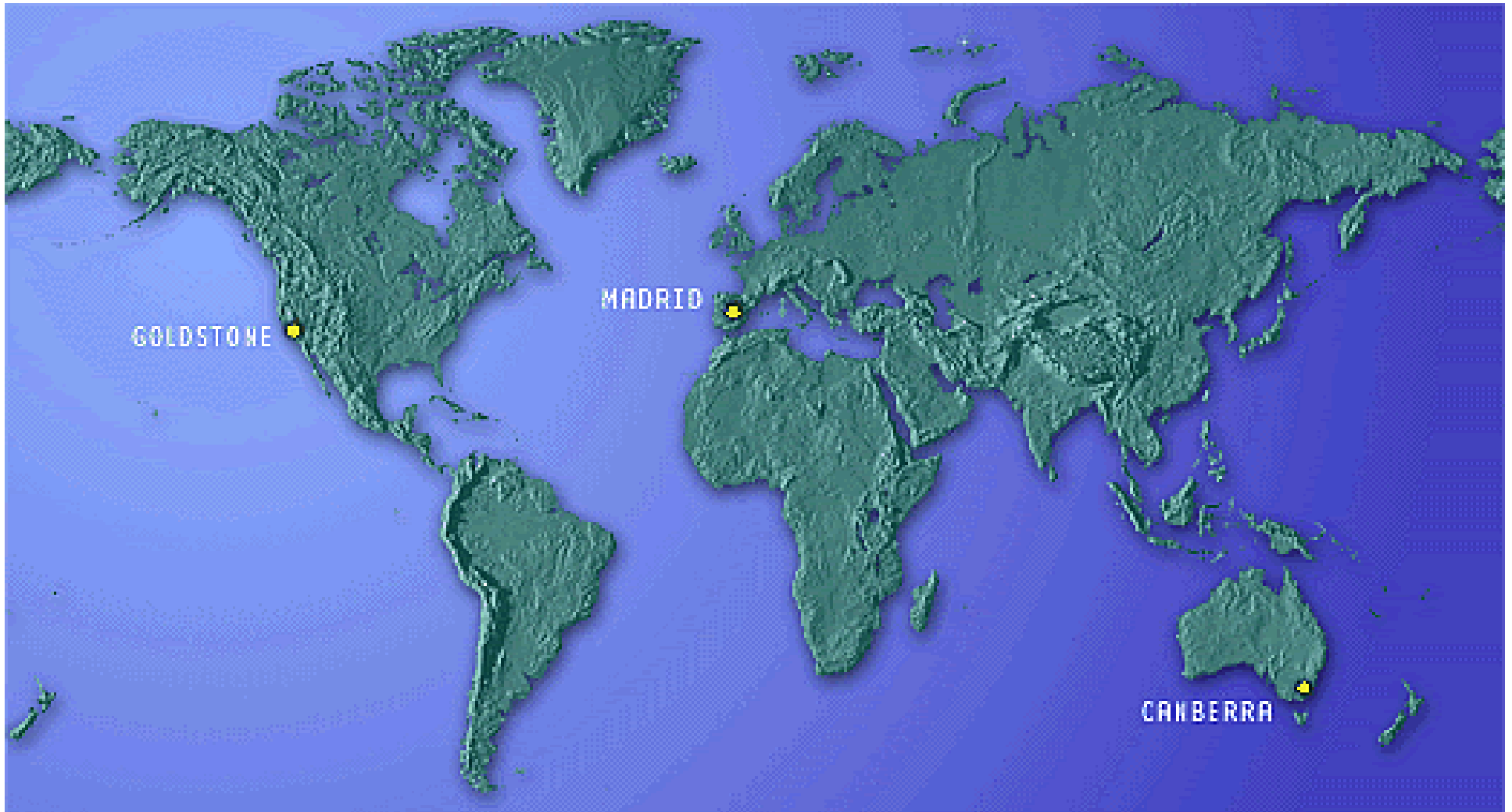


# DSN Antenna Downtime Status and Forecast



<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				GSSR Merc/Venus GBT					CHDR Earth Eclipse					CHDR Dark Current					MSGR Merc Flyby 3					MSGR TCM					CHDR Earth Eclipse																								
	SDU TCM/EGA Nav									LRO Launch					LCROSS Launch					LCROSS Impact					MSGR Solar Conj					MSGR TCM					MSGR DSM-5																								
	DAWN Mars G/A					MUSC Orbit Determination				GOES-O Launch					WIND TCM					WIND TCM					WIND TCM					CHDR Dark Current					WIND TCM																								
	WMAP TCM					SOHO Keyhole				WMAP TCM					WIND TCM					KEPL Monthly Sci					GSSR Ast2001					CV26					ROSE Earth Swingby																								
	DIF Earth Flyby/TCM					DIF TCM				SOHO Keyhole					SOHO HSO Continuous					SOHO Keyhole					WMAP TCM					SOHO Keyhole					KEPL Monthly Sci																								
															NHPC Checkout					NHPC L MET CCD CMD					NHPC L MET CCD CMD					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																								
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					X/KA HMT Maintenance				D27 Corrective Maintenance															D24 DLM - NIB					D15 Pintle Bearing					D15 Gear Box Replace - NIB																								
																									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 EI Bearing Replacement					D63 DLM - NIB															D63 Regrout - Proposed																													
																				D54 Ka-Band Phase 2															D54 ACQ AID																								

Revised: August 3, 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 September 29, 2009, weeks 27 – 40.
- ❑ DSS-54 downtime for ACQ AID installation is scheduled for September 30-October 4 week 40.
  - ❑ TERRA tracks will be scheduled outside of LCROSS view period window, October 5 through October 11.
- ❑ Complex preventative maintenance “Echo Tie-Line Electrical Maintenance”
  - ❑ Downtime has been ratified, work will begin in week 34 DOY 233/1525 – 0500
- ❑ Complex corrective maintenance “G86/G81 Transfer Switch Electrical Maintenance”
  - ❑ Downtime is scheduled for week 35 DOY 239/1300-0300
- ❑ 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-45 Additional time requested for Sub Reflector Servo Amps
  - ❑ Scheduled for 12 October, 2009 week 42.
- ❑ DSS-14 Grouting is planned for October of 2009 week 44.
  - ❑ 3-day grouting is 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)

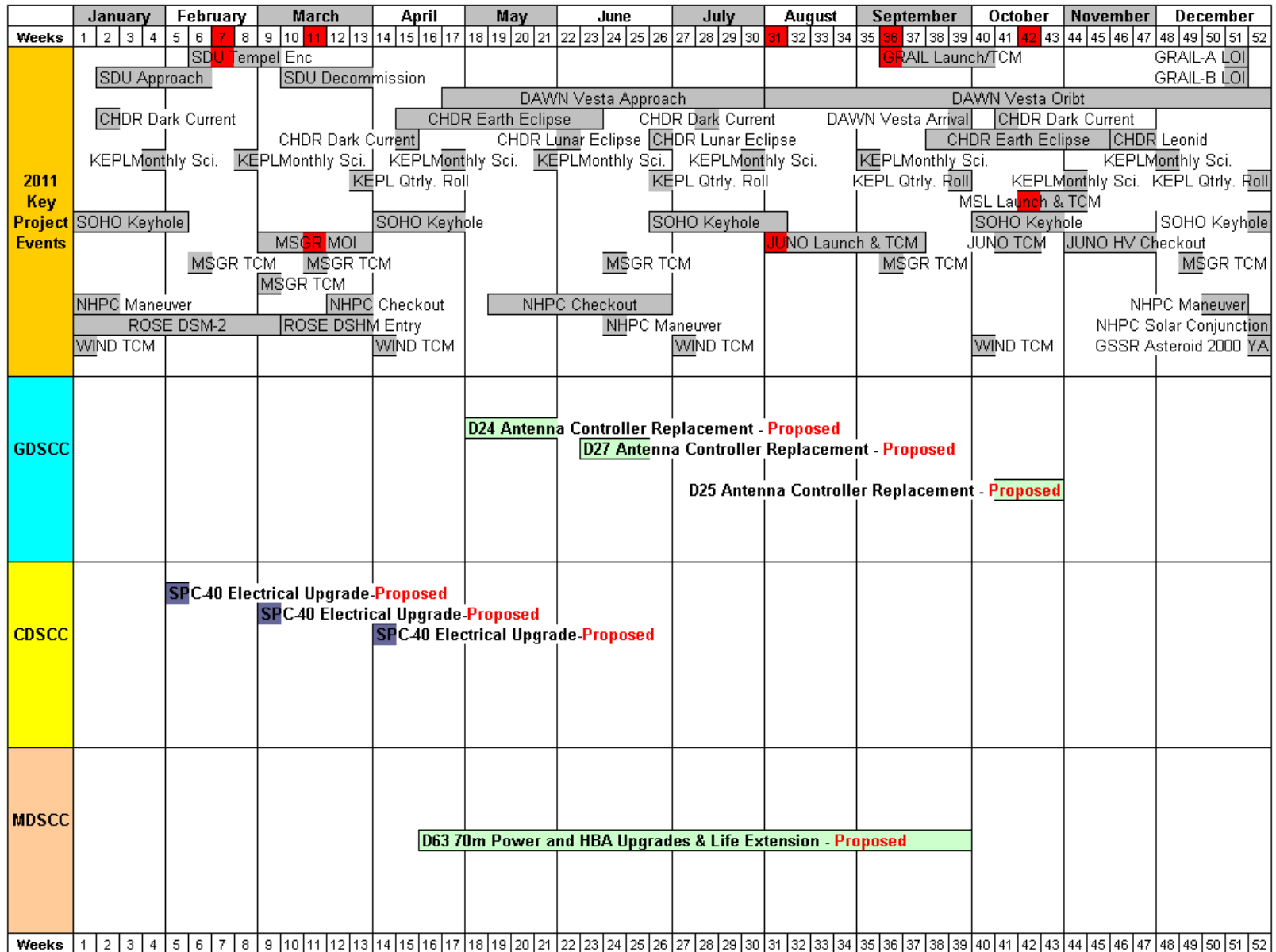
- ❑ DSS-24 downtime for painting is scheduled August 31 through September 25, 2009, weeks 36 - 43
  - ❑ There will be complete 24/7 downtime for the first 4 weeks and dayshift downtime (1400-0200) for the remaining weeks.
  - ❑ Depot Level Maintenance will be scheduled the first 4 weeks of this downtime
  - ❑ LCROSS Lunar impact October 9, DOY 282 will be supported
    - ❑ Painting has been suspended for DOYs 280-283
- ❑ 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 grouting
  - ❑ A proposal has been sent for October 19 – 25, week 43
  - ❑ Requesting MEX OCC/MO10 Themis supports move from DSS-63 to DSS-14 or 43
  - ❑ Requesting CLU1 SSO move from DSS-54/63 to DSS-54/65
  - ❑ Requesting RFC CLK SYN move from DSS-15/63 to DSS-15/65
  - ❑ Requesting to delete DSN ZDD X/X, EGC Calibration, EGS EVN J-M5
- ❑ 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 (TCA) upgrade to run NIB to downtime
  - ❑ Grouting will be NIB to downtime

# Antenna Downtime Status and Forecast

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

- ❑ SPC-10 downtime requested bi-monthly for 14 hour DSCC Power Substation (DPS) Maintenance in February Week 6, DOY 039 and April week 12, DOY 102, 2010
  - ❑ Beginning June 2010, 14 hour DPS Maintenance is requested monthly
- ❑ 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
  - ❑ Request 2 sets of 3 consecutive 12-hour blocks of dayshift time
- ❑ 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
- ❑ SPC-40 downtime requested for Electrical Upgrade for 2010 & 2011
  - ❑ Request 12-hour complex downtime per occurrence once per month
  - ❑ Requesting August, September, October and November 2010
  - ❑ Requesting February, March and April 2011
- ❑ 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



Revised: August 3, 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																															
					GSSR Ast 1991 VK				GRAIL A/B Science																																																			
	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																																																												

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# 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 Dark Current										CHDR Dark Current										CHDR Dark Current					MAVEN Launch																								
						CHDR Earth Eclipse									CHDR Dark Current										CHDR Earth Eclipse										CHDR Dark Current					CHDR Leonid																			
	JUNO Cruise																				JUNO Cruise										JUNO EFB					JUNO Cruise																							
																					JUNO ME Flush					JUNO TCM																																	
	MRO MSL Relay																																																										
	NHPC Solar Conjunction																				NHPC Checkout																																						
																NHPC DDOR					NHPC DDOR					NHPC Beacon																																	
																NHPC Maneuver																																											
GDSCC																																																											
CDSCC																																																											
					D43 Power and HBA Upgrades - Proposed																																																						
MDSCC																																																											
					D55 Antenna Controller Replacement - Proposed									D54 AZ Track Replacement/ACR - Proposed										D55 AZ Track Replacement - Proposed																																			

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# 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 Coastin				DAWN Forced Coast				DAWN Ceres Approach																						
	DAWN Ceres Coastin					DAWN Ceres ThrstPB				DAWN Ceres ThrstTV				DAWN Ceres Coastin				DAWN Ceres Coastin				DAWN Ceres Coastin				DAWN Ceres Coastin																										
						JUNO TCM				JUNO Cruise				JUNO Cruise				JUNO Cruise				JUNO Cruise				JUNO Cruise																										
										JWST Operations				JWST Operations				JWST Operations				JWST Operations				JWST Operations																										
GDS	D26 AZ Track Replacement - Proposed																																																			
CDS																																																				
MDS																																																				

Revised: August 3, 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 mid January through May of 2013, weeks 3 – 22.
  
- ❑ 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 is proposed that this be scheduled for March 25 through June 2, 2013, weeks 13-23
    - ❑ This includes Antenna Controller Replacement task
  - ❑ DSS-55 is scheduled for July 1 through September 8, 2013, weeks 27-36.
  - ❑ DSS-25 is scheduled for July 1 through November 10, 2013, weeks 36-45.
  - ❑ DSS-26 is scheduled for March 3 through May 4, 2014 weeks 10-18.

# 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