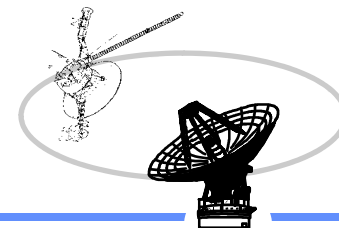


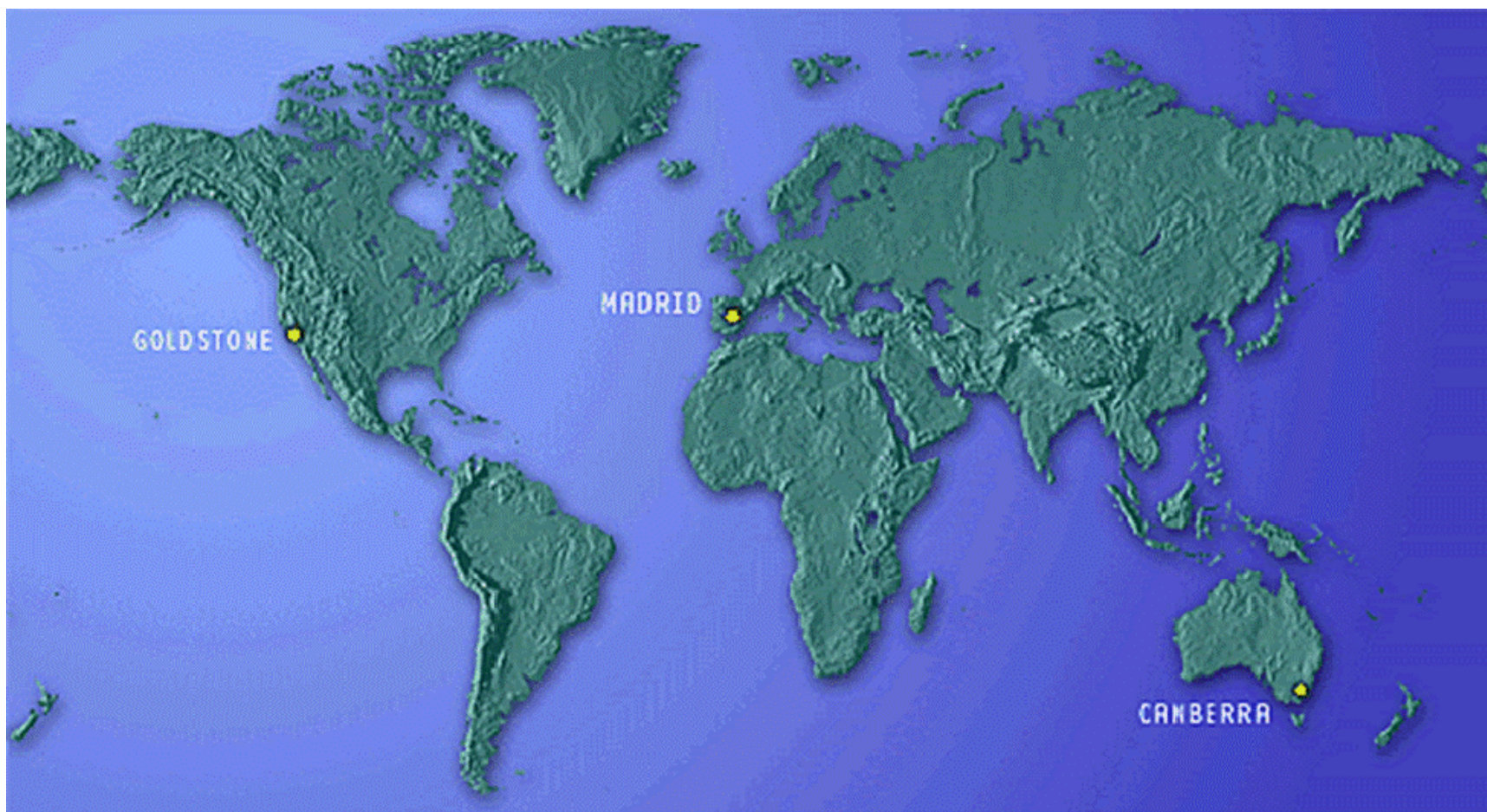


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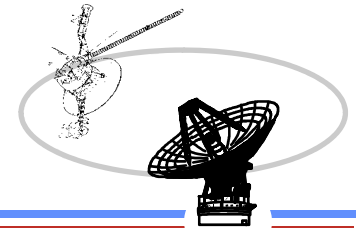
## DSN Antenna Downtime Status and Forecast





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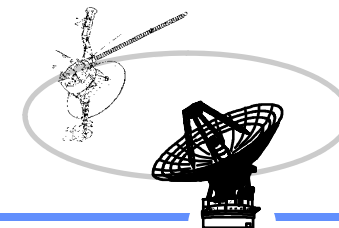
- 2011 -

	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 Tempel Enc							MSGR MOI		July 1 ACP Begins							THB LOI		JUNO Launch/LEOP		GRAIL Launch/TCM		DAWN Vesta Arrival		WIND TCM		MSL Launch & TCM		GRAIL-A/B LOI																							
	SDU Approach		SDU Post Enc Imaging			DAWN Vesta Approach			Vesta Orbit Survey				HAMO		DAWN Vesta Orbit LAMO																																					
	CHDR Dark Current		DAWN Forced Coast			CHDR Earth Eclipse			CHDR Dark Current		JUNO TCM		CHDR Dark Current		CHDR Draconid Pass																																					
	KEPL Monthly Sci.		DAWN Inst CO			KEPL Monthly Sci.			KEPL Monthly Sci.		KEPL Monthly Sci.		KEPL Qtrly. Roll		VGR1 ASCAL		KEPL Monthly Sci.																																			
	SOHO Keyhole		SOHO Keyhole MNVR			CLUII Post Eclipse			SOHO Keyhole		SOHO Keyhole MNVR		GSSR Ast 2005 YU55																																							
	SOHO MNVR		WIND TCM			SOHO Keyhole			CLUII Post Eclipse		GSSR COMET HMP		SOHO Keyhole																																							
	MSGR TCM/OCM		MSGR TCM/OCM			GSSR Ast 2009 BD			MSGR TCM/OCM		WIND TCM		MSGR TCM/OCM		GSSR Ast 1996 FG3																																					
	NHPC MNVR		NHPC MNVR			WIND TCM			NHPC MNVR		VGR1 MAGROL		GSSR Ast 2003 QC10		NHPC Checkout																																					
	ROSE Rendezvous Maneuver		CLUII Post Eclipse			ROSE DSHM Entry			VGR1 MAGROL		VGR1 MAGROL		CAS DIONE Flyby		NHPC Solar Conj																																					
	CAS RHEA Flyby		CAS TITAN Flyby			CAS TITAN Flyby			CLUII Pre/Post Eclipse		VGR2 ASCAL		CAS ENCELADUS Flyby		GSSR Ast 2000 YA																																					
GDSCC	D15 Pintle Bearing		D15 Gear Box Replace -NIB			D24 Antenna Controller Replacement			D25 Preliminary Design Review Test - for D35		D15 Uplink/Transmitter Calibration - Proposed		D25 Antenna Controller Replacement - Proposed																																							
	DPS Power Upgrade		DPS Power Upgrade			NMC Install			D27 Antenna Controller Replacement		250 Watt S-Band Install -NIB		Cable Wrap Protection -NIB																																							
	DPS Power Upgrade		DPS Power Upgrade			NMC Install			DPS Maintenance		DPS Maintenance		DPS Maintenance																																							
	DPS Power Upgrade		DPS Power Upgrade			NMC Install			DPS Maintenance		DPS Maintenance		DPS Maintenance																																							
CDSCC	D45 Uplink/Transmitter Calibration		D45 Heat Exchanger Level Switch Replacement			NMC Install			D43 AZ Box Replacement		DPS Maintenance		DPS Maintenance																																							
	D34 Sub Reflector Position Transducer Replacement		NMC Install			NMC Install			DPS Maintenance		DPS Maintenance		DPS Maintenance																																							
	D34 Heat Exchanger Level Switch Replacement - NIB		Cable Wrap Protection -NIB			DPS Maintenance			DPS Maintenance		DPS Maintenance																																									
MDSCC	NMC Install		NMC Install			NMC Install			D55 Sub Reflector Position Transducer Replacement		DPS Maintenance		DPS Maintenance																																							
	D63 DLM		D63 GROUING -NIB			D54 Sub Reflector Position Transducer Replacement			D65 Uplink/Transmitter Calibration		D65 Chiller Replacement		D65 Chiller Replacement																																							
	D65 Uplink/Transmitter Calibration		D65 Chiller Replacement			D65 Chiller Replacement			D65 Chiller Replacement		D65 Chiller Replacement																																									

Revised: April 1, 2011



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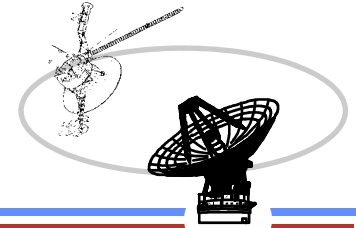


## DSN Downtime 2011

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	Cable Wrap Protection - NIB	04/11/2011 00:00	04/14/2011 00:00	3	15 - 15	101	104
DSS 24	Antenna Controller Replacement	04/11/2011 00:00	05/15/2011 00:00	34	15 - 19	101	135
SPC 10	NMC Installation	04/15/2011 03:00	04/15/2011 07:00	0	15 - 15	105	105
SPC 40	NMC Installation	05/15/2011 08:55	05/15/2011 11:30	0	19 - 19	135	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 00:00	3	20 - 20	137	139
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
DSS 25	Preliminary Design Review Test	05/31/2011 15:45	06/01/2011 01:45	0	22 - 22	151	152
DSS 25	Preliminary Design Review Test	06/01/2011 16:00	06/02/2011 01:00	0	22 - 22	152	153
DSS 25	Preliminary Design Review Test	06/02/2011 15:00	06/03/2011 01:00	0	22 - 22	153	154
DSS 25	Preliminary Design Review Test	06/03/2011 12:15	06/04/2011 22:15	1	22 - 22	154	155



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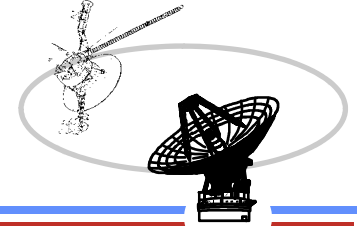
## DSN Downtime 2011 (Continued)

2011							
DSS 55	Sub Reflector Position Transducer Replacement	06/07/2011 00:00	06/09/2011 00:00	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
DSS 27	Antenna Controller Replacement	06/27/2011 19:15	07/24/2011 19:15	27	26 - 29	178	205
SPC 40	DPS Maintenance	06/30/2011 01:00	06/30/2011 10:50	0	26 - 26	181	181
DSS 65	Uplink/Transmitter Cal	07/04/2011 03:25	07/05/2011 15:25	2	27 - 27	185	186
DSS 65	Chiller Replacement	07/06/2011 03:15	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	Chiller Replacement	07/18/2011 05:00	07/18/2011 17:00	0	29 - 29	199	199
DSS 65	Chiller Replacement	07/19/2011 05:00	07/19/2011 17:00	0	29 - 29	200	200
SPC 40	DPS Maintenance	07/25/2011 20:00	07/26/2011 04:00	0	30 - 30	206	207
DSS 43	AZ Box Replacement	07/25/2011 22:00	07/28/2011 12:00	3	30 - 30	206	209
SPC 40	DPS Maintenance	08/25/2011 01:00	08/25/2011 13:00	0	34 - 34	237	237
DSS 25	Cable Wrap Protection - NIB - Proposed	10/03/2011 00:00	10/06/2011 00:00	3	40 - 40	276	279
DSS 25	Antenna Controller Replacement - Proposed	10/03/2011 00:00	11/06/2011 00:00	34	40 - 44	276	310
SPC 40	DPS Maintenance	10/13/2011 20:00	10/14/2011 08:00	0	41 - 41	286	287
SPC 40	DPS Maintenance	10/24/2011 20:00	10/25/2011 08:00	0	43 - 43	297	298
DSS 15	Uplink/Transmitter Cal - Proposed	11/07/2011 15:00	11/09/2011 07:00	2	45 - 45	311	313
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

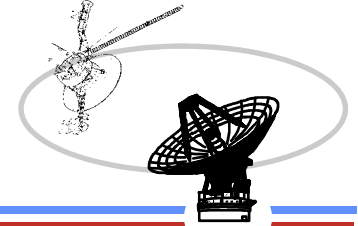
The following are downtimes for 2011

- ❑ DSS-15 downtime for Pintle Bearing was completed March 20 in week 11
  - ❑ Elevation Gearbox Replacement was completed
  - ❑ ZDD was performed prior to return to service
  
- ❑ Goldstone 12-hour Complex Wide DPS Power Upgrade Downtime
  - ❑ Additional downtimes are being explored for the April – June timeframe
  
- ❑ NMC 2 – 4 hour Complex Wide Downtime
  - ❑ Additional time has been scheduled at all complexes
    - ❑ Goldstone NMC Task
      - ❑ Scheduled for April 15 week 15, DOY 105/0300 – 0700
    - ❑ Canberra NMC Task
      - ❑ Scheduled for May 15, week19, DOY 135/0855 – 1130
      - ❑ Scheduled for June 07, week 23, DOY 158/0200 – 0600
    - ❑ Madrid NMC Task
      - ❑ Scheduled for May 28 week 21, DOY 148/1650 – 2050



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



## Antenna Downtime Status and Forecast

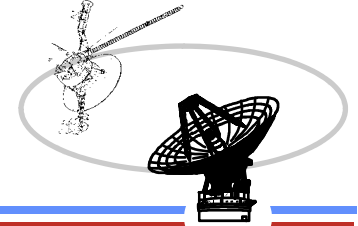
### Downtimes for 2011 (continued)

- ❑ DSS-63 downtime for Depot Level Maintenance is scheduled for April 4 – May 8, weeks 14 - 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 27 July 4/5, DOYs 185/186
  - ❑ DSS-15 is proposed for week 45
- ❑ DSS-65 Chiller replacement is scheduled for July, four 12-hour blocks are requested
  - ❑ Two blocks of consecutive days are scheduled for week 27 DOYs 187 and 188
  - ❑ Two blocks of consecutive days are requested for week 29 DOYs 199 and 200
- ❑ Canberra request for six 8 – 12 hour blocks of Complex Wide DSCC Power Substation (DPS) Maintenance Downtime for April – November
  - ❑ Day shift (2000 – 0800) is requested but not required in weeks 26, 30, 34, 41, 43 and 45
  - ❑ Weeks 25 and 44 were removed due to conflicts, week 34 was added
  - ❑ Week 26 is scheduled, DOY 181/0100-1050
  - ❑ There is a possibility that downtimes in weeks 41, 43 and 45 may be affected by GRAIL if the launch slips into week 40.



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



## 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 24, weeks 26 – 29
      - ❑ 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
    - ❑ DSS-25 is proposed for October 3 – November 6, weeks 40 – 44
- Note: Cable Wrap Protection for each BWG ACR requires 3 days and will be NIB  
An analysis has been completed and submitted for this downtime

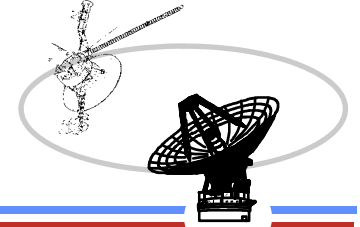
Additional Antenna Controller Replacements are proposed for 2012

- ❑ 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)

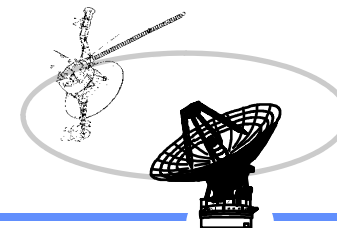
- ❑ DSS-25 downtime is scheduled for DSS-35 design review baseline testing no later than June 1
  - ❑ Requesting four 10 hour blocks of contiguous testing
  - ❑ DSS-25 downtime is scheduled May 31 – June 3 in week 22
    - ❑ DOY 151/1545-0145
    - ❑ DOY 152/1600-0100 (Only 9 hours were available for this DOY)
    - ❑ DOY 153/1500-0100
    - ❑ DOY 154/1215-2215
  - ❑ Tracking will be available after testing is complete each day
- ❑ DSS-43 downtime is requesting 72 hours for Azimuth Databox Replacement
  - ❑ This has been scheduled for July 25 – 29, DOY 206/2200 – 209/1200 in week 30





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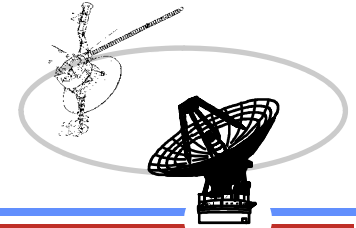
- 2012 -

	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	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	GRAIL A/B LOI/OPR/TSF		MSL INST C/O 1		MSL TCM		MSL FSW Update		MSL ENG C/O 1		MSL TCM		
	MSGR TCM/OCM				MSL TCM		MSL ENG C/O 2		MSL EDL				
	DAWN Vesta Orbit						DAWN Vesta Depart			MSL Surface Ops			
	GSSR Ast 1991 VK				GRAIL A/B Science				DAWN Ceres Thrust				
	KEPL Monthly Sci.		KEPL Qtrly. Roll		KEPL Monthly Sci.		KEPL Qtrly. Roll/Sci		KEPL Monthly Sci.		KEPL Monthly Sci.		GSSR Ast 2007 PA8
	WIND TCM		KEPL Monthly Sci.		WIND TCM		KEPL Monthly Sci.		WIND TCM		KEPL Monthly Sci.		KEPL Qtrly. Roll/Sci
	GSSR Ast Eros		JUNO DSMs DDOR		VGR2 DTR PB		JUNO DSMs DDOR		JUNO DSMs/DDORs/TCMs		JUNO Per Maint		VGR2 MAGROL
	CHDR Dark Current				CHDR Dark Current				CHDR Dark Current		WIND TCM		CHDR Dark Current
	VEX Drag Pass		GSSR Mars		CHDR Earth Eclipse				GSSR Ast 2005 G021		CHDR Earth Eclipse		CHDR Leonid
	MRO Relay												
	SOHO Keyhole				SOHO Keyhole		VGR2 MAGROL		SOHO Keyhole		VGR2 DTR PB		SOHO Keyhole
	SOHO MNVR				SOHO MNVR		VGR2 MAGROL		SOHO MNVR		VGR2 MAGROL		SOHO MNVR
	VGR1 MAGROL		VGR1 MAGROL		NHPG Checkout		VEX Drag Pass		VGR2 MAGROL		VEX Drag Pass		VGR2 MAGROL
	NHPG Solar Conj		VGR2 MAGROL		VGR1 MAGROL		NHPG MNVR		NHPG MNVR		VGR1 MAGROL		VGR1 ASCAL
	NHPG Checkout		GSSR Ast 2000 ET70		VGR1 ASCAL		GSSR Ast 1998 HE3		GSSR Ast 2002 AM31		VGR2 ASCAL		NHPG Checkout
NHPG MNVR		VGR2 ASCAL		CAS ENCELADUS Flyby		CAS TITAN Flyby		CAS TITAN Flyby		VGR1 DTR PB		GSSR Ast 4179 Tout	
CAS TITAN Flyby		CAS TITAN Flyby		CAS ENCELADUS Flyby		CAS TITAN Flyby		CAS TITAN Flyby		GSSR Ast 1998 ST49		CAS TITAN Flyby	
CAS TITAN Flyby				CAS ENCELADUS Flyby				CAS TITAN Flyby		CAS TITAN Flyby		CAS TITAN Flyby	
GDSCC													
	<p>D25 Antenna Controller Replacement Back-Up Plan - Proposed</p> <p>Cable Wrap Protection-NIB</p> <p>D26 Antenna Controller Replacement - Proposed</p> <p>Cable Wrap Protection-NIB</p> <p>D14 70M Tune-up/Calibration - Proposed</p>												
CDSCC													
	<p>D43 GROUTING - Proposed</p> <p>D43 70M Tune-up/Calibration - NIB</p>												
MDSCC													
	<p>D63 GROUTING - Proposed</p> <p>D63 70M Tune-up/Calibration - NIB</p> <p>D54 AZ Track Replacement - Proposed</p> <p>D54 Antenna Controller Replacement - Proposed</p> <p>Cable Wrap Protection-NIB</p>												
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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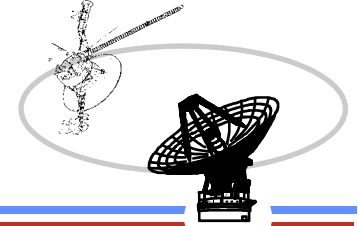
## DSN Downtime 2012

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 - Back-up Plan 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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# Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service



## 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
    - ❑ This is a backup for 2011 based on GRAIL launch schedule
  - ❑ 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

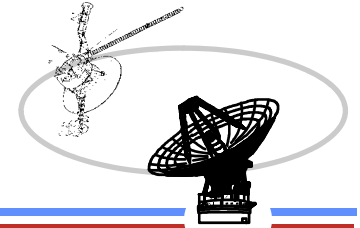
Note: Cable Wrap Protection for each BWG ACR requires 3 days and will be NIB
  
- ❑ DSS-63 downtime for Grouting is requested once per year
  - ❑ 2012 is proposed for May 7 – 27 , weeks 19 – 21
    - ❑ Tune-up/Calibration is requested NIB to grouting
  - ❑ 2013 is proposed for September 2 – 17, weeks 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



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



## Antenna Downtime Status and Forecast

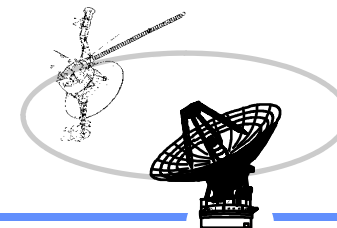
The following are downtimes for 2012 – 2014 (continued)

- ❑ 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
  
- ❑ 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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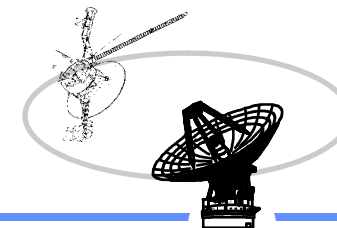
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## DSN Downtime 2013

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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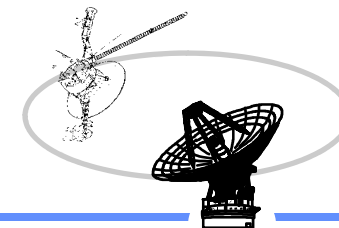
- 2014 -

	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							
<b>2014 Key Project Events</b>	MAVEN TCM										ROSE Hibernation Wake-up										MAVEN Approach										MMS Launch & Commissioning																												
	CHDR Dark Current										CHDR Earth Eclipse										CHDR Dark Current										ROSE Comet Ren Mnvr										ROSE Comet																		
	CHDR Earth Eclipse										DAWN Forced Coast										CHDR Earth Eclipse										DAWN Forced Coast										ROSE Lander																		
	DAWN Ceres Coasting										DAWN Ceres Thrst PB/TV										DAWN Ceres Coasting										DAWN Ceres Approach																												
	DAWN Ceres Coasting										MRO MSL Relay										MSL Surface Ops										NHPC Checkout																												
	NHPC Checkout										NHPC Solar Conjunction										NHPC MNVR										JUNO TCM										JUNO ME Flush																		
	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																		
	<b>GDSCC</b>	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																			
<b>CDSCC</b>	D35 Modkit Inventory/Installation/Checkout										D35 Subsystem Acceptance Testing										D35 Systems Integration Testing										D35 System Performance Testing										D35 Operational																		
	D35 Modkit Inventory/Installation/Checkout										D35 Subsystem Acceptance Testing										D35 Systems Integration Testing										D35 System Performance Testing										D35 Operational																		
<b>MDSCC</b>	D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed																												
	D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed										D63 HBA Upgrades & Life Extension - Proposed																												

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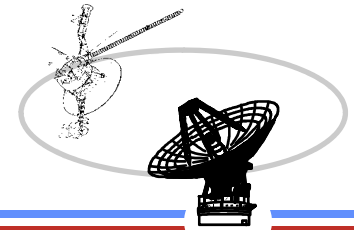
## DSN Downtime 2014

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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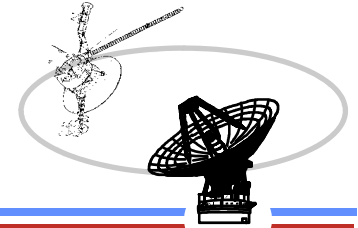
- 2015 -

	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 MNVR					NHPC MNVR					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 2004 BL86					GSSR Ast ICARUS					GSSR Ast 1999 JD6					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 TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby					CAS ENCELADUS Flyby																	
						CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS TITAN Flyby					CAS ENCELADUS Flyby					CAS ENCELADUS Flyby																						
GDSCC	D26 Install 80kW																									D26 Test 80kW																																					
														D25 AZ Track Replacement - Proposed												D26 80kW DDR																																					
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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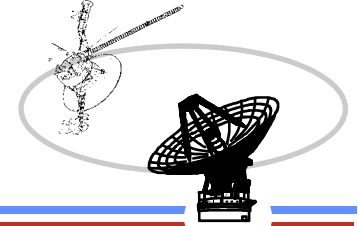
## DSN Downtime 2015

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

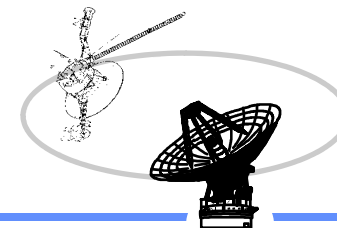
The following are downtimes for 2015 – 2016

- 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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## DSN Downtime 2016

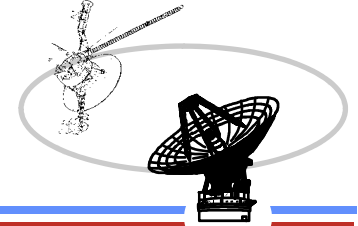
2016							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 55	80 kW Facility Prep - NIB	02/01/2016 00:00	03/20/2016 00:00	48	05 - 11	32	80
DSS 55	AZ Track Replacement - Proposed	02/01/2016 00:00	04/10/2016 00:00	69	05 - 14	32	101





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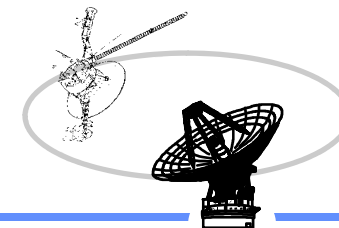


## Future assets new/upgrades

- ❑ **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