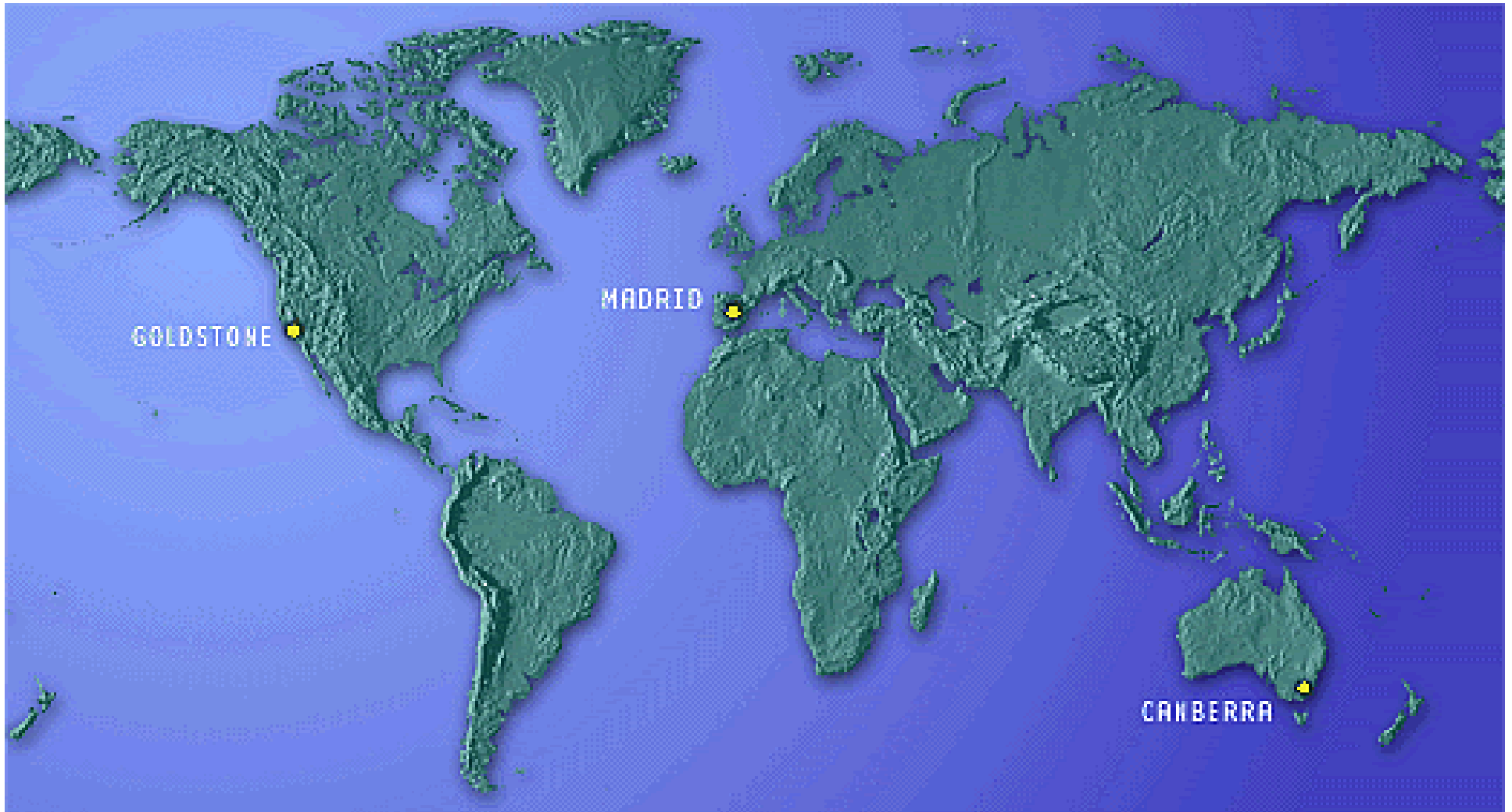


# DSN Antenna Downtime Status and Forecast



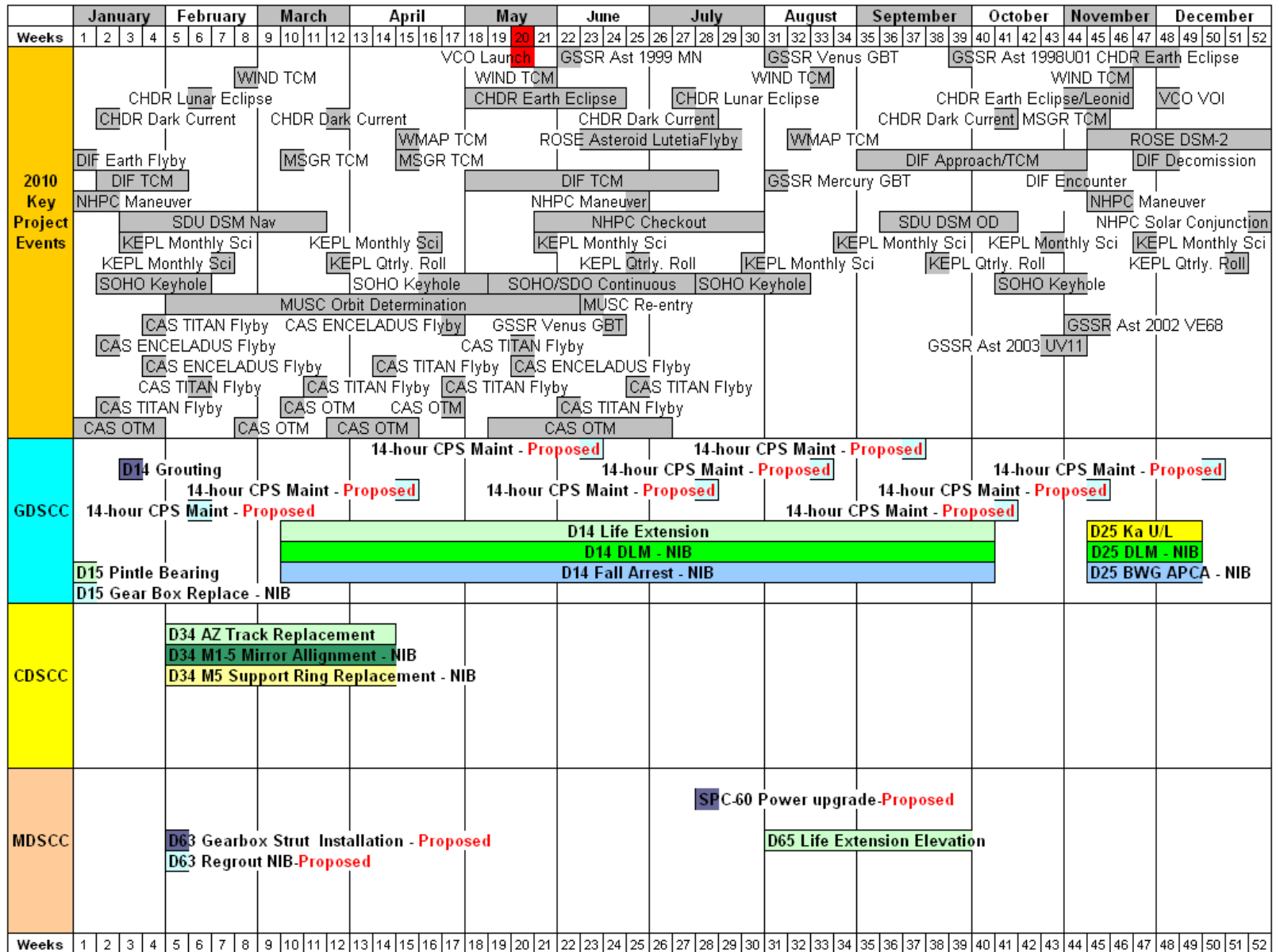
<http://rapweb.jpl.nasa.gov/planning>

# Antenna Downtime Status and Forecast 2009

	January					February				March					April					May					June					July					August					September					October					November					December				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53						
2009 Key Project Events	GSSR Mercury GBT					GSSR Ast 1998CS1				KEPL Launch										KEPL Monthly Sci					KEPL Monthly Sci										KEPL Monthly Sci																								
	CHDR Dark Current					GSSR Ast 1999AQ10				CHDR Dark Current					GSSR Merc/Venus GBT					CHDR Earth Eclipse					CHDR Dark Current					MSGR Merc Flyby 3					MSGR TCM					CHDR Leonid Pass					CHDR Earth Eclipse														
	SDU TCM/EGA Nav														LRO Launch					LRO TCM					GSSR Ast 2000CO10					LRO TCM					MSGR DSM-5																								
	DAWN Mars G/A					MUSC Orbit Determination				GOES-O Launch					NET					WIND TCM					LCROSS Impact					MSGR Solar Conj					MSGR TCM																								
	WMAP TCM					WIND TCM				WMAP TCM					WIND TCM					KEPL Monthly Sci					GSSR Ast2001					CV26					ROSE Earth Swingby					WIND TCM																			
	SOHO Keyhole									SOHO Keyhole					SOHO HSO Continuous					SOHO Keyhole					WMAP TCM					SOHO Keyhole					KEPL Monthly Sci																								
	DIF Earth Flyby/TCM					DIF TCM														NHPC Checkout															DIF TCM/Earth Flyby																								
																				NHPC L MET CCD CMD					NHPC Maneuver					NHPC L MET CCD CMD					NHPC Maneuver																								
																				GSSR Ast 1994CC					GSSR Venus GBT					GSSR Ast 1998 FW4					GSSR Ast 1999 AP10					GSSR Mercury GBT																			
						CAS TITAN Flyby				CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby														
					CAS OTM				CAS OTM					CAS OTM					CAS OTM					CAS OTM					CAS OTM					CAS OTM					CAS OTM					CAS OTM															
GDSCC	D24 Ka-Band Phase 2 Start 11-4-2008									D14 Corrective Maintenance					D14 Sub-Station Maintenance - NIB					D14 Grouting										D24 Paint					D24 Paint - Day shift only					D14 Grouting																			
	SPC-10 Apollo Tie Line Electrical Maint									D27 Corrective Maintenance															D24 DLM - NIB										D15 Pintle Bearing					D15 Gear Box Replace - NIB																			
						XKA HMT Maintenance																			SPC-10 Echo Tie Line Maintenance					SPC-10 G86/G81 Electrical Maint																													
CDSCC	D43 Life Extension					D43 DLM - NIB																			D46 Extended Downtime										D43 Jack Screw Replacement-Proposed					TCA NIB-Proposed																			
																																			DSS-45 Subreflector Servo Amps-Proposed																								
MDSCC																				SPC-60 UPS Installation																				D63 Regrout - Proposed																			
						D63 EI Bearing Replacement				D63 DLM - NIB															D54 Ka-Band Phase 2																																		

Revised: July 16, 2009

# Antenna Downtime Status and Forecast 2010



Revised: July 20, 2009

# Antenna Downtime Status and Forecast

## The following are downtimes for 2009 and 2010

- ❑ DSS-54 downtime for Ka-Band Phase 2 is scheduled for June 29 through October 2, 2009, weeks 27 – 40.
  - ❑ Requesting additional time for parts not yet delivered to complex.
- ❑ DSS-54 downtime for ACQ AID installation is scheduled for September 30-October 4 and October 7-11, 2009, weeks 40 & 41.
  - ❑ With the extension of Ka-Band Phase 2 the ACQ AID will be scheduled after the LCROSS Impact period.
- ❑ Complex preventative maintenance “Echo Tie-Line Electrical Maintenance”
  - ❑ Downtime has been ratified, work will begin in week 34 DOY 233/1500 – 0500
  - ❑ Contingent if CHDR slips from DOY 232 to DOY 233 for their FSW Recompile activity
- ❑ Complex corrective maintenance “G86/G81 Transfer Switch Electrical Maintenance”
  - ❑ Downtime is scheduled for week 35 DOY 239/1300-0300
- ❑ DSS-45 Additional time requested for Sub Reflector Servo Amps
  - ❑ Week 39 DOY 264/2200-0600
- ❑ DSS-43 Additional downtime requested for Jackscrew Replacement and Transmitter Controller Assembly (TCA) for September week 41 & 42 2009
  - ❑ Week 41 and 42 DOY 284/2100-290/0500
  - ❑ DOY 288-290 Downlink only supports can be scheduled from 0500-2100
- ❑ DSS-14 Grouting is planned for July and October of 2009 weeks 30 & 44.
  - ❑ With the shift of the Life Extension and Depot Level Maintenance to 2010, 2 additional grouting periods will be needed in 2009
  - ❑ July grouting is planned for the entire week 30, DOY 201-207.
  - ❑ TXR reliability downtime has also been scheduled for this timeframe NIB to grouting
  - ❑ October 3-day grouting proposed for DOY 300-302 week 44
  - ❑ Requested time has been sent to MRSS to be integrated into schedule generation

# Antenna Downtime Status and Forecast

## The following are downtimes for 2009 and 2010 (cont'd)

- ❑ DSS-24 downtime for painting is scheduled August 31 through September 25, 2009, weeks 36 - 43
  - ❑ There will be complete 24/7 downtime for the first 4 weeks and dayshift downtime (1400-0200) for the remaining weeks.
  - ❑ Depot Level Maintenance will be scheduled the first 4 weeks of this downtime
  - ❑ Request has been sent to MRSS for integrated schedule generation
  - ❑ Lunar LCROSS impact October 9 DOY 282 will be supported
  
- ❑ DSS-15 downtime for Pintle Bearing is scheduled for November 2, 2009 through January 10, 2010, weeks 45 - 01.
  - ❑ Downtime extended to compensate for the holidays.
  - ❑ DSS 15 Elevation Gearbox Replacement will be scheduled NIB during downtime
  
- ❑ DSS-63 is requesting a 1 week downtime for regrouting
  - ❑ Suggest week 46, November 15 2009
  - ❑ Request MEX OCC/MO10 Themis supports move from DSS-63 to DSS-14 or 43
  
- ❑ Antenna Servo Testing is being requested on a yearly basis
  - ❑ These inputs will not be included in the Gantt Charts
  - ❑ These test are requested for 8 hours dayshift
    - ❑ DSS-55, August 11, DOY 223/0730-1500, week 33
    - ❑ DSS-25, August 25, DOY 237/1500-2300 week 35
    - ❑ DSS-14 October 2, DOY 275/1500-2300 week 40
    - ❑ DSS-34 October 8, DOY 281/2100-0500 week 41
    - ❑ DSS-65 October 9, DOY 282/0600-1400 week 41
    - ❑ DSS-14 October 9, DOY 282/1500-2300 week 41
    - ❑ DSS-45 October 12, DOY 285/2100-0500 week 42
    - ❑ DSS-15 October 13, DOY 286/1500-2300 week 42
    - ❑ DSS-63 October 16, DOY 289/ 0600-1400 week 42
    - ❑ DSS- 26 October 22, DOY 295/1500-2300 week 43
    - ❑ DSS-43 October 22, DOY 295/2100-0500 week 43
    - ❑ DSS-54 October 27, DOY 300/0600-1400 week 44
    - ❑ DSS-27 November 4, DOY 308/1500-2300 week 45

# Antenna Downtime Status and Forecast

## The following are downtimes for 2009 through 2010

- ❑ DSS-34 downtime for Azimuth Track Replacement is scheduled February 1 through April 11, 2010, weeks 5 – 14.
  - ❑ This also includes M1-5 Mirror Alignment and M5 Support Ring Replacement
- ❑ DSS-63 downtime for Gearbox Strut Installation is proposed for February 1 through February 6 2010, week 5
  - ❑ Downtime to complete the two lower gearbox strut and backup roller installation and install the tension struts.
  - ❑ Conflict with Cluster II, SSO at DSS-54\63, suggest move to DSS-54\65
  - ❑ Conflict with M01O, at 43\63, suggest move to DSS-14\43
  - ❑ Conflict with STF, at 63\54, suggest move to 43\34
  - ❑ Requesting transmitter Controller assembly upgrade to run NIB to downtime
- ❑ SPC-10 downtime requested bi-monthly for 14 hour CPS Maintenance in February Week 6 DOY 039 and April week 12 DOY 102, 2010
  - ❑ Beginning June 2010 14 hour CPS Maintenance is requested monthly
  - ❑ Regrouting will be NIB to downtime
- ❑ DSS-14 downtime for Life Extension and Depot Level Maintenance will start March 8, through October 10, 2010, weeks 10-40
  - ❑ This includes Big Runner Replacement and EI Bearing to eliminate grouting
  - ❑ Included is Fall Arrest downtime
- ❑ SPC-60 downtime requested for power upgrade May-July 2010 time frame
  - ❑ Time requested is 3 days

# Antenna Downtime Status and Forecast

## The following are downtimes for 2009 through 2010

- ❑ DSS-65 downtime for Life Extension Elevation is scheduled for August 2 through October 3, 2010, weeks 31 - 39
  - ❑ All supports have been moved to other antenna during this downtime.
  - ❑ This overlaps with DSS-14 Life Extension, but should not be a problem
  
- ❑ DSS-25 downtime for Ka U/L is scheduled for November 8 through December 12, 2010 weeks 45-49
  - ❑ An additional week has been added to compensate for the holiday.
  - ❑ Depot Level Maintenance will be scheduled during this downtime.
  - ❑ APCA testing is also requested for this downtime

# Antenna Downtime Status and Forecast 2011

	January				February				March				April				May				June				July				August				September				October				November				December							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2011 Key Project Events	SDU Approach				SDU Tempel Enc				SDU Decommission				DAWN Vesta Approach				DAWN Vesta Orbit				CHDR Dark Current				CHDR Earth Eclipse				CHDR Dark Current				DAWN Vesta Arrival				CHDR Dark Current				GRAIL-A LOI				GRAIL-B LOI							
	CHDR Dark Current				CHDR Dark Current				CHDR Dark Current				CHDR Lunar Eclipse				CHDR Lunar Eclipse				CHDR Lunar Eclipse				CHDR Earth Eclipse				CHDR Leonid				KEPL Monthly Sci.				KEPL Monthly Sci.															
	KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.				KEPL Monthly Sci.															
	SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole				SOHO Keyhole																			
	MSGR MOI				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM																			
	NHPC Maneuver				ROSE DSM-2				ROSE DSHM Entry				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Maneuver				WIND TCM				WIND TCM				WIND TCM															
	WIND TCM				WIND TCM				WIND TCM				WIND TCM				WIND TCM				WIND TCM				WIND TCM				WIND TCM				WIND TCM																			
	MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM				MSGR TCM																			
	NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout				NHPC Checkout																			
	JUNO Launch & TCM				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM																			
GDSCC																																																				
CDSCC	SPC40 Switch Gear - Proposed																																																			
MDSCC																																																				

Revised: July 17, 2009

# Antenna Downtime Status and Forecast 2012

	January				February				March				April				May				June				July				August				September				October				November				December							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2012 Key Project Events	DAWN Vesta Orbit																DAWN Vesta Depart								DAWN Ceres Thrust PB and TV																											
	WIND TCM				GSSR Ast 2000 ET70				WIND TCM								WIND TCM				KEPL Qtrly. Roll				WIND TCM																											
					KEPL Monthly Sci.				KEPL Qtrly. Roll				KEPL Monthly Sci.				KEPL Qtrly. Roll				KEPL Monthly Sci.				KEPL Monthly Sci.				GSSR Ast 2007 PA8																							
					KEPL Monthly Sci.								KEPL Monthly Sci.												KEPL Monthly Sci.																											
					GSSR Ast Eros				JUNO DSMs DDOR								JUNO DSMs DDOR				JUNO DSMs/DDORs/TCMs				JUNO Per Maint																											
	JUNO Cruise																																																			
	CHDR Dark Current								CHDR Dark Current								CHDR Dark Current								CHDR Dark Current																											
					GSSR Mars				CHDR Earth Eclipse								GSSR Ast 2005 G021				CHDR Earth Eclipse								CHDR Leonid																							
	MRO Relay																																																			
	GRAIL A LOI/OPR/TSF												NHPC DDOR				NHPC DDOR												GSSR Ast 1998 ST49																							
	GRAIL B LOI/OPR/TSF												LADEE Launch								GSSR Ast 2002 AM31								GSSR Ast 4179 Tout																							
									GRAIL A/B Science																																											
									NHPC Beacon				NHPC Checkout								NHPC Beacon																															
	NHPC Solar Conjunction												MSL INST Checkout 2								MSL EDL/TCM				NHPC Solar Conjunction																											
													MSL FSW Update								MSL Approach																															
					MSL TCM								MSL FS Checkout 2								MSL TCM				MSL Surface Ops																											
																								MRO MSL Relay																												
GDSCC																	<b>D26 Antenna Controller Replacement - Proposed</b>								<b>D24 AZ Track Replacement - Proposed</b>																											
CDSCC																									<b>D34 Antenna Controller Replacement - Proposed</b>																											
MDSCC																																																				

Revised: July 16, 2009

# Antenna Downtime Status and Forecast 2013

	January					February				March				April				May				June				July				August				September				October				November				December						
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2013 Key Project Events	DAWN Ceres Coasting																																																			
	DAWN Ceres Thrst PB/TV																																																			
	CHDR Dark Current					CHDR Earth Eclipse				CHDR Dark Current				CHDR Dark Current				CHDR Earth Eclipse				CHDR Dark Current				CHDR Dark Current				CHDR Dark Current				CHDR Dark Current				CHDR Dark Current														
	JUNO Cruise										JUNO Cruise										JUNO Cruise										JUNO EFB										JUNO Cruise											
	JUNO ME Flush										JUNO TCM										JUNO TCM										JUNO TCM																					
	MRO MSL Relay																																																			
	NHPC Solar Conjunction										NHPC Checkout										NHPC DDOR										NHPC DDOR										NHPC Beacon											
	NHPC Maneuver										NHPC Beacon										NHPC Beacon										NHPC Beacon																					
GDSCC																																																				
CDSCC																																																				
	D43 Power and HBA Upgrades - Proposed																																																			
MDSCC																																																				
	D55 Antenna Controller Replacement - Proposed																																																			
	D54 Antenna Controller Replacement - Proposed										D54 AZ Track Replacement - Proposed										D55 AZ Track Replacement - Proposed																															
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52

Revised: July 16, 2009

# Antenna Downtime Status and Forecast 2014

	January					February				March				April				May				June				July				August				September				October				November				December						
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2014 Key Project Events	CHDR Dark Current					CHDR Earth Eclipse				CHDR Dark Current				JWST Launch				CHDR Dark Current				DAWN Ceres Approach				DAWN Forced Coast																										
	DAWN Ceres Coastin									DAWN Ceres ThrstPB				DAWN Ceres ThrstTV								DAWN Ceres Coastin																														
										JUNO TCM								JUNO Cruise																																		
														JWST Operations																																						
GDS										D26 AZ Track Replacement - Proposed																																										
CD																																																				
MD																																																				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52

Revised: July 6, 2009

# Antenna Downtime Status and Forecast

## The following are downtimes for 2011 through 2013

- ❑ As a result of the reduction of downtime for DSS-43 & DSS-63 in 2008 & 2009, it is requested to recover that time in 2011 and 2012, local spring, summer or fall after DSS-14 RTS.
  - ❑ DSS-63 is proposed for mid April through the end of September, 2011 weeks 16 – 39.
  - ❑ DSS-43 is proposed for February through May of 2012, weeks 5 – 22.
    - ❑ Due to high activities for GRAIL A and B science, there may be an overload on 34 meter antennas at CDSCC.
    - ❑ It is recommended that DSS-43 downtime be moved to 2013 weeks 5 – 22
    - ❑ Recommend to stay in 2012 schedule two 3-week downtimes, weeks 10-12 and 15-17 and remaining 12 weeks be scheduled in 2013
  
- ❑ BWG Antenna Controller Replacement is being requested starting in mid-April of 2011.
  - ❑ DSS-24 is proposed for May 2-29, weeks 18-21
  - ❑ DSS-27 is proposed for June 6-26, 2011 weeks 23-25
  - ❑ DSS-25 is proposed for October 10-30 2011 weeks 41-43 – This may move due to MSL Launch
  - ❑ DSS-26 is proposed for March 5-25 2012 weeks 10-12
  - ❑ DSS-34 is proposed for June 11 through July 8 2012 weeks 24-27
  - ❑ DSS-55 is proposed for January 14 to February 10, 2013 weeks 3-6
  
- ❑ AZ Track Replacement is needed for DSS-24, 54, 25, 26 and 55 starting in 2012 in the spring and fall. Propose the following sequence.
  - ❑ DSS-24 is proposed for September 3 through November 11, 2012, weeks 36-45
  - ❑ DSS-54 it is proposed that this be scheduled for April 1, through June 9, 2013, weeks 14-23
  - ❑ DSS-55 is scheduled for July 1, through September 8, 2013, weeks 36-45.
  - ❑ DSS-25 is scheduled for September 2 through November 10, 2013, weeks 27-36.
  - ❑ DSS-26 is scheduled for March 3 through May 11, 2014 weeks 10-19.

# Antenna Downtime Status and Forecast

**DSN Resource Implementation Planning Matrix** by Subnet

Complex	Station	Subnet	S-Band		X-Band		Ka-Band		Ka Phase 2
			Down	Up	Down	Up	Down	Up	
40	DSS-46	26M*	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-27	34HSB	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-24	34B1	✓	✓	✓	✓	N/A	N/A	TBD
40	DSS-34	34B1	✓	✓	✓	✓	✓	N/A	TBD
60	DSS-54	34B1	✓	✓	✓	✓	✓	N/A	09/27/09
10	DSS-25	34B2	N/A	N/A	✓	✓	✓	08/29/10	N/A
10	DSS-26	34B2	N/A	N/A	✓	✓	✓	N/A	N/A
60	DSS-55	34B2	N/A	N/A	✓	✓	✓	N/A	N/A
10	DSS-15	34HEF	✓	N/A	✓	✓	N/A	N/A	N/A
40	DSS-45	34HEF	✓	✓	✓	✓	N/A	N/A	N/A
60	DSS-65	34HEF	✓	✓	✓	✓	N/A	N/A	N/A
10	DSS-14	70M	✓	✓	✓	✓	N/A	N/A	N/A
40	DSS-43	70M	✓	✓	✓	✓	N/A	N/A	N/A
60	DSS-63	70M	✓	✓	✓	✓	N/A	N/A	N/A

N/A = Capability Not Planned      xx/xx/xx = Capability Date Recently Changed      As of: 03/02/09  
 ✓✓✓ = Capability Recently Exists      ✓ = Capability Exists      \* = To Be Decommissioned