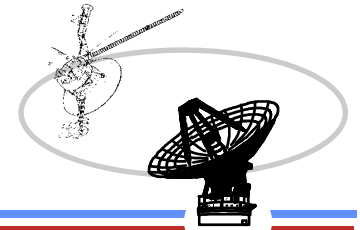


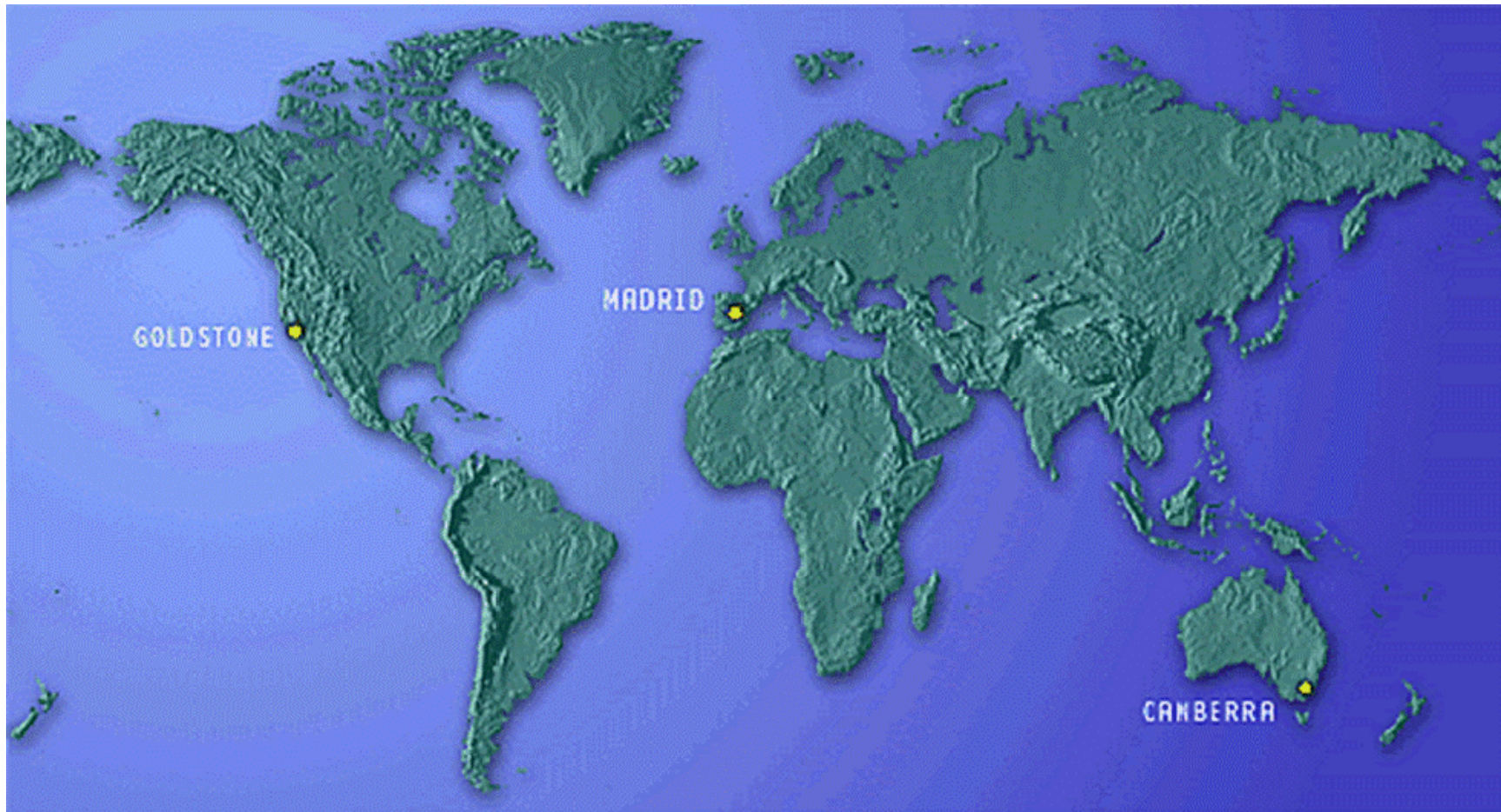


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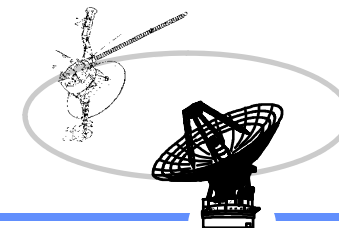
DSN Antenna Downtime Status and Forecast



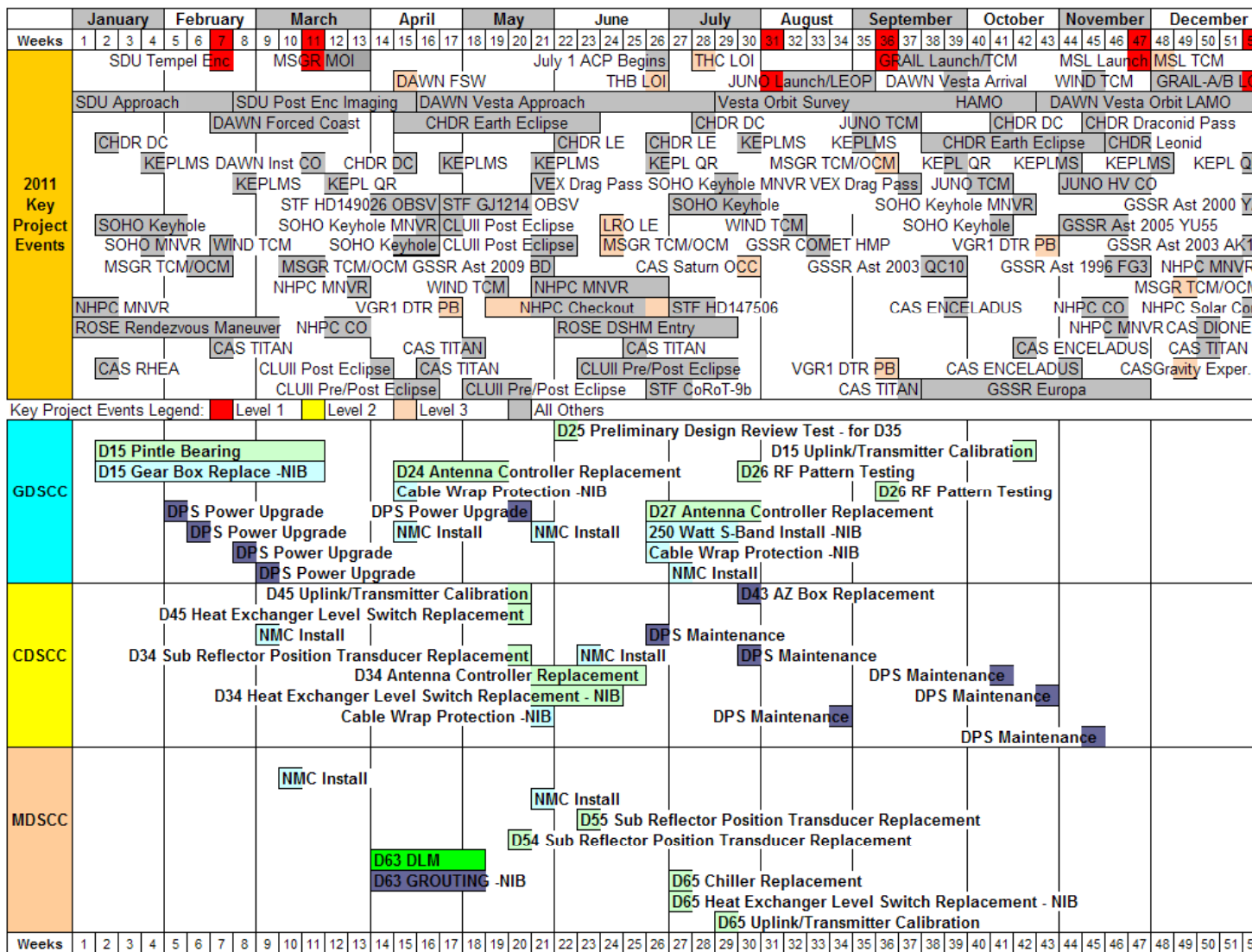


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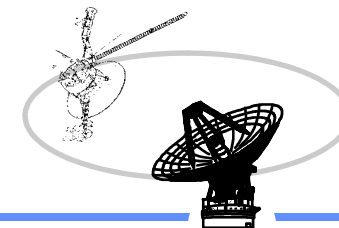
- 2011 -



Revised: May 2, 2011



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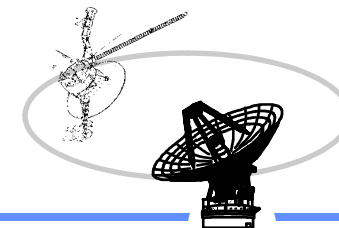
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DSN Downtime 2011

2011							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 63	Depot Level Maintenance	04/04/2011 00:00	05/08/2011 23:10	35	14 - 18	94	128
DSS 63	Grouting - NIB	04/04/2011 00:00	05/08/2011 23:10	35	14 - 18	94	128
DSS 24	Antenna Controller Replacement	04/11/2011 00:00	05/15/2011 00:00	34	15 - 19	101	135
DSS 45	Uplink/Transmitter Cal	05/16/2011 03:05	05/17/2011 15:05	2	20 - 20	136	137
DSS 54	Sub Reflector Position Transducer Replacement	05/17/2011 00:00	05/19/2011 23:59	3	20 - 20	137	139
SPC 10	DPS Maintenance	05/17/2011 09:00	05/17/2011 00:00	0	20 - 20	137	137
DSS 45	Heat Exchange Level Switch Replacement	05/17/2011 15:05	05/19/2011 15:05	2	20 - 20	137	139
DSS 34	Sub Reflector Position Transducer Replacement	05/18/2011 20:50	05/19/2011 03:05	0	20 - 20	138	139
DSS 34	Sub Reflector Position Transducer Replacement	05/19/2011 19:30	05/20/2011 04:30	0	20 - 20	139	140
DSS 34	Cable Wrap Protection - NIB	05/23/2011 00:00	05/26/2011 00:00	3	21 - 21	143	146
DSS 34	Antenna Controller Replacement	05/23/2011 00:00	06/20/2011 17:55	29	21 - 25	143	171
DSS 34	Heat Exchange Level Switch Replacement - NIB	05/23/2011 14:00	06/19/2011 02:00	26	21 - 24	143	170
SPC 60	NMC Installation	05/28/2011 16:50	05/28/2011 20:50	0	21 - 21	148	148
SPC 40	NMC Installation	05/29/2011 16:15	05/29/2011 20:15	0	21 - 21	149	149
DSS 25	Preliminary Design Review Test	05/31/2011 15:45	06/01/2011 02:05	0	22 - 22	151	152
DSS 25	Preliminary Design Review Test	06/01/2011 16:00	06/02/2011 01:15	0	22 - 22	152	153
DSS 25	Preliminary Design Review Test	06/02/2011 15:00	06/03/2011 02:00	0	22 - 22	153	154
DSS 25	Preliminary Design Review Test	06/03/2011 11:20	06/04/2011 22:15	1	22 - 22	154	155
DSS 55	Sub Reflector Position Transducer Replacement	06/07/2011 00:00	06/09/2011 23:59	3	23 - 23	158	160
SPC 40	NMC Installation	06/07/2011 02:00	06/07/2011 06:00	0	23 - 23	158	158
DSS 27	Cable Wrap Protection - NIB	06/27/2011 19:15	07/01/2011 19:15	4	26 - 26	178	182
DSS 27	250 Watt S-Band Install - NIB	06/27/2011 19:15	07/24/2011 19:15	27	26 - 29	178	205



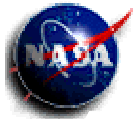
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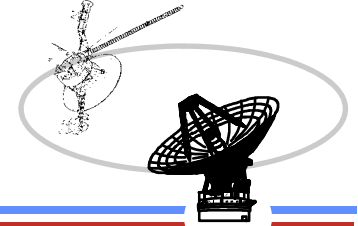
DSN Downtime 2011 (Continued)

2011							
DSS 27	Antenna Controller Replacement	06/27/2011 19:15	07/25/2011 11:30	28	26 - 30	178	206
SPC 40	DPS Maintenance	06/30/2011 01:00	06/30/2011 10:50	0	26 - 26	181	181
DSS 65	Chiller Replacement	07/05/2011 05:00	07/05/2011 15:25	0	27 - 27	186	186
DSS 65	Heat Exchanger - NIB	07/05/2011 05:00	07/05/2011 15:25	0	27 - 27	186	186
DSS 65	Chiller Replacement	07/06/2011 05:00	07/06/2011 15:10	0	27 - 27	187	187
DSS 65	Heat Exchanger - NIB	07/06/2011 05:00	07/06/2011 15:10	0	27 - 27	187	187
DSS 65	Chiller Replacement	07/07/2011 05:00	07/07/2011 17:00	0	27 - 27	188	188
DSS 65	Heat Exchanger - NIB	07/07/2011 05:00	07/07/2011 17:00	0	27 - 27	188	188
SPC 10	NMC Installation	07/10/2011 02:30	07/10/2011 05:30	0	27 - 27	191	191
DSS 65	Uplink/Transmitter Cal	07/20/2011 05:35	07/20/2011 19:35	1	29 - 29	201	201
DSS 65	Uplink/Transmitter Cal	07/21/2011 06:00	07/21/2011 14:35	0	29 - 29	202	202
SPC 40	DPS Maintenance	07/25/2011 19:00	07/26/2011 03:00	0	30 - 30	206	207
DSS 43	AZ Box Replacement	07/25/2011 22:00	07/28/2011 18:25	3	30 - 30	206	209
DSS 26	RF Pattern Testing	07/26/2011 15:15	07/27/2011 01:15	0	30 - 30	207	208
DSS 26	RF Pattern Testing	07/29/2011 13:00	07/29/2011 23:00	0	30 - 30	210	210
SPC 40	DPS Maintenance	08/25/2011 01:00	08/25/2011 13:00	0	34 - 34	237	237
DSS 26	RF Pattern Testing - Proposed	09/05/2011 00:00	09/08/2011 00:00	3	36 - 36	248	251
SPC 40	DPS Maintenance	10/13/2011 20:00	10/14/2011 08:00	0	41 - 41	286	287
DSS 15	Uplink/Transmitter Cal - Proposed	10/17/2011 05:00	10/18/2011 17:00	2	42 - 42	290	291
SPC 40	DPS Maintenance	10/24/2011 20:00	10/25/2011 08:00	0	43 - 43	297	298
SPC 40	DPS Maintenance	11/10/2011 20:00	11/11/2011 08:00	0	45 - 45	314	315



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Antenna Downtime Status and Forecast

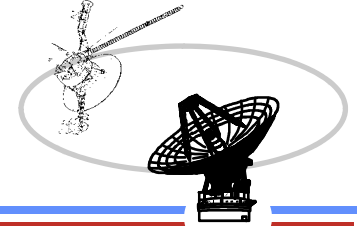
The following are downtimes for 2011

- ❑ Goldstone 12-hour Complex Wide DPS Power Upgrade Downtime
 - ❑ Scheduled for May 17 week 20, DOY 137/2100-0000
 - ❑ Additional downtimes needed will be worked in tandem with DSS maintenance
- ❑ NMC 2 – 4 hour Complex Wide Downtime
 - ❑ Additional time has been scheduled at all complexes
 - ❑ Goldstone NMC Task
 - ❑ Additional time is scheduled for July 10, week 27, DOY 191/0230-0530 for Automation Assembly
 - ❑ Canberra NMC Task
 - ❑ Deleted task for May 15, week 19, DOY 135/0730 – 1130
 - ❑ Scheduled for May 29, week 21, DOY 149/1615 – 2015
 - ❑ Scheduled for June 07 week 23, DOY 158/0200 – 0600
 - ❑ June 07 week 23 may need to schedule off shift
 - ❑ Madrid NMC Task
 - ❑ Scheduled for May 28, week 21, DOY 148/1650 – 2050



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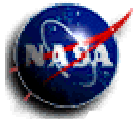
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Antenna Downtime Status and Forecast

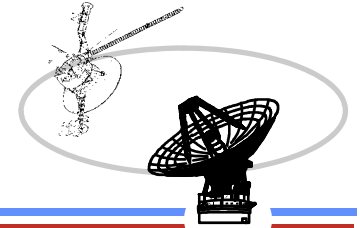
Downtimes for 2011 (continued)

- ❑ DSS-63 downtime for Depot Level Maintenance is scheduled to be completed May 8, week 18
 - ❑ Grouting is scheduled NIB
- ❑ HEF Uplink and Transmitter Calibration downtime is requested on each antenna for 36 hours in 2011
 - ❑ DSS-45 is scheduled for May 16/17 DOYs 136/137, week 20. Maintenance will be NIB for 8 hours of the downtime
 - ❑ Downtime is scheduled for Heat Exchanger Level Switch Replacement DOYs 137 – 139 in week 20
 - ❑ DSS-65 is scheduled for week 29 July 20/21, DOYs 201/202
 - ❑ DSS-15 is scheduled for week 42 October 17/18 DOYs
- ❑ Canberra request for six 8 – 12 hour blocks of Complex Wide DSCC Power Substation (DPS) Maintenance Downtime for April – November
 - ❑ Scheduled for weeks 26, 30, 34, 41, 43 and 45
 - ❑ There is a possibility that downtimes may be affected by GRAIL if the launch slips into week 40.



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Antenna Downtime Status and Forecast

Downtimes for 2011 (continued)

- ❑ BWG Antenna Controller Replacement is requested starting in April
 - ❑ DSS-24 is scheduled for April 11 – May 15, weeks 15 – 19
 - ❑ DSS-34 is scheduled for May 23 – June 19, weeks 21 – 25,
 - ❑ Additional time was requested. 17 hours and 55 minutes was added which has extended this downtime into week 25
 - ❑ Heat Exchanger Level Switch Replacement is scheduled NIB ending in week 24
 - ❑ DSS-27 is scheduled for June 27 – July 25, weeks 26 – 30
 - ❑ 250 Watt S-Band Installation is scheduled NIB
 - ❑ Downtime will begin after THB LOI support on DOY 178. Additional time has been requested to mitigate the loss of time in week 26 – **an additional 11 ½ hours of non prime shift has been added, we need at least a full day of prime shift**
- Note: Cable wrap protection for each BWG requires 3 days and will be NIB**

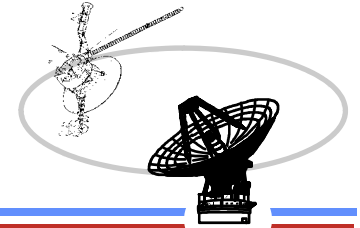
Additional Antenna Controller Replacements are proposed for 2012

- ❑ Sub Reflector Position Transducer Replacement is scheduled for May and June
 - ❑ DSS 34 is Scheduled for May 18 and 19, DOY138/2050-0305 and DOY139/1930-0430, week 20
 - ❑ DSS 54 is Scheduled for May 17 – 19, DOYs 137/0000 – 139/0000, week 20
 - ❑ DSS 55 is Scheduled for June 7 – 9, DOYs 158/0000 – 160/0000, week 23



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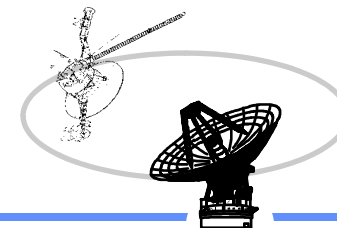


Downtimes for 2011 (continued)

- ❑ DSS-25 downtime is scheduled for DSS-35 design review baseline testing no later than June 1
 - ❑ Requesting four 10 hour blocks of contiguous testing
 - ❑ DSS-25 downtime is scheduled May 31 – June 3 in week 22
 - ❑ DOY 151/1545-0205
 - ❑ DOY 152/1600-0115 (Only 9 hours 15 minutes were available for this DOY)
 - ❑ DOY 153/1500-0200
 - ❑ DOY 154/1120-2215
 - ❑ Tracking will be available after testing is complete each day
- ❑ DSS-65 Chiller replacement is scheduled for July, week 27
 - ❑ DSS-65 is scheduled for DOYs 186, 187 and 188
 - ❑ Heat Exchanger Level Switch Replacement is scheduled NIB
- ❑ DSS-43 Azimuth Databox Replacement 72 hours is scheduled for July, week 30
 - ❑ This has been scheduled for July 25 – 29, DOY 206/2200 – 209/1825
- ❑ DSS-26 RF Pattern Testing is requested for July and September
 - ❑ One 72 hour block is scheduled in July , week 30 DOYs 207 - 210
 - ❑ One 72 block is scheduled in September week 36, DOYs 248 - 250



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- 2012 -

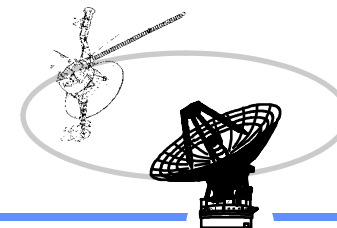
	January	February	March	April	May	June	July	August	September	October	November	December	
Weeks	1 2 3 4	5 6 7 8	9 10 11 12 13 14	15 16 17 18 19 20 21 22	23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31	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	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	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	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	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	
2012 Key Project Events	MSL INST C/O 1		MSL TCM	MSL FSW Update	MSL TCM	MSL ENG C/O 1	MSL TCM	MSL EDL					
	GRAIL A/B LOI/OPR/TSF		MSGR TCM/OCM		MSL Approach		MSL Surface Ops						
	DAWN Vesta Orbit				DAWN Vesta Depart				DAWN Ceres Thrust				DAWN Forced Coast
	GSSR Ast 1991 VK	GRAIL A/B Science				GSSR Ast 2007 PA8							
	KEPL MS	KEPL MS	KEPL QR	KEPL MS	KEPL MS	KEPL MS	KEPL MS	KEPL MS	KEPL MS	KEPL MS	KEPL MS	KEPL MS	GSSR Ast 2007 PA8
	WIND TCM	KEPL MS	WIND TCM	VGR1 DTR PB	JUNO DSMs DDOR	JUNO DSMs DDOR	JUNO DSMs DDOR	JUNO DSMs/DDORs/TCMs	JUNO Per Maint				
	GSSR Ast Eros	JUNO DSMs DDOR		VGR1 DTR PB	JUNO DSMs DDOR	JUNO DSMs DDOR	JUNO DSMs/DDORs/TCMs	JUNO Per Maint					
	CHDR DC	CHDR DC		CHDR DC	WIND TCM	CHDR DC	WIND TCM	CHDR DC					
	VEX Drag Pass	GSSR Mars	CHDR Earth Eclipse	GSSR Ast 2005 G021		CHDR Earth Eclipse	CHDR Leonid						
	MRO Relay												
SOHO Keyhole	SOHO MNVR	SOHO Keyhole	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO MNVR	SOHO Keyhole	
NHPC Solar Conj	NHPC Checkout	GSSR Ast 2000 ET70	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC MNVR	NHPC Solar Conj	
CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	CAS TITAN	
CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	CAS ENCELADUS	
Key Project Events Legend: ■ Level 1 ■ Level 2 ■ Level 3 ■ All Others													
GDSCC			D26 Antenna Controller Replacement - Proposed		D26 Antenna Controller Replacement - Proposed		D14 70M Tune-up/Calibration - Proposed		D25 Antenna Controller Replacement - Proposed				Cable Wrap Protection-NIB
CDSCC							D43 GROUTING - Proposed		D43 70M Tune-up/Calibration - NIB				
MDSCC					D63 GROUTING - Proposed		D63 70M Tune-up/Calibration - NIB		D54 AZ Track Replacement - Proposed				D54 Antenna Controller 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	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	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	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	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	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	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	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	

Revised: May 2, 2011



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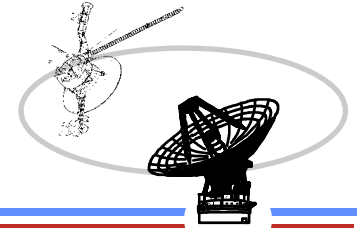
DSN Downtime 2012

2012							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 26	Cable Wrap Protection - NIB	03/12/2012 00:00	03/15/2012 00:00	3	11 - 11	72	75
DSS 26	Antenna Controller Replacement - Proposed	03/12/2012 00:00	04/08/2012 00:00	27	11 - 11	72	99
DSS 63	70m Tune-up/Calibration - NIB	05/07/2012 00:00	05/27/2012 00:00	20	19 - 21	128	148
DSS 63	Grouting - Proposed	05/07/2012 00:00	05/27/2012 00:00	20	19 - 21	128	148
DSS 14	70m Tune-up/Calibration - Proposed	05/28/2012 00:00	05/31/2012 00:00	3	22 - 22	149	152
DSS 25	Cable Wrap Protection - NIB	06/11/2012 00:00	06/14/2012 00:00	3	24 - 24	163	166
DSS 43	70m Tune-up/Calibration - NIB	06/11/2012 00:00	06/26/2012 00:00	15	24 - 26	163	178
DSS 43	Grouting - Proposed	06/11/2012 00:00	06/26/2012 00:00	15	24 - 26	163	178
DSS 25	Antenna Controller Replacement - Proposed	06/11/2012 00:00	07/15/2012 00:00	34	24 - 28	163	197
DSS 54	AZ Track Replacement - Proposed	09/10/2012 00:00	10/28/2012 00:00	48	37 - 43	254	302
DSS 54	Cable Wrap Protection - NIB	10/22/2012 00:00	10/25/2012 00:00	3	43 - 43	296	299
DSS 54	Antenna Controller Replacement - Proposed	10/22/2012 00:00	11/25/2012 00:00	34	43 - 47	296	330



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Antenna Downtime Status and Forecast

The following are downtimes for 2012 – 2014

- ❑ BWG Antenna Controller Replacement for 2012 – 2013
 - ❑ DSS-26 is proposed for March 12 – April 8, weeks 11 – 14
 - ❑ DSS-25 is proposed for June 11 – July 15, weeks 24 – 28
 - ❑ DSS-54 is proposed for October 22 – November 25, weeks 43 – 47
 - ❑ DSS-55 is proposed for January 14 – February 17, 2013, weeks 03 – 07

Note: Cable Wrap Protection for each BWG ACR requires 3 days and will be NIB

- ❑ DSS-63 downtime for Grouting is requested once per year
 - ❑ 2012 is proposed for May 7 – 27 , weeks 19 – 21
 - ❑ Tune-up/Calibration is requested NIB to grouting
 - ❑ Downtime may move due to Cassini
 - ❑ 2013 is proposed for September 2 – 17, weeks 36 – 38

Note: Stand alone Grouting requires 15 days

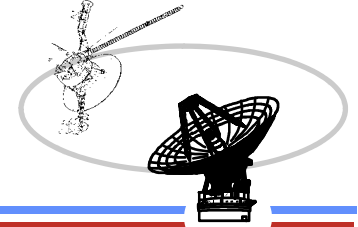
- ❑ DSS-14 downtime for Tune-up/Calibration is requested for May 28 – 31, 2012, week 22

- ❑ DSS-43 downtime for Grouting is requested for 2012
 - ❑ Tune-up/Calibration is requested NIB to grouting
 - ❑ This is proposed for June 11 – June 25, weeks 24 – 26 (DOY 163-178)
 - ❑ Cassini has Ring Occultation in week 26,DOY 180 and is concerned about the risk of the antenna not being operational on this day



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Antenna Downtime Status and Forecast

The following are downtimes for 2012 – 2014 (continued)

- ❑ AZ Track Replacement is requested for DSS-54, 24 and 26 beginning in the fall of 2012. The following sequence is proposed
 - ❑ DSS-54 is proposed for September 10 – October 28, 2012, weeks 37 – 43
 - ❑ DSS-24 is proposed for April 22 – June 30, 2013, weeks 17 – 26
 - ❑ DSS-26 is proposed for March 31 – June 8, 2014 weeks 14 – 23
 - ❑ 80 kW Facility Preparation will be scheduled NIB March 31 – May 18, weeks 14 – 20

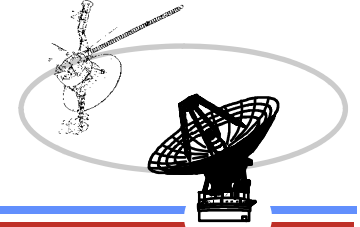
- ❑ DSS-43 HBA Upgrade Downtime is proposed for 2013
 - ❑ Proposed for January 7 – August 11, weeks 02 – 32
 - ❑ ZDD will be scheduled prior to return to service

NOTE: NHPC has issues with this downtime. NHPC Encounter Rehearsal is in week 23 and 24 with other key events in the following weeks

- DSS-63 HBA Upgrade Downtime is proposed for 2014
 - ❑ Proposed for March 10 – October 5, weeks 11– 40
 - ❑ ZDD will be scheduled prior to return to service



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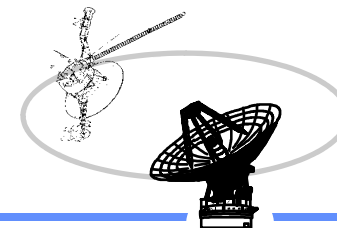
- 2013 -

	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	LADEE Launch					LIPF Launch					MAVEN Launch					MAVEN TCM																																												
	DAWN Ceres Thrst PB/TV																																																											
	WIND TCM										DAWN Forced Coast										WIND TCM										DAWN Ceres Coasting																													
	CHDR Dark Current					CHDR Earth Eclipse					WIND TCM					CHDR Dark Current					CHDR Earth Eclipse					JUNO TCM					JUNO TCM					CHDR Leonid																								
	SOHO Keyhole																																																											
											JUNO ME Flush										JUNO EFB DDOR										JUNO EFB																													
	MRO MSL Relay																																																											
	MSL Surface Ops																																																											
	NHPC Solar Conjunction										NHPC Checkout										NHPC Beacon										NHPC Checkout																													
	NHPC Checkout					NHPC MNVR					GSSR Ast 2002 AY1					GSSR Ast 2002 OD20					GSSR Ast 1998 QE2					GSSR Ast 2005 WK4					GSSR Ast 1999 CF9					GSSR Ast 2002 QA22					NHPC Solar Conjunction																			
GSSR Ast APODIS					CAS RHEA Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					GSSR Ast 1998 ML14					CAS TITAN Flyby					GSSR Ast 2001 AV43																				
GDSCC																										D24 AZ Track Replacement - Proposed																																		
CDSCC																										D43 HBA Upgrades & Life Extension - Proposed																																		
																										D35 Modkit Inventory/Installation/Checkout D35 Subsystem Acceptance Testing D35 Systems Integration Testing																																		
MDSCC																										D55 Antenna Controller Replacement - Proposed																																		
	D55 Cable Wrap Protection - NIB																														D63 GROUTING - Proposed																													

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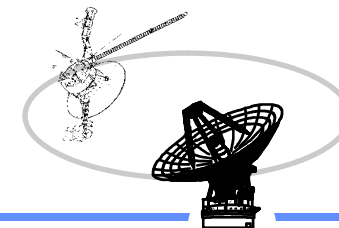
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DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	HBA Upgrades and Life Extension - Proposed	01/07/2013 00:00	08/11/2013 00:00	216	02 - 32	7	223
DSS 55	Cable Wrap Protection - NIB	01/14/2013 00:00	01/17/2013 00:00	3	03 - 03	14	17
DSS 55	Antenna Controller Replacement - Proposed	01/14/2013 00:00	02/17/2013 00:00	34	03 - 07	14	48
DSS 24	AZ Track Replacement - Proposed	04/22/2013 00:00	06/30/2013 00:00	69	17 - 26	112	181
DSS 63	Grouting - Proposed	09/02/2013 00:00	09/17/2013 00:00	15	36 - 38	245	260



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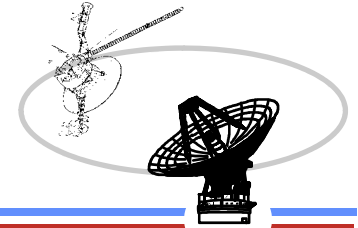
- 2014 -

	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	MAVEN TCM										ROSE Hibernation Wake-up										MAVEN Approach										MMS Launch & Commissioning																													
	CHDR Dark Current										CHDR Earth Eclipse										CHDR Dark Current										CHDR Earth Eclipse										DAWN Forced Coast										DAWN Ceres Thrst PB/TV									
	DAWN Ceres Coasting										MRO MSL Relay										MSL Surface Ops										NHPC Checkout										NHPC Solar Conjunction										NHPC MNVR									
	GSSR Ast 2000 RS11										GSSR Ast P/2004 CB										GSSR Ast 2002SR41										GSSR Ast 2002 CU11										GSSR Ast HATHOR																			
	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 TITAN Flyby										CAS TITAN Flyby										CAS TITAN Flyby									
	D26 AZ Track Replacement - Proposed										D26 80kW Facility Prep - NIB										D26 80kW arrives at DLF										D26 80 kW Onsite																													
	D35 Modkit Inventory/Installation/Checkout										D35 Subsystem Acceptance Testing										D35 Systems Integration Testing										D35 System Performance Testing										D35 Operational																			
	D63 HBA Upgrades & Life Extension - Proposed																																																											

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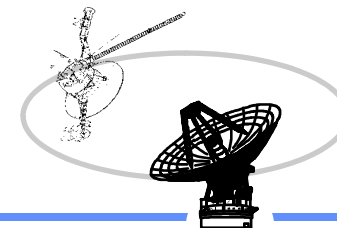
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DSN Downtime 2014

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 63	HBA Upgrades and Life Extension - Proposed	03/10/2014 00:00	10/05/2014 00:00	209	11 - 40	69	278
DSS 26	80 kW Facility Prep - NIB	03/31/2014 00:00	05/18/2014 00:00	48	14 - 20	90	138
DSS 26	AZ Track Replacement - Proposed	03/31/2014 00:00	06/08/2014 00:00	69	14 - 23	90	159



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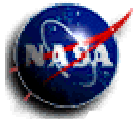


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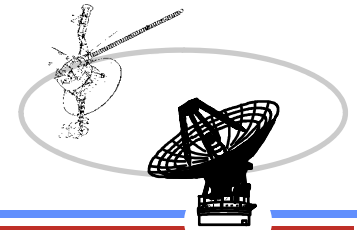
- 2015 -

	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																						
2015 Key Project Events	MMS Commissioning					NHPC Pluto Approach					NHPC MNVR					NHPC Pluto Encounter					NHPC Pluto Science PB					NHPC Checkout					NHPC Solar Conjunction																																												
	NHPC Solar Conjunction					MAVEN Deep Dip					MAVEN Deep Dip					MAVEN Conjunction					ROSE Comet					MMS Prime Mission					DAWN Ceres Orbit																																												
	DAWN Ceres Approach					JUNO Per Maint					JUNO JOI DDOR					JUNO ME Flush					JUNO JOI DDOR					JUNO Early Approach					GSSR Ast 2003 SD220																																												
	CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby																																												
	GSSR Ast 2004 BL86					GSSR Ast 1999 JD6					GSSR Ast 1994 AW1					GSSR Ast 2003 RB					GSSR Ast 1998 WT24					GSSR Ast 2003 SD220																																																	
	CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby																																																	
	CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby																																																	
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	CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby																																																	
GDSCC	D26 Install 80kW																									D26 Test 80kW																									D26 80kW DDR																								
	D25 AZ Track Replacement - Proposed																																																																										
CDSCC																																				D35 80kW Arrives to DLF															D35 80kW Onsite																								
MDSCC																																																																											
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																						

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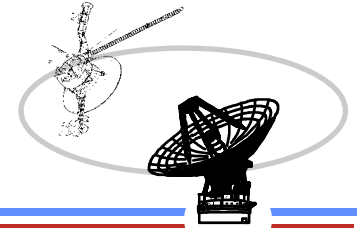
DSN Downtime 2015

2015							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 25	AZ Track Replacement - Proposed	03/31/2015 00:00	06/07/2015 00:00	68	14 - 23	90	158



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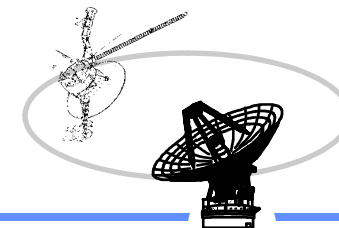
Antenna Downtime Status and Forecast

The following are downtimes for 2015 – 2016

- AZ Track Replacement is requested for DSS-25 and 55
 - DSS-25 is proposed for March 31 – June 7, 2015, weeks 14 – 23
 - DSS-55 is proposed for February 1 – April 10, 2016, weeks 05 – 14
 - 80 kW Facility Preparation is scheduled NIB for February 1 – March 20, weeks 05 – 11



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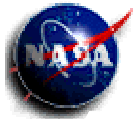


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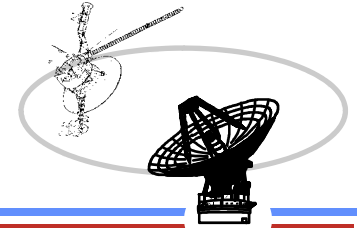
- 2016 -

	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																
2016 Key Project Events	NHPC Solar Conjunction																		ExpMars				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM				NHPC Pluto Encounter																													
	NHPC Pluto Science PB																																																																			
	NHPC Pluto Approach																																																																			
																			JUNO TCM				JUNO TCM				JUNO TCM				JUNO Capture Orbit																																					
	JUNO Approach																																																																			
																										JUNO Pre/Post JOI				JUNO Pre/Post PRM																																						
					CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby				CAS TITAN Flyby																																			
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GDSCC																																																																				
CDSCC	D35 Install 80kW																									D35 80kW Test																											D35 DDR															
MDSCC						D55 AZ Track Replacement - Proposed										D55 80 kW Facility Prep - NIB														D55 80kW to DLF								D55 80kW on site																														
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																

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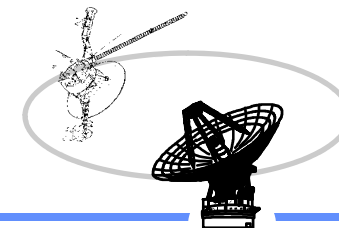
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DSN Downtime 2016

2016							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 55	80 kW Facility Prep - NIB	02/01/2016 00:00	03/20/2016 00:00	48	05 - 11	32	80
DSS 55	AZ Track Replacement - Proposed	02/01/2016 00:00	04/10/2016 00:00	69	05 - 14	32	101



Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service

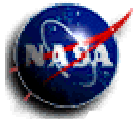


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- 2017 -

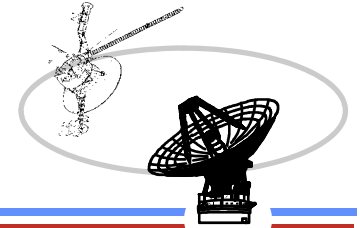
	January				February				March				April				May				June				July				August				September				October				November				December																							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52																
2017 Key Project Events																																									JUNO Deorbit																											
GDSCC																																									CAS TITAN Flyby																											
CDSCC																																																																				
MDSCC																																									D55 Install 80kW												D55 Test 80kW												D55 DDR			

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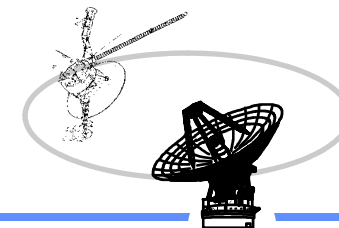


Future assets new/upgrades

- ❑ **DSS-35 Installation and Operational 2013 – 2014**
 - ❑ Modkit Installation October 1, 2013 – March 14, 2014 weeks 40 – 11
 - ❑ Acceptance Testing November 22, 2013 – April 4, 2014, weeks 47 – 14
 - ❑ System Integration Testing December 17, 2013 – June 2, 2014 weeks 51 – 23
 - ❑ Operations Systems Performance Testing June 2, 2014 – August 15, 2014, weeks 23 – 33
 - ❑ Operational September 26, 2014
- ❑ **DSS-26 80kW Installation 2014 – 2015**
 - ❑ 80kW arrive at DLF October, 2014, week 40
 - ❑ 80kW arrive on-site November, 2014, week 47
 - ❑ 80kW install January – June, 2015, weeks 02 – 25
 - ❑ 80 kW test June – September, 2015, weeks 24 – 36
 - ❑ DDR September, 2015, week 38
- ❑ **DSS-35 80kW Installation 2016 – A placeholder has been set awaiting dates**
- ❑ **DSS-36 Installation and Operational 2016 – A placeholder has been set awaiting dates**
- ❑ **DSS-55 80kW Installation 2016 – 2017**
 - ❑ 80kW Facility Prep – February 2016, weeks 05 – 10
 - ❑ 80kW at DLF September, 2016, week 39
 - ❑ 80kW on-site November, 2016, week 47
 - ❑ 80kW install January – June, 2017, weeks 01 – 24
 - ❑ 80kW test June – September, 2017, weeks 24 – 37
 - ❑ DDR September, 2017, week 39



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Antenna Downtime Status and Forecast

Complex	Station	Subnet	S-Band		X-Band		Ka-Band		Ka 2	X-Band ACQ AID	80kW
			Down	Up	Down	Up	Down	Up			
10	DSS-27	34HSB	✓	✓	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	DSS-24	34B1	✓	✓	✓	✓	N/A	N/A	✓	✓	N/A
40	DSS-34	34B1	✓	✓	✓	✓	✓	N/A	✓	✓	N/A
60	DSS-54	34B1	✓	✓	✓	✓	✓	N/A	✓	✓	N/A
10	DSS-25	34B2	N/A	N/A	✓	✓	✓	12/12/10	N/A	N/A	N/A
10	DSS-26	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	10/01/15
40	DSS-35*	34B2	N/A	N/A	11/01/14	11/01/14	11/01/14	N/A	N/A	N/A	11/01/16
40	DSS-36*	34B2	N/A	N/A	11/01/16	11/01/16	11/01/16	N/A	N/A	N/A	N/A
60	DSS-55	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	10/01/17
10	DSS-15	34HEF	✓	N/A	✓	✓	N/A	N/A	N/A	N/A	N/A
40	DSS-45	34HEF	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
60	DSS-65	34HEF	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
10	DSS-14	70M	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
40	DSS-43	70M	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A
60	DSS-63	70M	✓	✓	✓	✓	N/A	N/A	N/A	N/A	N/A

N/A = Capability Not Planned

xx/xx/xx = Capability Date Recently Changed

As of: 6/28/2010

✓ ✓ ✓ = Capability Recently Exists

✓ = Capability Exists

* = To Be Commissioned