

Month	Day	Year 1995	Day of Year	Flight Day	Time (UT)	Event
DEC	2	1995	336	1	8:08	Launch
DEC	2	1995	336	1	10:10	Separation from Centaur
DEC	2	1995	336	1	10:14	Telemetry acquired (delayed by ~ 3 min.)
DEC	2	1995	336	1	10:19	Solar Array deployed
DEC	2	1995	336	1	16:48	Fail-over to Gyro Mode
DEC	2	1995	336	1	18:30	High Gain Antenna deployed
DEC	3	1995	337	2	2:04	Thermal Reconfiguration (GOLF Sub.Htr.)
DEC	4	1995	338	3	0:10	MCC1 X-1 Burn
DEC	4	1995	338	3	2:05	ESR-1 (Emergency Sun Reorientation), by roll rate; failure was ACU Reset
DEC	4	1995	338	3	18:00	MCC1 X-2 Burn
DEC	4	1995	338	3	19:18	Fail-over to Gyro Mode
DEC	14	1995	348	13	0:27	Momentum Management; +3500/+600/+1000
DEC	14	1995	348	13	5:50	Roll to nominal attitude complete
DEC	14	1995	348	13	16:15	Fail-over to Gyro Mode
DEC	15	1995	349	14	4:34	Fail-over to Gyro Mode
DEC	17	1995	351	16	6:46	Fail-over to Gyro Mode
DEC	18	1995	352	17	16:41	Tape Recorder Maintenance
DEC	23	1995	357	22	13:37	Onboard Time Frequency Adjustment
DEC	26	1995	360	25	23:33	Onboard Time Frequency Adjustment

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	5	1996	5	35	5:40	MCC2 X-1 Burn
JAN	13	1996	13	43	14:31	Onboard Time Frequency Adjustment
JAN	16	1996	16	46	18:25	Momentum Management; -1200/+1000/+3200
FEB	1	1996	32	62	10:16	Fail-over to Gyro Mode
FEB	14	1996	45	75	17:00	Halo Orbit Insertion Manoeuvre (HOI)
FEB	14	1996	45	75	19:01	Reaction Wheel 4 Commissioning
FEB	16	1996	47	77	16:11	GOLF power cycle for re-boot (4 minutes)
FEB	17	1996	48	78	14:45	Offset Tests:FPSS Pi&Ya; Golf: Ro,Pi,Ya (PCPG)
FEB	21	1996	52	82	5:52	J2 - Golf Oscillation Tests - Yaw (PCPG)
FEB	22	1996	53	83	2:30	J2 - Golf Oscillation Tests - Pitch (PCPG)
FEB	24	1996	55	85	9:52	Fail-over to Gyro Mode
FEB	26	1996	57	87	21:56	Telemetry Submodes 2,3,4 tested
MAR	2	1996	62	92	14:52	Tape Recorder Maintenance
MAR	5	1996	65	95	21:02	Fail-over to Gyro Mode
MAR	7	1996	67	97	13:32	FPSS Pitch reference updated to -810 arcsec
MAR	11	1996	71	101	18:50	COBS patch for ACU Reset Monitoring (via "troubleshoot" function)
MAR	14	1996	74	104	16:13	ACU Patch 5 uplinked (SEU's are screened by "staircase filter"); name:CSEA003
MAR	15	1996	75	105	8:00	GOLF Roll Oscillations +/-45 arcsec for 16 hrs (PCPG)
MAR	18	1996	78	108	21:56	Momentum Management; +2350/-3010/+958
MAR	19	1996	79	109	16:58	J1 Test - 360 degree roll, steps of 30,45 and 90 degrees
MAR	20	1996	80	110	16:45	Wheels Test and MMM: -1200/+1000/+3000
MAR	20	1996	80	110	22:45	Halo Orbit Insertion Manoeuvre (HOI) - Trim
MAR	21	1996	81	111	18:18	GOLF commissions redundant channel
MAR	26	1996	86	116	15:46	VIRGO LOI Door opened with COBS Patch
APR	3	1996	94	124	17:10	J3 - FPSS Trim -10 arcmin North (in 50 min) 20 moves
APR	4	1996	95	125	12:20	J3 - FPSS Trim - 20 arcmin East (in 55 min) 40 moves
APR	13	1996	104	134	16:55	Fail-over to Gyro Mode
APR	16	1996	107	137	23:13	FPSS Pitch Bias set 3.3 arcmin
APR	19	1996	110	140	19:21	Onboard Time Frequency Adjustment
APR	21	1996	112	142	17:11	Fail-over to Gyro Mode
APR	24	1996	115	145		MDI Continuous Coverage, 3 days until 119/08:30
APR	26	1996	117	147	15:32	Fail-over to Gyro Mode

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
MAY	16	1996	137	167	20:45	Tape Recorder Maintenance
MAY	17	1996	138	168	22:56	Momentum Management; -2000/+1000/-1000
MAY	20	1996	141	171	23:30	Roll 90 degrees for CDS, SUMER (JOP2)
MAY	22	1996	143	173	19:40	Momentum Management; -800/+1000/-800
MAY	23	1996	144	174	0:02	SK-1; X-1; (141 sec)
MAY	23	1996	144	174		MDI Continuous Coverage, 2 months until 206/04:30
MAY	26	1996	147	177	18:18	Fail-over to Gyro Mode
JUN	25	1996	177	207	13:46	Onboard Time Frequency Adjustment
JUN	27	1996	179	209	18:05	Momentum Management; -1200/+1000/+3000
JUL	24	1996	206	236	16:52	Fail-over to Gyro Mode
JUL	26	1996	208	238	19:31	Fail-over to Gyro Mode
JUL	27	1996	209	239	20:39	SWAN powered off until July 29 at 15:01
JUL	30	1996	212	242	18:41	Fail-over to Gyro Mode
AUG	18	1996	231	261		MDI Continuous Coverage, 3 days until 235/03:10
AUG	18	1996	231	261	19:06	CTOF (CELIAS) power -off untill Nov 29,96
SEP	3	1996	247	277	17:55	Fail-over to Gyro Mode
SEP	9	1996	253	283	15:48	VIRGO "safe " mode (low power) untill Sept.12, 19:50
SEP	11	1996	255	285	19:59	Reaction Wheel 4 maintenance
SEP	11	1996	255	285	20:42	Momentum Management; -1200/+1000/+3000
SEP	11	1996	255	285	23:15	SK-2; X-1; (210 sec)
SEP	12	1996	256	286	15:15	ACU Patch 6 uplinked ("star jump filter"); name: CSEA004
SEP	17	1996	261	291		MDI Continuous Coverage, 3 days until 265/01:35
OCT	1	1996	275	305	15:49	Tape Recorder Maintenance
OCT	4	1996	278	308	14:50	Onboard Time Frequency Adjustment
OCT	13	1996	287	317	2:28	Fail-over to Gyro Mode
OCT	13	1996	287	317	18:32	Fail-over to Gyro Mode
OCT	17	1996	291	321		MDI Continuous Coverage, 3 days until 295/07:30
OCT	20	1996	294	324	21:26	Fail-over to Gyro Mode
NOV	9	1996	314	344	21:53	Momentum Management; +1800/+800/+3000
NOV	10	1996	315	345	15:41	Fail-over to Gyro Mode
NOV	16	1996	321	351		MDI Continuous Coverage, 3 days until 325/00:30
NOV	20	1996	325	355	21:05	FPSS Off-pointing by 10 arcsec Pitch and Yaw
NOV	21	1996	326	356	16:29	Roll to 45 and 90 degrees
NOV	22	1996	327	357	7:15	Roll back from 90 to 0 degrees
NOV	22	1996	327	357	17:07	Momentum Management; +500/+1000/+2500
NOV	30	1996	335	365	16:22	Fail-over to Gyro Mode
DEC	2	1996	337	367	15:23	Tape Recorder Maintenance
DEC	4	1996	339	369	18:30	Telemetry Submode 2 tested for 4 hrs
DEC	5	1996	340	370	13:00	Telemetry Submode 3 tested for 3 hrs
DEC	15	1996	350	380		MDI Continuous Coverage, 3 days until 354/01:50

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	14	1997	14	410	16:39	SK-3; (X 1=16sec, X 2=3.6sec)
JAN	14	1997	14	410	23:53	Fail-over to Gyro Mode
JAN	15	1997	15	411		MDI Continuous Coverage, 3 days (until 018/21:50)
JAN	21	1997	21	417	21:55	Fail-over to Gyro Mode
JAN	30	1997	30	426	14:44	SSU staircase threshold for fail-over to gyro: increased from 5 to 30
FEB	1	1997	32	428	17:30	Tape Recorder Maintenance
FEB	10	1997	41	437	17:00	Telemetry Submode 5 (new) replaces submode 1
FEB	11	1997	42	438	17:01	Telemetry Submode 6 (new) tested for 4 hrs
FEB	13	1997	44	440		MDI Continuous Coverage, 3 days (until 048/05:30)
FEB	13	1997	44	440	19:41	SEU counter trace with COBS min/max channels 15,16
FEB	15	1997	46	442	10:26	Thermal Reconfiguration (CEPAC/ESU hot)
MAR	6	1997	65	461	9:08	Fail-over to Gyro Mode (2hrs in RMW)
MAR	12	1997	71	467		MDI Continuous Coverage, 3 days (until 075/04:20)
MAR	18	1997	77	473	17:50	Wheel 4 maint. & Momentum Mgmt: 2517/-3103/1615 (till 22:40)
MAR	20	1997	79	475	12:02	Two Rolls for MDI&SWAN; 12 *30 deg.& 4*90 deg. (till 02:33)
MAR	21	1997	80	476	5:37	HGA points to center of earth, not to station D16 from now on
APR	2	1997	92	488	17:45	Tape Recorder Maintenance
APR	10	1997	100	496	10:10	Fail-over to Gyro Mode (6.1 hrs in RMW)
APR	11	1997	101	497	17:09	Mom. Mgmt. (-501/512/1589)
APR	11	1997	101	497		SK-4; Delta-V = - 0.19 m/s, burn time 1.5 min, fuel used 0.21 kg; NM at 22:50
APR	13	1997	103	499		MDI Continuous Coverage, 3 months (until 195/04:20)
APR	23	1997	113	509	3:20	Spacecraft Receiver 1 lost lock
APR	28	1997	118	514	19:51	Spacecraft Receiver 1 lock frequency found @ 2066.86 Mhz
MAY	2	1997	122	518	14:59	OBT Frequency Adjustment
MAY	19	1997	139	535		Medoc Campaign #1, run for 3 weeks until June 6,1997
MAY	29	1997	149	545	9:28	Fail-over to Gyro Mode (3 hrs in RMW)
JUN	1	1997	152	548	21:00	Tape Recorder Maintenance
JUN	13	1997	164	560		SSU Staircase Filter changed from 30 to 60 in AOCS Software
AUG	1	1997	213	609	16:00	Tape Recorder Maintenance
AUG	1	1997	213	609	20:26	Fail-over to Gyro Mode (52 min in RMW)
AUG	10	1997	222	618		MDI Continuous Coverage, 3 days (until 226/03:50)
SEP	1	1997	244	640	15:33	Momentum Management preparing for roll; fuel 53 gr.;done 18:36
SEP	2	1997	245	641	14:50	Fail-over to Gyro Mode (75 min in RMW)
SEP	3	1997	246	642	8:32	Roll;dwll: @ 45 deg. 1.5 hrs. @ 90 deg. 12 hrs; done 247/00:09
SEP	3	1997	246	642	16:06	Fail-over to Gyro Mode (114 min in RMW) during dwell @ 90 deg
SEP	4	1997	247	643	1:00	Switch to Communications Back-up (TM low rate), recovered: 7:39
SEP	4	1997	247	643	16:51	Wheel 4 Maintenance & Mom. Mgmt. (-500/500/1600); done 19:00
SEP	4	1997	247	643	21:49	SK-5; Delta-V = - 1.9 m/s, burn time 15.5 min, fuel used 2 kg; done 00:18
SEP	11	1997	254	650		MDI Continuous Coverage, 3 days (until 258/05:20)
SEP	25	1997	268	664	19:07	Test of new TM submode 3, until 24:00
SEP	26	1997	268	664	15:10	Test of new TM submode 2, until 19:05
OCT	7	1997	280	676		MDI Continuous Coverage, 3 days (until Oct.11, 04:35)
OCT	8	1997	281	677	13:30	CDS processor swap (to remedy the watch dog triggering)
OCT	13	1997	286	682	22:14	Fail-over to Gyro Mode (2 hrs in RMW)
OCT	27	1997	300	696		Medoc Campaign #2, run for 3 weeks until Nov.9,1997
OCT	30	1997	303	699	15:02	Fail-over to Gyro Mode (50 min in RMW)
NOV	5	1997	309	705		MDI Continuous Coverage, until Nov. 9 at 06:00)
NOV	6	1997	310	706	17:31	Fail-over to Gyro Mode (76 min in RMW) due to X9.4 flare in AR8100
NOV	7	1997	311	707	0:51	Fail-over to Gyro Mode, 3 times (4 hrs, 41 min total in RMW)
NOV	19	1997	323	719	14:40	ESR-2, by off-pointing (ACU power failure), recovered Nov.20 at 15:43
NOV	20	1997	324	720	10:20	Switch to Communications Back-up (TM low rate), recovered:12:33
NOV	29	1997	333	729	14:05	Wheel 4 Maint.,Mom. Mgmt. (3000/500/1800)
NOV	29	1997	333	729	20:45	SK-6, Delta -V = + 0.04 m/s, 15 sec burn, fuel 0.03 kg
DEC	11	1997	345	741		MDI Continuous Coverage, (until Dec.15, 07:00)
DEC	15	1997	349	745	14:45	OBT Frequency Adjustment
DEC	19	1997	353	749	18:00	Mom. Mgmt. (3000/500/1800) & SK 07; done 20:38 (result of ESR)
DEC	19	1997	353	749	20:30	SK-7, Delta -V = - 0.4 m/s, 3min burn, fuel 0.42 kg

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	30	1998	30	791	1:54	Fail-over to Gyro Mode (2 hours in RMW)
FEB	27	1998	58	819	23:49	Fail-over to Gyro Mode (1 hr, 42 min in RMW)
MAR	2	1998	61	822	14:00	New Telemetry Subformat 3 test, ran until Warm Start-up
MAR	3	1998	62	823	9:02	DHSS Warm Start-Up
MAR	3	1998	62	823	19:03	ESR-3 by off-pointing
MAR	3	1998	62	823	22:53	ESR-4 by roll rate; back to Normal Mode: March 5 at 00:04 UT
MAR	14	1998	73	834		OBT Frequency Adjustment.
MAR	25	1998	85	846	2:40	VIRGO "safe" mode (low power) until Mar. 26, @00:00
APR	8	1998	98	859		OBT Frequency Adjustment.
APR	10	1998	100	861	11:13	Fail-over to Gyro Mode (2 hrs 26 min in RMW)
APR	17	1998	107	868	18:52	SK-8, Delta V = 1.4 m/sec, 11 min burn, 1.5kg fuel
APR	20	1998	110	871	3:58	Fail-over to Gyro Mode (2 hrs in RMW)
MAY	1	1998	121	882	17:35	Fail-over to Gyro-Mode (1 hr, 20 min in RMW)
MAY	1	1998	121	882		MDI Continuous Coverage (until May 7, 21:30 UT)
JUN	11	1998	162	923		MDI Continuous Coverage (until June 18, 05:30 UT)
JUN	24	1998	175	936	23:16	ESR-5 by (false) roll rate
JUN	25	1998	176	937	2:35	ESR-6 by roll rate
JUN	25	1998	176	937	4:38	ESR-7 by off-pointing
JUN	25	1998	176	937	4:43	Loss of Telemetry
JUL	23	1998	204	965	10:00	RADAR from DSN & Arecibo determine SOHO position and Spin Rate
AUG	3	1998	215	976	22:51	SOHO Telemetry carrier signal received by DSN
AUG	8	1998	220	981	23:14	Reception of Telemetry, Batteries charging
AUG	9	1998	221	982		Payload RTU switched ON
AUG	12	1998	224	985	23:39	Begin of hydrazine tank thawing
AUG	28	1998	240	1001	23:02	Completion of hydrazine tank thawing;
AUG	30	1998	242	1003		Begin of hydrazine lines thawing
SEP	16	1998	259	1020	5:45	Begin of Attitude Recovery
SEP	16	1998	259	1020	18:29	ESR-8 (Commanded as part of the recovery)
SEP	16	1998	259	1020	18:30	SOHO locks onto the sun
SEP	22	1998	265	1026	19:35	ESR-9 by (false) off-pointing
SEP	22	1998	265	1026	21:32	DHSS Warm start-up
SEP	23	1998	266	1027	16:58	Attitude Control in Roll Maneuver Wheels Mode
SEP	25	1998	268	1029	18:00	SK-9, Delta - V = - 6.21 m/sec, 45.5 min burn, 6.7 kg fuel (in 2 segments)
SEP	25	1998	268	1029	19:52	Attitude Control in Normal Mode
OCT	1	1998	274	1035	12:15	SSU Patch, repeated on Oct.2
OCT	4	1998	277	1038	13:15	Fail-over to Gyro Mode (0.5 hrs in RMW)
OCT	5	1998	278	1039	18:20	SUMER power ON post recovery
OCT	6	1998	279	1040	17:53	VIRGO power ON post recovery
OCT	7	1998	280	1041	18:52	Offset -198 arcsec
OCT	7	1998	280	1041	13:55	Fail-over to Gyro Mode (0.5 hrs in RMW)
OCT	8	1998	281	1042	17:38	GOLF power ON post recovery
OCT	9	1998	282	1043	10:35	CEPAC power ON post recovery
OCT	10	1998	283	1044	17:28	UVCS power ON post recovery
OCT	12	1998	285	1046	19:42	MDI power ON post recovery
OCT	13	1998	286	1047	17:22	LASCO power ON post recovery
OCT	12	1998	286	1047	17:26	Fail-over to Gyro Mode (0.5 hrs in RMW)
OCT	13	1998	287	1048	15:46	OSR & FPSS duty cycle to 20%, to zero Oct 14
OCT	16	1998	289	1050	21:42	Mom. Mgmt. (-666/602/2357) & roll from 53 to 3 deg
OCT	16	1998	289	1050		SK-10, Delta - V = 2.4 m/sec
OCT	17	1998	290	1051	8:17	Fail-over to Gyro Mode (1.7 hrs in RMW)
OCT	17	1998	290	1051	18:52	Fail-over to Gyro Mode (0.4 hrs in RMW)
OCT	17	1998	290	1051	19:51	CDS power ON post recovery
OCT	17	1998	290	1051	21:11	Fail-over to Gyro Mode (0.6 hrs in RMW)
OCT	18	1998	291	1052	17:23	SWAN power ON post recovery
OCT	19	1998	292	1053	18:17	Close LV-B
OCT	23	1998	296	1057	15:35	X-Panel duty cycle decreased by 20% (TCS2, TCS3)
OCT	24	1998	297	1058	17:59	CELIAS power ON post recovery
NOV	4	1998	308	1069		Instrument Recommissioning Ends
NOV	12	1998	316	1077		Instrument Prep. for Leonids Begins
NOV	13	1998	317	1078	19:46	Mom. Mgmt (-719/911/1173) & SK-11 (2m/sec)
NOV	15	1998	319	1080	18:30	Roll to -120 degrees (protect for Leonids)
NOV	20	1998	324	1085		SSU Patch; this time successful
NOV	22	1998	326	1087		Instrument Recovery from Leonids Ends
DEC	21	1998	355	1116	17:49	ESR-10 by off-pointing (loss of the last gyro)
DEC	21	1998	355	1116	23:30	Started with roll rate braking (thruster 5B)

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JAN	8	1999	8	1134	19:58	Start reduction of yaw rate
JAN	19	1999	19	1145	18:30	SK-13 (in ESR), Delta-V = - 8.6 m/s, segment 1/2/3: 20/30/20 min, fuel 9.2 kg
JAN	20	1999	20	1146		Reaction wheels spinning and wheel 4 maintenance
JAN	26	1999	26	1152	19:00	SK-14 (in ESR), Delta-V = -3.9m/s ; segment 1/2/3 = 5/21/1 min, fuel 4.27 kg
JAN	28	1999	28	1154		Flight test of FPSS raw data processing
JAN	29	1999	29	1155		Preparation of ESR exit maneuver (ACU & SSU patches)
JAN	30	1999	30	1156		ESR exit maneuver
JAN	30	1999	30	1156	17:45	In RMW (Roll Angle -63 deg); mom mgt 21:10
JAN	30	1999	30	1156	22:57	DHS Reconfiguration
FEB	1	1999	32	1158	19:15	SK-15 (in RMW), Delta-V = +0.32 m/s, segment 1/2 = 10/25 min; fuel: 0.27 kg
FEB	1	1999	32	1158	22:12	DHS Reconfiguration
FEB	2	1999	33	1159	16:11	Transition Tests RMW/NM
FEB	2	1999	33	1159	19:12	Back to Normal Mode
FEB	5	1999	36	1162	15:59	Tape Recorder Maintenance
FEB	14	1999	45	1171	13:53	ESR-11, by off-pointing
FEB	18	1999	49	1175	18:52	Back to Normal Mode (Roll Angle -120 deg), mom mgt 15:20
MAR	3	1999	62	1188	16:05	Mom.Mgmt, 4 segments: yaw/roll/pitch/yaw;final speeds: 600/-750/600 rpm
MAR	4	1999	63	1189	16:18	Roll by 120 degrees to 0.653; roll trim to - 0.109 degrees; 198 arcsec yaw off-set 23:03
MAR	4	1999	63	1189		Loss of SSU Patch during S/C roll.
MAR	5	1999	64	1190	17:35	Mom.Mgmt, 3 segments: pitch/yaw/roll;final speeds: 2000/2000/-2000 rpm; 20:05 done
MAR	5	1999	64	1190	20:30	SK-16, Delta V = -11.87 cm/sec; 4 segments: jets 1/2/4/6: 52/52/2/2 sec on-time
MAR	5	1999	64	1190	21:30	Mom.Mgmt, 3 segments: roll/yaw/pitch;final speeds: 3000/500/-1700 rpm, 22:30 done
MAR	6	1999	65	1191	19:25	SSU SEU Flag (Fail-over to no roll control); back to Normal Mode 20:00
MAR	8	1999	67	1193	16:00	Roll trim by 1645 arcsec (0.45 degrees) for RSL activation at 17:25
MAR	13	1999	72	1198		MDI Continuous Coverage, planned until June 14 at 01:50
MAR	15	1999	74	1200	16:48	Roll trim by 378.86 arcsec (RSL correction)
MAR	18	1999	77	1203		SSU-A: heater for startracker head switched off
APR	9	1999	99	1225		RSL preparation on ground changed to skip pixel boundaries
APR	29	1999	119	1245	19:09	SSU SEU Flag (Fail-over to no roll control); back to Normal Mode 20:26
MAY	10	1999	130	1256		Medoc Campaign #3, run for 3 weeks until May 31,1999
MAY	11	1999	131	1257	17:37	Gyro B power off (all 3 gyros are off)
MAY	18	1999	138	1264	14:00	Mom.Mgmt, 3 segments: roll/pitch/yaw; final speeds: -581/762/1877 rpm; 17:00 done
MAY	20	1999	140	1266	17:07	SSU SEU Flag (Fail-over to no roll control); back to Normal Mode 18:31
JUN	11	1999	162	1288	19:49	SSU Staircase Filter changed from 60 to 600 in AOCS Software
JUN	14	1999	165	1291	13:10	Tape Recorder Maintenance
JUN	17	1999	168	1294	20:30	SK-17, Delta V = 0.46m/sec; 3 segments: jets 2/3/4: 3.5/155/151 sec on-time
JUN	17	1999	168	1294	23:00	Mom.Mgmt, 3 segments: roll/yaw/pitch;final speeds: -520/520/1900 rpm, 00:00 done

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AUG	26	1999	238	1364		MDI Continuous Coverage, planned until Sep1, 02:45
AUG	27	1999	239	1365	12:33	SSU SEU Flag (Fail-over to no roll control); back to Normal Mode 12:42
SEP	24	1999	267	1393		Gyroless Flight Comm.: AOCS Software part 1 upload
SEP	27	1999	270	1396		Gyroless Flight Comm.: AOCS Software part 2 and COBS upload; test of CRP,RMW,NM
SEP	28	1999	271	1397		Gyroless Flight Comm.: star swap, P/Y/R profiles in NM, protection functions, Mom mgt
SEP	29	1999	272	1398	14:55	Gyroless Flight Comm.: P/Y profiles in CRP, 1st part of 360 deg. roll: 8, 10 and 54 deg.
SEP	30	1999	273	1399	10:30	Gyroless Flight Comm.: final part of 360 deg.roll: 90, 105 and 90 deg.
OCT	1	1999	274	1400		Gyroless Flight Comm.: SSU patch, profiles P/Y/R in RMW, fallback to CRP & recovery
OCT	2	1999	275	1401		Gyroless Flight Comm.: Mom.Mgt, RW4 maint., Mom.Mgt, SK-18 (delta V=0.05m/sec)
OCT	4	1999	277	1403		Gyroless Flight Comm.: test of routine ops (release guide star, RSL uplink, recover star
OCT	6	1999	279	1405		Medoc Campaign #4, run until Oct.17,1999
OCT	13	1999	286	1412		MDI Continuous Coverage, planned until Oct.19 at 12:45 UT
OCT	21	1999	294	1420		Tape Recorder Maintenance
NOV	8	1999	312	1438		Instruments Prep. for Leonides begins
NOV	9	1999	313	1439	20:34	Mom.Mgmt, 3 segments: jets 5/4/1;final speeds: -600/800/1500 rpm, done 21:48
NOV	9	1999	313	1439		MDI Continuous Coverage, planned until Nov.16,13:30 UT
NOV	16	1999	320	1446	17:20	Leonides roll in CRP: -113.42 deg. to position -120.992 deg.; TM in MR; SSR, SSU off
NOV	19	1999	323	1449	14:39	Leonides roll back in CRP: -114 deg. to position -6.12 deg.; TM in MR; done 18:30
NOV	19	1999	323	1449	22:16	Mom.Mgmt, 1 segment : jet 4; final speeds: 2106/1439/-2127 rpm, done 23:40
NOV	20	1999	324	1450	0:20	SK-19, Delta V = 6.8 cm/sec; jets 1/2/4/6: 27.9/28.4/1/1.3 sec on-time
NOV	20	1999	324	1450	1:00	Mom.Mgmt, 2 segm.:jets 1/5; speeds: 2986/511/-1285 rpm, Hx=10.52 Nms; done 1:45
NOV	22	1999	326	1452		Instruments Recovery from Leonides Ends
NOV	28	1999	332	1458	11:55	ESR-12, triggered by ACU Reset Monitoring
NOV	29	1999	333	1459	18:35	Recovery to CRP, roll angle -125 deg
NOV	30	1999	334	1460	1:13	Mom.Mgmt, 2 segments : jets 5/2; final speeds: 2021/-2389/1967 rpm, done 15:40
NOV	30	1999	334	1460	16:20	roll-back by 117.22 deg; to -7.219 deg; done 20:16
DEC	1	1999	335	1461	15:00	Mom.Mgmt, 3 segments : jets 4/2/5; final speeds: 1750/1750/-1750 rpm, done 16:40
DEC	1	1999	335	1461	18:00	SK-20, Delta V = 0.364 m/sec; jets 1/2/4/6; 148/151/5/6 sec. on-time
DEC	1	1999	335	1461	18:09	Guide star loss during station keeping; CRP mode fails to control the roll
DEC	1	1999	335	1461	18:43	ESR-13, triggered from ground; no roll control in CRP due to ACU TM buffer overrun
DEC	2	1999	336	1462	19:42	Recovery to CRP, roll angle -67.67 deg
DEC	8	1999	342	1468		MDI Continuous Coverage, planned until Dec.13 at 14:00 UT
DEC	8	1999	342	1468	15:12	AOCS patch 11 uploaded (preliminary fix of the ACU S/W to clear ACU errors in TM)
DEC	8	1999	342	1468	16:45	Mom.Mgmt, 3 segments : jets 5/1/3; final speeds: 730/-1615/2485 rpm, done 17:42
DEC	8	1999	342	1468	19:52	roll-back by 69.0 deg; to -6.565 deg; done 21:32
DEC	9	1999	343	1469	12:25	Mom.Mgmt, 2 segments : jets 4/2; final speeds: 1624/1622/-1690 rpm, done 13:48
DEC	9	1999	343	1469	14:05	SK-21, delta v = 0.73 m/s; in 4 segm.; jets 1/2/4/6; final speeds: 1680/1357/-1493 rpm
DEC	9	1999	343	1469	21:25	Mom.Mgmt, 3 segm.: jets 4/1/5; final rpm's: 2790/609/-1292, done 23:12; Hx=10.1Nms
DEC	10	1999	344	1470	1:00	Back in Normal Mode
DEC	29	1999	363	1489	17:32	UVCS closed door in anticipation of Y2K problems

Month	Day	Year 2000	Day of Year	Flight Day	Time (UT)	Event
JAN	7	2000	7	1498	0:28	ESR-14, triggered by FSPAAD
JAN	10	2000	10	1501	15:15	roll-back to -6 deg; Mom.Mgmt (19:00 UT), jets 5/1/4, to 1741/-1744/1764 rpm;
JAN	10	2000	10	1501	20:20	SK-22, 3 segm., jets 1/2/4/6, deltaV=0.52 m/sec
JAN	11	2000	11	1502	15:10	Mom.Mgmt, jets 2/4, to 2565/867/-1539 rpm; Hx=9.0 Nms
JAN	11	2000	11	1502	18:54	Normal Mode
JAN	19	2000	19	1510	11:42	Automatic star swap #1
FEB	8	2000	39	1530	14:39	Fall-back to CRP, back to Normal Mode 20:11
FEB	10	2000	41	1532		MDI Continuous, planned until February 15 at 07:50 UT
MAR	7	2000	67	1558		Uplink/ flight commissioning of ACU patch 9, patch 10, patch 12, patch 13 (until Mar.9)
MAR	23	2000	83	1574	15:36	Reaction Wheel 4 maintenance, 21:25: SK-23, jets 1/2/4/6, deltaV=0.23 m/sec
MAR	23	2000	83	1574	22:30	Mom.Mgmt, 7 burns, final speeds: -517/511/1512 rpm; Hx=7.4 Nms, in NM at 00:50
APR	3	2000	94	1585		MDI continuous 3 month contact. First month best effort; prime from May 9-July 11
MAY	1	2000	122	1613		Medoc Campaign #5; until May 21
JUL	14	2000	196	1687	10:15	Proton Flare X.5.7 in AR 9077; 24000 particle flux units; UVCS, CDS& CTOFcmd'd to safe status
JUL	14	2000	196	1687	14:09	3 Starswaps by AOCS due to the flare (at 14:09, 17:21 and 197/10:03)
JUL	18	2000	200	1691	14:00	Mom.Mgmt, burn 1 jet 5, 30 min, speeds: -1518/1169/2020 rpm;
JUL	18	2000	200	1691	15:00	SK-24, jets 1,2,4,6; two burns: 74&14 min, delta V: 0.52 & 0.09 m/sec
JUL	18	2000	200	1691	18:30	Mom.Mgmt, burn 2 jet 4, 18 min, speeds: -903/1284/1237rpm;
JUL	18	2000	200	1691	19:00	Mom.Mgmt, burn 3 jet 1, 19 min, speeds: -515/530/1614 rpm; overall fuel use: 0.68 kg
AUG	15	2000	228	1719		MDI continuous until Aug. 29 at 05:50
AUG	26	2000	239	1730	1:06	Starswap by AOCS from star 4 (mv 6.6) to star 1
SEP	20	2000	264	1755		MDI continuous until Sept.26 at 8:45
OCT	18	2000	292	1783		MDI continuous until Oct.23 at 16:00
OCT	27	2000	301	1792	17:07	Mom.Mgmt, jets 5&4, speeds from: -2483/871/1142 rpm to 2491/1429/-2224 rpm;
OCT	27	2000	301	1792	19:50	Pros Clear burn: (2523/1407/-2212); SK-25, jets 1,2,4,6; one burn: 82 min, delta V:- 0.566 m/sec
OCT	27	2000	301	1792	23:05	Mom.Mgmt, jets 3&1; final speeds:2973/530/-1807 rpm, overall fuel use: 0.68 kg
OCT	30	2000	304	1795		MEDOC Campaign #6, until Nov.13
NOV	9	2000	314	1805	0:00	Proton Flare, lasted until Nov 10
NOV	29	2000	334	1825	0:19	ESR-15, due to ACU reset; in CRP @ 10:58; Mom.Mgmt: 3 burns 19:10; start roll 20:58
NOV	30	2000	335	1826	1:55	roll back (142 deg) done; Mom.Mgmt burn 1: 16:15; SK-26: 17:15; Mom.Mgmt burn 2&3: 18:05
NOV	30	2000	335	1826	19:21	back to Normal Mode from ESR

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	14	2001	14	1871	21:02	ESR-16, caused by ACU Reset
JAN	16	2001	16	1873	0:30	roll back from -55 to -5.6 deg., completed 02:20
JAN	16	2001	16	1873	16:45	Mom.Mgmt burn 1 with jet 4; wheels from 277/-960/1124 to 587/-910/762
JAN	16	2001	16	1873	17:05	Mom.Mgmt burn 2 with jet 5; wheels go to 854/-921/1029
JAN	16	2001	16	1873	17:50	SK-27: thrusters 1,2,4, and 6; delta V: 0.154 m/s, fuel:0.168 kg
JAN	16	2001	16	1873	18:50	Mom.Mgmt burn 1 with jet 3; wheels go from 865/-919/1038 to 390/1049/1644
JAN	16	2001	16	1873	19:15	Mom.Mgmt burn 2 with jet 2; wheels go to 309/351/991; Hx: 5.04 NMS
JAN	16	2001	16	1873	20:35	Roll Profile to trim the final roll attitude (- 5.5 degrees); back in Normal Mode @ 20:45
FEB	8	2001	39	1896	18:26	Offptg. for EIT (arcsec): Yaw: -225,-100,0,68,383,0; Pitch: -225,-100,0,68,383,30,0; done 21:00
FEB	22	2001	53	1910	17:00	SK -28: delta V: 2 mm/s; fuel 1.8 gram
FEB	22	2001	53	1910	17:30	Mom.Mgmt; jets 1 & 3, final speeds: -977; 501; 1023 rpm ;
FEB	28	2001	59	1916		MDI continuous until May 31 at 1:50
APR	2	2001	92	1949	21:51	Proton event - X20 flare with elevated proton counts for 6 days
APR	15	2001	105	1962	14:27	Proton event - X14 flare
APR	18	2001	108	1965	3:00	Proton event
MAY	14	2001	134	1991	0:00	Medoc Campaign #7, until May 28
JUN	28	2001	179	2036	14:10	SK-29: thrusters 2,3,4; delta V: 0.659 m/s, fuel: 0.55 kg; 76 min
JUN	28	2001	179	2036	15:55	Mom.Mgmt; 3 segments: jets 5,4,1; final speeds: -335/327/1092 rpm
JUL	28	2001	209	2066	20:16	ESR-17, caused by ACU reset; recovery to CRP 3:20
JUL	29	2001	210	2067	17:06	roll back (by 158°) from 162° to 4°, completed 22:46
JUL	30	2001	211	2068	0:14	Mom.Mgmt; 3 segments: jets 3,1,5; final speeds: -522/585/1024 rpm
JUL	31	2001	212	2069	15:30	SK-30: thrusters 1,2,4, and 6; delta V: 0.185 m/s, fuel: 0.202 kg
AUG	8	2001	220	2077	19:48	ACU Patch 15 uplinked (fixing RAM corruption by selfcheck); name: CSEA015
AUG	16	2001	228	2085	0:30	Proton event; intensity dropping fast, so no instrument needed to be saved
AUG	29	2001	241	2098		MDI continuous until Sept.4 at 8:32
SEP	24	2001	267	2124	9:36	CME; X-ray flare (X2.6), peak @10:38; energetic particle event @12:00, lasting until 269/12:00
OCT	15	2001	288	2145		Medoc Campaign #8, until Oct.26
OCT	24	2001	297	2154		MDI continuous until Oct.30 at 9:25
NOV	3	2001	307	2164	20:09	Start of X-panel heater switch-down in 10% steps; completed Nov. 19 at 18:51
NOV	4	2001	308	2165	16:00	proton event, X1 flare at 16:03; CTOF powered off after limit violation until Nov 19 @ 19:17
NOV	7	2001	311	2168	7:20	SK-31: jets 1,2,4,5; delta V: 0.02 m/s, fuel: 0.02 kg; Mom.Mgmt: 3 segm.; speeds: -487/215/2477
NOV	14	2001	318	2175	12:00	Science roll: from 6.5° to 330° in 30°steps; back to 270°- overnight stay; back to 6.5° next day
NOV	20	2001	324	2181	14:45	Tank heating thresholds changed from 18-23° to 20-21°
NOV	22	2001	327	2184	21:00	Proton event; M9.9 flare, lasting until Nov.24 @ 13:00; CDS safed Nov.24
DEC	26	2001	360	2217	5:00	Proton event, went on until 15:00

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	15	2002	15	2237	16:30	SK-32: jets 1,2,4,6; dV: 0.048m/s; fuel 0.053 kg Mom.Mgmt: 3 segm.; speeds: -322/328/1824
FEB	5	2002	36	2258	2:39	ESR-18: main bus voltage drop. Probable cause: "Tin Wiskers"
FEB	8	2002	39	2261	14:00	SK-33: jets 1,2,4,6; dV: 0.26m/s; Mom.Mgmt: 3 segm.; speeds: -1006/629/898; done 17:05
MAR	13	2002	72	2294	23:06	Both battery1 BDRs configured OFF, since battery 1 lost
MAR	24	2002	83	2305		MDI 60-Day Continuous until 05:00 UT, June 3
APR	21	2002	111	2333	1:30	Proton event - X1 flare
JUN	3	2002	154	2376	13:30	SK-34: jets 2,3,4,5; dV: 0.87m/s; Mom.Mgmt: 3 segm.; speeds: --404/483/1639 rpm; done 17:01
JUN	19	2002	170	2392		MDI 5-Day Continuous until 4:20 June 23
JUN	20	2002	171	2393	10:07	Kevlar Cutter electronics switched ON (to STBY) to reduce batt2 charge current by 20/40 mA
JUL	17	2002	198	2420		MDI 5-Day Continuous until 7:00 July 22
AUG	20	2002	232	2454	11:00	EIT Off-pointing (in NM&HR); 19 steps; max absolute off-pntg (arcsec): yaw: 720; pitch: 794
AUG	28	2002	240	2462		MDI Continuous until 8:30 on September 2
SEP	4	2002	247	2469	17:00	Tank heating limits changed to 25.5/26.5 °C
SEP	26	2002	269	2491		MDI 5-Day Continuous until 17:10 on September 30
OCT	7	2002	280	2502	20:18	Pros ring heater ON with duty cycle 100%
OCT	10	2002	283	2505	15:10	SK-35: jets 2,3,4,5; dV: 0.245m/s; Mom.Mgmt: 3 segm.; speeds: --318/386/1168 rpm; done 17:50
OCT	16	2002	289	2511	13:12	CAE B switched ON to monitor branch B pressure
OCT	21	2002	294	2516	0:00	Medoc Campaign # 10, until Nov.3
NOV	19	2002	323	2545		CAE telemetry swap between CAE A and CAE B once a week for branch press.survey

Month	Day	Year 2003	Day of Year	Flight Day	Time (UT)	Event
JAN	20	2003	20	2607		MDI Best Effort Continuous until February 16
FEB	27	2003	58	2645		MDI 5-Day Continuous until 7:55 on March 3
MAR	26	2003	85	2672		MDI 5-Day Continuous until 7:25 on March 31
APR	26	2003	116	2703		MDI Continuous until 6:30 on Apr.27 (original plan was to start Apr.23)
MAY	5	2003	125	2712	0:00	Comms Backup triggered by HGA monitoring on antenna Z-axis, Anomaly S3-001'
MAY	14	2003	134	2721	11:10	GOLF switch-off by itself; turned back ON May 19, 2003
MAY	19	2003	139	2726	0:00	Medoc Campaign # 11, until June 1
MAY	25	2003	145	2732	8:00	Stop HGA movements after 2003/05/25 08:00 (investigation of HGA anomaly; OCD 1779)
JUN	4	2003	155	2742	16:25	HGA pattern/pointing test
JUN	11	2003	162	2749	15:10	SK-37: jets 2,3,4,5; dV: 0.41m/s; Mom.Mgmt: 3 segm.; speeds: --555/402/1417 rpm; done 17:51
JUN	18	2003	169	2756	15:30	HGA pattern/pointing test
JUN	18	2003	169	2756		MDI 5-Day Continuous until 14:45 on June 23
JUN	19	2003	170	2757	18:05	HGA moves ok with APME-A and APME-B motor currents used in parallel
JUN	25	2003	176	2763	18:35	SSR Memory Unit 15 switched back ON
JUN	27	2003	178	2765		Beginning of June keyhole period
JUL	1	2003	182	2769	10:00	HR downlink on 34 m station lost as expected (HGA off-point from LOS to earth: 12.75 °
JUL	8	2003	189	2776	0:15	ESR-19 caused by FSPAAD
JUL	8	2003	189	2776	17:40	SK-38: jets 1,2,4,6; dV: -0.12 m/s; Mom.Mgmt: 2 segm.; speeds: 1154/-722/-1982 rpm
JUL	8	2003	189	2776	13:24	Roll 180 ° to prepare for next HGA "sweet spot" speeds : --2704/722/432. Position = inverted
JUL	14	2003	195	2782		End of June keyhole period
JUL	14	2003	195	2782	15:47	Warm start-up due to too tightly spaced mode 3 commands (for APME dual coil commands
JUL	23	2003	204	2791		MDI 5-day continuous til June 28, 14:05
AUG	7	2003	219	2806	14:25	APME Z axis dual coil command to confirm the exact off-pointing.Off-pointing confirmed. Result is -17.9 degrees
AUG	27	2003	239	2826		MDI 5-Day Continuous until September 1
SEP	2	2003	245	2832	18:10	Test in Low Rate by 26m station.
SEP	10	2003	253	2840		MDI 60-Day Continuous until November 23
SEP	23	2003	266	2853		Beginning of September keyhole period
SEP	29	2003	272	2859		Transponder Swap (1->2)
OCT	7	2003	280	2867	8:45	SK-39: jets 2,3,4; dV : 0.14m/s
OCT	7	2003	280	2867	9:15	Momentum Management 3 segments. Final speeds --1330/--308/1860 rpm
OCT	7	2003	280	2867	11:10	180 ° Roll, satellite back to regular position. Final speeds : 1561/312/--1630 rpm
OCT	11	2003	284	2871		Transponder Swap (2->1)
OCT	19	2003	292	2879		End of September keyhole period
OCT	20	2003	293	2880		Increase Ground Limits for QTR26 : FPSS temp going up due to aging
OCT	28	2003	301	2888		Proton storm (one guide star swap and one star declared ineligible)
NOV	3	2003	307	2894	20:08	Beginning of Z axis movements for a ten day period as per OCD #1866
NOV	17	2003	321	2908	0:00	MEDOC Campaign #12, until November 30
NOV	17	2003	321	2908	6:05	End of Z axis improvement (OCD#1860)
NOV	17	2003	321	2908	19:30	OCD #1865 Single coil Z axis movement try (post OCD#1860) : failcc
DEC	1	2003	335	2922	20:00	Beginning of Z axis movements for a ten day period as per OCD #1872
DEC	11	2003	345	2932	19:00	OCD #1875 Single coil Z axis movement try (post OCD#1873) : failcc
DEC	18	2003	352	2939	13:00	OCD#1877 Test to operate SSR and TR simultaneously
DEC	23	2003	357	2944		Beginning of December keyhole period
DEC	26	2003	360	2947		Transponder Swap (1->2)
DEC	30	2003	364	2951	17:00	SK-40: jets 2,3,4; dV : 0.007349 m/s
DEC	30	2003	364	2951	17:45	Momentum Management 3 segments. Final speeds 1200/400/--800 rpm
DEC	30	2003	364	2951	19:00	180 ° Roll, satellite in inverted position. Final speeds : --400/--400/1600 rpm

Month	Day	Year	Day of Year	Flight Day	Time (UT)	Event
JAN	6	2004	6	2958		Transponder Swap (2->1)
JAN	9	2004	9	2961		End of December keyhole period
JAN	28	2004	28	2980		MDI 5-Day Continuous until February 2
JAN	31	2004	31	2983	11:20	First day of telemetry outage (2 minutes duration) from Madrid D66 station. RFI with MSG after it has been moved from 10 deg west to 3.6 deg west.
FEB	11	2004	42	2994		MDI 5-Day Continuous until February 16
FEB	22	2004	53	3005	14:22	Last day of telemetry outage (2 minutes duration) from Madrid D66 station. RFI with MSG
FEB	23	2004	54	3006	16:00	GSFC/JPL teleconference about receivers sweep times. Major conclusions: - DSN will do its best to perform only one sweep cycle to lock onto the receivers - SOHO project has agreed that it may take more than one cycle to lock since this longer duration should not harm the spacecraft receivers.
MAR	16	2004	76	3028		Beginning of March keyhole period
MAR	19	2004	79	3031		Transponder Swap (1->2)
MAR	30	2004	90	3042		SK-41: jets 2,3,4; dV : 0.008567 m/s
MAR	30	2004	90	3042		Momentum Management 3 segments. Final speeds --1185/--520/2245 rpm
MAR	30	2004	90	3042		180 ° Roll, satellite back to regular position. Final speeds : 1735/520/--1700 rpm
APR	2	2004	93	3045		VIRGO switched-off by itself; turned back ON Apr 3, 2004
APR	3	2004	94	3046		Transponder Swap (2->1)
APR	7	2004	98	3050		End of March keyhole period
APR	21	2004	112	3064	5:37	ESR 20 triggered by FSPAAD
APR	22	2004	113	3065	7:27	ESR 21 triggered by FSPAAD
APR	22	2004	113	3065	16:12	ESR 22 triggered by FSPAAD
APR	23	2004	114	3066	23:37	ESR 23 triggered by FPSS Sun Presence monitoring
APR	27	2004	118	3070	17:05	SK-42: jets 1,2,4,6; dV: 0.7349 m/s
APR	27	2004	118	3070	19:20	Momentum Management 3 segments. Final speeds: --1275/340/1205 rpm
MAY	24	2004	145	3097		MDI 5-Day Continuous until June 6
JUN	3	2004	155	3107	0:00	MEDOC Campaign #13, until June 17
JUN	16	2004	168	3120		Beginning of June keyhole period
JUN	19	2004	171	3123		Transponder Swap (1->2)
JUN	22	2004	174	3126		SK-43: jets 2,3,4; dV : 0.476 m/s
JUN	22	2004	174	3126		180 ° Roll, satellite in inverted position. Final speeds : 2250/--665/--1085 rpm
JUN	30	2004	182	3134		Transponder Swap (2->1)
JUL	3	2004	185	3137		End of June keyhole period
JUL	4	2004	186	3138		MDI 60-Day Continuous until September 5
SEP	5	2004	249	3201	6:34	Spacecraft transitioned to CRP mode due to SSU reset. Tracking windows of two stars became too close to each other leading the SSU software into an endless loop.
SEP	11	2004	255	3207		Beginning of September keyhole period
SEP	17	2004	261	3213		Transponder Swap (1->2)
SEP	21	2004	265	3217		180 ° Roll, satellite back to regular position. Final speeds : --1285/430/870 rpm
SEP	21	2004	265	3217		SK-44: jets 1,2,4,6; dV : 0.01516 m/s
SEP	21	2004	265	3217		Momentum Management 3 segments. Final speeds: --435/395/495 rpm
SEP	21	2004	265	3217		"Intermittent recording" patch upload
SEP	22	2004	266	3218		Patch "intermittent recording" test; subset #3
SEP	24	2004	268	3220		Patch "intermittent recording" activation; subset #6
SEP	29	2004	273	3225		SSR dump with "intermittent recording" data. Successful session
OCT	1	2004	275	3227		Transponder Swap (2->1)
OCT	8	2004	282	3234		End of September keyhole period
OCT	22	2004	296	3248		First day of telemetry outage from Madrid D66 station. Suspected RFI with P92-3 USAF satellite.
NOV	3	2004	308	3260		MDI 5-Day Continuous until November 7
NOV	8	2004	313	3265		MEDOC Campaign #14, until November 21
NOV	12	2004	317	3269		Last day of telemetry outage from Madrid D66 station. Suspected RFI with P92-3 USAF satellite. RFI durations of a couple of minutes around 10:45 UT occurred on: Oct 22 & 24; Nov 1,2,3,6,7,10 & 12
DEC	1	2004	336	3288		MDI 5-Day Continuous until December 5
DEC	8	2004	343	3295	21:59	ESR-24 triggered by CSPAAD (false trigger)
DEC	9	2004	344	3296	16:20	--162.346 deg roll + Momentum Management 3 segments as part of the ESR-24 recovery. Final speeds: --600/3400/--1510 rpm
DEC	12	2004	347	3299		Beginning of December keyhole period
DEC	16	2004	351	3303		Transponder Swap (1->2)
DEC	21	2004	356	3308		SK-45: jets 1,2,4,6; dV: 0.3358 m/s
DEC	21	2004	356	3308		Momentum Management 3 segments. Final speeds: 1165/455/--835 rpm
DEC	21	2004	356	3308		180 ° Roll, satellite in inverted position. Final speeds: --380/--455/1615 rpm
DEC	26	2004	361	3313		Transponder Swap (2->1)
DEC	26	2004	361	3313	20:00	SSR Memory Unit #11 switched off by itself
DEC	30	2004	365	3317		End of December keyhole period

Month	Day	Year 2005	Day of Year	Flight Day	Time (UT)	Event
JAN	20	2005	20	3338		Major flare (18-21 Jan). Led to many anomalies, in particular multiple star swaps on Jan 20
JAN	24	2005	24	3342	19:15	SSR Memory Unit #11 switched back ON
FEB	3	2005	34	3352		MDI 4-Day Continuous until February 6
FEB	18	2005	49	3367		FSPAAD state indicated "detected"
MAR	3	2005	62	3380		Beginning of March keyhole period
MAR	10	2005	69	3387		Transponder Swap (1->2)
MAR	22	2005	81	3399		SK-46: jets 2,3,4; dV: 0.1137 m/s
MAR	22	2005	81	3399		Momentum Management 3 segments. Final speeds: --974/--400/2272 rpm
MAR	22	2005	81	3399		180 ° Roll, satellite back to regular position. Final speeds: 1885/400/--1370 rpm
MAR	24	2005	83	3401		Transponder Swap (2->1)
MAR	31	2005	90	3408		End of March keyhole period
MAR	31	2005	90	3408		MDI 5-Day Continuous until April 4
APR	8 & 9	2005	98	3416		GOLF polarizer and quarter wave electronics switched off, substitution heaters (68 & 69) to 30 %
APR	20	2005	110	3428	14:14-14:26	HGA Moved around Z axis by -70 steps (dual coil) to -18.553 deg to eliminate mini-keyhole:
APR	27	2005	117	3435		MDI 6-Day Continuous until May 2
MAY	16	2005	136	3454		MEDOC Campaign #15, until June 05
MAY	16	2005	136	3454	22:27	APME A switched OFF (spurious LCL OFF)
MAY	26	2005	146	3464	18:58	APME A switched back ON
JUN	2	2005	153	3471	15:00	HGA moved thru APME A around Y axis by -35 steps to get a fine pulse (whole APME A loop control)
JUN	5	2005	156	3474		Beginning of June keyhole period
JUN	9	2005	160	3478		Transponder Swap (1->2)
JUN	17	2005	168	3486		SK-47: jets 2,3,4; dV: 0.030 m/s
JUN	17	2005	168	3486		Momentum Management 3 segments. Final speeds: 610/390/--1000 rpm
JUN	17	2005	168	3486		180 ° Roll, satellite in inverted position. Final speeds: --615/--385/990 rpm
JUN	17	2005	168	3486		Upload of SSU Patch 2B (One Word Patch)
JUN	17	2005	168	3486		Determine exact fine pulse position vs step counter + move antenna (Y axis) to -4.06875 deg (June 20 16:00)
JUN	18	2005	169	3487	7:54	Star swap from star 1 to star 2
JUN	20	2005	171	3489		Transponder Swap (2->1)
JUN	25	2005	176	3494		End of June keyhole period
JUN	25	2005	176	3494		MDI 60-Day Continuous period until August 30
JUN	27	2005	178	3496	04:00-10:00	Telemetry and Telecommand test with New Norcia Station
JUL	12	2005	193	3511	14:30	FPSS-B comparison with FPSS-A (OCD # 2045)
AUG	30	2005	242	3560		Beginning of September keyhole period
SEP	1	2005	244	3562	18:15	Tape Recorder maintenance
SEP	6	2005	249	3567		Transponder Swap (1->2)
SEP	8	2005	250	3568		SK-48: jets 2,3,4; dV: 0.089 m/s
SEP	8	2005	250	3568		Momentum Management 3 segments. Final speeds: --1495/--425/1500 rpm
SEP	8	2005	250	3568		180 ° Roll, satellite back to regular position. Final speeds: 1080/425/--1910 rpm
SEP	9	2005	252	3570		Star swap
SEP	22	2005	265	3583		Transponder Swap (2->1)
SEP	30	2005	273	3591		End of September keyhole period
OCT	12	2005	285	3603		MDI 5-Day Continuous until October 16
OCT	23	2005	286	3604		Star swap
NOV	9	2005	313	3631		MDI 5-Day Continuous until November 13
NOV	11	2005	315	3633		HGA Y axis movements down from 3/day (@ 00:00, 08:00 and 16:00) to 1/day (@ 00:00) - OCD 2088
DEC	3	2005	337	3655		Beginning of December keyhole period
DEC	6	2005	340	3658		Transponder Swap (1->2)
DEC	14	2005	348	3666		Upload of SSR patch . Software version has been updated from version 2.02 to version 2.03.0 (SEF/DEF + IT2)
DEC	15	2005	349	3667		SK-49: jets 2,3,4; dV: 0.076 m/s
DEC	15	2005	349	3667		Momentum Management 3 segments. Final speeds: 1230/390/--810 rpm
DEC	15	2005	349	3667		180 ° Roll, satellite in inverted position. Final speeds: --430/--380/1605 rpm
DEC	17	2005	351	3669		Transponder Swap (2->1)
DEC	21	2005	355	3673		End of December keyhole period

Month	Day	Year 2006	Day of Year	Flight Day	Time (UT)	Event
JAN	5	2006	5	3688		MDI 3-Day Continuous until January 07
FEB	3	2006	34	3717		MDI 4-Day Continuous until February 06
FEB	3	2006	34	3717		SSR Program Memory Cleanup (OCD 2104)
FEB	22	2006	53	3736		Beginning of "March" keyhole period
FEB	28	2006	59	3742		Transponder Swap (1->2)
MAR	7	2006	66	3749		SK-50: jets 2,3,4; dV: 0.0155 m/s
MAR	7	2006	66	3749		Momentum Management 3 segments. Final speeds: --997/--403/2287 rpm
MAR	13	2006	72	3755		180 ° Roll, satellite back to regular position. Final speeds: 1925/395/--1445 rpm
MAR	16	2006	75	3758		Transponder Swap (2->1)
MAR	22	2006	81	3764		End of March keyhole period
MAR	22	2006	81	3764		MDI 60-Day Continuous period until May 21
MAR	23	2006	82	3765		MEDOC Campaign #16, until April 02
MAR	27	2006	86	3769		Investigations using oversampling facility begin (OCD 2120)
APR	29	2006	119	3802	11:42	SSR Memory Units 0 to F switched off by themselves
MAY	4	2006	124	3807		SSR Memory Units 0 to F switched back ON (OCD 2126)
MAY	27	2006	147	3830		Beginning of "June" keyhole period
MAY	31	2006	151	3834		Transponder Swap (1->2)
JUN	2	2006	153	3836		Tank and branch B PROS pressures equalization (OCD 2130)
JUN	6	2006	157	3840		SK-51: jets 2,3,4; dV: 0.1042 m/s
JUN	6	2006	157	3840		Momentum Management 3 segments. Final speeds: 705/370/--770 rpm
JUN	6	2006	157	3840		180 ° Roll, satellite in inverted position. Final speeds: --405/--370/1070 rpm
JUN	6	2006	157	3840		Back to SSU Patch 2A + Change magnitude check limit (OCD 2129)
JUN	8	2006	159	3842		HGA moved to end of keyhole position
JUN	11	2006	162	3845		Transponder Swap (2->1)
JUN	15	2006	166	3849		End of June keyhole period
JUL	12	2006	193	3876		MDI 4-Day Continuous until July 15
JUL	24	2006	205	3888		Switched MDI TM/TC to redundant side after anomaly S06-0045
AUG	21	2006	233	3916		Beginning of "September" keyhole period
AUG	28	2006	240	3923		Transponder Swap (1->2)
SEP	6	2006	249	3932		SK-52: jets 1,2,4,6; dV: -0.1688 m/s
SEP	6	2006	249	3932		Momentum Management 3 segments. Final speeds: --1505/--395/1695 rpm
SEP	11	2006	254	3937		180 ° Roll, satellite back to regular position. Final speeds: 1315/415/--1935 rpm
SEP	11	2006	254	3937		HGA moved to end of keyhole position
SEP	13	2006	256	3939		Transponder Swap (2->1)
SEP	20	2006	263	3946		End of September keyhole period
OCT	12	2006	285	3968		MDI 4-Day Continuous until October 15
NOV	10	2006	314	3997		MDI 4-Day Continuous until November 13
NOV	24	2006	328	4011		Beginning of "December" keyhole period
NOV	27	2006	331	4014		Transponder Swap (1->2)
DEC	5	2006	339	4022		SK-53: jets 1,2,4,6; dV: -0.0967 m/s
DEC	5	2006	339	4022		Momentum Management 3 segments. Final speeds: 1200/400/--805 rpm
DEC	5	2006	339	4022		180 ° Roll, satellite in inverted position. Final speeds: --410/--395/1585 rpm
DEC	7	2006	341	4024		HGA moved to end of keyhole position
DEC	8	2006	342	4025		Transponder Swap (2->1)
DEC	11	2006	345	4028		End of December keyhole period

Month	Day	Year 2007	Day of Year	Flight Day	Time (UT)	Event
JAN	6	2007	6	4054		MDI 3-Day Continuous until January 08
JAN	27	2007	27	4075		SUMER redundant LCL spuriously switched ON. As corrective action, all instruments LCL's switched OFF
FEB	1	2007	32	4080		MDI 5-Day Continuous until February 05
FEB	13	2007	44	4092		Beginning of "February/March" keyhole period
FEB	19	2007	50	4098		Transponder Swap (1->2)
FEB	27	2007	58	4106		SK-54: jets 2,3,4; dV: 0.123 m/s
FEB	27	2007	58	4106		Momentum Management 3 segments. Final speeds: --980/--405/2270 rpr
MAR	5	2007	64	4112		180 ° Roll, satellite in normal position. Final speeds: 1910/410/-1430 rpr
MAR	5	2007	64	4112		HGA moved to end of keyhole position
MAR	6	2007	65	4113		Transponder Swap (2->1)
MAR	12	2007	71	4119		End of "February/March" keyhole period
MAR	28	2007	87	4135		OCD 2229 executed: Existing macro space compacted in preparation for the TCM-in-Macros patch
MAR	29	2007	88	4136		OCD 2225 executed: ACU mapping data cleared before a star mapping
MAR	30	2007	89	4137		MDI 4-Day Continuous until April 2
APR	16	2007	106	4154		MEDOC Campaign #17, until April 22
APR	17	2007	107	4155		OCD 2232 executed: Upload of COBS Patches for Automated Operations (TCM in Macros and RW Speed Limits Updating)
APR	26	2007	116	4164		MDI 4-Day Continuous until April 29
MAY	15	2007	135	4183		Upload of new standard monitorings 30-32 and associated macros 15-17 for automation (TCM in macros)
MAY	18	2007	138	4186		Beginning of "May/June" keyhole period
MAY	21	2007	141	4189		Transponder Swap (1->2)
MAY	29	2007	149	4197		SK-55: jets 1,2,4,6; dV: -0.058 m/s
MAY	29	2007	149	4197		Momentum Management 3 segments. Final speeds: 680/390/--775 rpr
MAY	29	2007	149	4197		180 ° Roll, satellite in inverted position. Final speeds: --400/--375/1060 rpr
MAY	31	2007	151	4199		HGA moved to end of keyhole position
JUN	1	2007	152	4200		Transponder Swap (2->1)
JUN	6	2007	157	4205		End of "May/June" keyhole period
JUL	19	2007	200	4248		MDI 4-Day Continuous until July 22
AUG	11	2007	223	4271		Beginning of "Aug/Sep" keyhole period
AUG	18	2007	230	4278		Transponder Swap (1->2)
AUG	30	2007	242	4290		SK-56: jets 1,2,3,6; dV -0.195 m/s
AUG	30	2007	242	4290		Momentum Management 3 segments. Final speeds: --1454/--497/1726 rpr
AUG	31	2007	243	4291		180 ° Roll, satellite in normal position. Final speeds: 1234/505/--1954
SEP	3	2007	246	4294		Transponder Swap (2->1)
SEP	4	2007	247	4295		Power cycle APME-A
SEP	9	2007	253	4301		End of "Aug/Sep" keyhole period
OCT	26	2007	299	4347		MDI 3-day Continuous until Oct 28
NOV	15	2007	319	4367		Beginning of "November" keyhole period
NOV	18	2007	322	4370		Transponder Swap (1->2)
NOV	20	2007	324	4372		180 ° Roll, satellite in inverted position. Final speeds: -1045/-560/840 rpm. HGA moved to end of keyhole position.
NOV	27	2007	331	4379		SK-57: jets 2,3,4; dV: 0.045 m/s. Momentum management 3 segments. Final speeds: -360/-410/1595
NOV	29	2007	333	4381		Transponder Swap (2->1)
DEC	2	2007	336	4384		End of "November" keyhole period
DEC	3	2007	337	4385		MDI 60-day Continuous until Feb 3 2008
DEC	7	2007	341	4389	6:31	SWAN LCL switched off, Experiment LCL monitoring triggered at 06:34
DEC	17	2007	351	4399		FPSS Standard Monitoring channels 20, 21 changed to filter value 6 and trigger macro 14 (ESR)

Month	Day	Year 2008	Day of Year	Flight Day	Time (UT)	Event
JAN	24	2008	24	4437		Tank and branch B PROS pressures equalization (OCD 2130 repeated)
FEB	3	2008	34	4447		End of MDI 60-day continuous campaign
FEB	4	2008	35	4448		Beginning of "February" keyhole period
FEB	11	2008	42	4455		Transponder Swap (1->2)
FEB	19	2008	50	4463		SK-58: jets 2,3,4; dV: 0.096 m/s.
FEB	22	2008	53	4466		Momentum management 3 segments (jets 5,2,3). 180° Roll, satellite in normal position. Final wheels speeds: 1906/400/1397
FEB	25	2008	56	4469		Transponder Swap (2->1)
MAR	2	2008	62	4475		End of "February" keyhole period
MAR	3	2008	63	4476		MDI 60-day continuous until May 4 2008
APR	9	2008	100	4513		Add new COBS macro (OCD2311) for SSR almost full
MAY	7	2008	128	4541		Beginning of "May" keyhole period
MAY	10	2008	131	4544		Transponder Swap (1->2)
MAY	19	2008	140	4553	15:55	SK-59: jets 1,2,4,6; dV -0.08 m/s
MAY	19	2008	140	4553		Momentum management 3 segments (jets 3,5,1). 180° Roll, satellite in inverted position. Final wheels speeds: -440/-315/1070. Start using "extended HGA table" (covers the whole period between two Key Holes).
MAY	22	2008	143	4556		Transponder Swap (2->1). TC Watchdog set to 48 hours (as per UB55).
MAY	25	2008	145	4558		End of "May" keyhole period
JUN	23	2008	175	4588		SUMER campaign until July 3
JUL	2	2008	184	4597		Correction of COBS Scheduler bug
JUL	9	2008	191	4604		MDI 4-day continuous until July 13