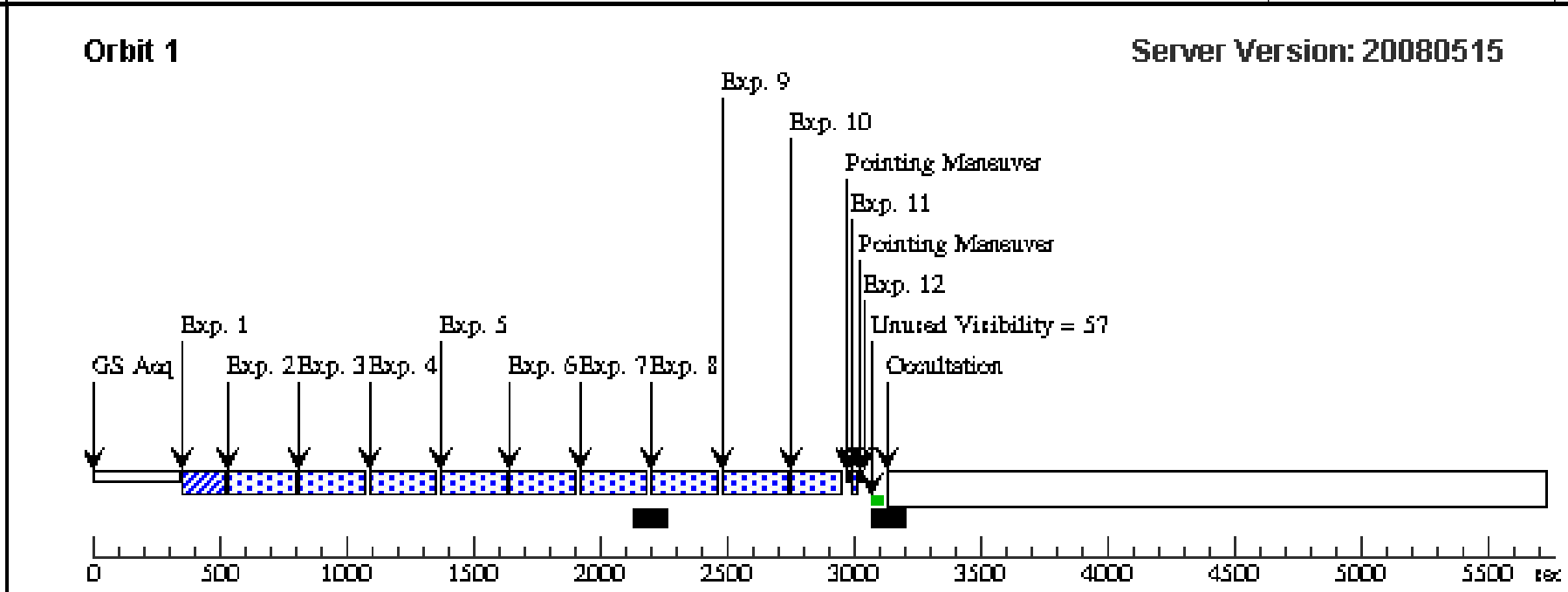
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(4) HD141569	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-12 Non-Int	2.5 Secs *[==>]*	 ***[1]***
2	pol0 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
3	pol120 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
4	pol240 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
5	pol0 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
6	pol120 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
7	pol240 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
8	pol0 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***
9	pol120 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-12 Non-Int	*[==>]*	*[1]*
11	unocc pol0L position 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,0.0	Sequence 1-12 Non-Int	*[==>]*	*[1]*
12	unocc pol0L position 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-12 Non-Int	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11155, Visit 41, completed Fri May 30 01:03:50 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT -150.0D TO -145.0D FROM 40

Comments: Disk semi-minor axis at 86 degrees (Weinberger et al. 1999)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(4)	HD141569	RA: 15 49 57.7489 (237.4906204d) Dec: -03 55 16.36 (-3.92121d) Equinox: J2000		V=7 J=6.872, H=6.861, K=6.821, H-K=0.0400	Reference Frame: ICRS

Comments: Herbig Ae star with circumstellar disk. SpT=A0

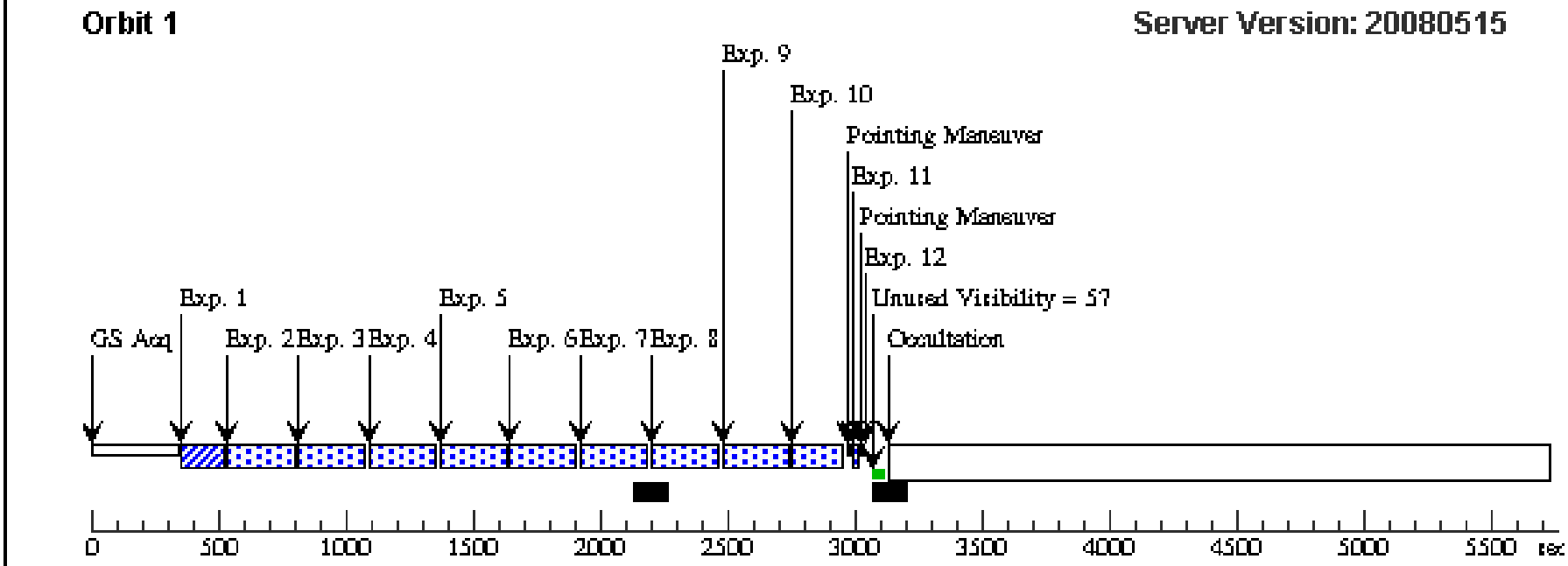
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(4) HD141569	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-12 Non-Int	2.5 Secs *[==>]*	*[1]*
2	pol0 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
3	pol120 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
4	pol240 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
5	pol0 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
6	pol120 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
7	pol240 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
8	pol0 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
9	pol120 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=12		Sequence 1-12 Non-Int	*[==>]*	*[1]*
10	pol240 3	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-12 Non-Int	*[==>]*	*[1]*

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11	unocc pol0L position 1	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,0.0	Sequence 1-12 Non-Int	*[==>]*	*[1]*
12	unocc pol0L position 2	(4) HD141569	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-12 Non-Int	*[==>]*	*[1]*

Orbit Structure



Visit

Proposal 11155, Visit 50, failed Fri May 30 01:03:50 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 256.5D TO 276.5 D; ORIENT 346.5D TO 6.5 D; ORIENT 166.5D TO 186.5 D; ORIENT 76.5D TO 96.5 D

Comments: Disk semi-minor axis at 240 degrees (Fukugawa et al. 2006)

APT indicates that the two visits to this star are NOT schedulable if linked with an ORIENT FROM of 120 to 125; using instead ORIENT FROM -150 to -145 it does show some schedulability but with almost a 1 year delay between visits. For this target we therefore instead specify an ORIENT FROM of 55 to 65 degrees. IF POSSIBLE we request a RELATIVE orientation for visit 51 as close to 60 degrees from visit 50 as can be scheduled.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HD142527	RA: 15 56 41.8899 (239.1745412d) Dec: -42 19 23.29 (-42.32314d) Equinox: J2000		V=8.33 J=6.503, H=5.715, K=4.98, H-K=0.735	Reference Frame: ICRS

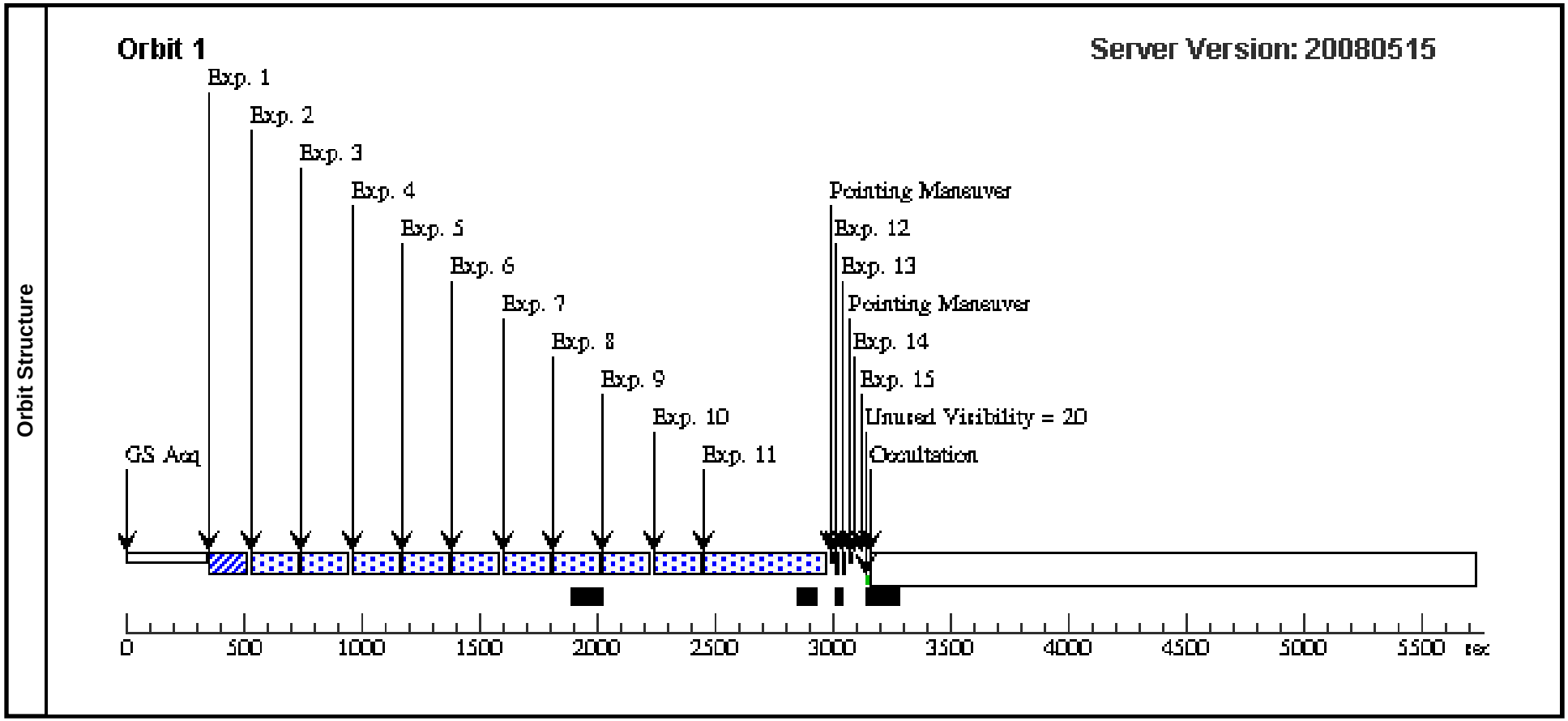
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F6

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(5) HD142527	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.95 Secs *[==>]*	*[1]*
2	pol0 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
3	pol120 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
4	pol240 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
5	pol0 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
6	pol120 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
7	pol240 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
8	pol0 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
9	pol120 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 20
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 51, scheduling Fri May 30 01:03:51 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 120.0D TO 125.0D FROM 90

Comments: Disk semi-minor axis at 240 degrees (Fukugawa et al. 2006)

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HD142527	RA: 15 56 41.8899 (239.1745412d) Dec: -42 19 23.29 (-42.32314d) Equinox: J2000		V=8.33 J=6.503, H=5.715, K=4.98, H-K=0.735	Reference Frame: ICRS

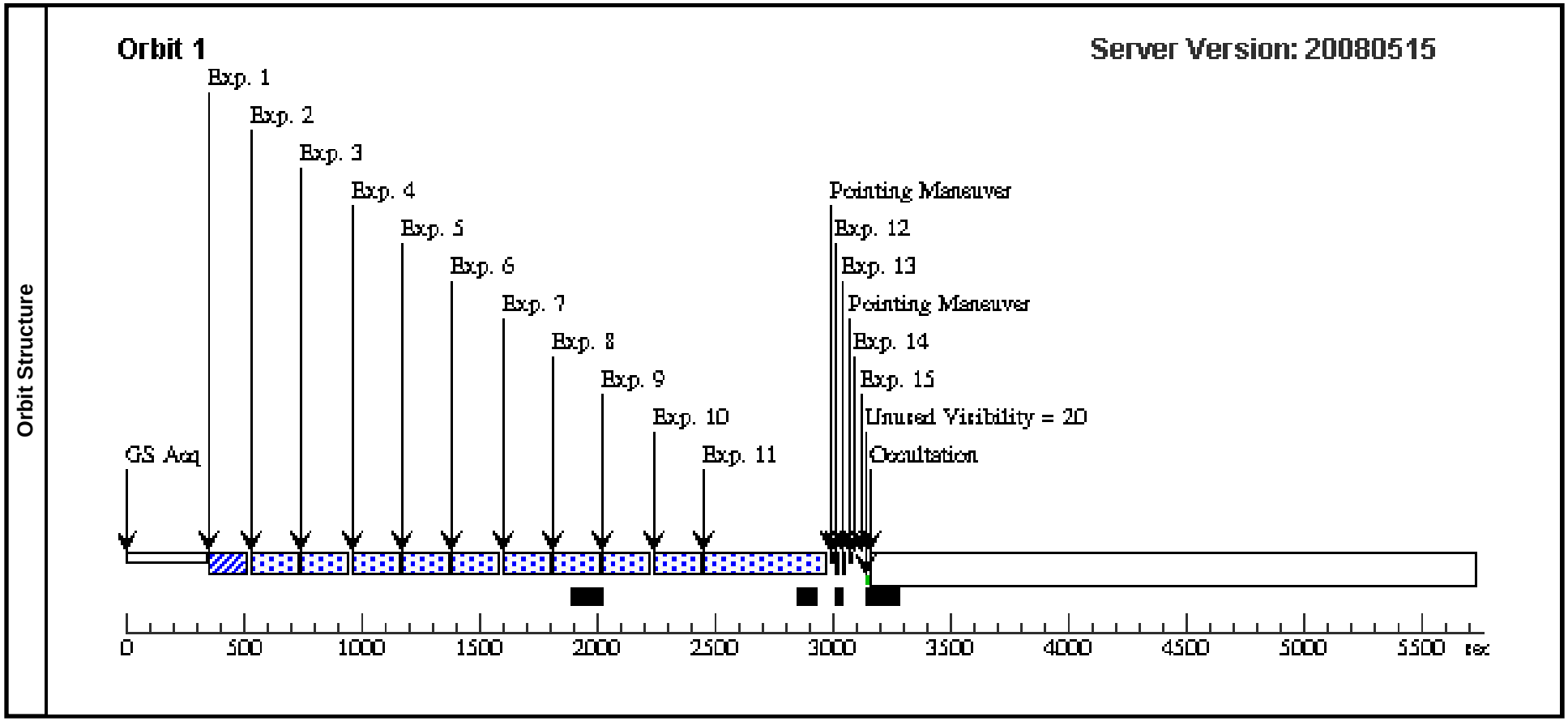
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F6

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(5) HD142527	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.95 Secs *[==>]*	 ***[1]***
2	pol0 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
11	f110w	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 20
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 60, scheduling Fri May 30 01:03:51 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 61.5D TO 81.5 D; ORIENT 151.5D TO 171.5 D; ORIENT 331.5D TO 351.5 D; ORIENT 241.5D TO 261.5 D

Comments: Disk minor axis at 45 degrees (Perrin 2006). There is a binary ompanion (Delta H=2.1) located 6.0 arcsec distant at PA=141 degrees. As the companion is offset approximately along the major axis of the disk, in our preferred orientations with the disk major axis horizontal on the detector, the diffraction spikes from the companion do NOT impinge on the target disk.

APT indicates that the two visits to this star are NOT schedulable if linked with an ORIENT FROM of 120 to 125 OR from -150 to -145. We therefore instead specify an ORIENT FROM of 55 to 65 degrees. IF POSSIBLE we request a RELATIVE orientation for visit 61 as close to 60 degrees from visit 60 as can be scheduled.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PDS-453	RA: 17 20 56.1500 (260.2339583d) Dec: -26 03 30.80 (-26.05856d) Equinox: J2000		V=12.92 J=10.847, H=9.969, K=9.171, H-K=0.798	Reference Frame: ICRS

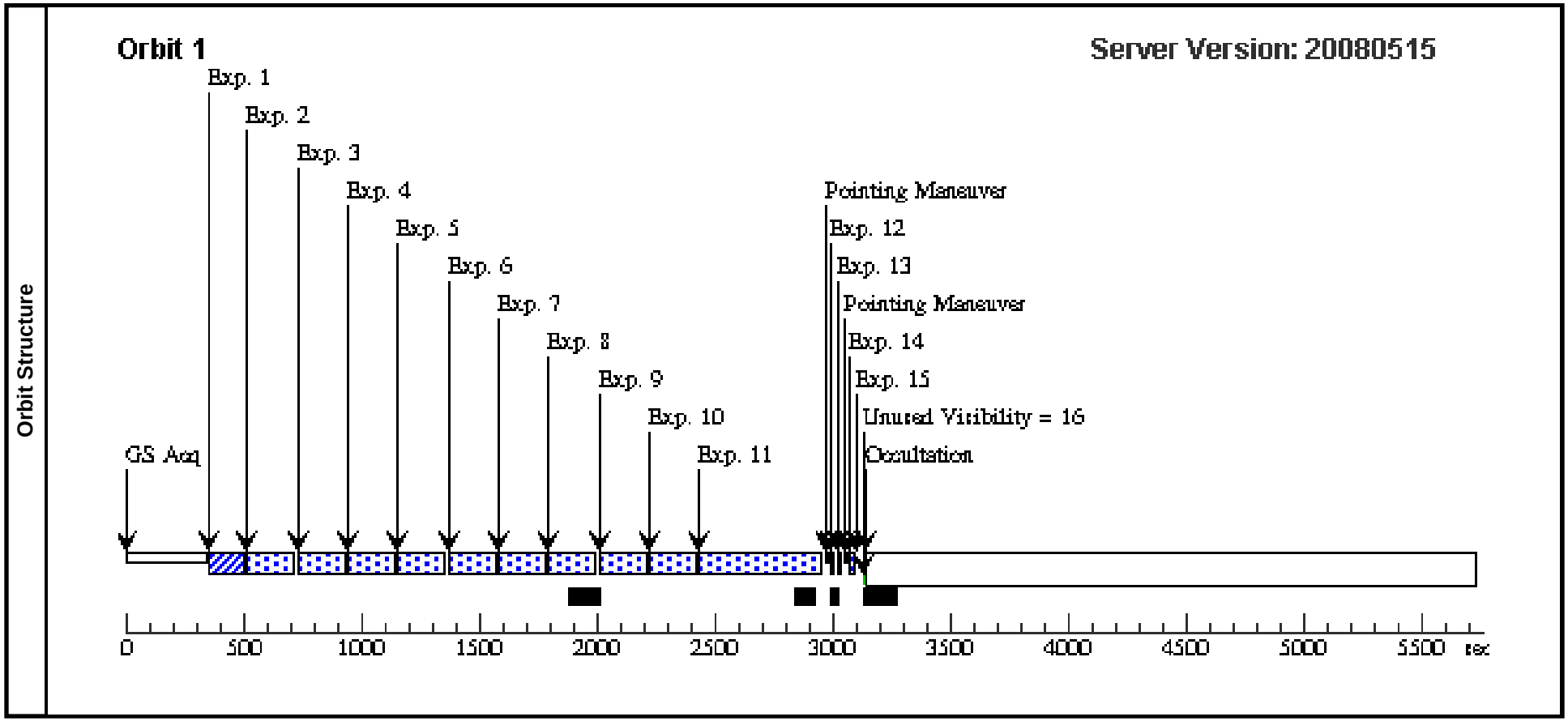
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F2. There is a nearby star (unknown whether binary companion or background object) 6 arcsec southwest, but it is 5x fainter at H and should not hinder coronagraphic acquisition.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(6) PDS-453	NIC2, ACQ, NIC2-ACQ	F160W		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.6 Secs *[==>]*	 ***[1]***
2	pol0 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
9	pol120 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 16
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 61, scheduling Fri May 30 01:03:52 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 55.0D TO 65.0D FROM 60; AFTER 60 BY 0.8 Orbits TO 1.2 Orbits

Comments: Disk minor axis at 45 degrees (Perrin 2006). Companion candidate (Delta H=2.1) located 6.0 arcsec distant at PA=141 degrees. As the companion is offset approximately along the major axis of the disk, in our preferred orientations with the disk major axis horizontal on the detector, the diffraction spikes from the companion do NOT impinge on the target disk.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PDS-453	RA: 17 20 56.1500 (260.2339583d) Dec: -26 03 30.80 (-26.05856d) Equinox: J2000		V=12.92 J=10.847, H=9.969, K=9.171, H-K=0.798	Reference Frame: ICRS

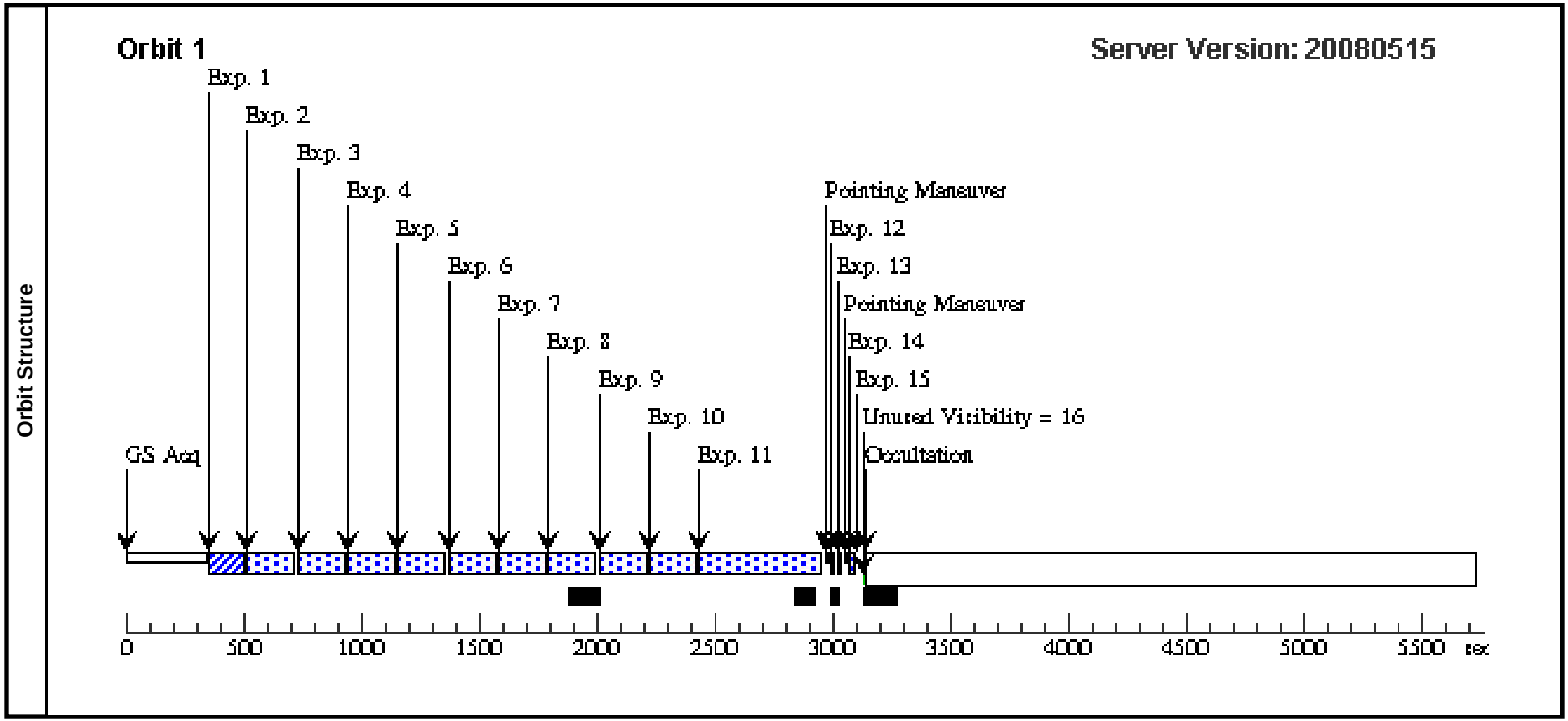
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F2. There is a nearby star (unknown whether binary companion or background object) 6 arcsec southwest, but it is 5x fainter at H and should not hinder coronagraphic acquisition.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(6) PDS-453	NIC2, ACQ, NIC2-ACQ	F160W		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.6 Secs *[==>]*	***[1]***
2	pol0 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 16
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 70, completed Fri May 30 01:03:52 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 220.0D TO 233.0 D; ORIENT 130.0D TO 197.0 D; ORIENT 40.0D TO 107.0 D; ORIENT 310.0D TO 17.0 D; ORIENT 250.0D TO 257.0 D; ORIENT 272.0D TO 287.0 D

Comments: 5.5" binary A0/A5 system, with edge-on disk around A0 component. Our science target is the northern of the two stars.

This is one of our the NON-CORONAGRAPHIC orbits in this program. The absolute ORIENT constraints have been computed so that neither the diffraction spikes nor the NIC1 polarization ghosts from the southern star will impinge upon the northern star.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(1)	Pattern Type=NIC-SPIRAL-DITH	Coordinate Frame=POS-TARG		(1-3)
	Purpose=DITHER	Pattern Orientation=22.5		
	Number Of Points=4	Angle Between Sides=		
	Point Spacing=1.61	Center Pattern=false		
	Line Spacing=			

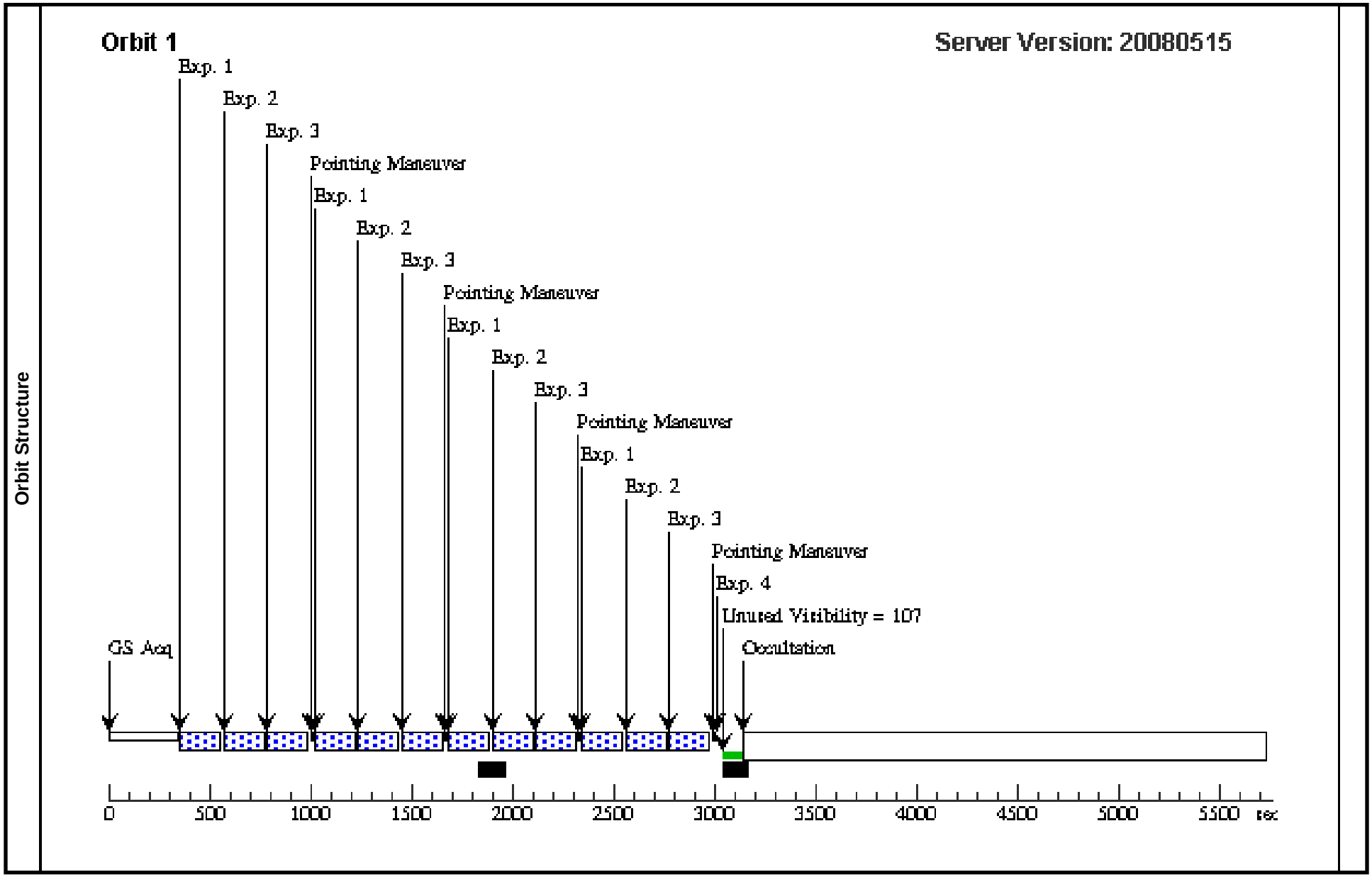
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	PDS-144N	RA: 15 49 15.5200 (237.3146667d)		V=12.8	Reference Frame: ICRS
		Dec: -26 00 50.20 (-26.01394d)			
		Equinox: J2000			

Comments: Herbig Ae star with edge-on circumstellar disk. SpT=A2. Binary companion 5" away is A5. Coordinates listed are 2MASS for PDS 144N, the edge on disk of the binary.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	pol0 1	(7) PDS-144N	NIC2, MULTIACCUM, NIC2-FIX	POL0L	SAMP-SEQ=STEP64; NSAMP=11	GS ACQ SCENARIO BASE1TNS	Sequence 1-4 Non-Int Pattern 1-3 (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	pol120 1	(7) PDS-144N	NIC2, MULTIACCUM, NIC2-FIX	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-4 Non-Int Pattern 1-3 (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
3	pol240 1	(7) PDS-144N	NIC2, MULTIACCUM, NIC2-FIX	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-4 Non-Int Pattern 1-3 (1)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
4		(7) PDS-144N	NIC2, MULTIACCUM, NIC2-FIX	POL240L	SAMP-SEQ=SCAMRR; NSAMP=20		Sequence 1-4 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 4
Unused Visibility = 107
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 71, completed Fri May 30 01:03:53 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC1

Special Requirements: ORIENT 220.0D TO 233.0 D; ORIENT 130.0D TO 197.0 D; ORIENT 40.0D TO 107.0 D; ORIENT 310.0D TO 17.0 D; ORIENT 250.0D TO 257.0 D; ORIENT 272.0D TO 287.0 D

Comments: PDS 144 is an A0/A5 binary system with an edge-on disk around the A0 component. Our science target is the northern of the two stars.

This is one of our the NON-CORONAGRAPHIC orbits in this program. The absolute ORIENT constraints have been computed so that neither the diffraction spikes nor the NIC1 polarization ghosts from the southern star will impinge upon the northern star.

Patterns

#	Primary Pattern		Secondary Pattern	Exposures
(2)	Pattern Type=NIC-SPIRAL-DITH	Coordinate Frame=POS-TARG		(1-3)
	Purpose=DITHER	Pattern Orientation=22.5		
	Number Of Points=4	Angle Between Sides=		
	Point Spacing=1.15	Center Pattern=false		
	Line Spacing=			

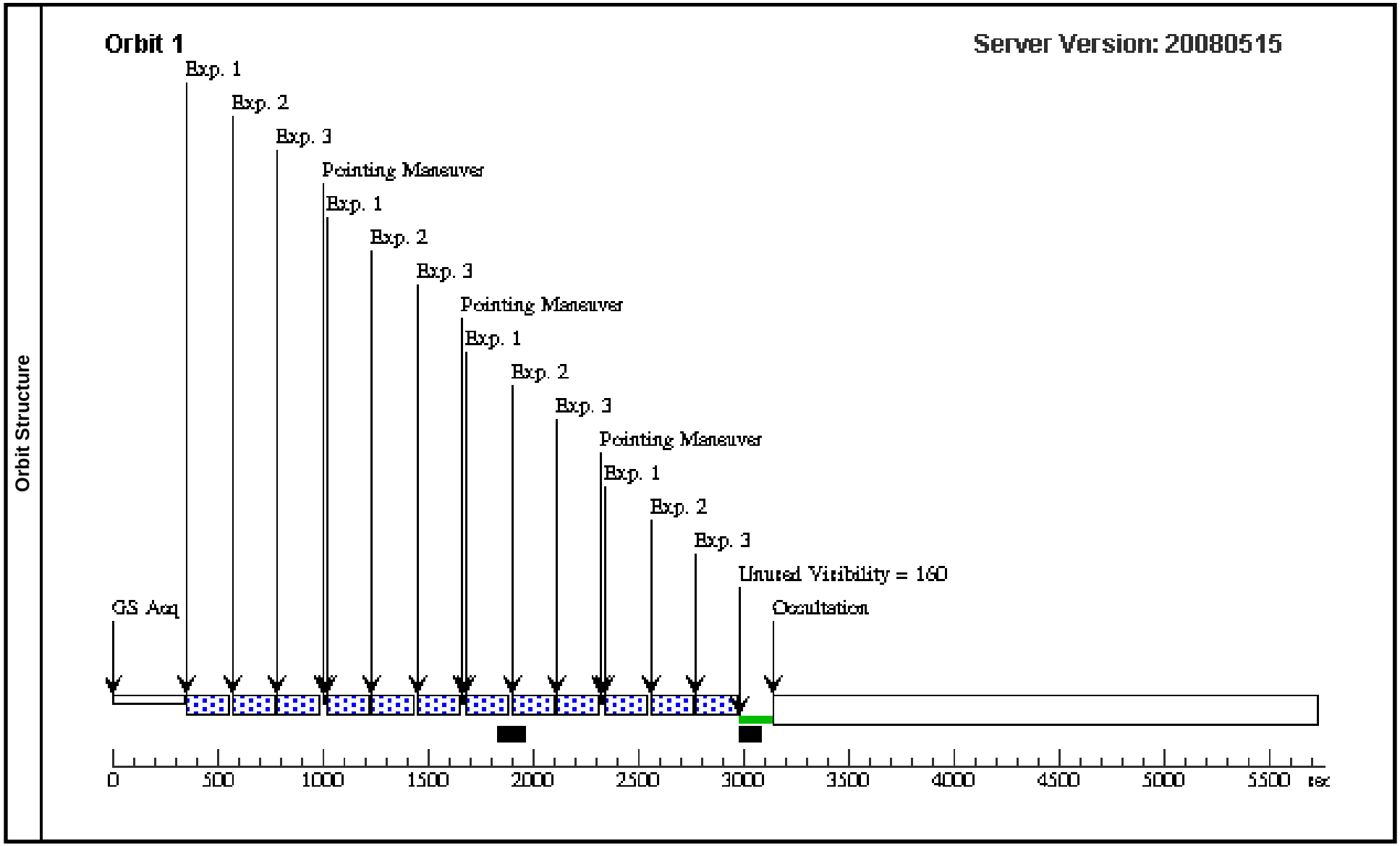
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(7)	PDS-144N	RA: 15 49 15.5200 (237.3146667d)		V=12.8	Reference Frame: ICRS
		Dec: -26 00 50.20 (-26.01394d)			
		Equinox: J2000			

Comments: Herbig Ae star with edge-on circumstellar disk. SpT=A2. Binary companion 5" away is A5. Coordinates listed are 2MASS for PDS 144N, the edge on disk of the binary.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	pol0 1	(7) PDS-144N	NIC1, MULTIACCUM, NIC1-FIX	POL0S	NSAMP=11; SAMP-SEQ=STEP64	GS ACQ SCENARIO BASE1TNS	Sequence 1-3 Non-Int Pattern 1-3 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
2	pol120 1	(7) PDS-144N	NIC1, MULTIACCUM, NIC1-FIX	POL120S	NSAMP=11; SAMP-SEQ=STEP64		Sequence 1-3 Non-Int Pattern 1-3 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***
3	pol240 1	(7) PDS-144N	NIC1, MULTIACCUM, NIC1-FIX	POL240S	NSAMP=11; SAMP-SEQ=STEP64		Sequence 1-3 Non-Int Pattern 1-3 (2)	*[==>(Pattern 1)]* *[==>(Pattern 2)]* *[==>(Pattern 3)]* *[==>(Pattern 4)]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Pointing Maneuver
Exp. 1
Exp. 2
Exp. 3
Unused Visibility = 160
GS Acq
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 80, completed Fri May 30 01:03:53 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: (none)

Comments: PSF calibration / unpolarized standard observation.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(8)	HIP70890 Alt Name1: PROXIMA-CENTAURI Alt Name2: GJ551	RA: 14 29 42.9487 (217.4289529d) Dec: -62 40 46.14 (-62.67948d) Equinox: J2000	Proper Motion RA: -0.54839s/yr Proper Motion Dec: 0.76933"/yr Parallax: 0.77233" Epoch of Position: 2000.0	V=11.05 J=5.357, H=4.835, K=4.384, H-K=0.451	Reference Frame: ICRS

Comments: PSF reference star.

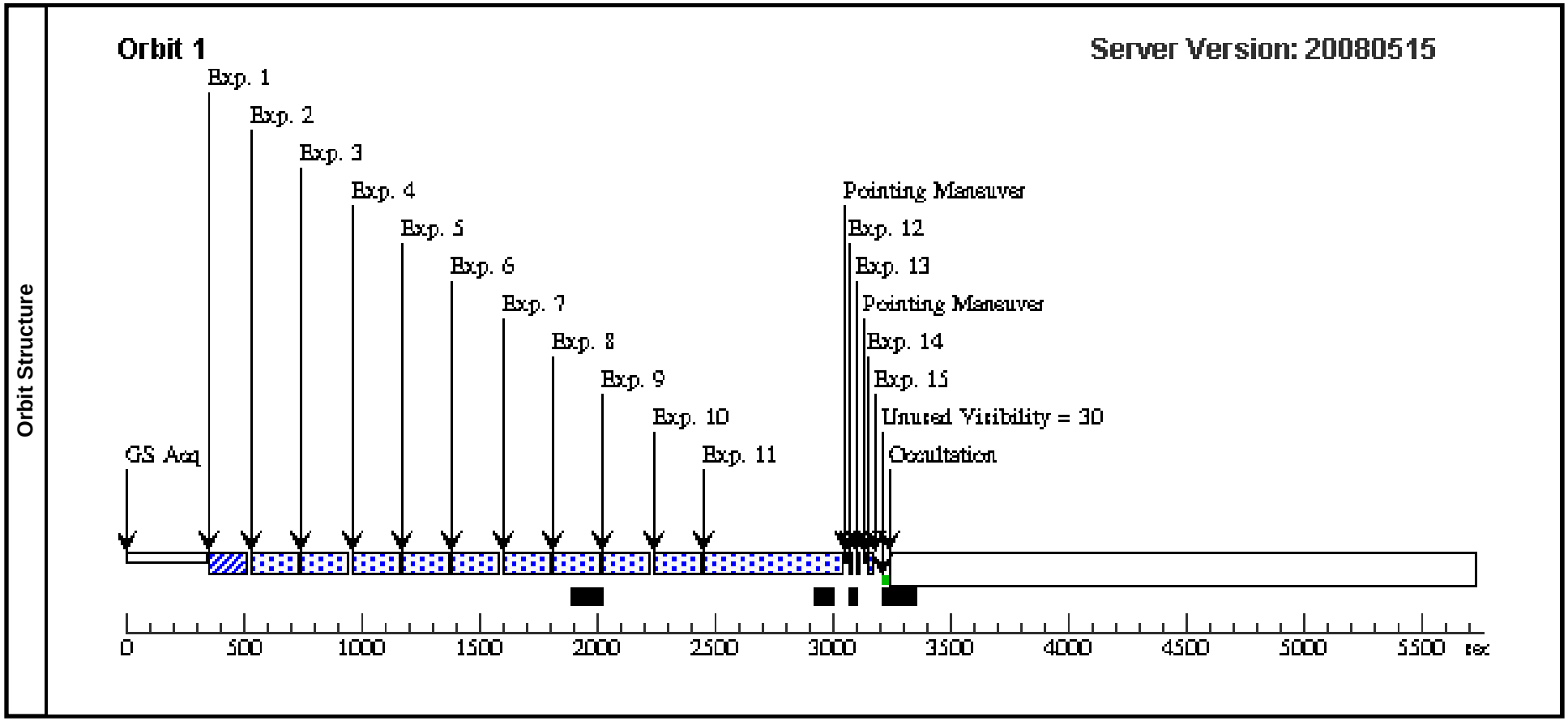
This is Proxima Centauri. As it is both relatively bright and very red (H-K = 0.45), it thus makes a good PSF reference for our very red science targets.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(8) HIP70890	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.48 Secs *[==>]*	***[1]***
2	pol0 1	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=17		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(8) HIP70890	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 30
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 81, completed Fri May 30 01:03:53 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: (none)

Comments: PSF reference observation.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(9)	HIP36208 Alt Name1: LUYTENS-STAR Alt Name2: GJ273	RA: 07 27 24.4991 (111.8520796d) Dec: +05 13 32.83 (5.22579d) Equinox: J2000	Proper Motion RA: 0.038243s/yr Proper Motion Dec: -3.69425"/yr Parallax: 0.263" Epoch of Position: 2000.0	V=9.89 J=5.714, H=5.219, Ks=4.857, H-K=0.362	Reference Frame: ICRS

Comments: PSF reference star.

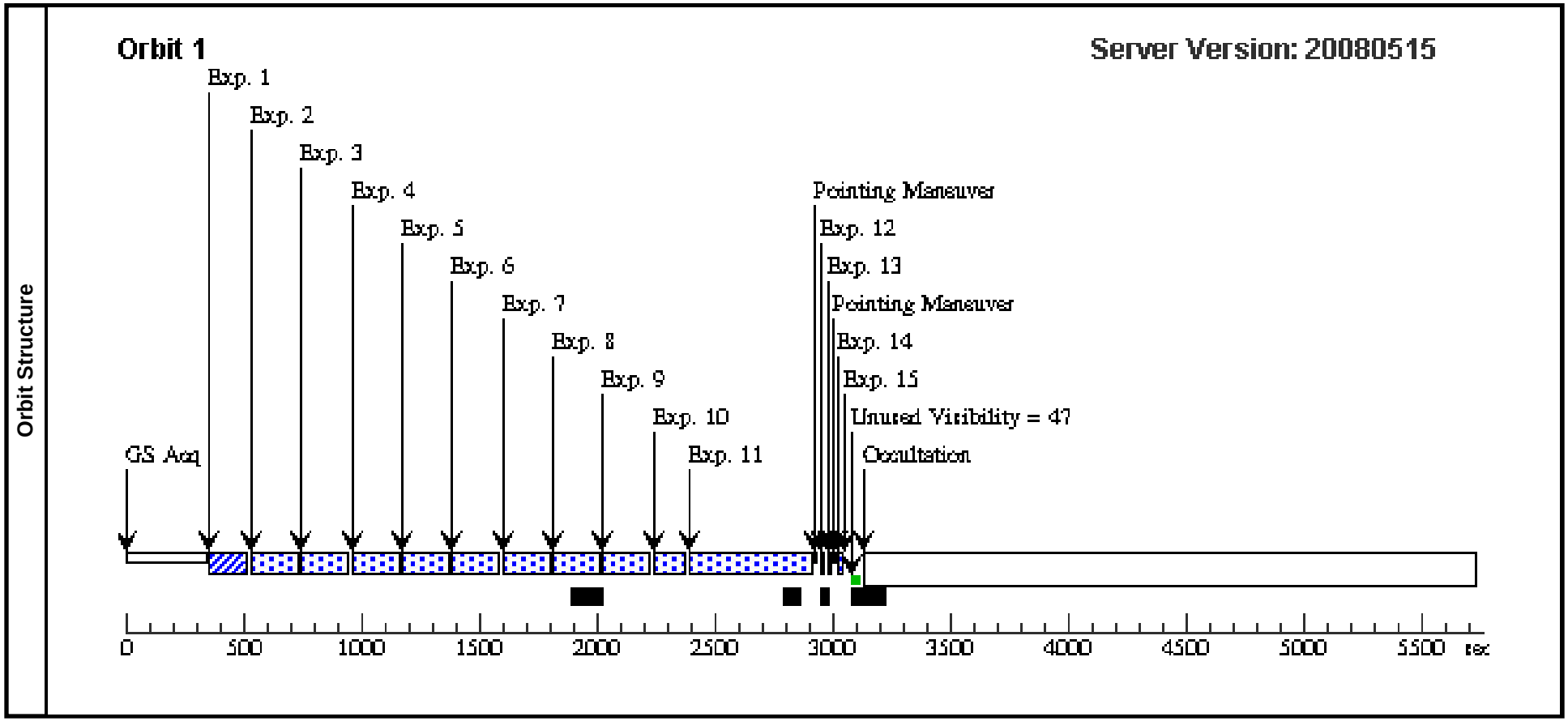
This is Luyten's star, an M3.5 star at 3.8 pc

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(9) HIP36208	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.48 Secs *[==>]*	 ***[1]***
2	pol0 1	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
3	pol120 1	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
4	pol240 1	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
5	pol0 2	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
6	pol120 2	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
7	pol240 2	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
8	pol0 3	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
9	pol120 3	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=10		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(9) HIP36208	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 47
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 82, completed Fri May 30 01:03:54 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: (none)

Comments: PSF reference observation.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(10)	HIP57548	RA: 11 47 44.3964 (176.9349850d)	Proper Motion RA: 0.040381s/yr	V=11.08	Reference Frame: ICRS
	Alt Name1: ROSS128	Dec: +00 48 16.43 (.80456d)	Proper Motion Dec: -1.21932"/yr	J=6.505,	
	Alt Name2: GJ447	Equinox: J2000	Parallax: 0.29959"	H=5.945,	
			Epoch of Position: 2000.0	Ks=5.654,	
				H-K=0.291	

Comments: PSF reference star.

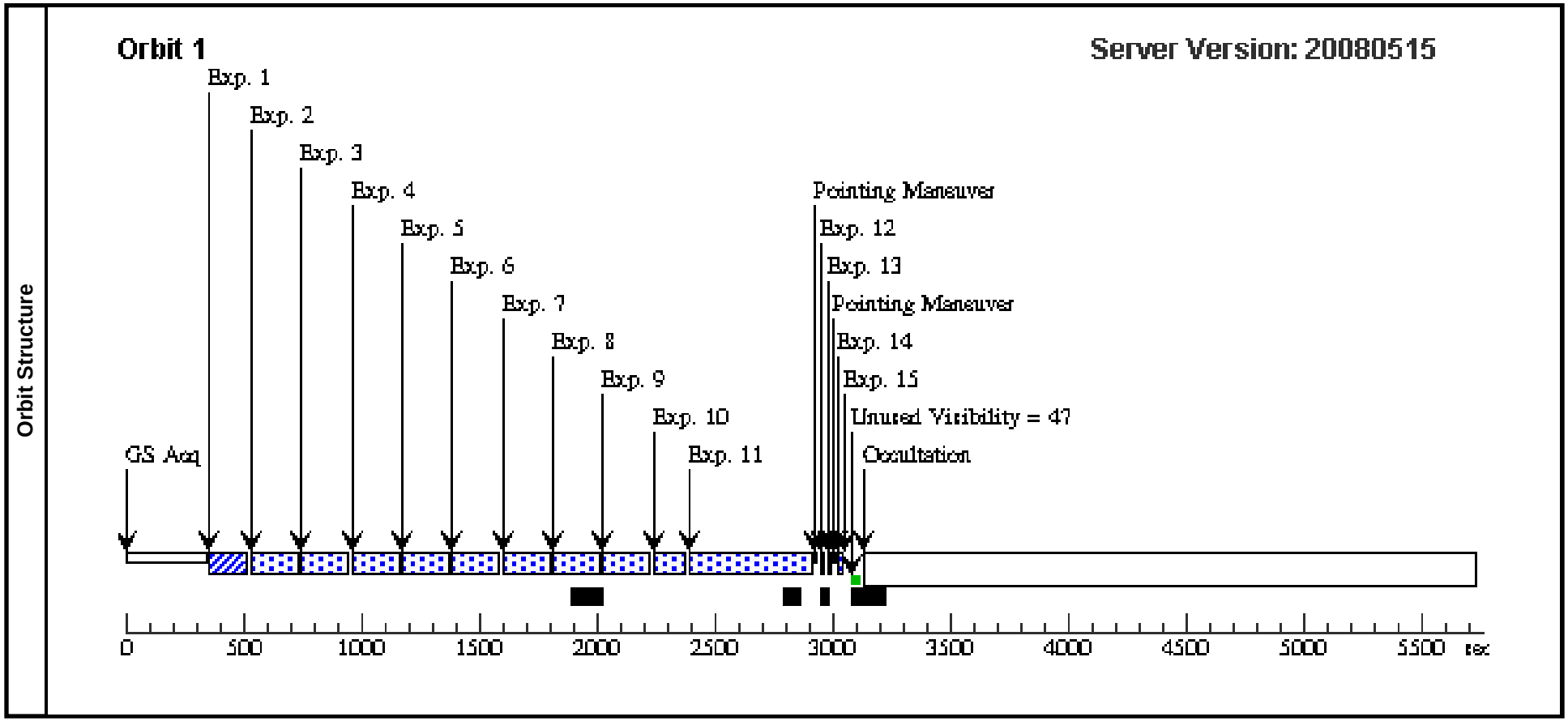
This is Ross 128, an M4 star at 3.3 pc.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(10) HIP57548	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.48 Secs *[==>]*	*[1]*
2	pol0 1	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
3	pol120 1	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
4	pol240 1	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
5	pol0 2	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
6	pol120 2	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
7	pol240 2	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
8	pol0 3	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
9	pol120 3	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=10		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAM RR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAM RR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAM RR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(10) HIP57548	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAM RR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 47
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 90, completed Fri May 30 01:03:54 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 256.5D TO 276.5 D; ORIENT 346.5D TO 6.5 D; ORIENT 166.5D TO 186.5 D; ORIENT 76.5D TO 96.5 D

Comments: Disk semi-minor axis at 240 degrees (Fukugawa et al. 2006)

APT indicates that the two visits to this star are NOT schedulable if linked with an ORIENT FROM of 120 to 125; using instead ORIENT FROM -150 to -145 it does show some schedulability but with almost a 1 year delay between visits. For this target we therefore instead specify an ORIENT FROM of 55 to 65 degrees. IF POSSIBLE we request a RELATIVE orientation for visit 51 as close to 60 degrees from visit 50 as can be scheduled.

This is a repeat of visit 50 which failed.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(5)	HD142527	RA: 15 56 41.8899 (239.1745412d) Dec: -42 19 23.29 (-42.32314d) Equinox: J2000		V=8.33 J=6.503, H=5.715, K=4.98, H-K=0.735	Reference Frame: ICRS

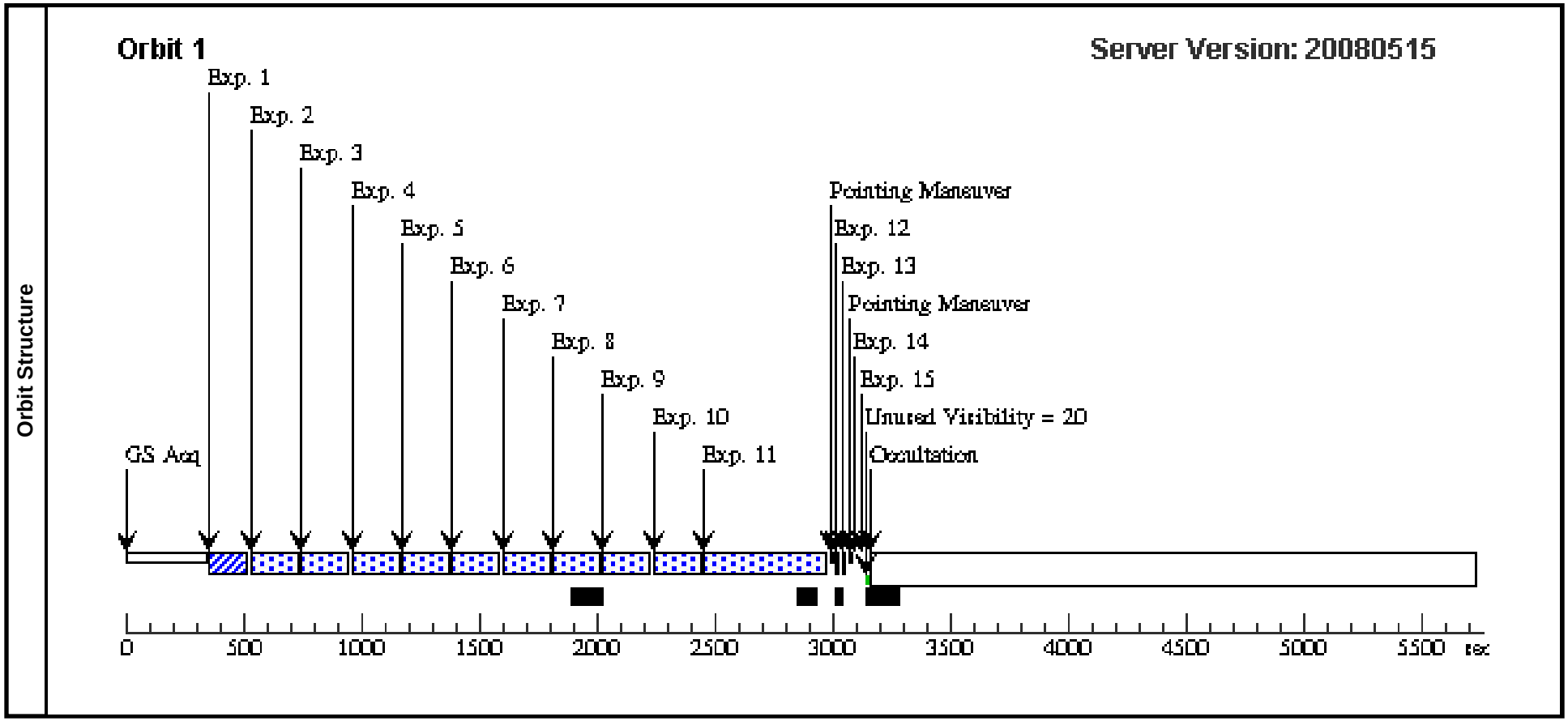
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F6

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(5) HD142527	NIC2, ACQ, NIC2-ACQ	F187N		GS ACQ SCENARIO BASE1TNS	Sequence 1-15 Non-Int	0.95 Secs *[==>]*	*[1]*
2	pol0 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
3	pol120 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
4	pol240 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
5	pol0 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
6	pol120 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
7	pol240 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*
8	pol0 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	*[1]*

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
9	pol120 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
10	pol240 3	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-15 Non-Int	*[==>]*	***[1]***
11	f110w	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-15 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=20	POS TARG 3.0,0.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
14	unocc pol0L position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***
15	unocc f110w position 2	(5) HD142527	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,1.0	Sequence 1-15 Non-Int	*[==>]*	***[1]***


Orbit Structure
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Server Version: 20080515
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Pointing Maneuver
Exp. 14
Exp. 15
Unused Visibility = 20
Occultation
GS Acq
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec

Visit

Proposal 11155, Visit 91 Fri May 30 01:03:55 GMT 2008

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC2

Special Requirements: ORIENT 314D TO 324 D

Comments: Disk minor axis at 45 degrees (Perrin 2006). Companion candidate (Delta H=2.1) located 6.0 arcsec distant at PA=141 degrees. As the companion is offset approximately along the major axis of the disk, in our preferred orientations with the disk major axis horizontal on the detector, the diffraction spikes from the companion do NOT impinge on the target disk.
This is a repeat of visit 61.

Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(6)	PDS-453	RA: 17 20 56.1500 (260.2339583d) Dec: -26 03 30.80 (-26.05856d) Equinox: J2000		V=12.92 J=10.847, H=9.969, K=9.171, H-K=0.798	Reference Frame: ICRS

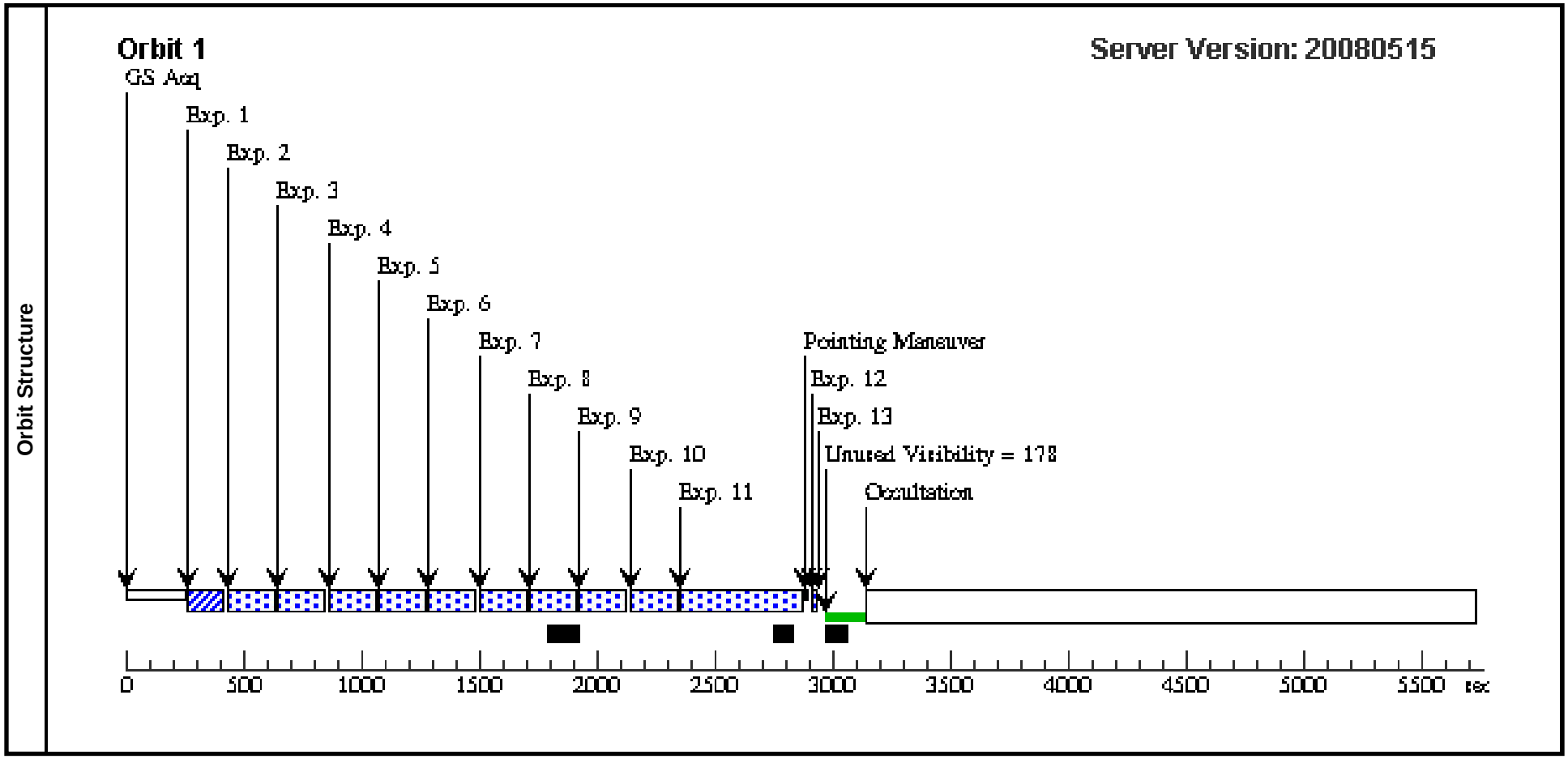
Comments: Herbig 'Ae' star with circumstellar disk. SpT=F2. There is a nearby star (unknown whether binary companion or background object) 6 arcsec southwest, but it is 5x fainter at H and should not hinder coronagraphic acquisition.

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1	acquisition	(6) PDS-453	NIC2, ACQ, NIC2-ACQ	F160W		GS ACQ SCENARIO ONEB1TNS	Sequence 1-13 Non-Int	0.6 Secs *[==>]*	 ***[1]***
2	pol0 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
3	pol120 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
4	pol240 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
5	pol0 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
6	pol120 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
7	pol240 2	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
8	pol0 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
9	pol120 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL120L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***

Exposures (continued)

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
10	pol240 3	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL240L	SAMP-SEQ=STEP64; NSAMP=11		Sequence 1-13 Non-Int	*[==>]*	***[1]***
11	f110w	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=STEP64; NSAMP=16		Sequence 1-13 Non-Int	*[==>]*	***[1]***
12	unocc f110w position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	F110W	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,-1	Sequence 1-13 Non-Int	*[==>]*	***[1]***
13	unocc pol0L position 1	(6) PDS-453	NIC2, MULTIACCUM, NIC2-CORON	POL0L	SAMP-SEQ=SCAMRR; NSAMP=25	POS TARG 3.0,-1	Sequence 1-13 Non-Int	*[==>]*	***[1]***


Orbit Structure
Orbit 1
Server Version: 20080515
GS Acq
Exp. 1
Exp. 2
Exp. 3
Exp. 4
Exp. 5
Exp. 6
Exp. 7
Exp. 8
Exp. 9
Exp. 10
Exp. 11
Pointing Maneuver
Exp. 12
Exp. 13
Unused Visibility = 178
Occultation
0
500
1000
1500
2000
2500
3000
3500
4000
4500
5000
5500
sec