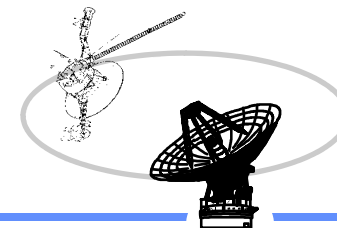


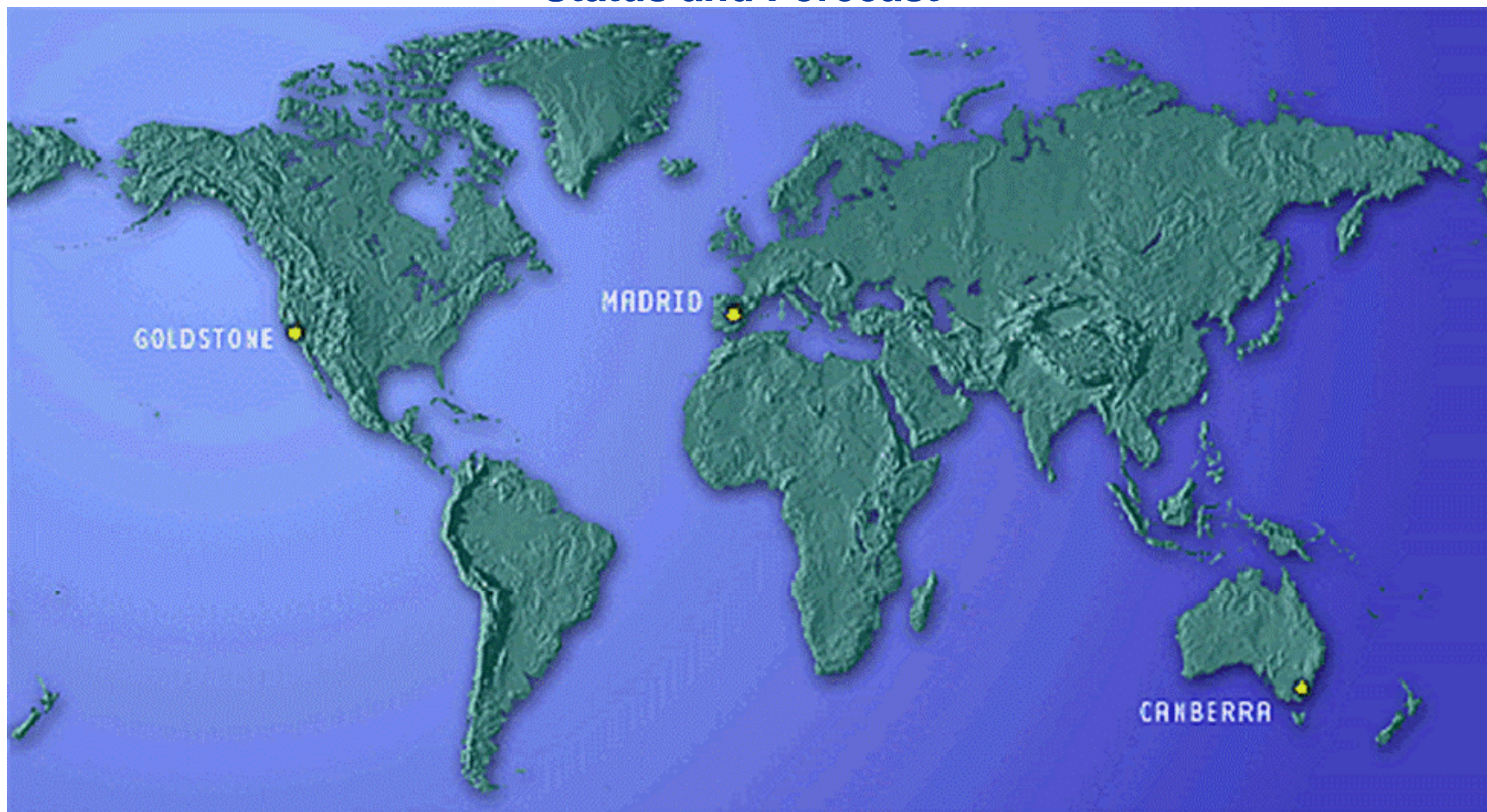


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Resource Allocation Planning Service



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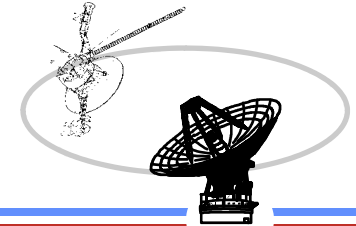
## DSN Antenna Downtime Status and Forecast



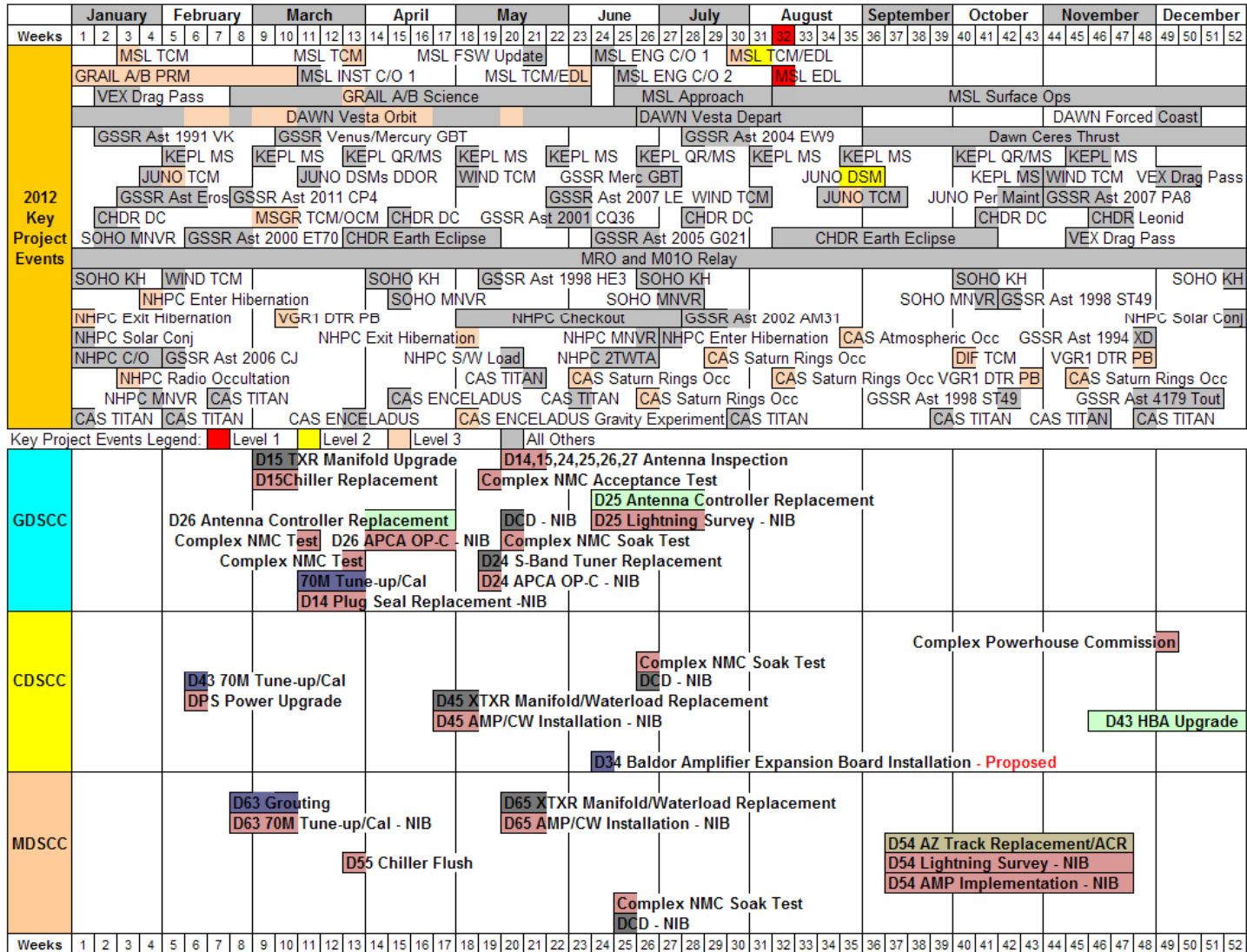


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# Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service



- 2012 -

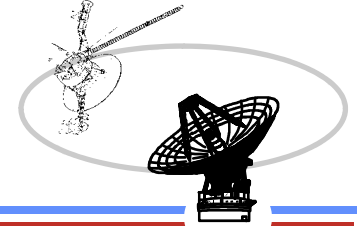


Revised: April 2, 2012



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

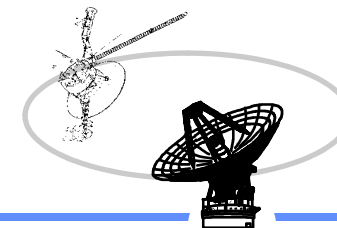


## DSN Downtime 2012

2012							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 10	NMC D2.2 Testing	03/31/2012 09:00	03/31/2012 13:00	0	13 - 13	91	91
DSS 26	Antenna Controller Replacement	04/02/2012 00:00	04/29/2012 00:00	27	14 - 17	93	120
DSS 26	APCA OP-C - NIB	04/02/2012 00:00	04/29/2012 00:00	27	14 - 17	93	120
DSS 45	AMP/CW Installation - NIB	04/27/2012 20:00	05/08/2012 06:20	9	17 - 19	118	129
DSS 45	XTXR Manifold/Waterload Replacement	04/27/2012 20:00	05/08/2012 06:20	9	17 - 19	118	129
DSS 24	S-Band Tuner Replacement	05/07/2012 13:10	05/10/2012 00:30	2	19 - 19	128	131
DSS 24	APCA OP-C - NIB	05/07/2012 14:00	05/10/2012 00:00	2	19 - 19	128	131
SPC 10	NMC D2.2 Acceptance Testing	05/08/2012 09:00	05/08/2012 15:00	0	19 - 19	129	129
DSS 34	AMP Installation	06/13/2012 22:00	09/19/2012 06:25	3	20 - 20	165	168
DSS 14	Antenna Inspection	05/14/2012 15:00	05/15/2012 06:00	1	20 - 20	135	136
DSS 26	Antenna Inspection	05/15/2012 15:00	05/16/2012 06:00	1	20 - 20	136	137
DSS 65	AMP/CW Installation - NIB	05/16/2012 08:40	05/26/2012 20:20	10	20 - 21	137	147
DSS 65	XTXR Manifold/Waterload Replacement	05/16/2012 08:40	05/26/2012 20:20	10	20 - 21	137	147
DSS 25	Antenna Inspection	05/16/2012 15:00	05/17/2012 06:00	1	20 - 20	137	138
DSS 15	Antenna Inspection	05/17/2012 15:00	05/18/2012 06:00	1	20 - 20	138	139
DSS 27	Antenna Inspection	05/18/2012 14:00	05/18/2012 22:00	0	20 - 20	139	139
GCF 20	DCD 229	05/20/2012 07:30	05/20/2012 13:15	0	20 - 20	141	141
SPC 10	DCD 229 - NIB	05/20/2012 07:30	05/20/2012 13:15	0	20 - 20	141	141
SPC 10	NMC D2.2 SOAK	05/20/2012 07:30	05/20/2012 15:15	0	20 - 20	141	141
DSS 14	Antenna Inspection	05/21/2012 15:00	05/21/2012 23:00	0	21 - 21	142	142
DSS 26	Antenna Inspection	05/22/2012 15:00	05/22/2012 23:00	0	21 - 21	143	143
DSS 24	Antenna Inspection	05/23/2012 15:00	05/24/2012 06:00	1	21 - 21	144	145
DSS 15	Antenna Inspection	05/24/2012 15:00	05/24/2012 23:00	0	21 - 21	145	145



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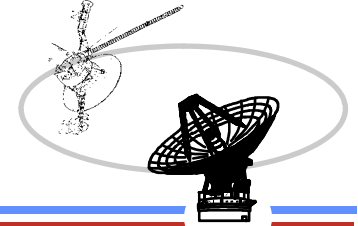
## DSN Downtime 2012

2012							
DSS 25	Antenna Controller Replacement	06/11/2012 13:00	07/15/2012 01:00	34	24 - 28	163	197
DSS 25	Lightning Survey - NIB	06/11/2012 13:00	07/15/2012 01:00	34	24 - 28	163	197
SPC 60	DCD 229 - NIB	06/20/2012 19:30	06/21/2012 01:30	0	25 - 25	172	173
SPC 60	NMC D2.2 SOAK	06/20/2012 19:30	06/21/2012 01:30	0	25 - 25	172	173
SPC 40	DCD 229 - NIB	06/29/2012 02:15	06/29/2012 08:15	0	26 - 26	181	181
SPC 40	NMC D2.2 SOAK	06/29/2012 02:15	06/29/2012 08:15	0	26 - 26	181	181
DSS 54	AMP Installation - NIB	09/10/2012 05:00	11/25/2012 18:00	77	37 - 47	254	330
DSS 54	AZ TRK/ACR Replacement	09/10/2012 05:00	11/25/2012 18:00	77	37 - 47	254	330
DSS 54	Lightning Survey - NIB	09/10/2012 05:00	11/25/2012 18:00	77	37 - 47	254	330
DSS 43	HBA Upgrade and Life Extension	11/12/2012 19:00	06/10/2013 07:00	210	46 - 24	317	161
SPC 40	Powerhouse Commission	12/04/2012 04:15	12/04/2012 07:15	0	49 - 49	339	339
SPC 40	Powerhouse Commission	12/04/2012 21:00	12/05/2012 00:00	0	49 - 49	339	340
SPC 40	Powerhouse Commission	12/05/2012 21:00	12/06/2012 00:00	0	49 - 49	340	341
SPC 40	Powerhouse Commission	12/06/2012 21:00	12/07/2012 00:00	0	49 - 49	341	342



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## Antenna Downtime Status and Forecast

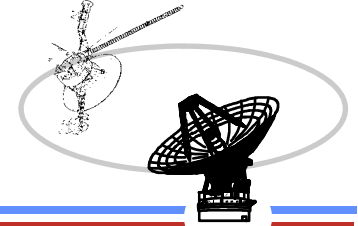
The following are downtimes for 2012

- DSS-63 downtime for Grouting
  - Was completed in week 10
    - Tune-up/Calibration was be NIB
  - An additional grouting is proposed for August 12 – 27, 2013, weeks 33 – 35  
Note: Stand alone Grouting requires 15 days
  
- DSS-15 downtime for TXR Manifold Upgrade and Chiller replacement was Scheduled for week 10
  - TXR/Manifold downtime was completed in week 10
    - ECR 10.0014 (Cable Wrap Protection) implementation –was completed.
    - ECR 11.0070 (Baldor amplifier expansion board installation) was moved to 2013, will be NIB to DSS-15 Maser Replacement in week 33-44
  
- DSS-14 downtime for Tune-up/Calibration and Plug Seal Replacement was scheduled for 2012
  - Tune-up/Calibration and Plug Seal Replacement was completed in week 13.



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## Antenna Downtime Status and Forecast

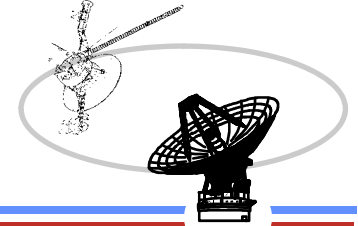
The following are downtimes for 2012 (continued)

- ❑ SPC-10, 40 and 60 requested 4 – 6 hour complex wide downtime for NMC D2.2 Test and SOAK in 2012
  - ❑ SPC-10 Testing for weeks 11, 13, have been completed. Acceptance testing is also scheduled for week 19 and SOAK for week 20
  - ❑ SPC-10 SOAK, week 20
    - ❑ Data Capture and Delivery (DCD 229) will be scheduled NIB, the NOCC will also be down during this time frame, all data at the complexes will be recorded and sent later.
  - ❑ SPC-60 SOAK is scheduled for week 25
    - ❑ Data Capture and Delivery (DCD 229) will be scheduled NIB
  - ❑ SPC-40 SOAK is scheduled for week 26
    - ❑ Data Capture and Delivery (DCD 229) will be scheduled NIB
- ❑ DSS-55 requested 3 days of downtime for Chiller Flush in 2012
  - ❑ Chiller flush and water replacement was completed in week 13
- ❑ DSS-45 and DSS-65 requested 10 days of downtime in 2012 for Waterload and XTXR Manifold Replacement .
  - ❑ DSS-45 is scheduled for April 27 – May 8, weeks 17 – 19.
    - ❑ DSS-45 had additional downtime hours added for adequate testing of the Antenna Servo Amplifier
  - ❑ DSS-65 is scheduled for May 16 – 26, weeks 20 and 21
  - ❑ ECR 11.0070 (Baldor amplifier expansion board installation) and ECR 10.0014 (Cable Wrap Protection) implementation will be NIB



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## Antenna Downtime Status and Forecast

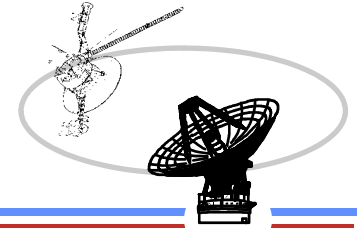
The following are downtimes for 2012 (continued)

- DSS-24 S-Band Tuner Replacement downtime requested for 2012
  - Three and ½** days scheduled for May 7 – 10, week 19
  - APCA OP-C will be NIB
  
- SPC-10 request a 24 hour downtime on each antenna for inspection in 2012
  - Antennas include DSS-14, 15, 24, 25, 26 and 27
  - Week 20 inspection times are proposed for 8 hours NIB to maintenance plus 8 hours swing shift ,except for DSS-24, (only 8 hours NIB to maintenance)
  - Week 21 inspection times are proposed for 8 hours NIB to maintenance except DSS-24, (8 hours NIB to maintenance plus 8 hours swing shift )
  
- BWG Antenna Controller Replacement for 2012
  - DSS-26 is scheduled for April 2 – 29, weeks 14 – 17
    - APCA OP-C will be NIB
  - DSS-25 is scheduled for June 11 – July 15, 2012, weeks 24 – 28
    - Lightning Survey will be NIB
  - DSS-54 ACR and AZ Track Replacement is scheduled for September 10 – November 25, 2012, weeks 37 – 47
    - Lightning Survey will be NIB
    - ECR 11.0070 (Baldor amplifier expansion board installation) will be NIB
    - ZDD is required during this time
  
- DSS-34 requests downtime for ECR 11.0070 Baldor amplifier expansion board installation in 2012
  - Scheduled for week 24



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## Antenna Downtime Status and Forecast

The following are downtimes for 2012 (continued)

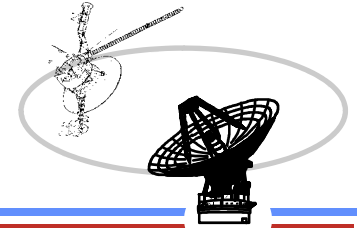
- SPC-40 requests 4 blocks of 3 hour complex downtime for Power House Commission in 2012. The following week is **scheduled**
  - Four days, 3 hours in December, week 49
  
- DSS-43 HBA Upgrade and Life Extension downtime is scheduled for 2012
  - DSS-43 HBA Upgrade downtime is scheduled as one continuous downtime for weeks 46 – 52 of 2012 and week 01 – 23 of 2013
  - S-Band Maser Replacement will be NIB
  - ZDD will be scheduled prior to return to service





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## Antenna Downtime Status and Forecast

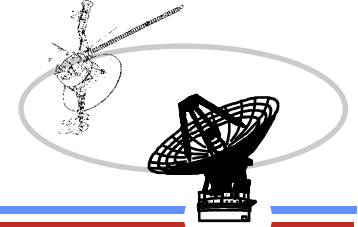
The following are downtimes for 2013 – 2014

- ❑ Madrid requests six 10 hour blocks of Complex Wide (DPS) Maintenance Downtime from January – June of 2013
  - ❑ Downtimes are proposed for the following weeks – prime shift hours are requested
    - ❑ January 23, week 04
    - ❑ February 27, week 09
    - ❑ March 27, week 13
    - ❑ April 24, week 17
    - ❑ May 29, week 22
    - ❑ June 26, week 26
  
- ❑ BWG Antenna Controller Replacement for 2013
  - ❑ DSS-55 is proposed for February 18 – March 25, weeks 08 – 13
  - ❑ ECR 11.0070 (Baldor amplifier expansion board installation) will be NIB
  
- ❑ SPC-40 request 8 blocks of 3 hour complex downtime for Power House Commission in 2013. The following weeks are proposed
  - ❑ Five days, 3 hours in April, week 16
  - ❑ Three days, 3 hours in April/May, week 18
  
- ❑ AZ Track Replacement downtime is requested for DSS-24 and DSS-26
  - ❑ DSS-24 is proposed for March 25 – June 3, 2013, weeks 13 – 22
  - ❑ DSS-26 is proposed for March 31 – June 8, 2014, weeks 14 – 23
    - ❑ Reconfiguration Prep is proposed for March 10 – June 30, weeks 11 - 26
    - ❑ 80 kW Facility Preparation will be scheduled NIB March 31 – May 18, weeks 14 – 20



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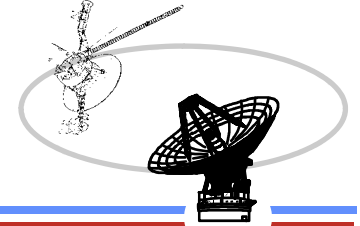


## The following are downtimes for 2013 – 2014 (continued)

- SPC-40 request a 24 hour downtime on each antenna for inspection in 2013
  - Antennas include DSS- 34, 43 and 45
  - Week 25 inspection times are proposed for 8 hours NIB to maintenance plus 8 hours swing shift
  - Week 26 inspection times are proposed for 8 hours NIB to maintenance
  
- DSS-15 Maser Replacement is requested for 2013
  - Seventy seven days are proposed for August 12, – November 4, weeks 33– 44
  - ECR 11.0070 (Baldor amplifier expansion board installation) - NIB
  
- SPC-10 requests one 6 – 8 hour complex wide downtime for NMC Automated Link Build (ALB)
  - Proposed for March 21, 2013, week 12
  
- DSS-63 HBA Upgrade and Life Extension 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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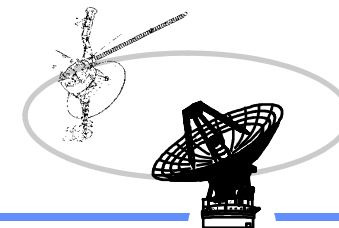
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The following are downtimes for 2014 (continued)

- SPC-60 request a 24 hour downtime on each antenna for inspection in 2014
  - Antennas include DSS-54, 55, 63 and 65
  - Week 43 inspection times are proposed for 8 hours NIB to maintenance plus 8 hours swing shift (except DSS-63 which will be completed during maintenance periods in weeks 43 and 44, (other options may potentially be explored)
  - Week 44 inspection times are proposed for 8 hours NIB to maintenance



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- 2013 -

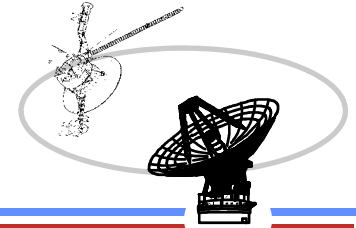
	January					February					March					April					May					June					July					August					September					October					November					December				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52								
2013 Key Project Events	GSSR Ast 2002 AY1					GSSR Ast 1993 UC					LADEE Launch					LADEE LOA/LOI					GSSR Ast 2007 CN26					MAVEN Launch					MAVEN TCM																													
	GSSR Ast APOPHIS					GSSR Ast 2005 NZ6					GSSR Ast 2001 PJ9					GSSR Ast 2007 CN26					MAVEN TCM																																							
	DAWN Ceres Thrst PB/TV					DAWN Ceres Coasting					DAWN Ceres Coasting					DAWN Ceres Coasting					DAWN Ceres Coasting					DAWN Ceres Coasting																																		
	WIND TCM					GSSR Ast Camillo					WIND TCM					GSSR Ast 1998 QE2					GSSR Ast 2005 WK4					WIND TCM					DAWN Forced Coast																													
	CHDR DC					CHDR DC					VGR2 Solstice					CHDR DC					CHDR Earth Eclipse					CHDR DC					CHDR Leonid																													
	SOHO Keyhole					NHPC Hibernation Re-Entry					JUNO ME Flush					JUNO EFB DDOR					JUNO EFB					NHPC Hibernation Re-Entry																																		
	NHPC S/W Load					MRO MSL Relay					MSL Surface Ops					MSL Surface Ops					MSL Surface Ops					MSL Surface Ops																																		
	NHPC Solar Conjunction					NHPC Hibernation Exit					NHPC S/W Load					NHPC S/W Load					NHPC S/W Load					NHPC S/W Load																																		
	NHPC Checkout					NHPC MNVR					CAS TITAN Flyby					GSSR Ast 2002 OD20					NHPC Enc Rehearsal					GSSR Ast 2002 NV16					NHPC Checkout																													
	NHPC MNVR					CAS TITAN Flyby					GSSR Ast 1998 QE2					GSSR Ast 1999 CF9					GSSR Ast 2002 QA22					GSSR Ast 2001 AV43																																		
CAS Saturn Rings Occ					CAS Saturn Rings Occ					CAS RHEA Flyby					CAS TITAN Flyby					GSSR Ast 1998 ML14					CAS TITAN Flyby																																			
CAS Saturn Atmospheric Occ					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby																																			
Key Project Events Legend:					Level 1					Level 2					Level 3					All Others																																								
GDSCC						D24 AZ Track Replacement - Proposed					Complex NMC Automated Link Build - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed																													
						Complex Wide Powerhouse Commission - Proposed					Complex Wide Powerhouse Commission - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed																																		
						D43 HBA Upgrade					D43 Maser Replacement - NIB					VGR2 Proof of Performance					D35 Modkit Inventory/Installation/Checkout					D35 Subsystem Acceptance Testing					D35 Systems Integration Testing																													
						D55 Antenna Controller Replacement - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed																																		
CDSCC						D43 Maser Replacement - NIB					VGR2 Proof of Performance					D34, 43, 45 Antenna Inspection - Proposed																																												
						D55 Antenna Controller Replacement - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed																																		
MDSCC						D55 Antenna Controller Replacement - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed					Complex Wide DPS Power Maintenance - Proposed																																		
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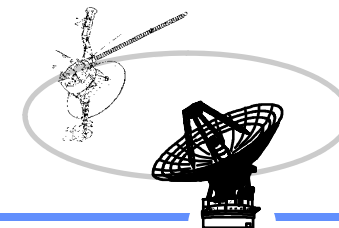
## DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 60	DPS Complex Power Maintenance - Proposed	01/23/2013 05:00	01/23/2013 17:00	0	04 - 04	23	23
DSS 55	AMP Installation - NIB	02/18/2013 00:00	03/25/2013 00:00	35	08 - 13	49	84
DSS 55	Antenna Controller Replacement - Proposed	02/18/2013 00:00	03/25/2013 00:00	35	08 - 13	49	84
DSS 43	Maser Replacement - NIB	02/25/2013 05:00	04/25/2013 17:00	60	09 - 17	56	115
SPC 60	DPS Complex Power Maintenance - Proposed	02/27/2013 05:00	02/27/2013 17:00	0	9 - 09	58	58
DSS 24	AZ Track Replacement - Proposed	03/25/2013 00:00	06/03/2013 01:55	70	13 - 23	84	154
SPC 10	NMC Automated Link Build - Proposed	03/21/2013 00:00	03/21/2013 06:00	0	12 - 12	80	80
SPC 60	DPS Complex Power Maintenance - Proposed	03/27/2013 05:00	03/27/2013 17:00	0	13 - 13	86	86
SPC 10	DPS Complex Power Maintenance - Proposed	04/01/2013 15:00	04/02/2013 01:00	0	14 - 14	91	92
SPC 40	Powerhouse Commission - Proposed	04/15/2013 21:00	04/16/2013 00:00	0	16 - 16	105	106
SPC 40	Powerhouse Commission - Proposed	04/16/2013 21:00	04/17/2013 00:00	0	16 - 16	106	107
SPC 40	Powerhouse Commission - Proposed	04/17/2013 21:00	04/18/2013 00:00	0	16 - 16	107	108
SPC 40	Powerhouse Commission - Proposed	04/18/2013 21:00	04/19/2013 00:00	0	16 - 16	108	109
SPC 40	Powerhouse Commission - Proposed	04/19/2013 21:00	04/20/2013 00:00	0	16 - 16	109	110
SPC 60	DPS Complex Power Maintenance - Proposed	04/24/2013 05:00	04/24/2013 17:00	0	17 - 17	114	114
SPC 40	Powerhouse Commission - Proposed	04/29/2013 21:00	04/30/2013 00:00	0	18 - 18	119	120
SPC 40	Powerhouse Commission - Proposed	04/30/2013 21:00	05/01/2013 00:00	0	18 - 18	120	121
SPC 40	Powerhouse Commission - Proposed	05/01/2013 21:00	05/02/2013 00:00	0	18 - 18	121	122
SPC 10	DPS Complex Power Maintenance - Proposed	05/06/2013 15:00	05/07/2013 01:00	0	19 - 19	126	127
SPC 60	DPS Complex Power Maintenance - Proposed	05/29/2013 05:00	05/29/2013 17:00	0	22 - 22	149	149
SPC 10	DPS Complex Power Maintenance - Proposed	06/10/2013 15:00	06/11/2013 01:00	0	24 - 24	161	162
DSS 43	Antenna Inspection - Proposed	06/17/2013 22:00	06/18/2013 13:00	1	25 - 25	168	169
DSS 34	Antenna Inspection - Proposed	06/18/2013 22:00	06/19/2013 13:00	1	25 - 25	169	170



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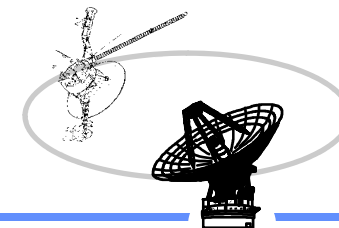


## DSN Downtime 2013

2013							
DSS 45	Antenna Inspection - Proposed	06/19/2013 22:00	06/20/2013 13:00	1	25 - 25	170	171
DSS 43	Antenna Inspection - Proposed	06/24/2013 22:00	06/25/2013 06:00	0	26 - 26	175	176
DSS 34	Antenna Inspection - Proposed	06/25/2013 22:00	06/26/2013 06:00	0	26 - 26	176	177
SPC 60	DPS Complex Power Maintenance - Proposed	06/27/2013 05:00	06/27/2013 17:00	0	26 - 26	178	178
SPC 10	DPS Complex Power Maintenance - Proposed	07/29/2013 15:00	07/30/2013 01:00	0	31 - 31	210	211
DSS 63	Grouting - Proposed	08/12/2013 00:00	08/27/2013 00:00	15	33 - 35	224	239
DSS 15	AMP Installation - NIB	08/12/2013 14:00	11/04/2013 01:00	83	33 - 45	224	308
DSS 15	Maser Replacement - Proposed	08/12/2013 14:00	11/04/2013 01:00	83	33 - 45	224	308



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



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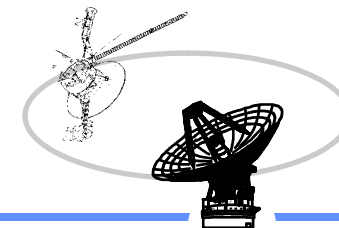
- 2014 -

	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										CHDR DC										CHDR DC										MAVEN TCM										MAVEN Approach										MAVEN TCM										MAVEN Deep Dip										MAVEN Deep Dip									
	CHDR Earth Eclipse										DAWN Forced Coast										CHDR Earth Eclipse										DAWN Forced Coast										DAWN Ceres Coasting										DAWN Ceres Coasting										DAWN Ceres Approach																			
	DAWN Ceres Thrst PB/TV										ROSE DSHM Wake-up										ROSE Comet Rendezvous MNVR										ROSE Lander										ROSE Comet										ROSE Comet																													
	MSL Surface Ops										MRO MSL Relay										MSL Surface Ops										MRO MSL Relay										MSL Surface Ops										MRO MSL Relay																													
	NHPC Checkout										NHPC Solar Conjunction										JUNO TCM										JUNO ME Flush										JUNO Conjunction										NHPC Checkout																													
	NHPC MNVR										GSSR Ast 2006 DP14										JUNO Per Maint										JUNO ME Flush										NHPC S/W Load										GSSR Ast 2002 CE26																													
	NHPC Hibernation Exit										GSSR Ast 2000										GSSR Ast 2006 SX217										NHPC Hibernation Exit										GSSR Ast 2001 RZ11										GSSR Ast 2002 CE26																													
	NHPC Hibernation Re-Entry										GSSR Ast 2007 SJ										GSSR Ast 2000 RS11										GSSR Ast P/2004 CB										GSSR Ast 2010 LE15										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																			
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	Key Project Events Legend: <span style="color:red">■</span> Level 1 <span style="color:yellow">■</span> Level 2 <span style="color:orange">■</span> Level 3 <span style="color:gray">■</span> All Others																																																																															
GDSCC											D26 AZ Track Replacement - Proposed										D26 80kW Facility Prep - NIB										D26 RF Reconfiguration Prep - Proposed																				D26 80kW arrives at DLF										D26 80 kW Onsite																			
CDSCC	D35 Modkit Inventory/Installation/Checkout										D35 Subsystem Acceptance Testing										D35 Systems Integration Testing										D35 System Performance Testing										D35 Operational										D35 Operational																													
MDSCC											D63 HBA Upgrades & Life Extension - Proposed										D63 Maser Replacement - NIB																				D55, 65, 63, 54 Antenna Inspection - 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																												

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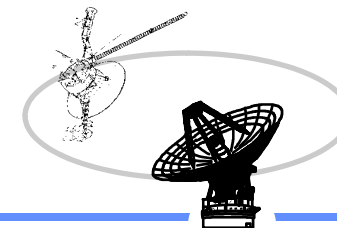
## DSN Downtime 2014

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 26	RF Reconfiguration Prep - Proposed	03/10/2014 00:00	06/29/2014 00:00	111	11 - 26	69	180
DSS 63	HBA Upgrades and Life Extension - Proposed	03/10/2014 00:00	10/05/2014 00:00	209	11 - 40	69	278
DSS 63	S-Band Maser Replacement - NIB	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
DSS 55	Antenna Inspection - Proposed	10/20/2014 07:00	10/20/2014 23:00	1	43 - 43	293	293
DSS 65	Antenna Inspection - Proposed	10/21/2014 07:00	10/21/2014 23:00	1	43 - 43	294	294
DSS 63	Antenna Inspection - Proposed	10/22/2014 07:00	10/22/2014 23:00	1	43 - 43	295	295
DSS 54	Antenna Inspection - Proposed	10/24/2014 07:00	10/24/2014 23:00	1	43 - 43	297	297
DSS 55	Antenna Inspection - Proposed	10/27/2014 07:00	10/27/2014 16:30	0	44 - 44	300	300
DSS 65	Antenna Inspection - Proposed	10/28/2014 07:00	10/28/2014 16:30	0	44 - 44	301	301
DSS 63	Antenna Inspection - Proposed	10/29/2014 07:00	10/29/2014 16:30	0	44 - 44	302	302
DSS 54	Antenna Inspection - Proposed	10/31/2014 07:00	10/31/2014 16:30	0	44 - 44	304	304



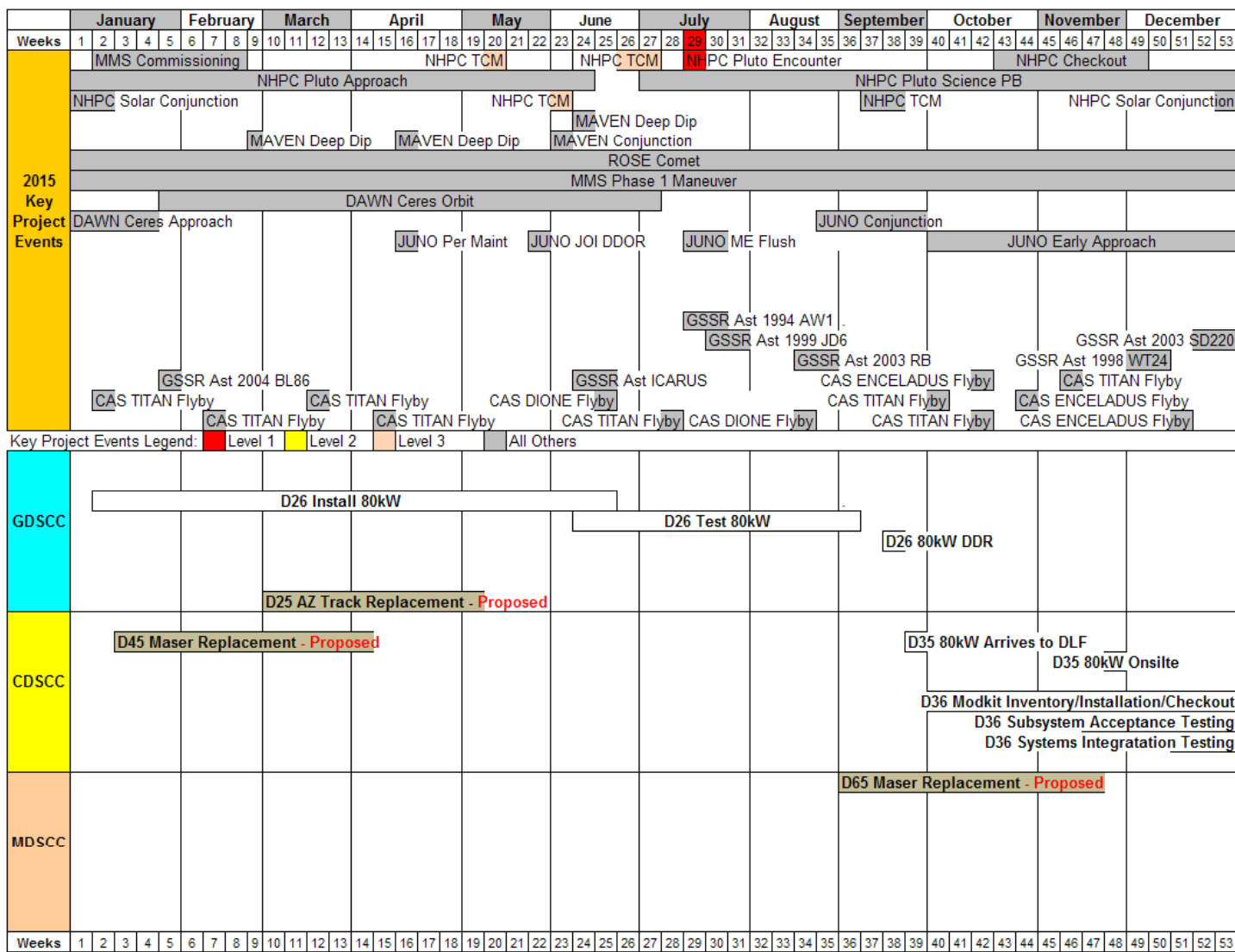


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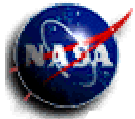


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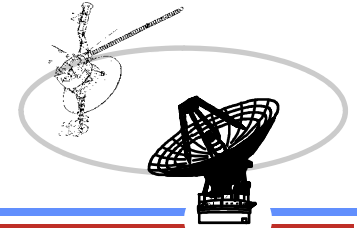
- 2015 -



Revised: March 5, 2012



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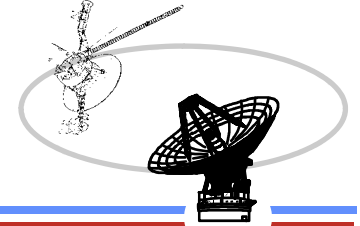
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## DSN Downtime 2015

2015							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 45	Maser Replacement - Proposed	01/12/2015 00:00	04/06/2015 00:00	84	05 - 15	12	96
DSS 25	AZ Track Replacement - Proposed	03/31/2015 00:00	06/07/2015 00:00	68	14 - 23	90	158
DSS 65	Maser Replacement - Proposed	08/31/2015 00:00	11/23/2015 00:00	84	36 - 48	243	327



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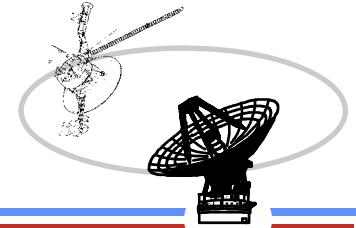
## Antenna Downtime Status and Forecast

The following are downtimes for 2015 – 2016

- Maser Replacement has been requested for 2015
  - DSS-45 is proposed for weeks 03 – 14
  - DSS-65 is proposed for weeks 36 – 47
  
- AZ Track Replacement is requested for DSS-25 and DSS-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
    - Reconfiguration Prep is proposed for February 1 – May 23, weeks 05 – 20



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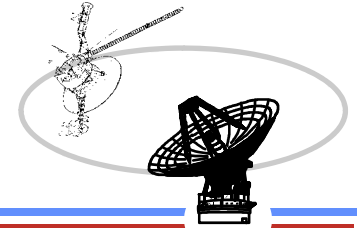
**- 2016 -**

	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	ExoMars	NHPC Solar Conjunction	NHPC Pluto Science PB	NHPC Kuiper Belt Approach	JUNO Approach	JUNO TCM	JUNO TCM	JUNO JOI	JUNO Capture Orbit	JUNO Conjunction	JUNO Orbit Ops	ORX Launch
	MMS Phase 1 Maneuver	MMS Phase 2a1	MMS Phase 2a2	MMS Phase 2b Maneuver	JUNO TCM	JUNO Approach	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	CAS TITAN Flyby	CAS TITAN Flyby	CAS TITAN Flyby	CAS TITAN Flyby	CAS TITAN Flyby	CAS TITAN Flyby
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Key Project Events Legend: <span style="background-color: red; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Level 1 <span style="background-color: yellow; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Level 2 <span style="background-color: orange; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> Level 3 <span style="background-color: gray; border: 1px solid black; display: inline-block; width: 10px; height: 10px;"></span> All Others												
GDSCC												
CDSCC	D35 Install 80kW	D35 80kW Test	D35 DDR	D36 Modkit Inventory/Installation/Checkout	D36 Subsystem Acceptance Testing	D36 Systems Integration Testing	D36 System Performance Testing	D36 Operational	D55 80kW to DLF	D55 80kW on site	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB
	D35 Install 80kW	D35 80kW Test	D35 DDR	D36 Modkit Inventory/Installation/Checkout	D36 Subsystem Acceptance Testing	D36 Systems Integration Testing	D36 System Performance Testing	D36 Operational	D55 80kW to DLF	D55 80kW on site	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB
	D35 Install 80kW	D35 80kW Test	D35 DDR	D36 Modkit Inventory/Installation/Checkout	D36 Subsystem Acceptance Testing	D36 Systems Integration Testing	D36 System Performance Testing	D36 Operational	D55 80kW to DLF	D55 80kW on site	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB
	D35 Install 80kW	D35 80kW Test	D35 DDR	D36 Modkit Inventory/Installation/Checkout	D36 Subsystem Acceptance Testing	D36 Systems Integration Testing	D36 System Performance Testing	D36 Operational	D55 80kW to DLF	D55 80kW on site	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB
MDSCC	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed
	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - Proposed	D55 AZ Track Replacement - Proposed	D55 80 kW Facility Prep NIB	D55 RF Reconfiguration Prep - 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

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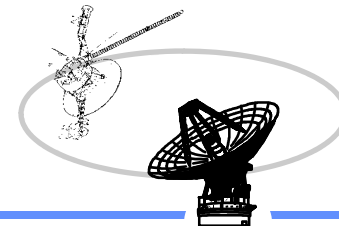
## DSN Downtime 2016

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
DSS 55	RF Reconfiguration Prep - Proposed	02/01/2016 00:00	05/23/2016 00:00	112	05 - 21	32	144



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- 2017 -

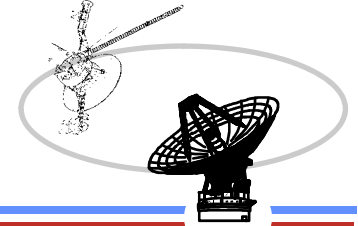
	January				February				March				April				May				June				July				August				September				October				November				December												
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52					
<b>2017 Key Project Events</b>	MMS Phase 2b Maneuver				MMS Disposal				JUNO Orbit Ops/Gravity Sci				JUNO Deorbit				CAS TITAN Flyby																																								
Key Project Events Legend: <span style="color: red;">■</span> Level 1 <span style="background-color: yellow;">■</span> Level 2 <span style="background-color: orange;">■</span> Level 3 <span style="background-color: grey;">■</span> All Others																																																									
<b>GDSCC</b>																																																									
<b>CDSCC</b>																																								D36 80kW Arrives to DLF				D36 80kW Onsite													
<b>MDSCC</b>									D55 Install 80kW								D55 Test 80kW								D55 DDR																																
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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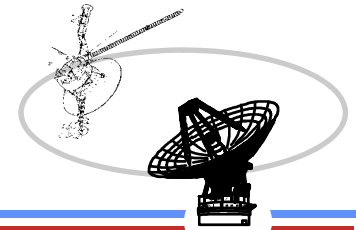
## Future assets new/upgrades

- 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 Phase 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	✓	✓	✓	✓	N/A	N/A	10/01/15
10	DSS-26	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	N/A
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: 1/5/2012

✓ ✓ ✓ = Capability Recently Exists

✓ = Capability Exists

\* = To Be Commissioned