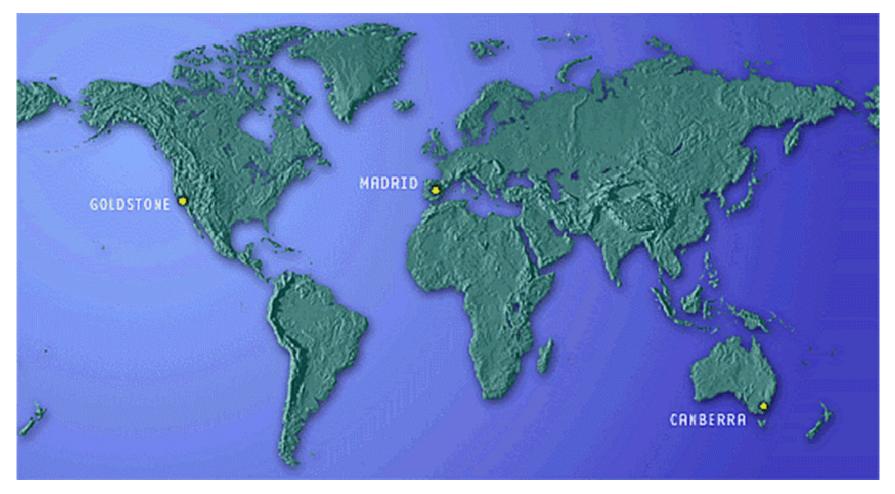
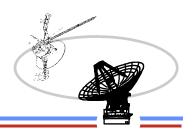


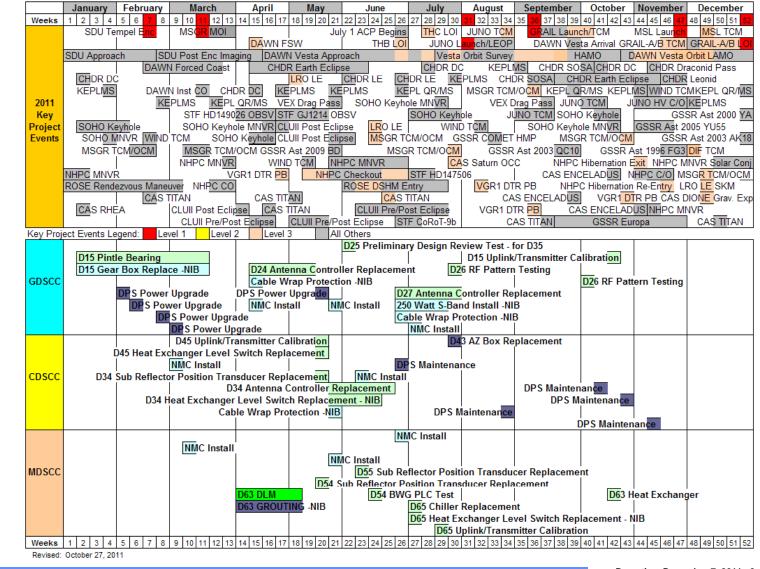


DSN Antenna Downtime Status and Forecast

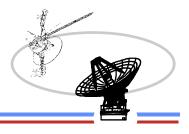




Jet Propulsion Laboratory California Institute of Technology



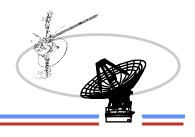
- 2011 -



Jet Propulsion Laboratory California Institute of Technology

		2011					
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 40	DPS Maintenance	11/10/2011 17:45	11/11/2011 04:30	0	45 - 45	314	315



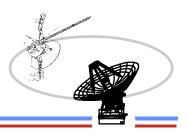


Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

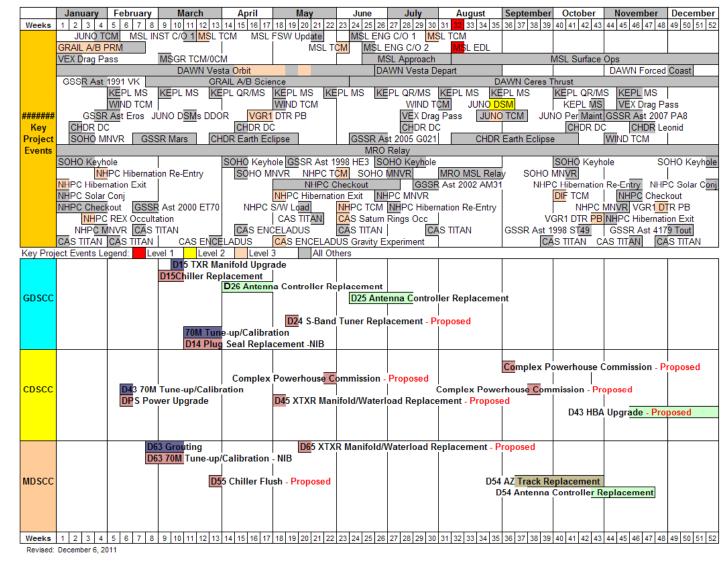
The following downtime is for 2011

 Canberra requested six 8 – 12 hour blocks of Complex Wide DSCC Power Substation (DPS) Maintenance Downtime for April – November
 Week 45, November 10, DOY 314/1745 – 315/0430 – complete

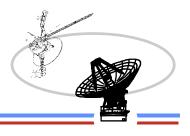


Jet Propulsion Laboratory California Institute of Technology

- 2012 -

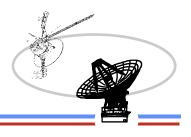


Downtime December 7, 2011 5



Jet Propulsion Laboratory California Institute of Technology

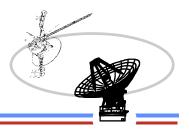
		2012					
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	70m Tune-up/Calibration	02/06/2012 19:00	02/12/2012 07:00	6	06 - 06	037	043
SPC 40	DPS Maintenance	02/08/2012 20:00	02/09/2012 08:00	0	06 - 06	039	040
DSS 63	70m Tune-up/Calibration - NIB	02/20/2012 10:00	03/11/2012 17:00	20	08 - 10	051	071
DSS 63	Grouting	02/20/2012 10:00	03/11/2012 17:00	20	08 - 10	051	071
DSS 15	Chiller Replacement	03/01/2012 14:00	03/02/2012 02:00	0	09 - 09	061	062
DSS 15	TXR Manifold Replacement	03/05/2012 14:00	03/07/2012 01:00	1	10 - 10	065	067
DSS 15	TXR Manifold Replacement	03/07/2012 14:00	03/08/2012 01:00	0	10 - 10	067	068
DSS 15	Chiller Replacement- NIB	03/07/2012 14:00	03/08/2012 02:00	0	10 - 10	067	068
DSS 15	TXR Manifold Replacement	03/08/2012 14:00	03/09/2012 01:00	0	10 - 10	068	069
DSS 15	TXR Manifold Replacement	03/09/2012 14:00	03/10/2012 01:00	0	10 - 10	069	070
DSS 14	70m Tune-up/Calibration	03/12/2012 01:00	03/12/2012 22:00	1	11 - 11	072	072
DSS 14	Plug Seal Replacement - NIB	03/12/2012 01:00	03/12/2012 22:00	1	11 - 11	072	072
DSS 14	70m Tune-up/Calibration	03/13/2012 00:50	03/13/2012 22:00	1	11 - 11	073	073
DSS 14	Plug Seal Replacement - NIB	03/13/2012 00:50	03/13/2012 22:00	1	11 - 11	073	073
DSS 14	70m Tune-up/Calibration	03/14/2012 00:50	03/14/2012 22:00	1	11 - 11	074	074
DSS 14	Plug Seal Replacement - NIB	03/14/2012 00:50	03/14/2012 22:00	1	11 - 11	074	074
DSS 14	70m Tune-up/Calibration	03/15/2012 00:50	03/15/2012 21:50	1	11 - 11	075	075
DSS 14	Plug Seal Replacement - NIB	03/15/2012 00:50	03/15/2012 21:50	1	11 - 11	075	075
DSS 14	70m Tune-up/Calibration	03/16/2012 00:40	03/16/2012 21:50	1	11 - 11	076	076
DSS 14	Plug Seal Replacement - NIB	03/16/2012 00:40	03/16/2012 21:50	1	11 - 11	076	076
DSS 14	70m Tune-up/Calibration	03/17/2012 00:40	04/01/2012 01:00	15	11 - 13	077	092
DSS 14	Plug Seal Replacement - NIB	03/17/2012 00:40	04/01/2012 01:00	15	11 - 13	077	092



Jet Propulsion Laboratory California Institute of Technology

DSN Downtime 2012 Cont'd

	2012										
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY				
DSS 55	Chiller Flush - Proposed	03/26/2012 13:00	03/28/2012 01:00	3	13 - 13	086	088				
DSS 26	Antenna Controller Replacement	04/02/2012 13:00	04/29/2012 01:00	26	14 - 17	093	120				
DSS 45	XTXR Manifold/Waterload Replacement - Proposed	04/29/2012 20:00	05/03/2012 06:00	3	17 - 18	120	124				
DSS 45	XTXR Manifold/Waterload Replacement - Proposed	05/03/2012 20:00	05/04/2012 06:00	0	18 - 18	124	125				
DSS 45	XTXR Manifold/Waterload Replacement - Proposed	05/04/2012 20:00	05/05/2012 06:00	0	18 - 18	125	126				
DSS 45	XTXR Manifold/Waterload Replacement - Proposed	05/05/2012 20:00	05/06/2012 06:00	0	18 - 18	126	127				
DSS 45	XTXR Manifold/Waterload Replacement - Proposed	05/06/2012 20:00	05/07/2012 06:00	0	18 - 19	127	128				
DSS 24	S-Band Tuner Replacement - Proposed	05/07/2012 14:00	05/10/2012 00:00	2	19 - 19	128	131				
DSS 65	XTXR Manifold/Waterload Replacement - Proposed	05/14/2012 05:00	05/17/2012 17:00	4	20 - 20	135	138				
DSS 65	XTXR Manifold/Waterload Replacement - Proposed	05/18/2012 05:00	05/18/2012 17:00	0	20 - 20	139	139				
DSS 65	XTXR Manifold/Waterload Replacement - Proposed	05/19/2012 05:00	05/19/2012 17:00	0	20 - 20	140	140				
DSS 65	XTXR Manifold/Waterload Replacement - Proposed	05/20/2012 05:00	05/20/2012 17:00	0	20 - 20	141	141				
SPC 40	Powerhouse Commission - Proposed	05/28/2012 20:00	05/28/2012 23:00	0	22 - 22	149	149				
SPC 40	Powerhouse Commission - Proposed	05/29/2012 20:00	05/29/2012 23:00	0	22 - 22	150	150				
SPC 40	Powerhouse Commission - Proposed	05/30/2012 20:00	05/30/2012 23:00	0	22 - 22	151	151				
SPC 40	Powerhouse Commission - Proposed	05/31/2012 20:00	05/31/2012 23:00	0	22 - 22	152	152				
DSS 25	Antenna Controller Replacement	06/11/2012 13:00	07/15/2012 01:00	34	24 - 28	163	197				
SPC 40	Powerhouse Commission - Proposed	09/03/2012 20:00	09/03/2012 23:00	0	36 - 36	247	247				
SPC 40	Powerhouse Commission - Proposed	09/04/2012 20:00	09/04/2012 23:00	0	36 - 36	248	248				
SPC 40	Powerhouse Commission - Proposed	09/05/2012 20:00	09/05/2012 23:00	0	36 - 36	249	249				
SPC 40	Powerhouse Commission - Proposed	09/06/2012 20:00	09/06/2012 23:00	0	36 - 36	250	250				
SPC 40	Powerhouse Commission - Proposed	09/07/2012 20:00	09/07/2012 23:00	0	36 - 36	251	251				

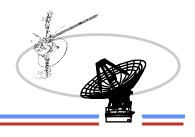


Jet Propulsion Laboratory California Institute of Technology

DSN Downtime 2012 Cont'd

		2012					
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 54	AZ Track Replacement	09/10/2012 00:00	10/28/2012 00:00	48	37 - 43	254	302
DSS 43	HBA Upgrades and Life Extension Phase 1 - Proposed	11/12/2012 00:00	06/09/2013 00:00	209	46 - 23	317	160
SPC 40	Powerhouse Commission - Proposed	09/18/2012 20:00	09/18/2012 23:00	0	38 - 38	262	262
SPC 40	Powerhouse Commission - Proposed	09/19/2012 20:00	09/19/2012 23:00	0	38 - 38	263	263
SPC 40	Powerhouse Commission - Proposed	09/20/2012 20:00	09/20/2012 23:00	0	38 - 38	264	264
DSS 54	Antenna Controller Replacement	10/22/2012 00:00	11/25/2012 00:00	34	43 - 47	296	330





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

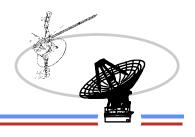
The following are downtimes for 2012

- DSS-43 downtime for Tune-up/Calibration is scheduled for 2012
 - □ Scheduled for February 6 12, week 06, DOY 037/1900 043/0700
 - An additional SPC-40 DPS 8-12 hour power task is scheduled for week 06, DOY 039/2000 – 040/0800
 - Initially requested for December 2011, but due to contention/high level activities, it is proposed for February 2012
- DSS-63 downtime for Grouting is scheduled for 2012
 - □ Scheduled for February 20 March 11, 2012, weeks 08 10, DOY 051/1000 071/1700
 - 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, DOY 245/0000 – 260/0000

Note: Stand alone Grouting requires 15 days

- DSS-15 downtime for TXR Manifold Upgrade and Chiller replacement is requested in 2012
 - □ One week of downtime is requested for January May time frame
 - \Box TXR/Manifold downtime is scheduled for March 5 9, week 10, 065/1400 069/0000,
 - 12 hour downtime for Chiller Replacement is scheduled for week 09, NIB to maintenance block
 - □ 12 hour downtime for Chiller Replacement in week 10 NIB to TXR Manifold upgrade
 - □ The first two days of downtime there will be no tracking. The last three days will be downlink only tracking, off shift





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

The following are downtimes for 2012 (continued)

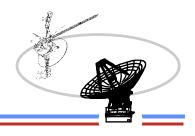
- DSS-14 downtime for Tune-up/Calibration and Plug Seal Replacement is scheduled for 2012
 - Tune-up/Calibration and Plug Seal Replacement is scheduled for March 12 April 1, weeks 11 13, DOY 072/1400 092/0100. In week 11, downtime task will be worked outside of GSSR's requirements. Continuous downtime will begin after GSSR 's final track in week 11 on DOY 077
- DSS-55 request 3 days of downtime for Chiller Flush in 2012
 - □ Three days of continuous downtime is requested for chiller water replacement
 - □ Downtime is proposed for March 26 28, week 13

DSS-45 and DSS-65 request 7 days of downtime in 2012 for Waterload and XTXR

Manifold Replacement

- □ DSS-45 is proposed for April 31 May 6, week, 18
- DSS-65 is proposed for May 14 20, week 20 New placement requested due to local holiday
- □ The first three days of downtime there will be no tracking. The last four days will be downlink only tracking off shift





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

The following are downtimes for 2012 (continued)

- DSS-24 S-Band Tuner Replacement downtime requested for 2012
 Four days proposed for May 7 10, Week 19
- □ BWG Antenna Controller Replacement for 2012
 - □ DSS-26 is scheduled for April 2 29, weeks 14 17, DOY 093/1300 120/0100
 - DSS-25 is scheduled for June 11 July 15, 2012, weeks 24 28, DOY 163/0000 – 197/0000
 - DSS-54 is scheduled for October 22 November 25, 2012, weeks 43 47, DOY 296/0000 – 330/0000

SPC-40 request 12 blocks of 3 hour complex downtime for Power House Commission in 2012

- □ Four days, 3 hours in May, week 22
- □ Five days, 3 hours in September, week 36 New placement requested due to JUNO DSM's
- □ Three days, 3 hours in September, week 38

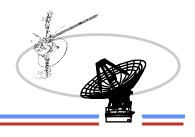
DSS-43 HBA Upgrade and Life Extension downtime is proposed for 2012

- □ DSS-43 HBA Upgrade downtime is currently proposed as one continuous downtime for weeks 46 52 of 2012 and week 01 23 of 2013
- □ Maser Replacement will be NIB
- □ ZDD will be scheduled prior to return to service

□ AZ Track Replacement is scheduled for DSS-54 in 2012

□ DSS-54 is scheduled for September 10 – October 28, 2012, weeks 37 – 43





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

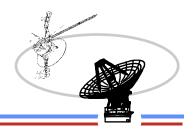
The following are downtimes for 2013 – 2014

- BWG Antenna Controller Replacement for 2013
 DSS-55 is proposed for January 14 February 17, weeks 03 07, DOY 014/0000 – 048/0000
- 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

□AZ Track Replacement downtime is requested for DSS-24 and 26

- □ 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
 - □ Reconfiguration Prep is proposed for March 10 June 30, weeks 11 26
 - 80 kW Facility Preparation will be scheduled NIB March 31 May 18, weeks14 – 20





Jet Propulsion Laboratory California Institute of Technology

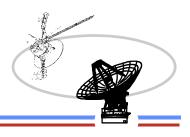
The following are downtimes for 2013 – 2014 (continued)

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

DSS-63 HBA Upgrade and Life Extension downtime is proposed for 2014

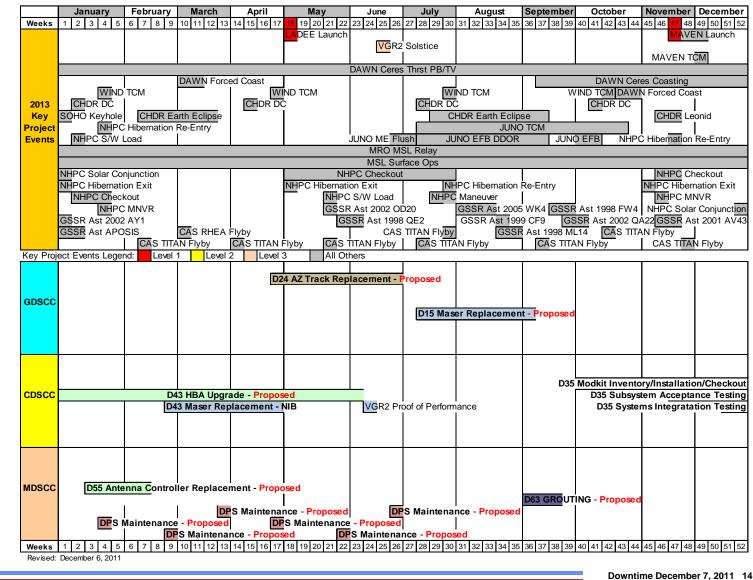
 \Box Proposed for March 10 – October 5, weeks 11–40

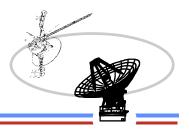
D ZDD will be scheduled prior to return to service



Jet Propulsion Laboratory California Institute of Technology

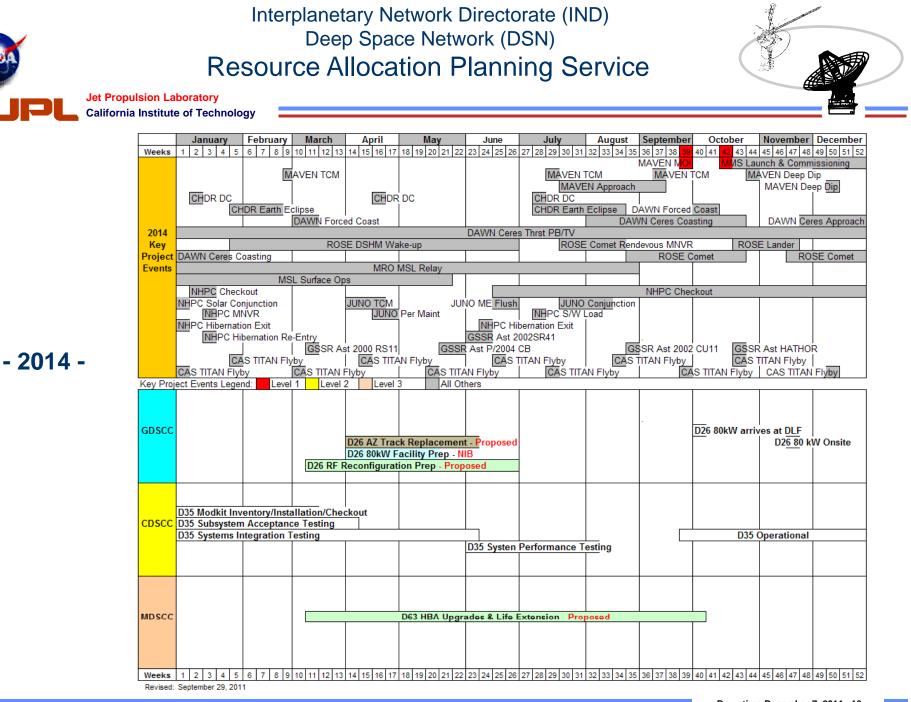
- 2013 -

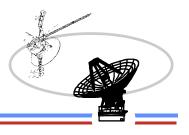




Jet Propulsion Laboratory California Institute of Technology

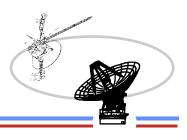
		2013					
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 55	Antenna Controller Replacement - Proposed	01/14/2013 00:00	02/17/2013 00:00	34	03 - 07	014	048
SPC 60	DPS Maintenance - Proposed	01/23/2013 05:00	01/23/2013 17:00	0	04 - 04	023	023
DSS 43	Maser Replacement - NIB	02/25/2013 05:00	04/25/2013 17:00	60	09 - 17	056	115
SPC 60	DPS Maintenance - Proposed	02/27/2013 05:00	02/27/2013 17:00	0	09 - 09	058	058
SPC 60	DPS Maintenance - Proposed	03/27/2013 05:00	03/27/2013 17:00	0	13 - 13	086	086
DSS 24	AZ Track Replacement - Proposed	04/22/2013 00:00	06/30/2013 00:00	69	17 - 26	112	181
SPC 60	DPS Maintenance - Proposed	04/24/2013 05:00	04/24/2013 17:00	0	17 - 17	114	114
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	09/01/2013 01:00	60	28 - 36	189	250
DSS 63	Grouting - Proposed	09/02/2013 00:00	09/17/2013 00:00	15	36 - 38	245	260





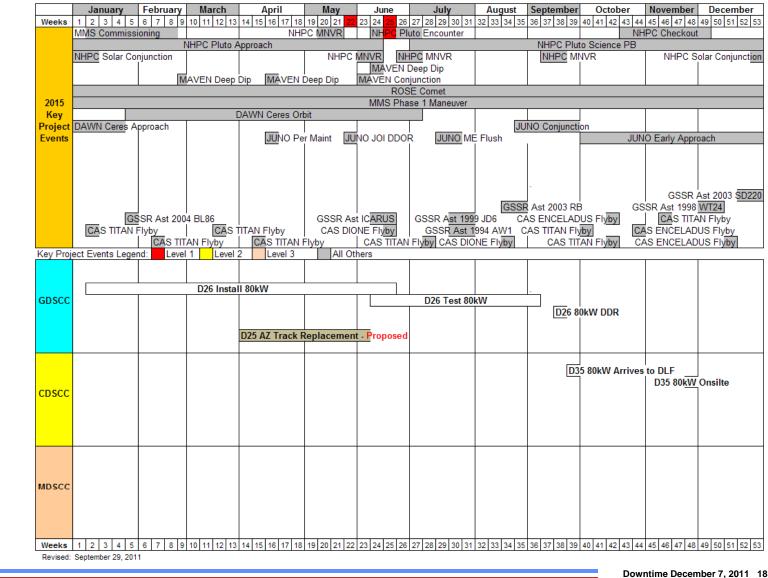
Jet Propulsion Laboratory California Institute of Technology

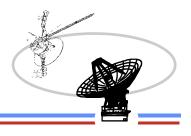
		2014					
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 26	RF Reconfiguration Prep - Proposed	03/10/2014 00:00	06/29/2014 00:00	111	11 - 26	069	180
DSS 63	HBA Upgrades and Life Extension - Proposed	03/10/2014 00:00	10/05/2014 00:00	209	11 - 40	069	278
DSS 26	80 kW Facility Prep - NIB	03/31/2014 00:00	05/18/2014 00:00	48	14 - 20	090	138
DSS 26	AZ Track Replacement - Proposed	03/31/2014 00:00	06/08/2014 00:00	69	14 - 23	090	159



Jet Propulsion Laboratory California Institute of Technology

- 2015 -

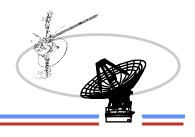




Jet Propulsion Laboratory California Institute of Technology

		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	090	158





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

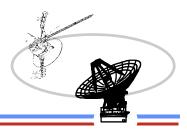
The following are downtimes for 2015 - 2016

- □ AZ Track Replacement is requested for DSS-25 and 55
 - \Box 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

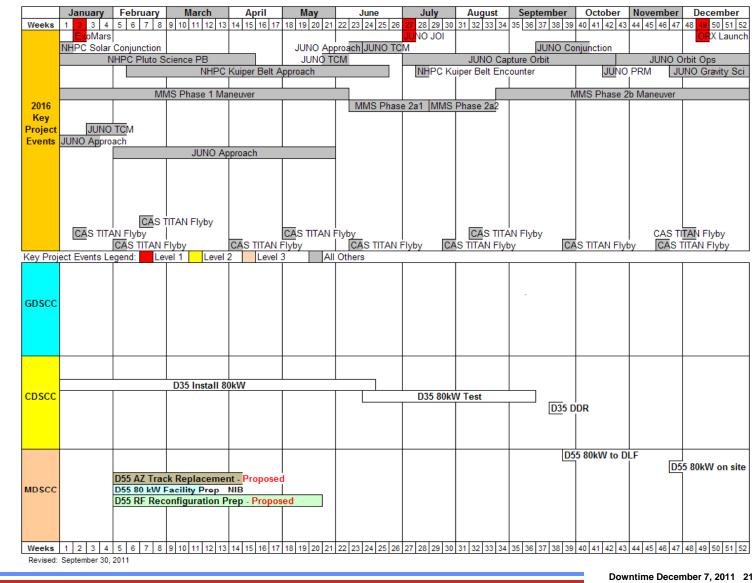


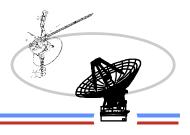
- 2016 -

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



Jet Propulsion Laboratory California Institute of Technology

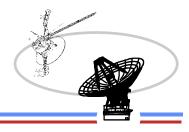




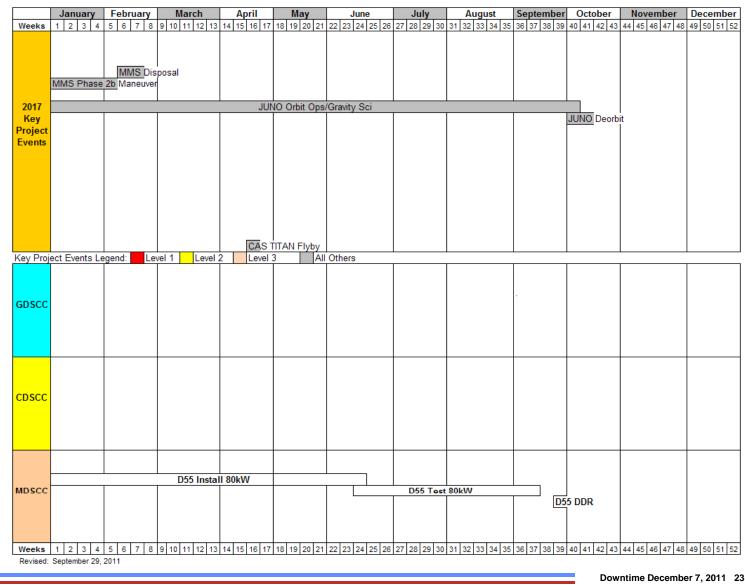
Jet Propulsion Laboratory California Institute of Technology

		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	032	080
DSS 55	AZ Track Replacement - Proposed	02/01/2016 00:00	04/10/2016 00:00	69	05 - 14	032	101
DSS 55	RF Reconfiguration Prep - Proposed	02/01/2016 00:00	05/23/2016 00:00	112	05 - 21	032	144



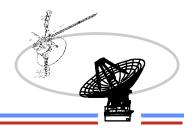


Jet Propulsion Laboratory California Institute of Technology



- 2017 -



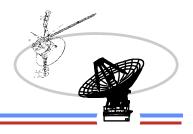


Jet Propulsion Laboratory California Institute of Technology

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
 - Department 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





Jet Propulsion Laboratory California Institute of Technology

Antenna Downtime Status and Forecast

			S-B	and	X-B	and	Ka-E	Band	Ka Phase 2	X-Band	80KW
Complex	Station	Subnet	Down	Up	Down	Up	Down	Up	rta Filase Z	ACQ AID	OURIN
10	DSS-27	34HSB	~	v	N/A	N/A	N/A	N/A	N/A	N/A	N/A
10	DSS-24	34B1	•	v	\$	*	N/A	N/A	~	v	N/A
40	DSS-34	34B1	~	~	*	*	*	N/A	~	~	N/A
60	DSS-54	34B1	~	~	*	~	*	N/A	~	v	N/A
10	DSS-25	34B2	N/A	N/A	*	*	*	05/17/11	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	•	*	*	4	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 = Capa	lanned		xx/xx/xx =	Capability	Date Recent	ly Changed		As of:	8/4/2011		
 ✓ ✓ ✓ = Capability Recently Exists ✓ = Capability Exists ★ = To Be Commission 							missioned				