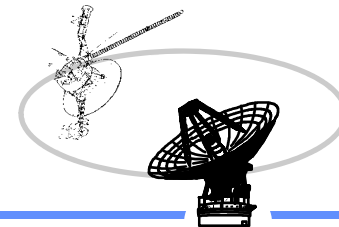


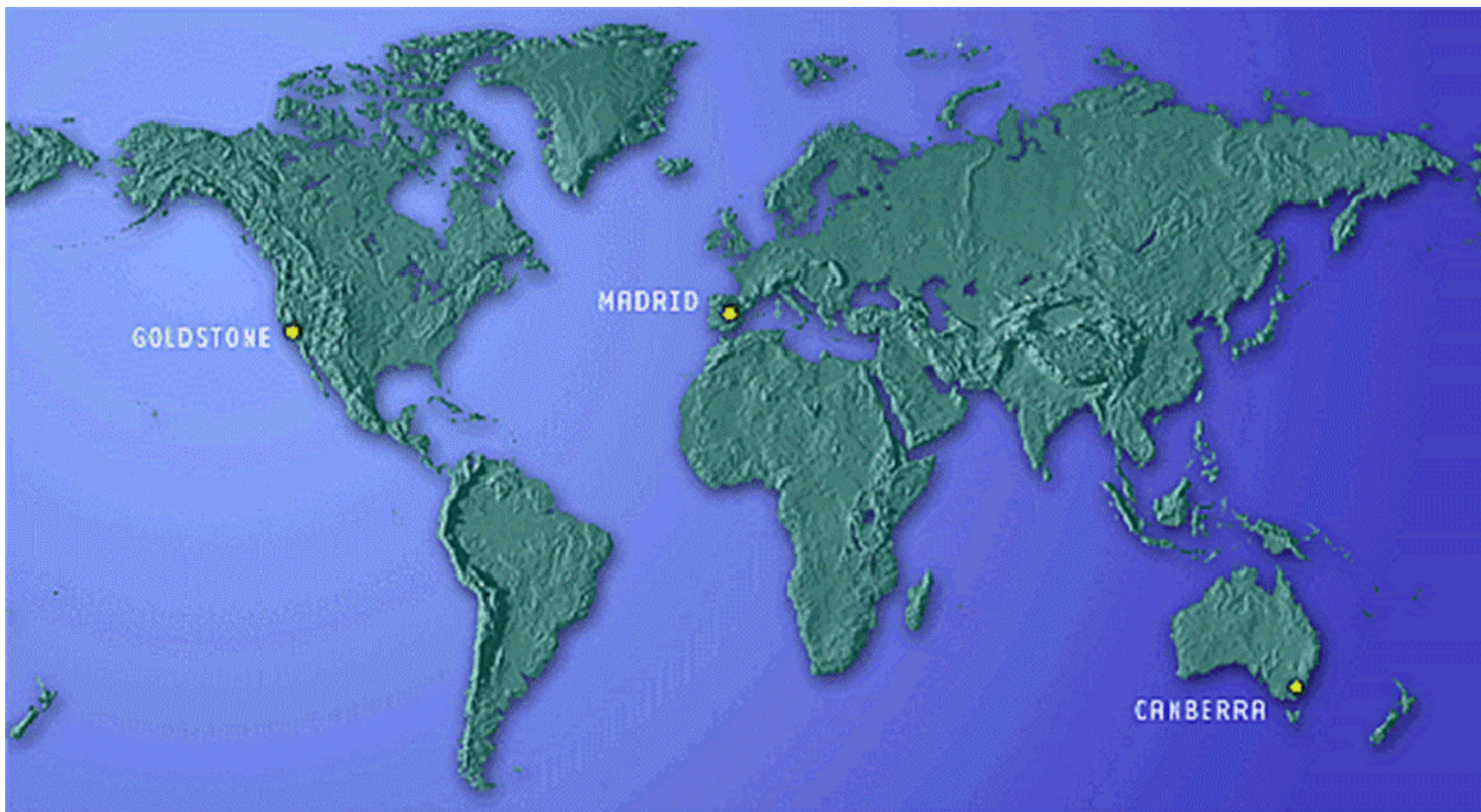


Interplanetary Network Directorate (IND)  
Deep Space Network (DSN)  
Resource Allocation Planning Service



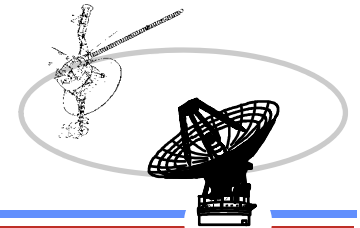
Jet Propulsion Laboratory  
California Institute of Technology

## DSN Antenna Downtime Status and Forecast





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

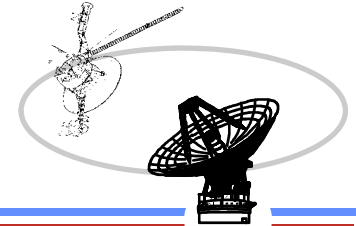


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Complex downtime for Power House Commission	CDSCC	Jan 2013	Jun 2013	03, 04, 05, 09, 13, 21, 22, 25	John Phillips, Rob Mehrkish	Prime shift hours are requested for 3 hours each 4 blocks – 2 consecutive blocks each in weeks 3 and 4 5 blocks in May, split between weeks 21 and 22 2 blocks in June, week 25 Added additional blocks in weeks 03, 04, 05, 09 and 13. 2 of 4 blocks in week 13 were released by the complex
Complex downtime for G86 Power Cutover	GDSCC	Feb 2013	Sep 2013	08, 14, 17, 22, 25, 29, 33, 37	Hill Reus, Richard Fleig, Tony Medeiros	Request 16 hours each block Week 8 scheduled for 14 hours 15 minutes Week 17 scheduled for 15.5 hours – This downtime released due to NASA IFO audit scheduled for this week. 8 hour block scheduled in week 17 prior to audit. <b>Week 29 hours changed to start off shift due to project activities in that week. Week 32 rescheduled for week 33 due to JUNO activities and extension of DSS-63 grouting into week 32</b>
Complex downtime for NMC Automated Link Build (ALB)	GDSCC	Mar 2013	Oct 2013	10, 12, 17, 24, 32, 38, 42	Jim Buckley, Dave Taylor, Shirley Cizmar	Request 6 – 8 hours each block – days/times flexible Week 10 scheduled Mar 4 for 7 hours Week 12 scheduled Mar 18 for 7 hours Week 15 released to G86 Week 17 scheduled Apr 24 for 8 hours and Apr 28 for 8 hours to replace time released to G86 in week 15
	CDSCC	July 2013	July 2013	30		<b>Initially added to week 32 then moved to week 30 for 8 hours</b>



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

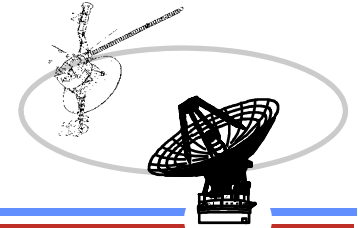


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
HBA Prep Metrology – HBA Joints T/S & AZ Runner Measurements	DSS-63	Apr 16, 2013	Apr 16, 2013	16	Tim Sink	Added week 16 DOYs, 106, 107, 108 for HBA Joints T/S (completed)
		June 27 2013	June 27 2013	26		Week 26 DOY's 175, 176 and 178 for AZ Runner Measurements
Complex System Level Testing (Power)	GDSCC	Apr 21, 2013	Apr 21, 2013	16	Hill Reus, Richard Fleig	Needed to validate the new G86 power distribution system sequence of operation, to make sure the system will function as intended. <b>Completed.</b>
AZ Track Replacement	DSS-24	Apr 29, 2013	Jul 12, 2013	18 – 28	Pam Rothman, Asim Sehic	ZDD is required NIB during DSS-24 downtime Added Gain Select Installation NIB on a Best Efforts Basis (BEB)
	DSS-26	Mar 10, 2014	Jun 20, 2014	11 – 26		Downtime includes RF Reconfiguration and 80 kW Facility Preparation
DSS-55, 25 Primary task changed from Reconfig. Prep to AZ Track Replacement	DSS-55	Mar 9, 2015	Jun 26, 2015	11 – 26		Downtime includes RF Reconfiguration and 80 kW Facility Preparation. Will do power and A/C mods Study requested for potential shift between DSS-63 groutings in 2015
	DSS-25	Jan 29, 2018	Apr 9, 2018	05 – 14		XX/Ka Installation is scheduled NIB during DSS-25 downtime is proposed



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



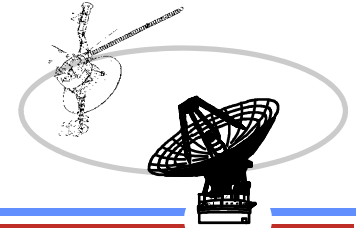
## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Gain Select Installation	DSS-26	May 28, 2013	June 4, 2013	22 & 23	Chris Link, Juan Ocampo	Install, test and accept all the components for the gain select task. NIB to G86 Power on DOY 148 and prime with maintenance on DOY 151. <b>Demo scheduled NIB to Power Robustness in week 23</b> <b>For each week this downtime will be NIB to DSS-34 Maintenance</b>
	DSS-34	June 24 2013	July 14 2013	26 – 28	Harout Matossian	
Power Robustness	GDSCC	Jun 2013	Jun 2013	23	Hill Reus, Chris Jeffries	Request 2 10 hour blocks Daylight hours only <b>STB Demo scheduled for Gain Select Installation</b>
BWG Antenna Controller Replacement	DSS-55	Jun 10, 2013	Jul 19, 2013	24 – 29	Anna Fan, Barzia Tehrani	Depot Level Maintenance NIB <b>Added Gain Select Installation NIB (BEB)</b> <b>Study requested for extended into into week 30</b>
Grouting	DSS-63	Jul 15, 2013	Aug 9, 2013	29 - 32	Pam Rothman, Dave	An additional 5 days added. Need to be done prior to JUNO TCM. DLM Maintenance - NIB  Requesting 2 additional groutings each in 2014 – 2016 These are proposed dates: Nov 2014, S-Band Maser Replacement NIB  May 2015, 70m Tune-up and calibration NIB 2015 groutings are only 2 weeks to allow support of NHPC If HBA Upgrade is not approved for 2017, 2 additional grouting will be scheduled in 2017, 9 months apart
		Mar 2014	Mar 2014	10 – 13	Taylor, David	
		2014	2014	45 – 48	Munoz	
		2015	2015	19 & 20	Mochon,	
		2015	2015	32 & 33	Bernardo	
		2016	2016	18 – 21	Lopez,	
		2016	2016	44 – 47	Pete Hames	





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

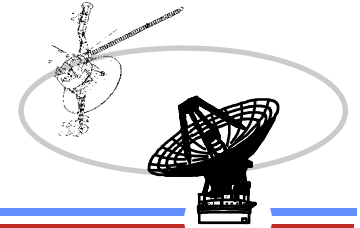


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
HEF Maser Replacement	DSS-15	Aug 19, 2013	Nov 9, 2013	34 – 45	Anna Fan, Chris Link	Replacing Maser LNA with HEMT LNA 250W S-Band & Depot Level Maintenance NIB Shifted from weeks 32-43 to weeks 34-45 Added Gain Select Installation NIB (BEB)
	DSS-65	Aug 2015	Nov 2015	34 – 43		Proposed date. No Depot Level Maintenance at this time
	DSS-45	Oct 2015	Jan 2016	44 – 04		Proposed date. No Depot Level Maintenance at this time
Complex downtime for NMC Automated Link Build (ALB) SOAK	GDSCC	Oct 2013	Oct 2013	42	Jim Buckley, Shirley Cizmar, Dave Taylor	Request 6 – 8 hours per block at each complex
		Feb 2014	Feb 2014	08		Additional downtime Requested early 2014
	CDSCC and DCD.4.1 DSOC	Jan 2014	Jan 2014	03		Request was received to add DSOC
	MDSOC	Feb 2014	Feb 2014	07		Request was received to move from week 05 to mid Feb
Complex downtime for SPC-60 Power Cutover	MDSOC	Dec 2013	May 2014	50 2013 03, 07, 11, 15, 19 2014	Anna Fan, Rob Mehrkish, Javier Lopez-Perea	Request 12 hours blocks of prime shift hours, but hours are negotiable. Maintenance blocks for DSS-54, 55, and 65 are NIB for 8-hours to proposed downtimes in week 50 of 2013, and weeks 03, 07, 11, 15, and 19 of 2014.



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

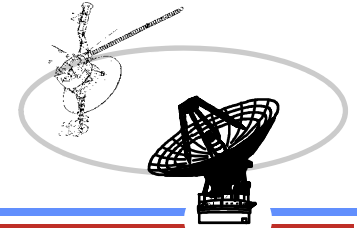


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
DCD 4.1 software installation, NMC and SOAK	GDSCC and DSOC	Jan 8, 2014	Jan 9, 2014	02	Anna Fan, Susan Zia	These are proposed dates at this time
	CDSCC	Feb 20, 2014	Feb 21, 2014	08		
	MDSCC	Mar 6, 2014	Mar 6, 2014	10		
Depot Level Maintenance	DSS-45	Jan 2014	Feb 2014	05 – 08	John Phillips, David Munoz Mochon John Phillips	Recurring task to optimize antennas Requested Feb 2013
	DSS-65	April 2014	May 2014	17 - 20		
	DSS-34	Jan 2015	Feb 2015	05 - 08		
Antenna Inspections	MDSCC	Mar 2014	Mar 2014	12 & 13	Anna Fan, Neil Bucknam	These are proposed dates at this time
		Aug 2017	Aug 2017	35 & 36		
70M Tune-up and calibration	DSS-14	Dec 1, 2014	Dec 15, 2014	49 & 50	Bob Haroldsson	These are proposed dates at this time and are In preparation for NHPC Pluto Encounter
	DSS-43	Mar 9, 2015	Mar 21, 2015	11 & 12	John Phillips	



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

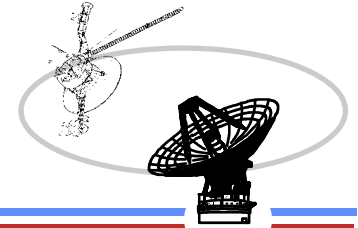


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Antenna Inspections	GDSCC	May 2015	May 2015	22 & 23	Anna Fan, Neil Bucknam, Daniel Olson	These are proposed dates at this time
		Apr 2018	Apr 2018	15 & 16		
Antenna Inspections	CDSCC	Jan 2016	Jan 2016	1 & 2	Anna Fan, Dave Taylor, Neil Bucknam, Daniel Olson	2016 – During DSS-45 Maser Replacement
HEF Transmitter Replacement	DSS-15	Oct 3, 2016	Jan 13, 2017	40 – 02	Wendy Hodgkin	These are proposed dates at this time
	DSS-45	Jan 16, 2017	Apr 8, 2017	03 – 14		
	DSS-65	Sep 11, 2017	Dec 1, 2017	37 – 48		



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



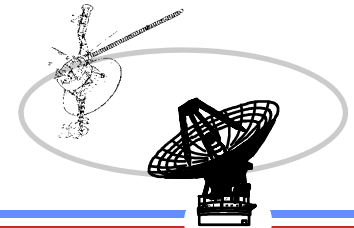
Jet Propulsion Laboratory  
California Institute of Technology

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
SWUPS Installation	CDSCC	Nov 2, 2016	Nov 3, 2016	44	Pete Hames	These blocks are proposed at this time 12 hour blocks for each downtime Must be done in daylight. There is a connection to the power house.
		Nov 16, 2016	Nov 17, 2016	46		
		Nov 30, 2016	Dec 1, 2016	48		
HBA Upgrade and Life Extension	DSS-63	Jan 30, 2017	Sep 8, 2017	05 – 36	Dave Taylor, Bernardo Lopez	This is proposed at this time Maser Replacement is NIB Tentative date, may move to 2018
Pedestal Rehab	DSS-54	Jan 8, 2018	Sep 28, 2018	02 – 39	Ben Saldua	This is proposed at this time This date may change based on need Ka2 Tune-up is NIB weeks 36 & 37 and scheduled prior to JWST launch in 2018
XX/Ka Installation	DSS-24	Apr 30, 2018	Jul 9, 2018	18 - 27	Wendy Hodgins	This is proposed at this time
Ka2 Tune-up	DSS-24	May 1, 2018	May 13, 2018	18 & 19	Wendy Hodgins	Both Ka2 Tune-ups must be scheduled prior to JWST launch in October 2018, budget/resource driven
Ka2 Tune-up	DSS-34	Jun 4, 2018	Jun 16, 2018	22 & 23		



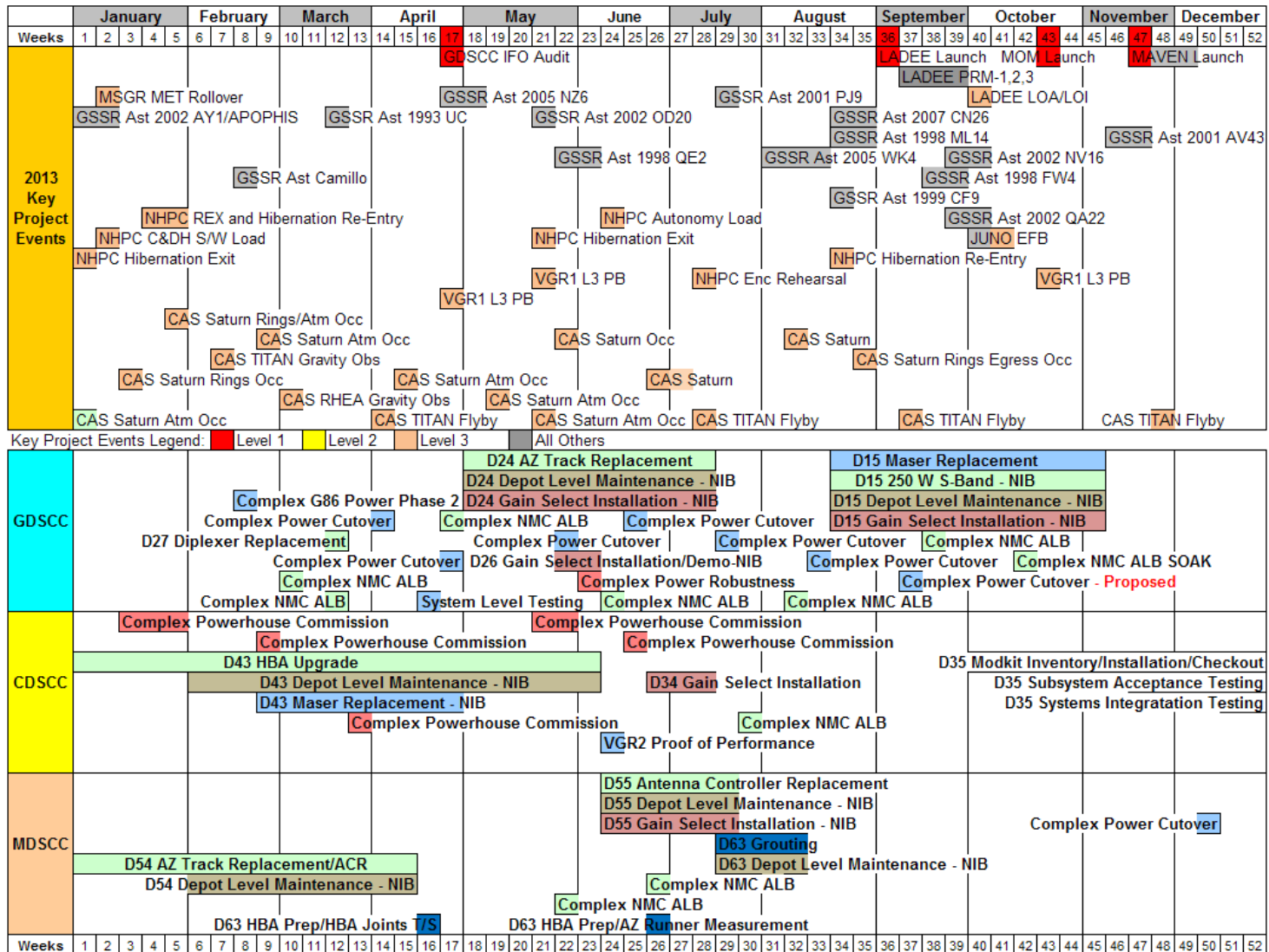


# Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service



Jet Propulsion Laboratory  
California Institute of Technology

- 2013 -



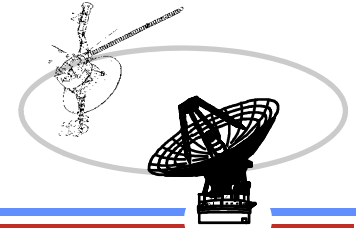
Revised: May 1, 2013

Downtime May 8, 2013 9

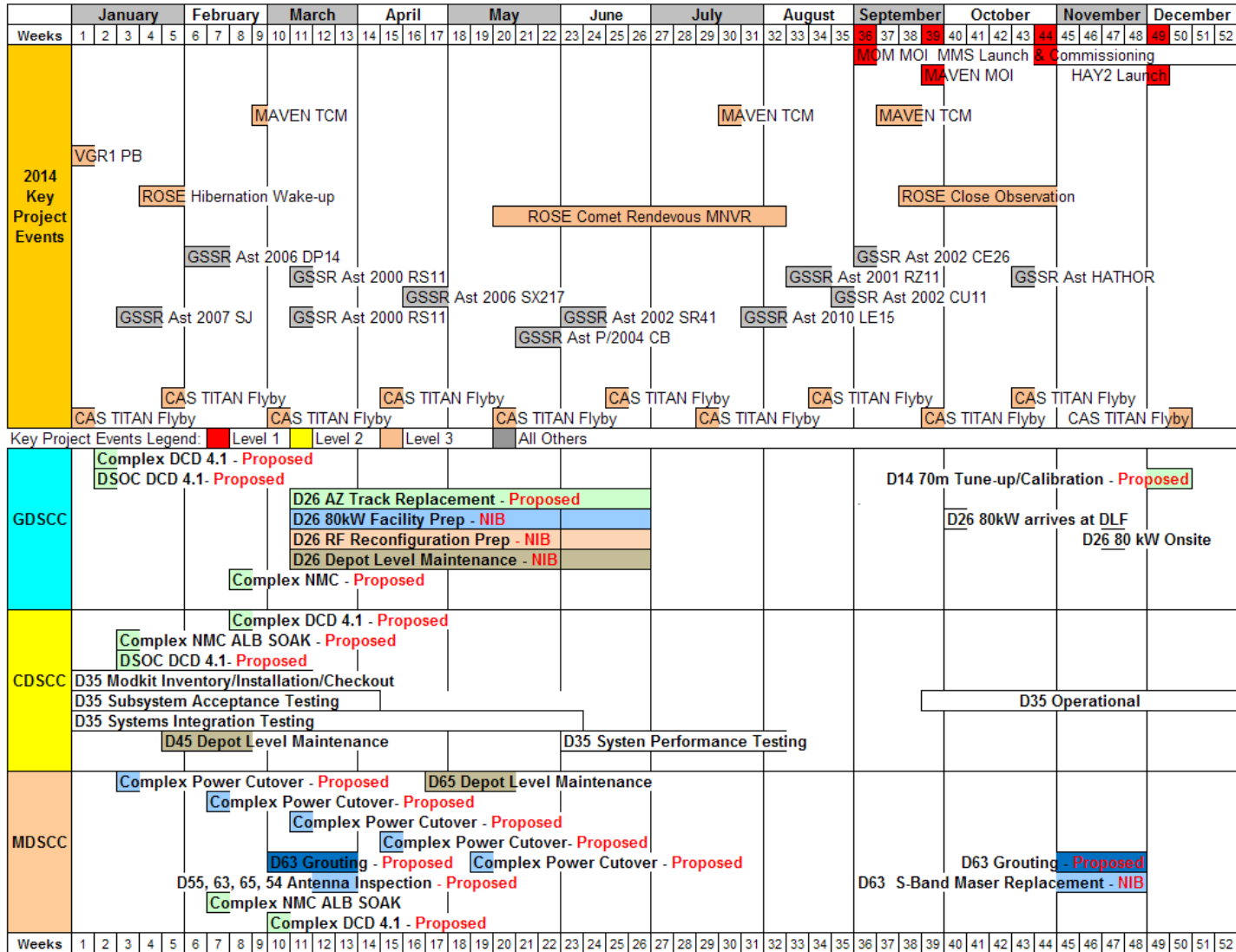


Jet Propulsion Laboratory  
California Institute of Technology

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



- 2014 -



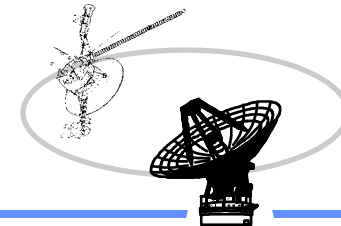
Revised: May 7, 2013



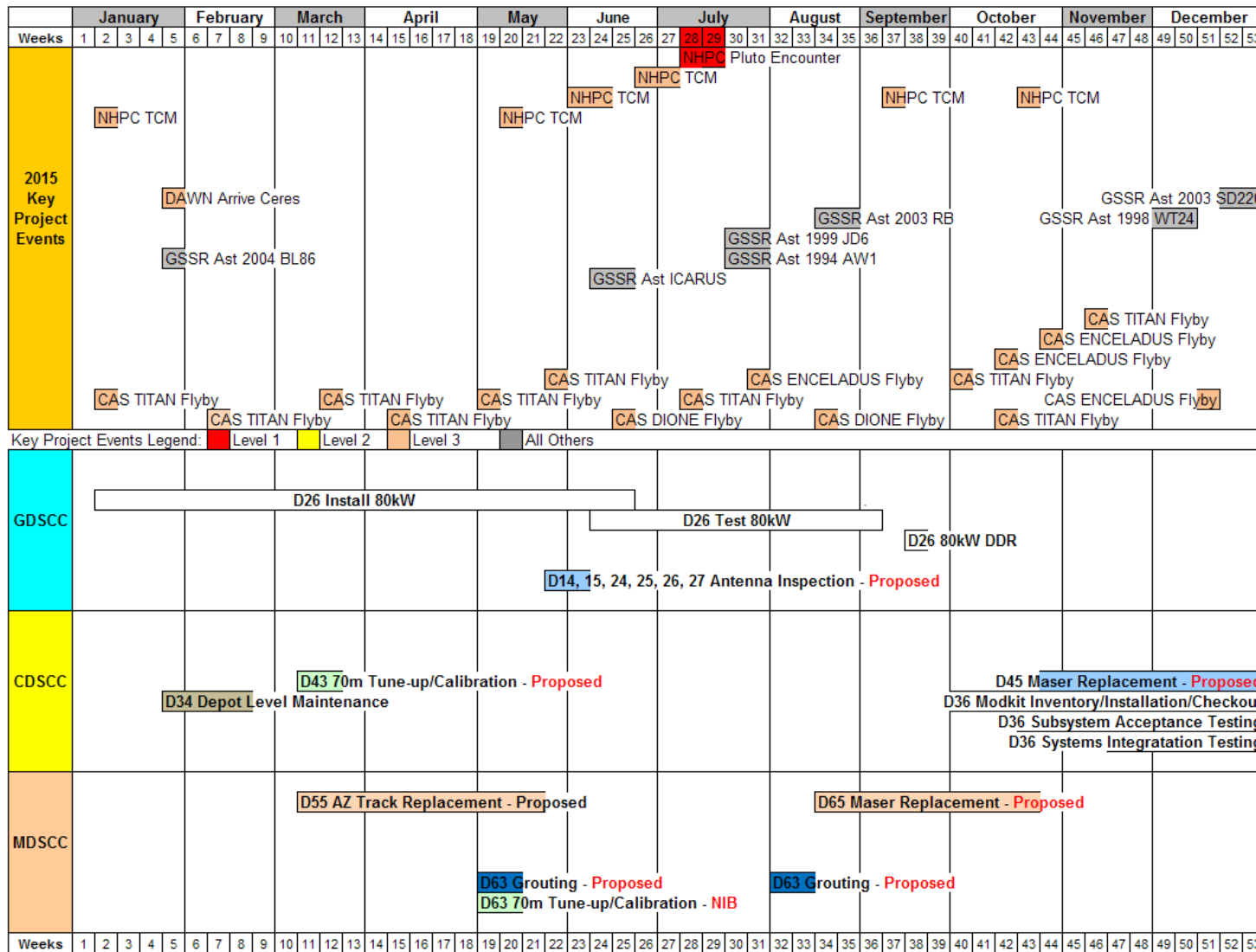
**JPL**

Jet Propulsion Laboratory  
California Institute of Technology

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



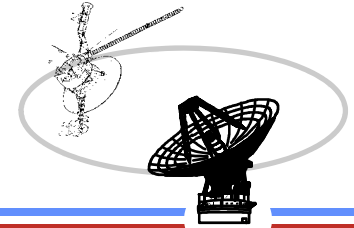
- 2015 -



Revised: April 25, 2013



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



Jet Propulsion Laboratory  
California Institute of Technology

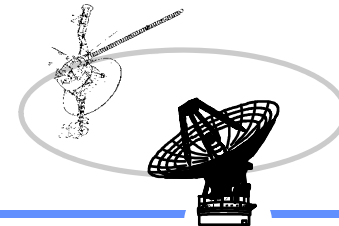
- 2016 -

	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									InSight Launch																JUNO JOI								ORX Launch				InSight MOI															
	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							
Key Project Events Legend: <span style="color: red;">■</span> Level 1 <span style="background-color: yellow;">■</span> Level 2 <span style="background-color: #ffe4c4;">■</span> Level 3 <span style="background-color: #d3d3d3;">■</span> All Others																																																				
GDSCC																																									D15 Transmitter Replacement - Proposed											
CDSCC	D45 Maser Replacement - Proposed				D34, 35, 43, 45 Antenna Inspection - Proposed																												SWUPS Installation - Proposed				SWUPS Installation - Proposed				SWUPS Installation - Proposed				D36 Operational							
	D36 Modkit Inventory/Installation/Checkout																	D36 Subsystem Acceptance Testing																	D36 System Performance Testing																	
	D36 Systems Integration Testing																																																			
MDSCC																		D63 Grouting - Proposed																	D63 Grouting - 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

Revised: April 25, 2013



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



Jet Propulsion Laboratory  
California Institute of Technology

- 2017 -

	January				February				March				April				May				June				July				August				September				October				November				December								
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	
2017 Key Project Events																																																					
<div style="display: flex; justify-content: center; gap: 10px; font-size: 10pt;"> <span style="background-color: red; width: 10px; height: 10px; display: inline-block;"></span> Level 1           <span style="background-color: yellow; width: 10px; height: 10px; display: inline-block;"></span> Level 2           <span style="background-color: orange; width: 10px; height: 10px; display: inline-block;"></span> Level 3           <span style="background-color: gray; width: 10px; height: 10px; display: inline-block;"></span> All Others         </div>																																																					
GDSCC	D15 Transmitter Replacement - Proposed																																																				
CDSCC	D45 Transmitter Replacement - Proposed																																																				
MDSCC	D63 HBA Upgrades & Life Extension - Proposed D65 Transmitter Replacement - Proposed D54,55,63, 65 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	

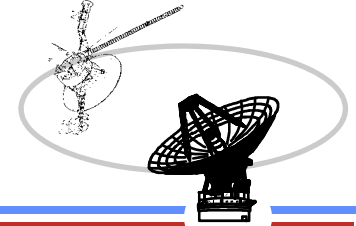
Revised: April 25, 2013





Jet Propulsion Laboratory  
California Institute of Technology

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



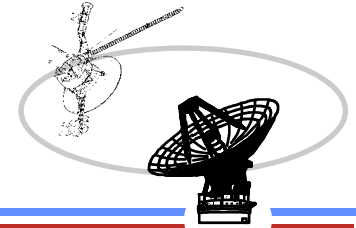
- 2018 -

Weeks	January				February				March				April				May				June				July				August				September				October				November				December														
	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							
2018 Key Project Events														Mars 2018 Launch and LEOP														SEP Launch and LEOP														JWST Launch and Commissioning																	
Key Project Events Legend:																																																											
GDSCC																																																											
CDSCC																																																											
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							

Revised: April 25, 2013



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



**Jet Propulsion Laboratory**  
California Institute of Technology

- 2019 -

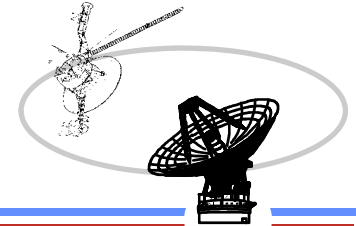
	January				February				March				April				May				June				July				August				September				October				November				December							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2019 Key Project Events					SPP Beacon				SPP Solar Enc				ORX Tag 1 Reh				Tag 1				SPP Solar Enc								SPP Venus Flyby																							
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																																																				
CDSCC																																																				
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

Revised: April 25, 2013



Jet Propulsion Laboratory  
California Institute of Technology

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



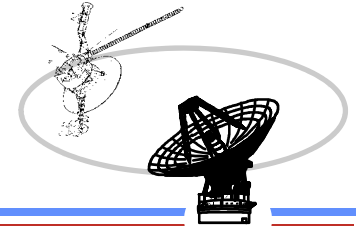
## DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	Depot Level Maintenance - NIB	02/04/2013 00:00	06/10/2013 07:00	126	06 - 24	35	161
DSS 24	AZ Track Replacement	04/29/2013 15:00	07/13/2013 00:00	74	18 - 28	119	194
DSS 24	Depot Level Maintenance - NIB	04/29/2013 15:00	07/13/2013 00:00	74	18 - 28	119	194
DSS 24	Gain Select Installation - NIB	04/29/2013 15:00	07/13/2013 00:00	74	18 - 28	119	194
SPC 10	G86 Complex Power Cutover	05/16/2013 12:30	05/17/2013 00:30	0	20 - 20	136	137
SPC 40	Powerhouse Commission	05/21/2013 00:25	05/21/2013 03:25	0	21 - 21	141	141
SPC 40	Powerhouse Commission	05/22/2013 21:30	05/23/2013 00:30	0	21 - 21	142	143
SPC 40	Powerhouse Commission	05/23/2013 21:00	05/24/2013 00:00	0	21 - 21	143	144
SPC 40	NMC & DCD Maintenance	05/24/2013 00:00	05/24/2013 00:30	0	21 - 21	144	144
SPC 40	Powerhouse Commission	05/27/2013 20:00	05/27/2013 23:00	0	22 - 22	147	147
SPC 10	G86 Complex Power Cutover	05/28/2013 13:00	05/29/2013 05:00	1	22 - 22	148	149
DSS 26	Gain Select Installation - NIB	05/28/2013 13:00	05/29/2013 05:00	1	22 - 22	148	149
SPC 60	NMC Automated Link Build	05/29/2013 09:00	05/29/2013 19:00	0	22 - 22	149	149
SPC 40	Powerhouse Commission	05/30/2013 02:45	05/30/2013 05:45	0	22 - 22	150	150
DSS 26	Gain Select Installation	05/31/2013 13:25	05/31/2013 22:50	0	22 - 22	151	151
SPC 10	Power Robustness	06/03/2013 15:00	06/04/2013 03:00	0	23 - 23	154	155
DSS 26	Gain Select Installation Eng Demo - NIB	06/04/2013 15:00	06/04/2013 18:05	0	23 - 23	155	155
SPC 10	Power Robustness	06/04/2013 15:00	06/05/2013 03:00	0	23 - 23	155	156
DSS 55	Depot Level Maintenance - NIB	06/10/2013 05:00	07/19/2013 19:10	40	24 - 29	161	200
DSS 55	Gain Select Installation - NIB	06/10/2013 05:00	07/19/2013 19:10	40	24 - 29	161	200
DSS 55	Antenna Controller Replacement	06/10/2013 05:00	07/26/2013 19:10	47	24 - 30	161	207
SPC 10	NMC Automated Link Build	06/11/2013 04:35	06/11/2013 10:35	0	24 - 24	162	162
SPC 40	Powerhouse Commission	06/17/2013 05:05	06/17/2013 08:05	0	25 - 25	168	168
SPC 40	Powerhouse Commission	06/18/2013 05:40	06/18/2013 08:40	0	25 - 25	169	169



Jet Propulsion Laboratory  
California Institute of Technology

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



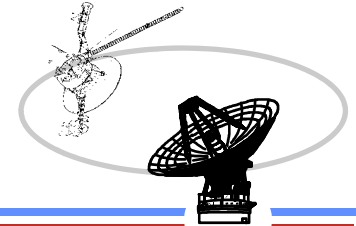
## DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 10	G86 Complex Power Cutover	06/19/2013 13:00	06/20/2013 05:00	1	25 - 25	170	171
SPC 40	Powerhouse Commission	06/20/2013 18:45	06/20/2013 21:45	0	25 - 25	171	171
DSS 63	HBA Prep AZ Runner Measurement	06/24/2013 22:00	06/25/2013 06:00	0	26 - 26	175	176
DSS 63	HBA Prep AZ Runner Measurement	06/25/2013 22:00	06/26/2013 06:00	0	26 - 26	176	177
DSS 34	Gain Select Installation - NIB	06/25/2013 22:00	06/26/2013 08:05	0	26 - 26	176	177
DSS 63	HBA Prep AZ Runner Measurement	06/26/2013 20:05	06/27/2013 04:05	0	26 - 26	177	178
SPC 60	NMC Automated Link Build	06/27/2013 22:25	06/28/2013 06:00	0	26 - 26	178	179
DSS 34	Gain Select Installation - NIB	07/02/2013 22:00	07/03/2013 07:40	0	27 - 27	183	184
DSS 34	Gain Select Installation - NIB	07/09/2013 22:00	07/10/2013 06:00	0	28 - 28	190	191
DSS 63	Depot Level Maintenance - NIB	07/15/2013 06:00	08/09/2013 17:00	25	29 - 32	196	221
DSS 63	Grouting	07/15/2013 06:00	08/09/2013 17:00	25	29 - 32	196	221
SPC 10	G86 Complex Power Cutover	07/16/2013 07:45	07/16/2013 23:45	1	29 - 29	197	197
SPC 40	NMC Automated Link Build	07/28/2013 14:45	07/28/2013 19:45	0	30 - 30	209	209
SPC 10	NMC Automated Link Build	08/05/2013 02:05	08/05/2013 09:45	0	32 - 32	217	217
SPC 10	G86 Complex Power Cutover	08/15/2013 22:50	08/16/2013 02:50	1	33 - 33	227	228
DSS 15	250W S-Band - NIB	08/19/2013 15:00	11/09/2013 00:00	81	34 - 45	231	313
DSS 15	Depot Level Maintenance - NIB	08/19/2013 15:00	11/09/2013 00:00	81	34 - 45	231	313
DSS 15	Gain Select Installation - NIB	08/19/2013 15:00	11/09/2013 00:00	81	34 - 45	231	313
DSS 15	Maser Replacement	08/19/2013 15:00	11/09/2013 00:00	81	34 - 45	231	313
SPC 10	G86 Complex Power Cutover	09/10/2013 13:00	09/11/2013 05:00	1	37 - 37	253	254
SPC 10	NMC Automated Link Build	09/19/2013 00:00	09/19/2013 08:00	0	38 - 38	262	262
SPC 10	NMC Automated Link Build - SOAK	10/17/2013 00:00	10/17/2013 08:00	0	42 - 42	290	290
SPC 60	Complex Power Cutover	12/09/2013 05:00	12/09/2013 17:00	0	50 - 50	343	343



Jet Propulsion Laboratory  
California Institute of Technology

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



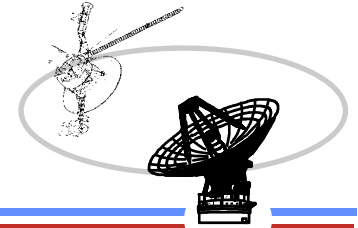
## DSN Downtime 2014

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
GCF 20	DCD 4.1 - Proposed	01/08/2014 23:10	01/09/2014 05:10	0	02 - 02	8	9
SPC 10	DCD 4.1 - Proposed	01/08/2014 23:10	01/09/2014 05:10	0	02 - 02	8	9
SPC 60	Complex Power Cutover - Proposed	01/14/2014 05:00	01/14/2014 17:00	0	03 - 03	14	14
GCF 20	DCD 4.1 - Proposed	01/15/2014 21:00	01/16/2014 05:00	0	03 - 03	15	16
SPC 40	NMC Automated Link Build - SOAK Proposed	01/15/2014 21:00	01/16/2014 05:00	0	03 - 03	15	16
DSS 45	Depot Level Maintenance	01/27/2014 21:00	02/21/2014 05:00	24	05 - 08	27	52
SPC 60	Complex Power Cutover - Proposed	02/14/2014 05:00	02/14/2014 17:00	0	07 - 07	45	45
SPC 60	NMC Automated Link Build - SOAK Proposed	02/16/2014 06:00	02/16/2014 14:00	0	07 - 07	47	47
SPC 10	NMC Automated Link Build - Proposed	02/18/2014 00:00	02/18/2014 08:00	0	08 - 08	49	49
SPC 40	DCD 4.1 - Proposed	02/20/2014 23:00	02/21/2014 05:00	0	08 - 08	51	52
DSS 63	Grouting - Proposed	03/03/2014 06:00	03/28/2014 17:00	25	10 - 13	62	87
SPC 60	DCD 4.1 - Proposed	03/06/2014 07:00	03/06/2014 13:00	0	10 - 10	65	65
SPC 60	Complex Power Cutover - Proposed	03/10/2014 05:00	03/10/2014 17:00	0	11 - 11	69	69
DSS 26	80 kW Facility Prep - NIB	03/10/2014 15:00	06/27/2014 00:00	108	11 - 26	69	178
DSS 26	AZ Track Replacement - Proposed	03/10/2014 15:00	06/27/2014 00:00	108	11 - 26	69	178
DSS 26	Depot Level Maintenance - NIB	03/10/2014 15:00	06/27/2014 00:00	108	11 - 26	69	178
DSS 26	RF Reconfiguration Prep - NIB	03/10/2014 15:00	06/27/2014 00:00	108	11 - 26	69	178
DSS 55	Antenna Inspection - Proposed	03/17/2014 07:00	03/17/2014 23:00	1	12 - 12	76	76
DSS 65	Antenna Inspection - Proposed	03/18/2014 07:00	03/18/2014 23:00	1	12 - 12	77	77
DSS 63	Antenna Inspection - Proposed	03/19/2014 07:00	03/19/2014 23:00	1	12 - 12	78	78
DSS 54	Antenna Inspection - Proposed	03/20/2014 07:00	03/20/2014 23:00	1	12 - 12	79	79
DSS 55	Antenna Inspection - Proposed	03/24/2014 07:00	03/24/2014 15:00	0	13 - 13	83	83
DSS 65	Antenna Inspection - Proposed	03/25/2014 07:00	03/25/2014 15:00	0	13 - 13	84	84
DSS 54	Antenna Inspection - Proposed	03/26/2014 07:00	03/26/2014 15:00	0	13 - 13	85	85





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



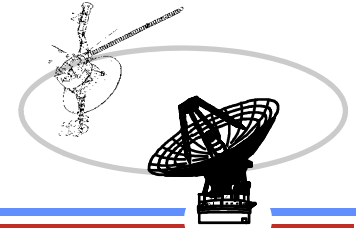
Jet Propulsion Laboratory  
California Institute of Technology

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 60	Complex Power Cutover - Proposed	04/08/2014 05:00	04/08/2014 17:00	0	15 - 15	98	98
DSS 65	Depot Level Maintenance	04/21/2014 07:00	05/16/2014 16:00	25	17 - 20	111	136
SPC 60	Complex Power Cutover - Proposed	05/09/2014 05:00	05/09/2014 17:00	0	19 - 19	129	129
DSS 63	Grouting - Proposed	11/03/2014 06:00	11/28/2014 17:00	25	45 - 48	307	332
DSS 63	S-Band Maser Replacement - NIB	11/03/2014 06:00	11/28/2014 17:00	25	45 - 48	307	332
DSS 14	70M Tune-up/Calibration - Proposed	12/01/2014 15:00	12/15/2014 00:00	13	49 - 51	335	349



Jet Propulsion Laboratory  
California Institute of Technology

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



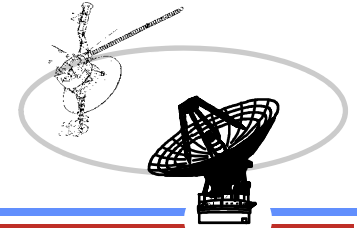
## DSN Downtime 2015

2015							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 34	Depot Level Maintenance	01/26/2015 21:00	02/20/2015 05:00	24	05 - 08	26	51
DSS 55	AZ Track Replacement - Proposed	03/09/2015 06:00	05/22/2015 17:00	74	11 - 21	68	142
DSS 43	70m Tune-up/Callibration - Proposed	03/09/2015 21:00	03/21/2015 06:00	11	11 - 21	68	80
DSS 63	70m Tune-up/Calibration - NIB	05/04/2015 06:00	05/17/2015 17:00	13	19 - 20	124	137
DSS 63	Grouting - Proposed	05/04/2015 06:00	05/17/2015 17:00	13	19 - 20	124	137
DSS 14	Antenna Inspection - Proposed	05/25/2015 15:00	05/26/2015 06:00	1	22 - 22	145	146
DSS 26	Antenna Inspection - Proposed	05/26/2015 15:00	05/27/2015 06:00	1	22 - 22	146	147
DSS 25	Antenna Inspection - Proposed	05/27/2015 15:00	05/28/2015 06:00	1	22 - 22	147	148
DSS 15	Antenna Inspection - Proposed	05/28/2015 15:00	05/29/2015 06:00	1	22 - 22	148	149
DSS 27	Antenna Inspection - Proposed	05/29/2015 15:00	05/30/2015 06:00	1	22 - 22	149	150
DSS 14	Antenna Inspection - Proposed	06/01/2015 15:00	06/02/2015 00:00	0	23 - 23	152	153
DSS 26	Antenna Inspection - Proposed	06/02/2015 15:00	06/03/2015 00:00	0	23 - 23	153	154
DSS 24	Antenna Inspection - Proposed	06/03/2015 15:00	06/04/2015 06:00	1	23 - 23	154	155
DSS 15	Antenna Inspection - Proposed	06/04/2015 15:00	06/05/2015 00:00	0	23 - 23	155	156
DSS 27	Antenna Inspection - Proposed	06/05/2015 15:00	06/05/2015 23:00	0	23 - 23	156	156
DSS 63	Grouting - Proposed	08/03/2015 05:00	08/16/2015 17:00	14	32 - 33	215	228
DSS 65	Maser Replacement - Proposed	08/17/2015 06:00	10/23/2015 17:00	67	34 - 43	229	296
DSS 45	Maser Replacement - Proposed	10/26/2015 21:00	01/29/2016 06:00	94	44 - 04	299	29



Jet Propulsion Laboratory  
California Institute of Technology

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



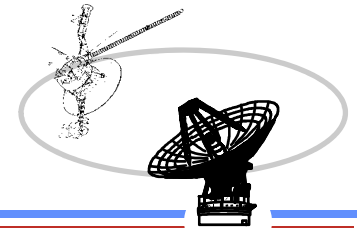
## DSN Downtime 2016

2016							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	Antenna Inspection - Proposed	01/04/2016 22:00	01/05/2016 14:00	1	01 - 01	4	5
DSS 34	Antenna Inspection - Proposed	01/05/2016 22:00	01/06/2016 14:00	1	01 - 01	5	6
DSS 45	Antenna Inspection - Proposed	01/06/2016 22:00	01/07/2016 14:00	1	01 - 01	6	7
DSS 35	Antenna Inspection - Proposed	01/07/2016 22:00	01/08/2016 14:00	1	01 - 01	7	8
DSS 43	Antenna Inspection - Proposed	01/11/2016 22:00	01/12/2016 06:00	0	02 - 02	11	12
DSS 34	Antenna Inspection - Proposed	01/12/2016 22:00	01/13/2016 06:00	0	02 - 02	12	13
DSS 63	Grouting - Proposed	05/02/2016 06:00	05/29/2016 17:00	27	18 - 21	123	150
DSS 15	Transmitter Replacement - Proposed	10/03/2016 15:00	01/13/2017 00:00	101	40 - 02	277	13
DSS 63	Grouting - Proposed	10/31/2016 06:00	11/25/2016 17:00	25	44 - 47	305	330
SPC 40	SWUPS Installation - Proposed	11/02/2016 21:00	11/03/2016 09:00	0	44 - 44	307	308
SPC 40	SWUPS Installation - Proposed	11/16/2016 21:00	11/17/2016 09:00	0	46 - 46	321	322
SPC 40	SWUPS Installation - Proposed	11/30/2016 21:00	12/01/2016 09:00	0	48 - 48	335	336



Jet Propulsion Laboratory  
California Institute of Technology

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



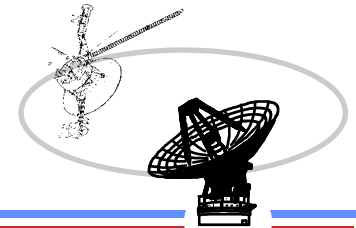
## DSN Downtime 2017

2017							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 45	Transmitter Replacement - Proposed	01/16/2017 21:00	04/08/2017 06:00	81	03 - 14	16	98
DSS 63	HBA Upgrade and Life Extension - Proposed	01/30/2017 06:00	09/08/2017 17:00	221	05 - 36	30	251
DSS 55	Antenna Inspection - Proposed	08/28/2017 07:00	08/28/2017 23:00	1	35 - 35	240	240
DSS 65	Antenna Inspection - Proposed	08/29/2017 07:00	08/29/2017 23:00	1	35 - 35	241	241
DSS 63	Antenna Inspection - Proposed	08/30/2017 07:00	08/30/2017 23:00	1	35 - 35	242	242
DSS 54	Antenna Inspection - Proposed	08/31/2017 07:00	08/31/2017 23:00	1	35 - 35	243	243
DSS 55	Antenna Inspection - Proposed	09/04/2017 07:00	09/04/2017 15:00	0	36 - 36	247	247
DSS 63	Antenna Inspection - Proposed	09/05/2017 07:00	09/05/2017 15:00	0	36 - 36	248	248
DSS 54	Antenna Inspection - Proposed	09/07/2017 07:00	09/07/2017 15:00	0	36 - 36	250	250
DSS 65	Transmitter Replacement - Proposed	09/11/2017 06:00	12/01/2017 17:00	81	37 - 48	254	335



Jet Propulsion Laboratory  
California Institute of Technology

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



## DSN Downtime 2018

2018							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 54	Pedestal Rehab	01/08/2018 06:00	09/28/2018 17:00	263	02 - 39	8	271
DSS 25	AZ Track Replacement - Proposed	01/29/2018 15:00	04/07/2018 00:00	67	05 - 14	29	97
DSS 25	XX/Ka Installation - NIB	01/29/2018 15:00	04/07/2018 00:00	67	05 - 14	29	97
DSS 14	Antenna Inspection - Proposed	04/08/2018 15:00	04/09/2018 06:00	1	14 - 15	98	99
DSS 26	Antenna Inspection - Proposed	04/09/2018 15:00	04/10/2018 06:00	1	15 - 15	99	100
DSS 25	Antenna Inspection - Proposed	04/10/2018 15:00	04/11/2018 06:00	1	15 - 15	100	101
DSS 15	Antenna Inspection - Proposed	04/11/2018 15:00	04/12/2018 06:00	1	15 - 15	101	102
DSS 27	Antenna Inspection - Proposed	04/12/2018 15:00	04/13/2018 06:00	1	15 - 15	102	103
DSS 14	Antenna Inspection - Proposed	04/15/2018 15:00	04/16/2018 00:00	0	15 - 16	105	106
DSS 26	Antenna Inspection - Proposed	04/16/2018 15:00	04/17/2018 00:00	0	16 - 16	106	107
DSS 24	Antenna Inspection - Proposed	04/17/2018 15:00	04/18/2018 06:00	1	16 - 16	107	108
DSS 27	Antenna Inspection - Proposed	04/18/2018 15:00	04/19/2018 00:00	0	16 - 16	108	109
DSS 24	Ka2 Tune-up - NIB	04/30/2018 15:00	05/13/2018 00:00	12	18 - 19	120	133
DSS 24	XX/Ka Installation - Proposed	04/30/2018 15:00	07/07/2018 00:00	67	18 - 27	120	188
DSS 34	Ka2 Tune-up - Proposed	06/04/2018 21:00	06/16/2018 06:00	11	23 - 24	155	167
DSS 54	Ka2 Tune-up - NIB	09/03/2018 06:00	09/17/2018 17:00	14	36 - 38	246	260

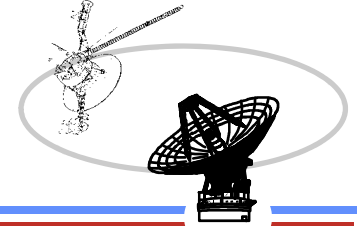




**JPL**

Jet Propulsion Laboratory  
California Institute of Technology

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



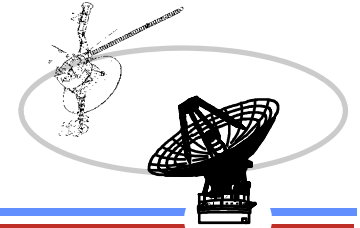
## Future assets new/upgrades

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



Jet Propulsion Laboratory  
California Institute of Technology

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



## Antenna Downtime Status and Forecast

### DSN Resource Implementation Planning Matrix by Complex

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
10	DSS-25	34B2	N/A	N/A	✓	✓	✓	✓	N/A	N/A	N/A
10	DSS-26	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	10/01/15
10	DSS-15	34HEF	✓	10/26/13	✓	✓	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-33*	34B2	N/A	N/A	10/01/19	10/01/19	10/01/19	N/A	N/A	N/A	N/A
40	DSS-34	34B1	✓	✓	✓	✓	✓	N/A	✓	✓	N/A
40	DSS-35*	34B2	N/A	N/A	09/29/14	09/29/14	09/29/14	N/A	N/A	N/A	N/A
40	DSS-36*	34B2	N/A	N/A	09/26/16	09/26/16	09/26/16	N/A	N/A	N/A	N/A
40	DSS-45	34HEF	✓	✓	✓	✓	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-54	34B1	✓	✓	✓	✓	✓	N/A	✓	✓	N/A
60	DSS-55	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	N/A
60	DSS-56	34B2	N/A	N/A	09/28/20	09/28/20	09/28/20	N/A	N/A	N/A	N/A
60	DSS-65	34HEF	✓	✓	✓	✓	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 = Not Applicable or Capability Not Planned

xx/xx/xx = Capability Date Recently Changed

As of: 4/4/2013

✓ ✓ ✓ = Capability Recently Exists

✓ = Capability Exists

\* = To Be Commissioned