10780 - The Unusual Afterglow and Host Galaxy of the Short GRB 060121

Cycle: 14, Proposal Category: GO/DD

(Availability Mode: SUPPORTED)

INVESTIGATORS

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VISITS

Visit	*Targets*	*Configurations*	*Orbits Used*	*Last Orbit Planner Run*	*OP Current with Visit?*
01	(1) GRB060121	NIC3	2	30-Jun-2006 21:22:25.0	yes
02	(1) GRB060121	ACS/WFC	2	30-Jun-2006 21:22:32.0	yes
03	(2) GRB060121-OPT	NIC3	2	30-Jun-2006 21:22:37.0	yes
04	(2) GRB060121-OPT	NIC3	2	30-Jun-2006 21:22:43.0	yes

8 Total Orbits Used

ABSTRACT

We request Director's Discretionary Time to observe the afterglow and host galaxy of the short-hard gamma-ray bursts GRB 060121. This is only the fourth time an optical afterglow of a short-hard burst has been found at its properties are significantly different to other cases. Both the afterglow and host galaxy are much fainter than previous short bursts (for which optical afterglows have been located) and the afterglow may also show the signature of dust extinction. Such extinction is completely unexpected for short bursts, given the currently popular model of their origin in NS-NS mergers. We propose ACS and NICMOS observations which will locate the afterglow and host galaxy of GRB 060121, provide constraints on its beaming angle, search for the signature of dust, and measure the offset from its host. These observations offer a strong test of NS-NS merger models.

OBSERVING DESCRIPTION

TBD

Visit

Proposal 10780, Visit 01 Sat Jul 01 01:22:45 GMT 2006

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC3

Special Requirements: BETWEEN 27-FEB-2006:00:00:00 AND 13-MAR-2006:00:00:00; VISIBILITY INTERVAL 3060 S

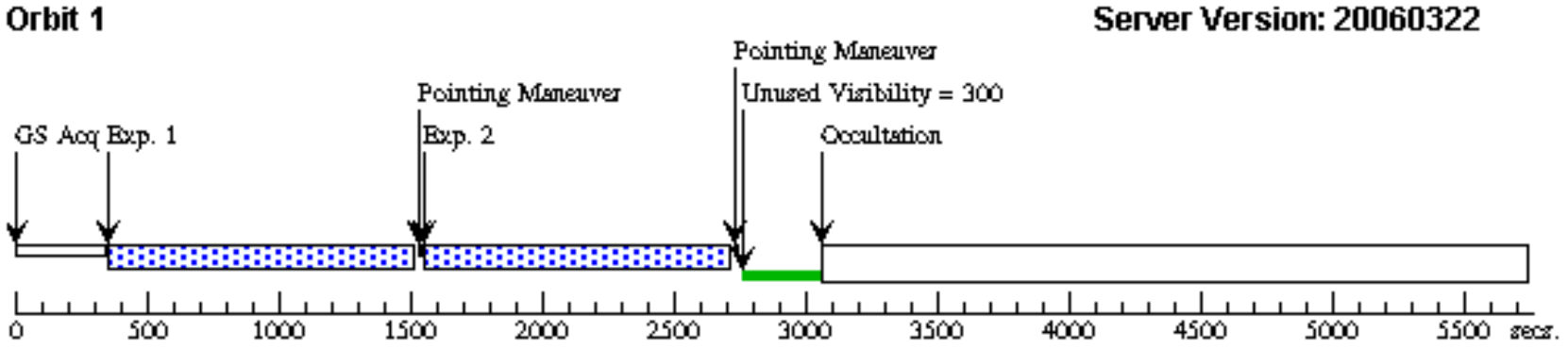
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB060121	RA: 09 09 52.1300 (137.4672083d) Dec: +45 39 44.90 (45.66247d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG

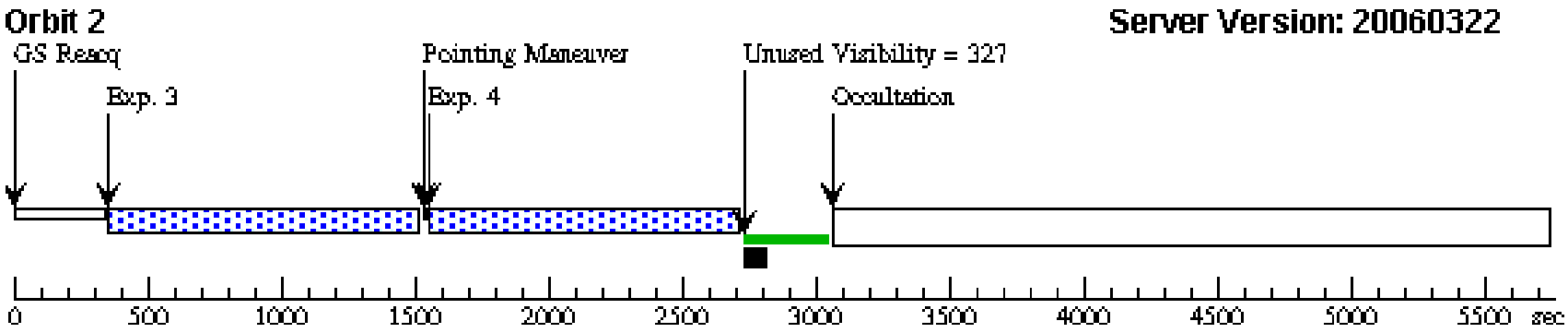
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,-1.421		*[==>]*	***[1]***
2		(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,1.523		*[==>]*	***[1]***
3		(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,-1.421		*[==>]*	***[2]***
4		(1) GRB060121	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,1.523		*[==>]*	***[2]***

Orbit Structure



Orbit Structure (continued)



Visit

Proposal 10780, Visit 02 Sat Jul 01 01:22:46 GMT 2006

Diagnostic Status: No Diagnostics

Scientific Instruments: ACS/WFC

Special Requirements: BETWEEN 27-FEB-2006:00:00:00 AND 13-MAR-2006:00:00:00

Patterns

#	Primary Pattern		Secondary Pattern		Exposures
(1)	Pattern Type=ACS-WFC-DITHER-LINE Purpose=DITHER Number Of Points=2 Point Spacing=3.011 Line Spacing=	Coordinate Frame=POS-TARG Pattern Orientation=85.3 Angle Between Sides= Center Pattern=false	Pattern Type=ACS-WFC-DITHER-BOX Purpose=DITHER Number Of Points=4 Point Spacing=0.265 Line Spacing=0.187	Coordinate Frame=POS-TARG Pattern Orientation=20.7 Angle Between Sides=69.1 Center Pattern=false	(1)

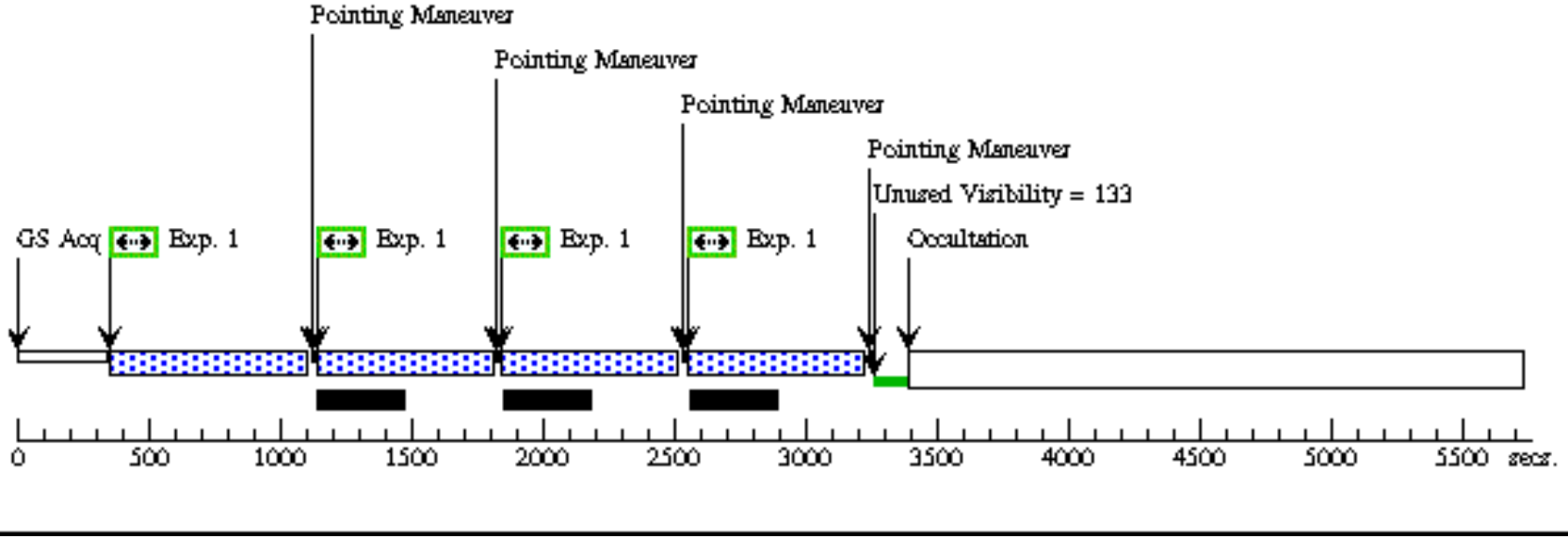
Fixed Targets

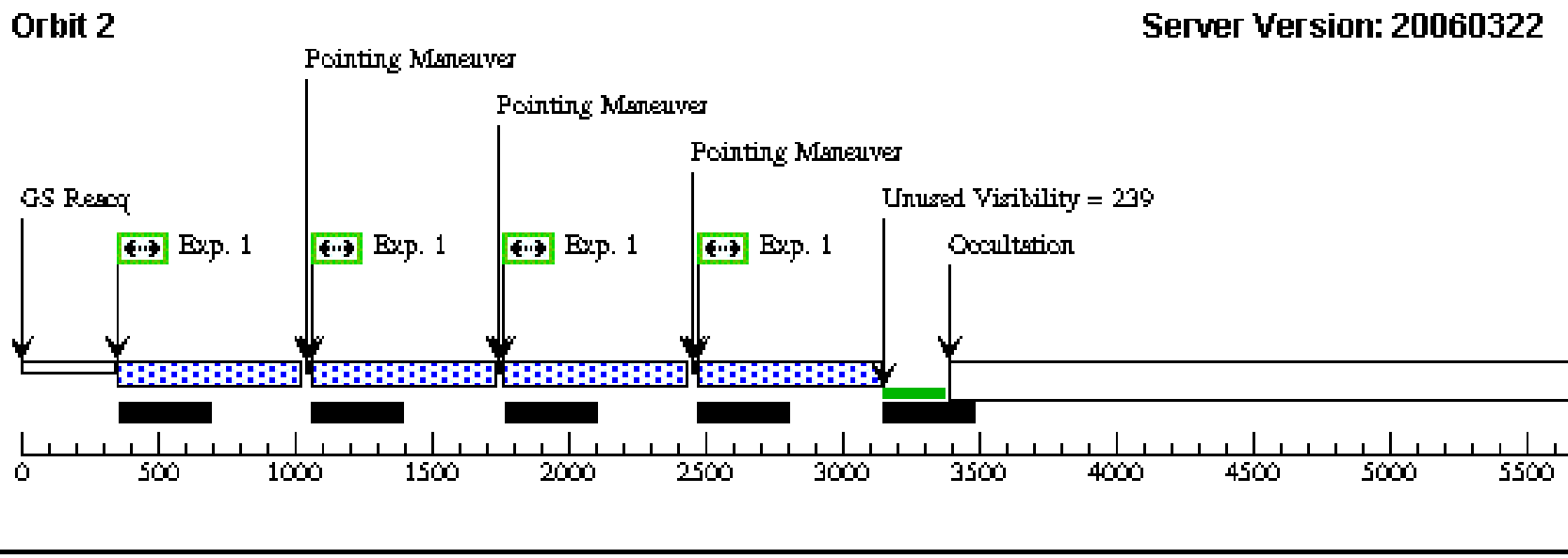
#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(1)	GRB060121	RA: 09 09 52.1300 (137.4672083d) Dec: +45 39 44.90 (45.66247d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(1) GRB060121	ACS/WFC, ACCUM, WFC1	F606W	CR-SPLIT=NO		Pattern 1-1 (1)	550.0 Secs	
								[==>(Pattern 1,1)] *[==>(Pattern 1,2)]* *[==>(Pattern 1,3)]* *[==>(Pattern 1,4)]*	***[1]***
								[==>(Pattern 2,1)] *[==>(Pattern 2,2)]* *[==>(Pattern 2,3)]* *[==>(Pattern 2,4)]*	***[2]***

Orbit Structure





Visit

Proposal 10780, Visit 03 Sat Jul 01 01:22:47 GMT 2006

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC3

Special Requirements: VISIBILITY INTERVAL 3060 S

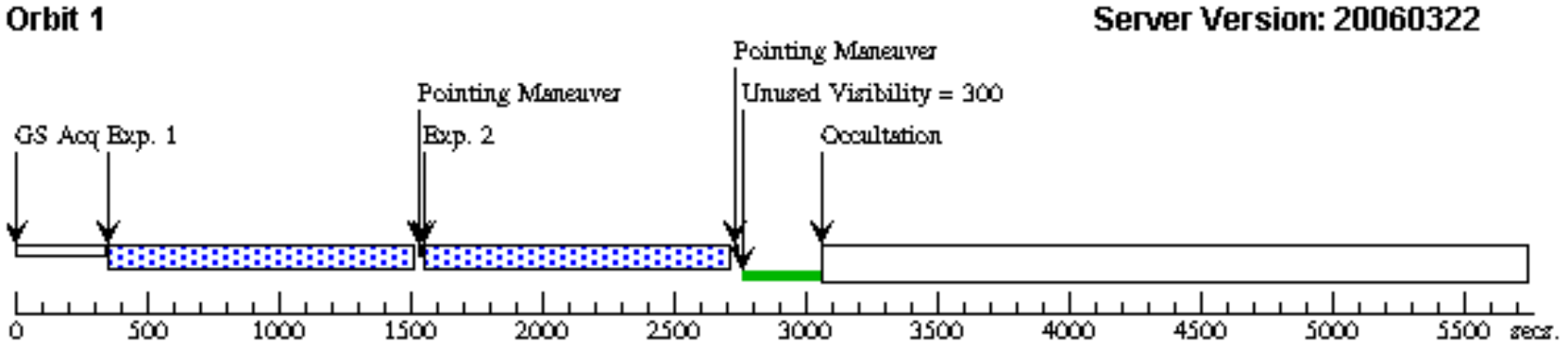
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GRB060121-OPT	RA: 09 09 51.9900 (137.4666250d) Dec: +45 39 45.60 (45.66267d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG

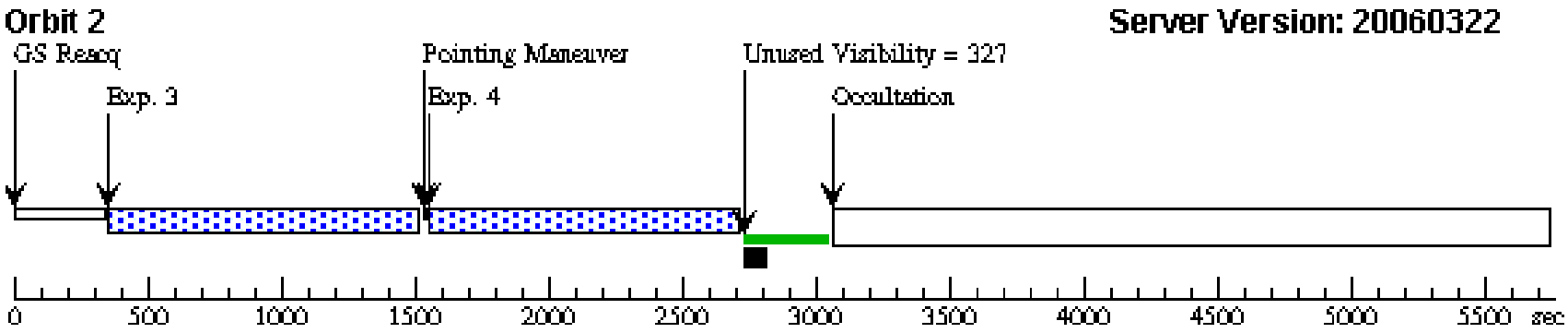
Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,-1.421		*[==>]*	***[1]***
2		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,1.523		*[==>]*	***[1]***
3		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,-1.421		*[==>]*	***[2]***
4		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F160W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,1.523		*[==>]*	***[2]***

Orbit Structure



Orbit Structure (continued)



Visit

Proposal 10780, Visit 04 Sat Jul 01 01:22:47 GMT 2006

Diagnostic Status: No Diagnostics

Scientific Instruments: NIC3

Special Requirements: VISIBILITY INTERVAL 3060 S

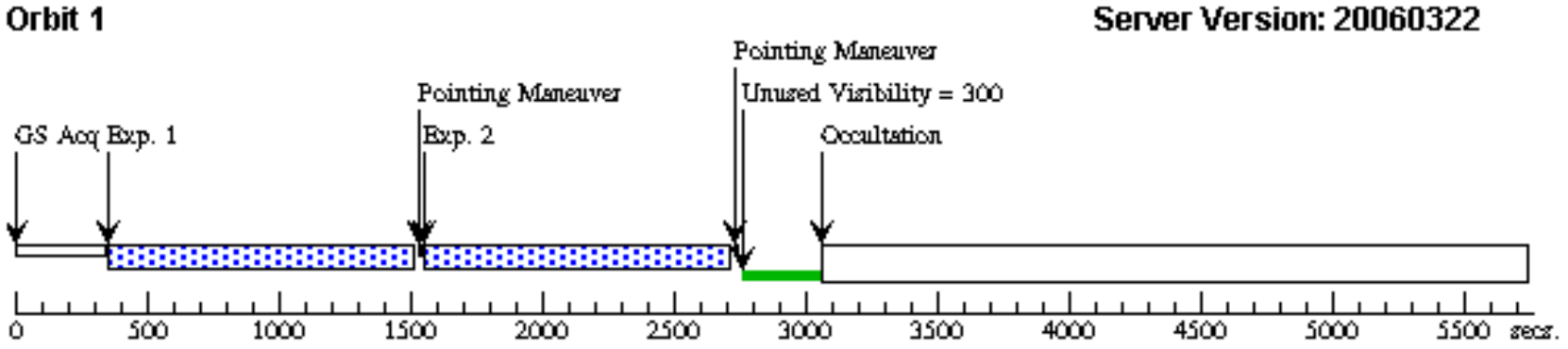
Fixed Targets

#	Name	Target Coordinates	Targ. Coord. Corrections	Fluxes	Miscellaneous
(2)	GRB060121-OPT	RA: 09 09 51.9900 (137.4666250d) Dec: +45 39 45.60 (45.66267d) Equinox: J2000 Plate Id: (?)		V=27.0+/-1.0	Coordinate Source: GUIDE_STAR_CATALOG

Exposures

#	Label	Target	Config,Mode,Aperture	Spectral Els.	Opt. Params.	Special Reqs.	Groups	Exp. Time/[Actual Dur.]	Orbit
1		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,-1.421		*[==>]*	***[1]***
2		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG -1.426,1.523		*[==>]*	***[1]***
3		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,-1.421		*[==>]*	***[2]***
4		(2) GRB060121-OPT	NIC3, MULTIACCUM, NIC3	F110W	NSAMP=11; SAMP-SEQ=SPARS128	POS TARG 1.528,1.523		*[==>]*	***[2]***

Orbit Structure



Orbit Structure (continued)