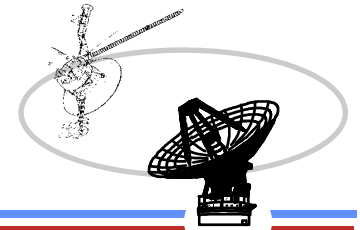


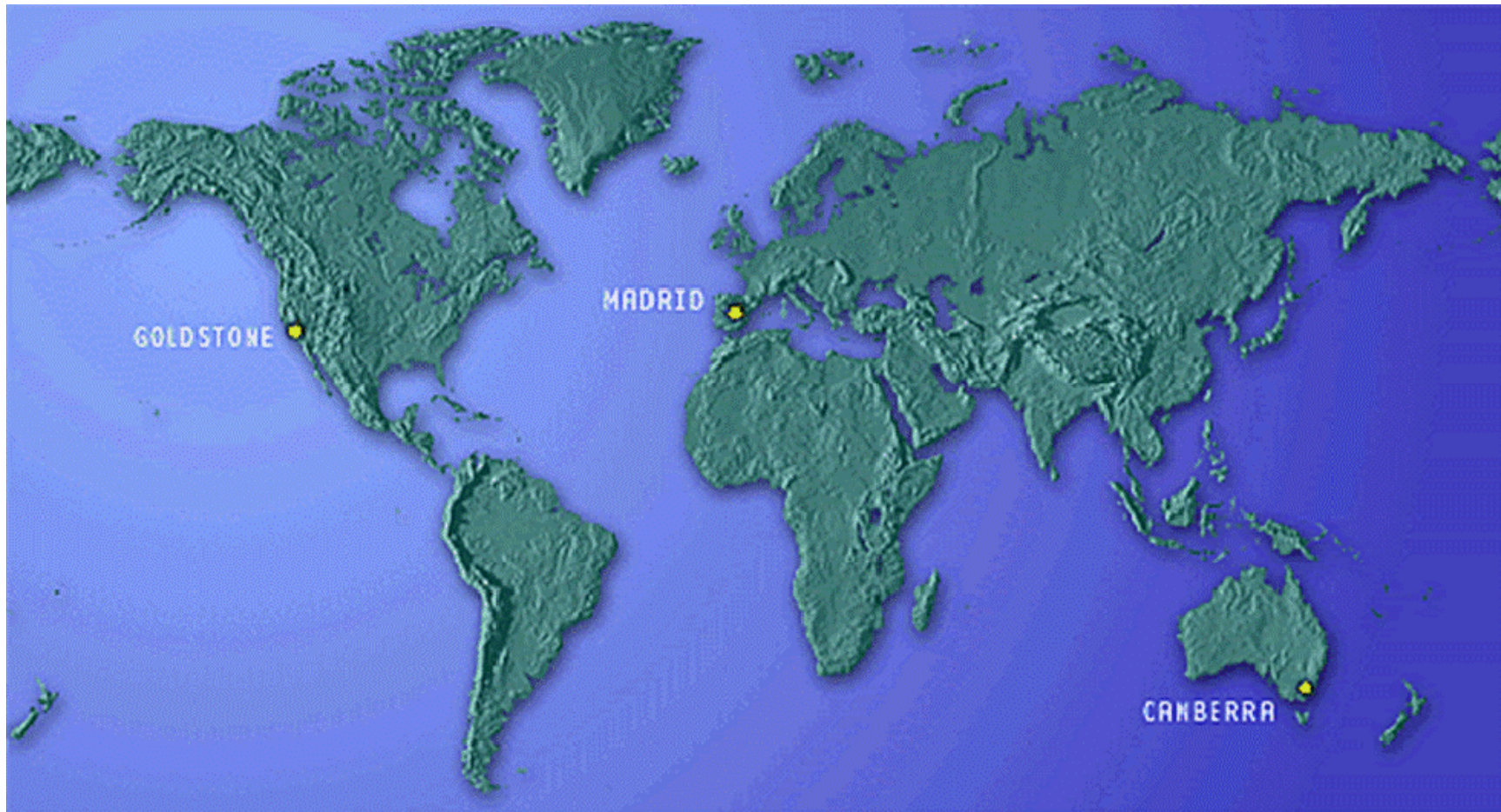


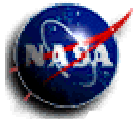
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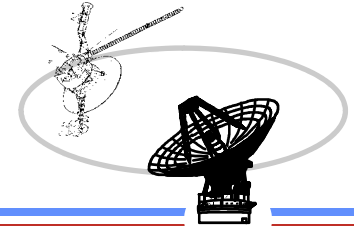
DSN Antenna Downtime Status and Forecast





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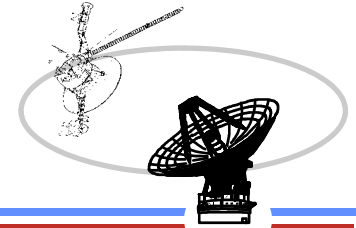
- 2012 -

	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	MSL TCM		MSL TCM		MSL FSW Update		MSL ENG C/O 1		MSL TCM/EDL					
	GRAIL A/B PRM		MSL INST C/O 1		MSL TCM/EDL		MSL ENG C/O 2		MSL EDL					
	VEX Drag Pass		GRAIL A/B Science				MSL Approach		MSL Surface Ops					
	DAWN Vesta Orbit				DAWN Vesta Depart				DAWN Ceres Thrust					
	GSSR Ast 1991 VK		GSSR Venus/Mercury GBT				DAWN Ceres Thrust							
	KEPL MS		KEPL MS		KEPL QR/MS		KEPL MS		KEPL MS		KEPL QR/MS		KEPL MS	
	JUNO TCM		JUNO DSMs DDOR		WIND TCM		GSSR Merc GBT		VEX Drag Pass		JUNO DSM		KEPL MS WIND TCM	
	GSSR Ast Eros		GSSR Ast 2006 CP4		VGR1 DTR PB		GSSR Ast 2007 LE		WIND TCM		JUNO TCM		JUNO Per Maint	
	CHDR DC		MSGR TCM/OCM		CHDR DC		GSSR Ast 2001 CQ36		CHDR DC		CHDR DC		CHDR Leonid	
	SOHO MNVR		GSSR Ast 2000 ET70		CHDR Earth Eclipse		GSSR Ast 2005 G021		CHDR Earth Eclipse		VEX Drag Pass			
	MRO Relay													
	SOHO KH		WIND TCM		SOHO KH		GSSR Ast 1998 HE3		SOHO KH		SOHO KH		SOHO KH	
	NHPC Hibernation Re-Entry		SOHO MNVR		NHPC TCM		SOHO MNVR		MRO MSL Relay		SOHO MNVR		NHPC Solar Conj	
	NHPC Hibernation Exit		NHPC Checkout				GSSR Ast 2002 AM31		NHPC Hibernation Re-Entry		NHPC Solar Conj			
	NHPC Solar Conj		NHPC Hibernation Exit		NHPC MNVR		GSSR Ast 2004 EW9		NHPC Hibernation Re-Entry		NHPC Solar Conj			
NHPC C/O		GSSR Ast 2006 CJ		NHPC S/W Load		NHPC Hibernation Re-Entry		NHPC Hibernation Re-Entry		NHPC Solar Conj				
NHPC REX Occultation		CAS TITAN		CAS TITAN		CAS Saturn Rings Occ		VGR1 DTR PB		NHPC Hibernation Exit				
NHPC MNVR		CAS TITAN		CAS ENCELADUS		CAS TITAN		GSSR Ast 1998 ST49		GSSR Ast 4179 Tout				
CAS TITAN		CAS TITAN		CAS ENCELADUS		CAS ENCELADUS Gravity Experiment		CAS TITAN		CAS TITAN		CAS TITAN		
Key Project Events Legend: ■ Level 1 ■ Level 2 ■ Level 3 ■ All Others														
GDSCC			D15 TXR Manifold Upgrade		D14,15,24,25,26,27 Antenna Inspection - Proposed									
			D15 Chiller Replacement		D26 Antenna Controller Replacement									
			Complex NMC Testing		D25 Antenna Controller Replacement									
			Complex NMC Testing		Complex NMC Acceptance Testing		D24 S-Band Tuner Replacement							
CDSCC			70M Tune-up/Calibration											
			D14 Plug Seal Replacement - NIB											
MDSCC			Complex Powerhouse Commission - Proposed											
			D43 70M Tune-up/Calibration		D45 XTRX Manifold/Waterload Replacement						D43 HBA Upgrade			
MDSCC			DPS Power Upgrade											
			D63 GROUTING		D65 XTRX Manifold/Waterload Replacement									
MDSCC			D63 70M Tune-up/Calibration - NIB											
			D55 Chiller Flush											
MDSCC														
									D54 AZ Track Replacement		D54 Antenna Controller Replacement			

Revised: February 6, 2012



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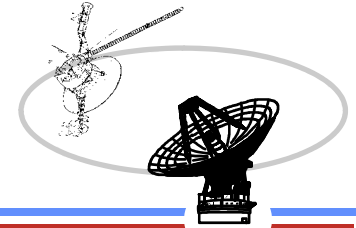
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DSN Downtime 2012

2012							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	70m Tune-up/Calibration	02/06/2012 15:40	02/12/2012 23:25	6	06 - 06	37	43
DSS 63	70m Tune-up/Calibration - NIB	02/20/2012 10:00	03/11/2012 17:00	20	08 - 10	51	71
DSS 63	Grouting	02/20/2012 10:00	03/11/2012 17:00	20	08 - 10	51	71
DSS 15	TXR Manifold Replacement	02/29/2012 14:20	03/10/2012 01:00	9	09 - 10	60	70
DSS 15	Chiller Replacement	03/01/2012 14:00	03/02/2012 02:00	0	09 - 09	61	62
DSS 15	Chiller Replacement- NIB	03/07/2012 14:00	03/08/2012 02:00	0	10 - 10	67	68
DSS 14	70m Tune-up/Calibration	03/12/2012 01:00	03/12/2012 22:00	1	11 - 11	72	72
DSS 14	70m Tune-up/Calibration	03/13/2012 00:50	03/13/2012 22:00	1	11 - 11	73	73
DSS 14	70m Tune-up/Calibration	03/14/2012 00:50	03/14/2012 22:00	1	11 - 11	74	74
DSS 14	70m Tune-up/Calibration	03/15/2012 00:50	03/15/2012 21:50	1	11 - 11	75	75
DSS 14	70m Tune-up/Calibration	03/16/2012 00:40	04/01/2012 01:00	16	11 - 13	76	92
DSS 14	Plug Seal Replacement - NIB	03/16/2012 00:40	04/01/2012 01:00	16	11 - 13	76	92
SPC 10	NMC D2.2 Testing	03/18/2012 04:45	03/18/2012 10:45	0	11 - 11	78	78
DSS 55	Chiller Flush	03/26/2012 05:00	03/28/2012 15:45	2	13 - 13	86	88
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 13:00	04/29/2012 01:00	26	14 - 17	93	120
DSS 45	XTXR Manifold/Waterload Replacement	04/27/2012 20:00	05/07/2012 06:00	9	17 - 19	118	128
DSS 24	S-Band Tuner Replacement - Proposed	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 05:45	05/08/2012 11:45	0	19 - 19	129	129
DSS 14	Antenna Inspection - Proposed	05/14/2012 15:00	05/15/2012 07:00	1	20 - 20	135	136



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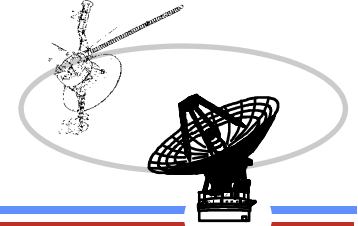
DSN Downtime 2012

2012 (cont.)							
DSS 26	Antenna Inspection - Proposed	05/15/2012 15:00	05/16/2012 07:00	1	20 - 20	136	137
DSS 65	XTXR Manifold/Waterload Replacement - Proposed	05/16/2012 05:00	05/26/2012 00:00	10	20 - 21	137	147
DSS 24	Antenna Inspection - Proposed	05/16/2012 15:00	05/16/2012 23:00	0	20 - 20	137	137
DSS 25	Antenna Inspection - Proposed	05/16/2012 15:00	05/17/2012 07:00	1	20 - 20	137	138
DSS 15	Antenna Inspection - Proposed	05/17/2012 15:00	05/18/2012 07:00	1	20 - 20	138	139
DSS 27	Antenna Inspection - Proposed	05/18/2012 15:00	05/19/2012 07:00	1	20 - 20	139	140
DSS 14	Antenna Inspection - Proposed	05/21/2012 15:00	05/21/2012 23:00	0	21 - 21	142	142
DSS 26	Antenna Inspection - Proposed	05/22/2012 15:00	05/22/2012 23:00	0	21 - 21	143	143
DSS 25	Antenna Inspection - Proposed	05/23/2012 15:00	05/23/2012 23:00	0	21 - 21	144	144
DSS 24	Antenna Inspection - Proposed	05/23/2012 15:00	05/24/2012 07:00	1	21 - 21	144	145
DSS 15	Antenna Inspection - Proposed	05/24/2012 15:00	05/24/2012 23:00	0	21 - 21	145	145
DSS 27	Antenna Inspection - Proposed	05/25/2012 15:00	05/25/2012 23:00	0	21 - 21	146	146
DSS 25	Antenna Controller Replacement	06/11/2012 13:00	07/15/2012 01:00	34	24 - 28	163	197
DSS 54	AZ Track Replacement	09/10/2012 05:00	10/28/2012 00:00	48	37 - 43	254	302
DSS 54	Antenna Controller Replacement	10/22/2012 00:00	11/26/2012 18:00	36	43 - 48	296	331
DSS 43	HBA Upgrades and Life Extension	11/12/2012 00:00	06/09/2013 00:00	209	46 - 23	317	160
SPC 40	Powerhouse Commission - Proposed	12/03/2012 21:00	12/04/2012 00:00	0	49 - 49	338	339
SPC 40	Powerhouse Commission - Proposed	12/04/2012 21:00	12/05/2012 00:00	0	49 - 49	339	340
SPC 40	Powerhouse Commission - Proposed	12/05/2012 21:00	12/06/2012 00:00	0	49 - 49	340	341
SPC 40	Powerhouse Commission - Proposed	12/06/2012 21:00	12/07/2012 00:00	0	49 - 49	341	342



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Antenna Downtime Status and Forecast

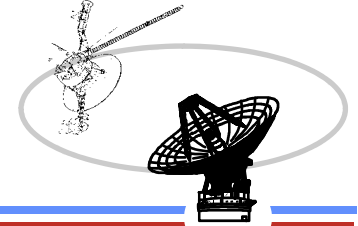
The following are downtimes for 2012

- DSS-43 downtime for Tune-up/Calibration is scheduled for 2012
 - Scheduled for February 6 – 12, week 06
 - An additional SPC-40 DPS 8-12 hour power task is scheduled for week 06
 - The power task was completed early and this additional requirement has been cancelled
- DSS-63 downtime for Grouting is scheduled for 2012
 - Scheduled for February 20 – March 11, 2012, weeks 08 – 10
 - Tune-up/Calibration is scheduled NIB to grouting
 - Will begin at 1000 vice 0600 to accommodate CAS
 - An additional grouting is proposed for September 2 – 17, 2013, weeks 36 – 38,
Note: Stand alone Grouting requires 15 days
- DSS-15 downtime for TXR Manifold Upgrade and Chiller replacement is **Scheduled** in 2012
 - One week of downtime is **scheduled** for January – May time frame
 - TXR/Manifold downtime is **scheduled for February 29 – March 10, weeks 09 and 10**
 - This downtime has been reworked to be a 10 day continuous downtime beginning mid week 09 to mid week 10**
 - One 12 hour block of downtime for Chiller Replacement is scheduled for week 09
Added 4 hours to the 8 hour maintenance block, maintenance will be NIB
 - One 12 hour block of downtime for Chiller Replacement in week 10, NIB to TXR
Manifold Upgrade.



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Antenna Downtime Status and Forecast

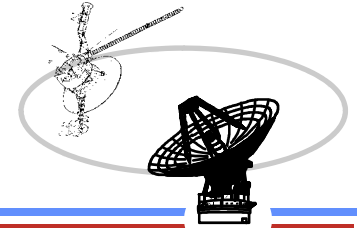
The following are downtimes for 2012 (continued)

- ❑ DSS-14 downtime for Tune-up/Calibration and Plug Seal Replacement is scheduled for 2012
 - ❑ Tune-up/Calibration and Plug Seal Replacement is scheduled for March 12 – April 1, weeks 11 – 13.
 - ❑ In week 11, the first 4 days will be Tune-up/Calibration only outside of GSSR's requirements.
 - ❑ Continuous downtime for Tune-up and Plug Seal will begin after GSSR 's final track in week 11, DOY 076, ending in week 13, DOY 092
- ❑ DSS-55 request 3 days of downtime for Chiller Flush in 2012
 - ❑ Three days of continuous downtime is **Scheduled** for chiller flush and water replacement March 26 – 28, week 13
- ❑ SPC-10 request three 4 – 6 hour complex wide downtime for NMC D2.2 Test in 2012
 - ❑ Scheduled for March and May, weeks 11, 13 and 19
- ❑ DSS-45 and DSS-65 request **10 days** of downtime in 2012 for Waterload and XT XR Manifold Replacement
 - ❑ DSS-45 is **scheduled for April 27 – May 7, weeks, 17 and 18**
 - ❑ DSS-65 is **scheduled for May 16 – 26, week 20 and 21**
 - ❑ These downtimes have been revisited and are now 10 day continuous downtimes



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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
 - Four days **scheduled** for May 7 – 10, Week 19

- SPC-10 request a 24 hour downtime on each antenna for inspection in 2012
 - Antennas include DSS-14, 26, 24, 25, 15, 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)

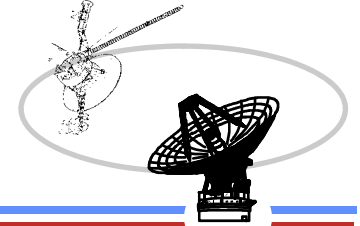
- BWG Antenna Controller Replacement for 2012
 - DSS-26 is scheduled for April 2 – 29, weeks 14 – 17
 - DSS-25 is scheduled for June 11 – July 15, 2012, weeks 24 – 28
 - DSS-54 is scheduled for October 22 – November 25, 2012, weeks 43 – 47

- SPC-40 request **1** block of 3 hour complex downtime for Power House Commission in 2012. The following week is proposed
 - 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 currently 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

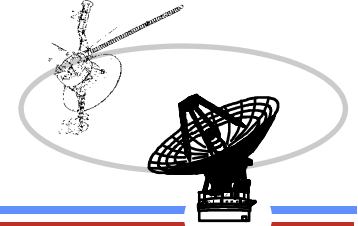
The following are downtimes for 2012 (continued)

- AZ Track Replacement is scheduled for DSS-54 in 2012
 - DSS-54 is scheduled for September 10 – October 28, 2012, weeks 37 – 4



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Antenna Downtime Status and Forecast

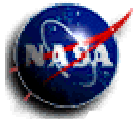
The following are downtimes for 2013 – 2014

- ❑ BWG Antenna Controller Replacement for 2013
 - ❑ DSS-55 is proposed for January 14 – February 17, weeks 03 – 07

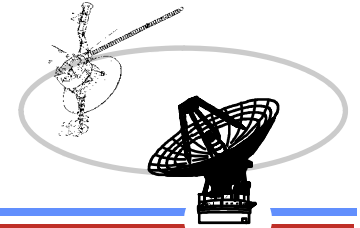
- ❑ Madrid requests six 8 – 12 hour blocks of Complex Wide DSCC Power Substation (DPS) Maintenance Downtime for January – June of 2013
 - ❑ Downtimes are proposed for the following weeks – prime shift hours are requested
 - ❑ January 23, week 04
 - ❑ February 27, week 09
 - ❑ March 27, week 13
 - ❑ April 24, week 17
 - ❑ May 29, week 22
 - ❑ June 26, week 26

- ❑ SPC-40 request 2 block 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 4,– May 13, 2013, weeks 10 – 19
 - ❑ Moved from week 17 due to LADEE Launch in week 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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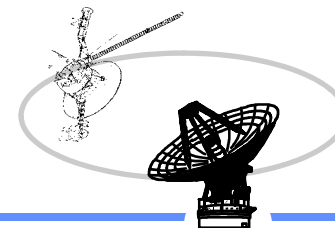
The following are downtimes for 2013 – 2014 (continued)

- DSS-15 Maser Replacement is requested for 2013
 - Seventy seven days are proposed for July 8 – September 7, weeks 28 – 36

- 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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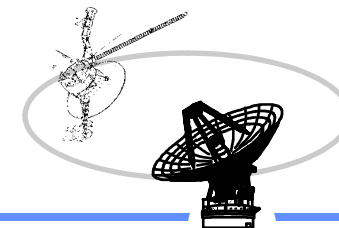
- 2013 -

	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																						VGR2 Solstice																						MAVEN Launch																						MAVEN TCM																																										
	DAWN Ceres Thrst PB/TV																						DAWN Ceres Coasting																																																																																						
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	SOHO Keyhole					NHPC Hibernation Re-Entry				NHPC S/W Load				JUNO ME Flush				JUNO EFB DDOR				JUNO EFB				NHPC Hibernation Re-Entry																																																																																			
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	NHPC Checkout					NHPC MNVR				GSSR Ast 2002 AY1				GSSR Ast 1998 QE2				GSSR Ast 2002 OD20				GSSR Ast 1999 CF9				GSSR Ast 2005 WK4				GSSR Ast 1998 FW4				GSSR Ast 2002 QA22				GSSR Ast 2001 AV43																																																																							
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Key Project Events Legend:																						Level 1																						Level 2																						Level 3																						All Others																					
GDSCC	D24 AZ Track Replacement - Proposed																						D15 Maser Replacement - Proposed																																																																																						
	Complex Powerhouse Commission - Proposed																						Complex Powerhouse Commission - Proposed																																																																																						
CDSCC	D43 HBA Upgrade																						D35 Modkit Inventory/Installation/Checkout																																																																																						
	D43 Maser Replacement - NIB																						D35 Subsystem Acceptance Testing																																																																																						
VGR2 Proof of Performance																						D35 Systems Integration Testing																																																																																							
MDSCC	D55 Antenna Controller Replacement - Proposed																						D63 GROUTING - Proposed																																																																																						
	DPS Maintenance - Proposed					DPS Maintenance - Proposed				DPS Maintenance - Proposed				DPS Maintenance - Proposed				DPS Maintenance - Proposed				DPS Maintenance - Proposed				DPS Maintenance - Proposed				DPS Maintenance - Proposed																																																																															
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Revised: January 30, 2012



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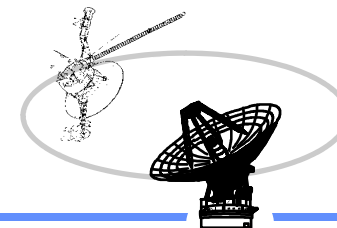
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DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 55	Antenna Controller Replacement - Proposed	01/14/2013 00.:00	02/17/2013 00:00	34	06 - 07	14	48
SPC 60	DPS Maintenance - Proposed	01/23/2013 05.:00	01/23/2013 17:00	0	04 - 04	23	23
DSS 43	Maser Replacement - NIB	02/25/2013 05.:00	04/25/2013 17:00	60	09 - 17	56	115
SPC 60	DPS Maintenance - Proposed	02/27/2013 05.:00	02/27/2013 17:00	0	09 - 09	58	58
DSS 24	AZ Track Replacement - Proposed	03/04/2013 00.:00	05/13/2013 00:00	70	10 - 20	63	133
SPC 60	DPS Maintenance - Proposed	03/27/2013 05.:00	03/27/2013 17:00	0	13 - 13	86	86
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 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 60	DPS Maintenance - Proposed	05/29/2013 05.:00	05/29/2013 17:00	0	22 - 22	149	149
SPC 60	DPS Maintenance - Proposed	06/26/2013 05.:00	06/26/2013 17:00	0	26 - 26	177	177
DSS 15	Maser Replacement - Proposed	07/08/2013 14.:00	09/24/2013 01:00	77	28 - 39	189	267
DSS 63	Grouting - Proposed	09/02/2013 00.:00	09/17/2013 00:00	15	36 - 38	245	260

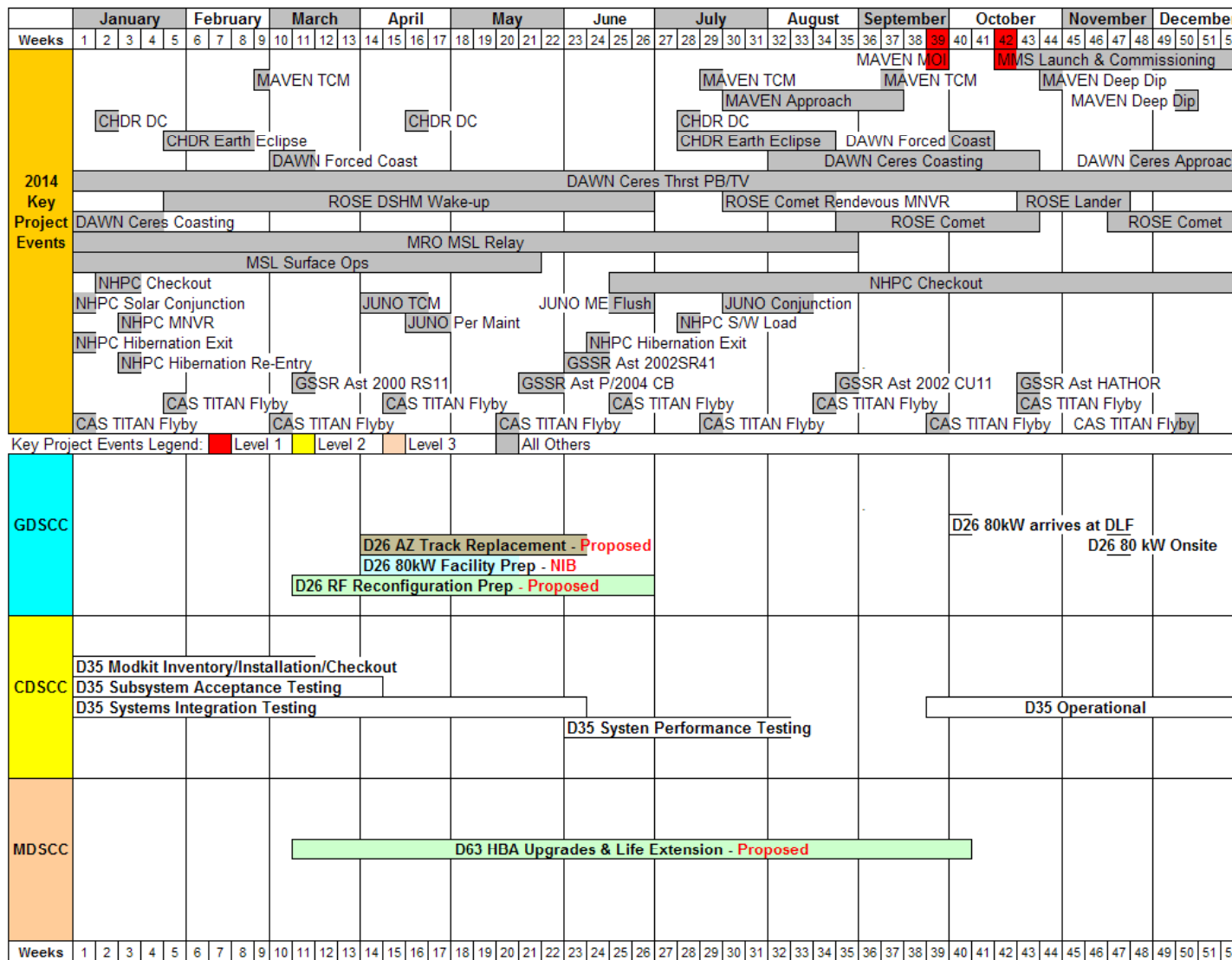


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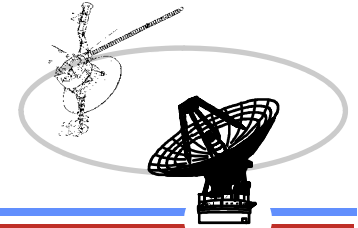
- 2014 -



Revised: January 30, 2012



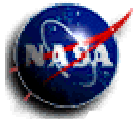
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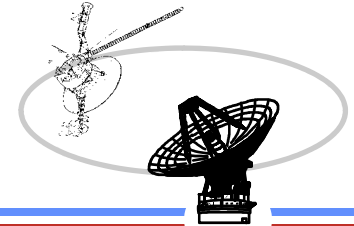
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DSN Downtime 2014

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 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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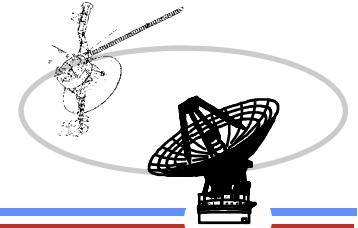
- 2015 -

	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 TCM					NHPC TCM					NHPC Pluto Encounter					NHPC Pluto Science PB					NHPC Checkout																													
	NHPC Solar Conjunction					MAVEN Deep Dip					MAVEN Deep Dip					MAVEN Deep Dip					MAVEN Conjunction					NHPC TCM					NHPC Solar Conjunction																													
	ROSE Comet					MMS Phase 1 Maneuver					DAWN Ceres Orbit					DAWN Ceres Approach					JUNO Per Maint					JUNO JOI DDOR					JUNO ME Flush					JUNO Conjunction					JUNO Early 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																			
	GSSR Ast 2004 BL86					GSSR Ast 1999 JD6					GSSR Ast ICARUS					GSSR Ast 1994 AW1					GSSR Ast 2003 RB					GSSR Ast 1998 WT24					GSSR Ast 2003 SD220																													
	CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby					CAS DIONE Flyby																								
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	D26 Install 80kW					D25 AZ Track Replacement - Proposed					D26 Test 80kW					D26 80kW DDR					D35 80kW Arrives to DLF					D35 80kW Onsite																																		
	D45 Maser Replacement - Proposed					D36 Modkit Inventory/Installation/Checkout					D36 Subsystem Acceptance Testing					D36 Systems Integration Testing					D65 Maser Replacement - Proposed																																							
	D36 Maser Replacement - Proposed																																																											

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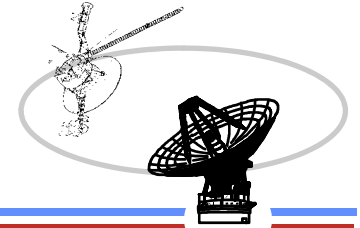
DSN Downtime 2015

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	03 - 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

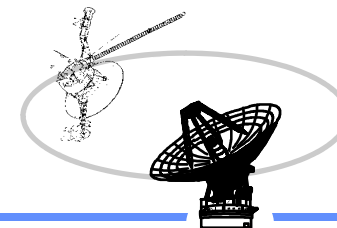
The following are downtimes for 2015 – 2016

- 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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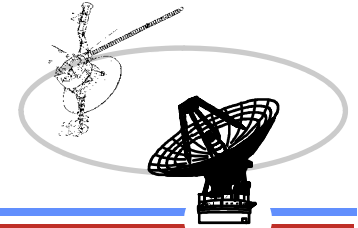
- 2016 -

	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	ExpMars		NHPC Solar Conjunction				NHPC Pluto Science PB				NHPC Kuiper Belt Approach				MMS Phase 1 Maneuver				MMS Phase 2a1 MMS Phase 2a2				MMS Phase 2b Maneuver				ORX Launch																												
	JUNO Approach				JUNO TCM				JUNO TCM				JUNO TCM				JUNO Approach				JUNO TCM				JUNO TCM				JUNO TCM				JUNO TCM																						
	JUNO Approach				JUNO Approach				JUNO Approach				JUNO Approach				JUNO Approach				JUNO Approach				JUNO Approach				JUNO Approach				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																						
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Key Project Events Legend: Level 1				Level 2				Level 3				All Others																																											
GDSCC																																																							
CDSCC	D35 Install 80kW																								D35 80kW Test												D35 DDR																		
MDSCC	D55 AZ Track Replacement - Proposed					D55 80 kW Facility Prep - NIB					D55 RF Reconfiguration Prep - Proposed					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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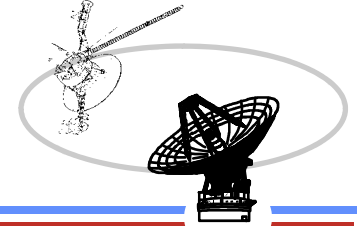
DSN Downtime 2016

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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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

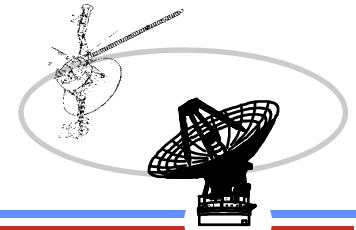
- ❑ DSS-36 Installation and Operational 2016 – A placeholder has been set awaiting dates

- ❑ 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