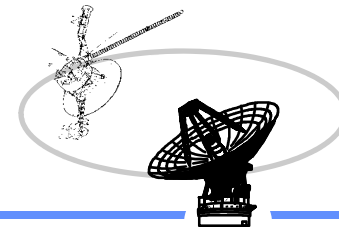


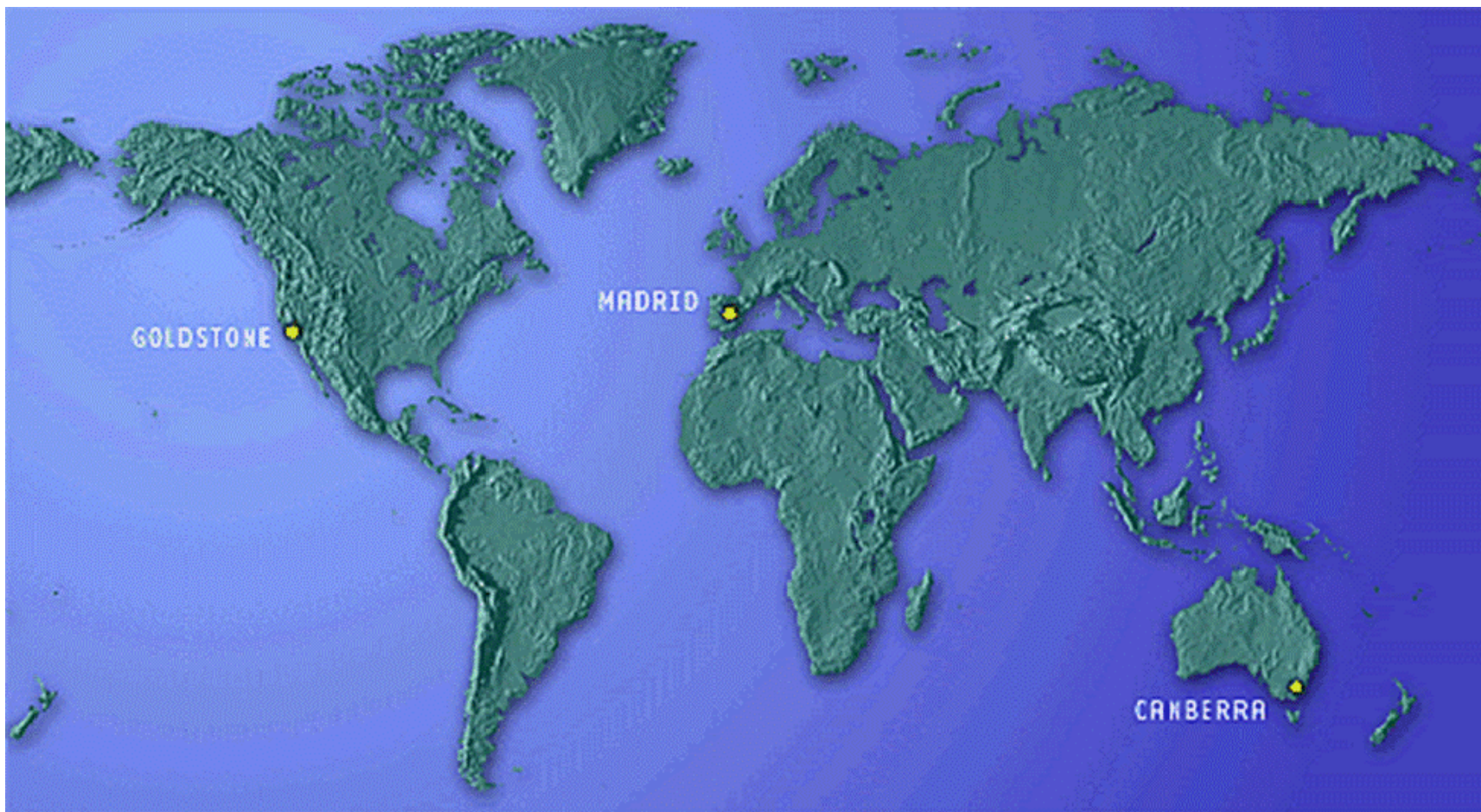


Interplanetary Network Directorate (IND)  
Deep Space Network (DSN)  
Resource Allocation Planning Service



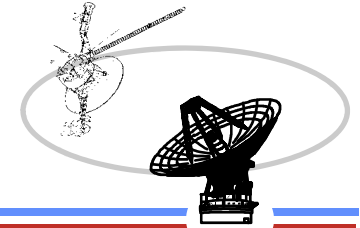
Jet Propulsion Laboratory  
California Institute of Technology

## DSN Antenna Downtime Status and Forecast





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



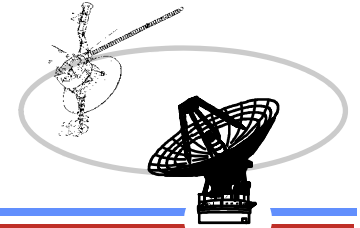
## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Complex downtime for G86 Power Cutover	GDSCC	Feb 2013	Sep 2013	08, 14, 17, 22, 25, 29, 33	Hill Reus, Richard Fleig, Tony Medeiros	This downtime task has been completed
Complex downtime for NMC Automated Link Build (ALB)	GDSCC	Mar 2013	Oct 2013	10, 12, 17, 24, 32, 38, 43,49	Jim Buckley, Dave Taylor, Shirley Cizmar	Request 6 – 8 hours each block – days/times flexible. Moved week 42 NMC ALB task to week 43 due to LADEE contention and viewperiod. An additional request for NMC ALB A/T was added in week 49. Weeks 38, 43, and 49 remain to be completed.
Complex downtime for NMC Automated Link Build and (ALB) SOAK	DSOC	Jan 2014	Jan 2014	02 & 03	Jim Buckley, Shirley Cizmar, Dave Taylor	6 –8 hours of network wide DSOC downtimes are proposed at GDSCC in week 2 and CDSCC in week 3. Request 6 – 8 hours per block at each complex Additional downtime Requested early 2014.
	GDSCC	Jan 2014	Feb 2014	03 & 08		
	MDSCC	Feb 2014	Feb 2014	07		
	CDSCC	Mar 2014	Mar 2014	10		
Complex downtime for Power House Commission	CDSCC	March 2014 March 2015	Oct 2014 March 2015	10, 12, 15, 25, 41 10,12	John Phillips, Rob Mehrkish, Dave Taylor	Prime shift hours are preferred. Week 10 downtime requires 12 hours. Downtimes in weeks 12, 15, 25, and 41 require 6 hours. Week 10 downtime requires 12 hours, week 12 downtime requires 6 hours.



Jet Propulsion Laboratory  
California Institute of Technology

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

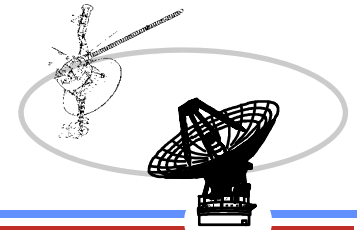


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
AZ Track Replacement	DSS-26	Mar 10, 2014	Aug 31, 2014	11 – 35	Pam Rothman, Asim Sehic	80kW Facility prep, RF Reconfig Prep and DLM are NIB. DSS-26 downtime has been extended through week 35  XX/Ka Installation is scheduled NIB during DSS-25 downtime is proposed
	DSS-55	Mar 9, 2015	Jun 26, 2015	11 – 21	Hal Ahlstrom	
	DSS-25	Jan 29, 2018	Apr 9, 2018	05 – 14	Asim Sehic	
Gain Select Installation	DSS-45	Jul 2013	Jul 2013	27 – 29	Chris Link, Juan Ocampo, Harout Matossian	Task and Demo pass completed.
	DSS-54	Sep 2013	Oct 2013	39 – 41		Demo pass is scheduled for 10/7
HBA Prep Metrology – AZ Runner Measurement	DSS-63	Jun 27 2013	June 27 2013	26	Tim Sink	Completed
		Feb 4 2014	Feb 7 2014	06		Requested 4 additional nights 12 hours each Jan/Feb 2014 timeframe



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



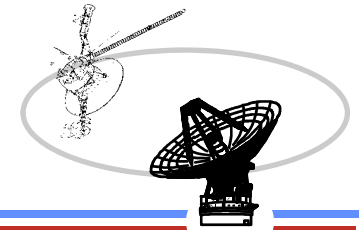
## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Grouting	DSS-63	2013	2013	29 – 32	Pam Rothman, Dave Taylor, David Munoz Mochon, Bernardo Lopez, Asim Sehic	<b>DSS-63 Grouting Completed for 2013</b> An additional 2 weeks added to first grouting in 2014. 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 <b>Have the option of two 5 weeks downtimes in 2017, could removed HBA Upgrade or take a single 10 weeks downtime in 2017. Need at least 8 weeks in 2017 if the APCA is NIB to downtime</b>
		2014	2014	10 – 15		
		2014	2014	44 – 48		
		2015	2015	19 & 20		
		2015	2015	32 & 33		
		2016	2016	14 – 17		
		2016	2016	40 – 43		
Heat Exchanger Update Install	DSS-26	Jul 29, 2013	Aug 2, 2013	31	Harout Matossian	<b>DSS-25 and 26 heat exchanger tasks have been completed</b>  <b>Looking for 32 hours for heat exchanger swap at DSS-26 between September 10 and October 4. Supports can be scheduled D/L during swap</b>
	DSS-25	Aug 12, 2013	Aug 16, 2013	33		
	DSS-26	Sep 2013	Sep 2013	37		
HEF Maser Replacement	DSS-15	Sep 9, 2013	Dec 7, 2013	37 – 51	Anna Fan, Chris Link	Replacing Maser LNA with HEMT LNA, 250W S-Band & Depot Level Maintenance NIB Added Gain Select Installation NIB (BEB) Extended an additional 2 weeks through week 51. <b>Demo tracks planned for week 48 because of project activities for Comet ISON Observing Campaign.</b>





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

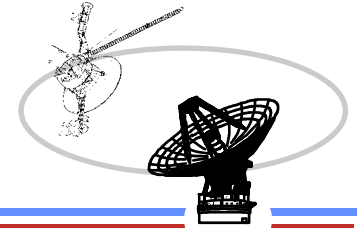


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Complex downtime for SPC-60 Power Cutover	MDSCC	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.
HBA Digital Cam Survey	DSS-63	Jan 2014	Jan 2014		Bernardo Lopez, Asim Sehic	Request 2 night time 10 – 12 hour blocks for calibration of the current “10 degree bar” and “3.33 degree bar” data prior to 2014 Grouting
DSOC & DCD 4.1 software	GDSCC	Jan 8, 2014	Jan 9, 2014	02	Anna Fan, Sheila Garrett	The DSOC tasks require 6-8 hours of network wide downtime in weeks 2 and 3 and have been incorporated into the NMC ALB SOAK task
	DCD	Jan 2014	Feb 2014	08		
	CDSCC	Jan 2014	Feb 2014	08		
	DCD	Jan 2014	Feb 2014	08		
Depot Level Maintenance	MDSCC	Mar 6, 2014	Mar 6, 2014	10		
	DSS-35	Jan, 2014	Mar, 2014	01 – 11	John Phillips for CDSCC	DSS-35 Modkit installation during Jan – Mar time frame
	DSS-45	Feb 2014	Feb 2014	07 – 09		DSS-43 and DSS-45 DLM were swapped due to CDSCC Powerhouse Complex
	DSS-43	April 2014	May 2014	16 – 18	David Munoz	DSS-43 2400 Vac Alternate Bus Installation - NIB
	DSS-65	May 2014	May 2014	20 – 22	Mochon for MDSCC	DSS-45 and DSS-65 re-scheduled to occur after DSS-63 grouting
	DSS-34	Jan 2015	Feb 2015	05 – 08		



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

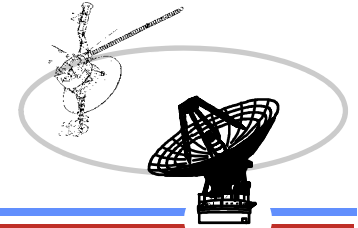


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Lead Abatement Replace Sub Reflector Cable	DSS-14	Feb 2014	Feb 2014	07	Erik Holmgren	Request 5 days to perform lead abatement on handrails and to replace a sub reflector cable. Tracking available during night hours.
Antenna Inspections	MDSCC	Mar 2014 Aug 2017	Mar 2014 Aug 2017	12 & 13 35 & 36	Anna Fan, Neil Bucknam	These are proposed dates at this time
Elevation Cable Wrap	DSS-15	July 2014	Aug 2014	29 - 31	Pete Hames	Three weeks of downtime was requested during August Downtime meeting
70M Tune-up and calibration	DSS-14 DSS-43	Dec 1, 2014 Mar 9, 2015	Dec 15, 2014 Mar 21, 2015	49 & 50 11 & 12	David Allen John Phillips	These are proposed dates at this time and are In preparation for NHPC Pluto Encounter
Antenna Inspections	GDSCC	Aug, 2015  Apr, 2018	Aug, 2015  Apr, 2018	13 & 14  15 & 16	Anna Fan, Neil Bucknam, Daniel Olson	2015 Antenna Inspections moved to March - April timeframe,



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



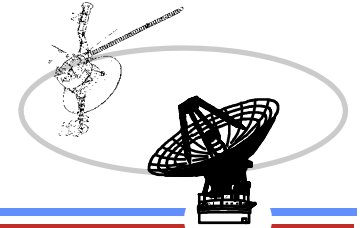
## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Antenna Inspections	CDSCC	Jan 2016	Jan 2016	1 & 2	Anna Fan, Dave Taylor, Neil Bucknam, Daniel Olson	2016 – During DSS-45 Maser Replacement
X/X/Ka Ka U/L Installation	DSS-25	Jan, 2016	April, 2016	01 – 13	Wendy Hodgkin	Downtime requested at July downtime meeting. <b>Needs to be done prior to JNO JOI campaign</b>
APCA	DSS-14 DSS-43	Nov, 2016 Sept, 2017	Jan, 2017 Nov, 2017	44 – 04 37 - 48	Anna Fan, Barzia Tehrani	Downtime requested at July downtime meeting <b>These could move based on DSS-63 HBA downtime changes</b>
SWUPS Installation	CDSCC	Nov, 2016 Nov 2016 Nov, 2016	Nov, 2016 Nov 2016 Nov, 2016	44 46 48	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.
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 APCA and Maser Replacement are NIB Tentative date, may move to 2018 <b>This is pending a decision of the extension of the grouting blocks to 5 weeks. APCA could be scheduled standalone, but will require at least 6 weeks.</b>



Jet Propulsion Laboratory  
California Institute of Technology

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



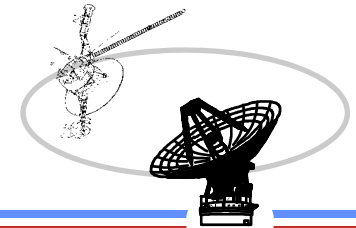
Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Pedestal Rehab	DSS-54	Jan 8, 2018	Sep 28, 2018	02 – 39	Ben Saldua	This is proposed at this time This date may change based on need Ka2 Tune-up is NIB weeks 36 & 37 and scheduled prior to JWST launch in 2018
XX/Ka Installation	DSS-24	Apr 30, 2018	Jul 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, If JWST launch slips, tune-ups may be slipped also. Budget/resource driven
Ka2 Tune-up	DSS-34	May 28, 2018	Jun 4, 2018	22 & 23		



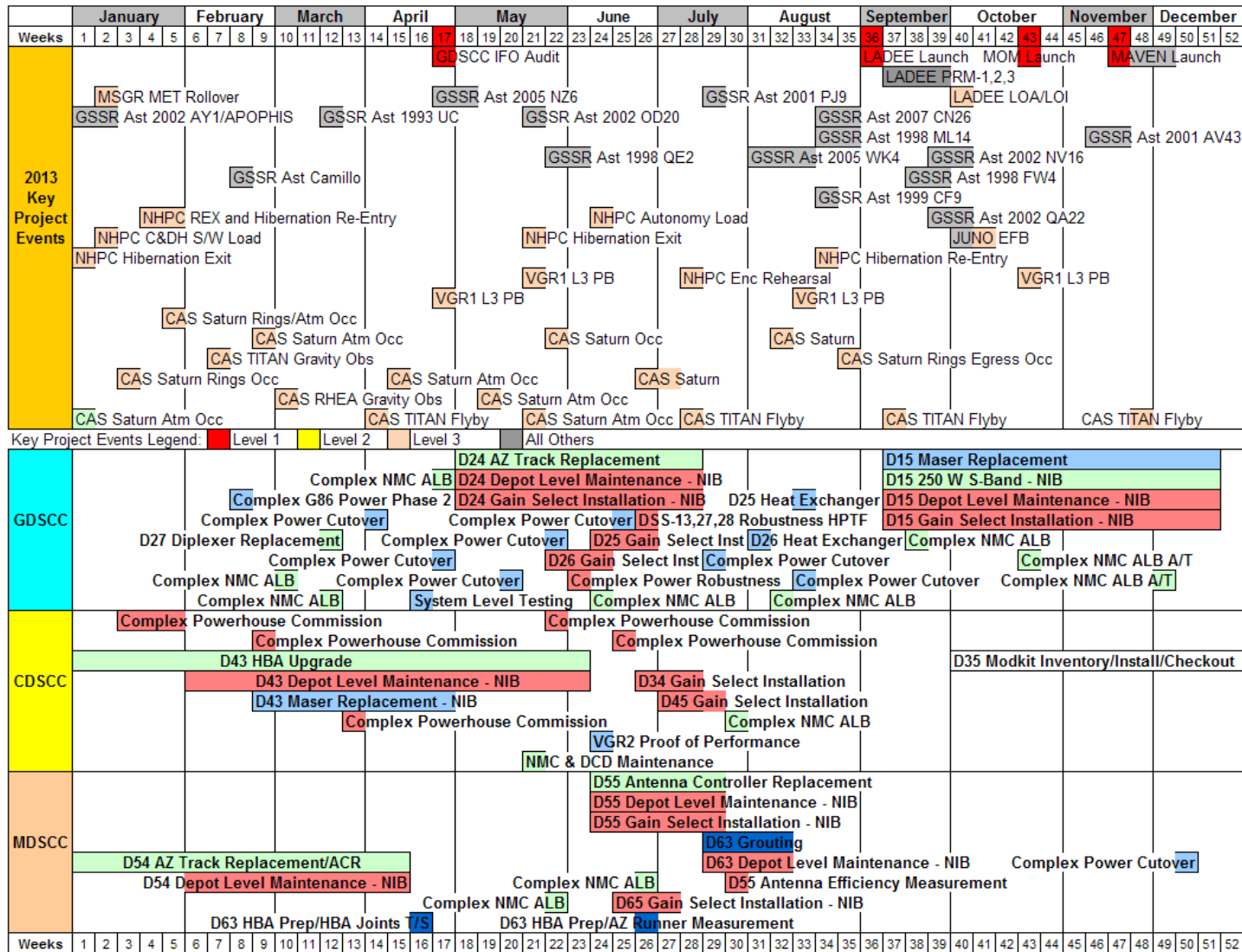


Jet Propulsion Laboratory  
California Institute of Technology

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



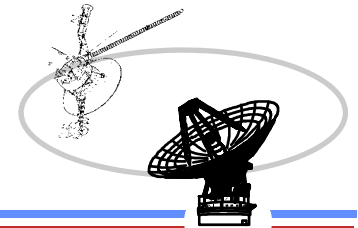
- 2013 -



Revised: August 1, 2013

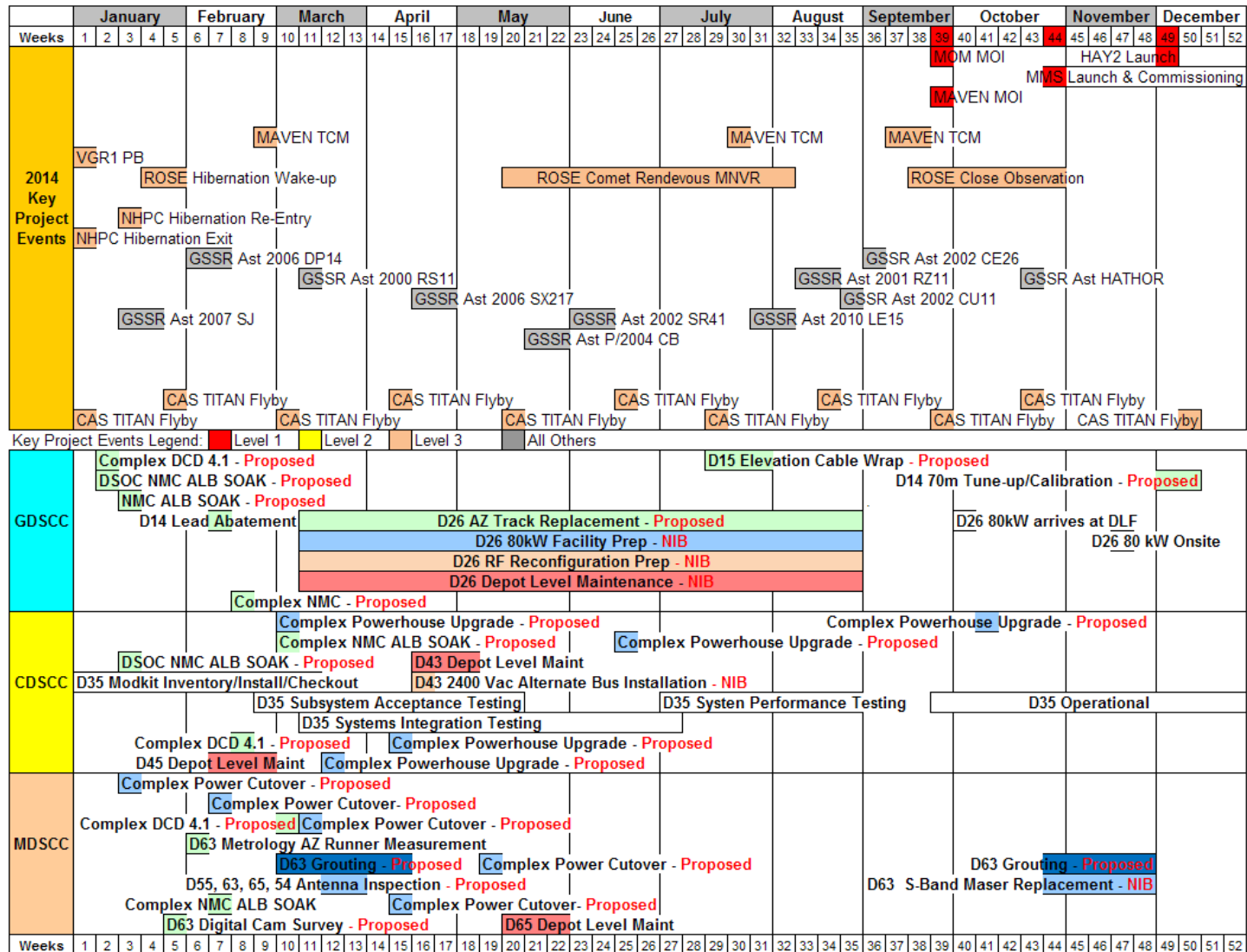


# Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service



**Jet Propulsion Laboratory**  
California Institute of Technology

**- 2014 -**

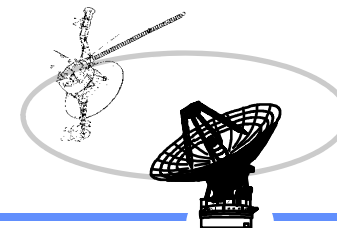


Revised: August 30, 2013

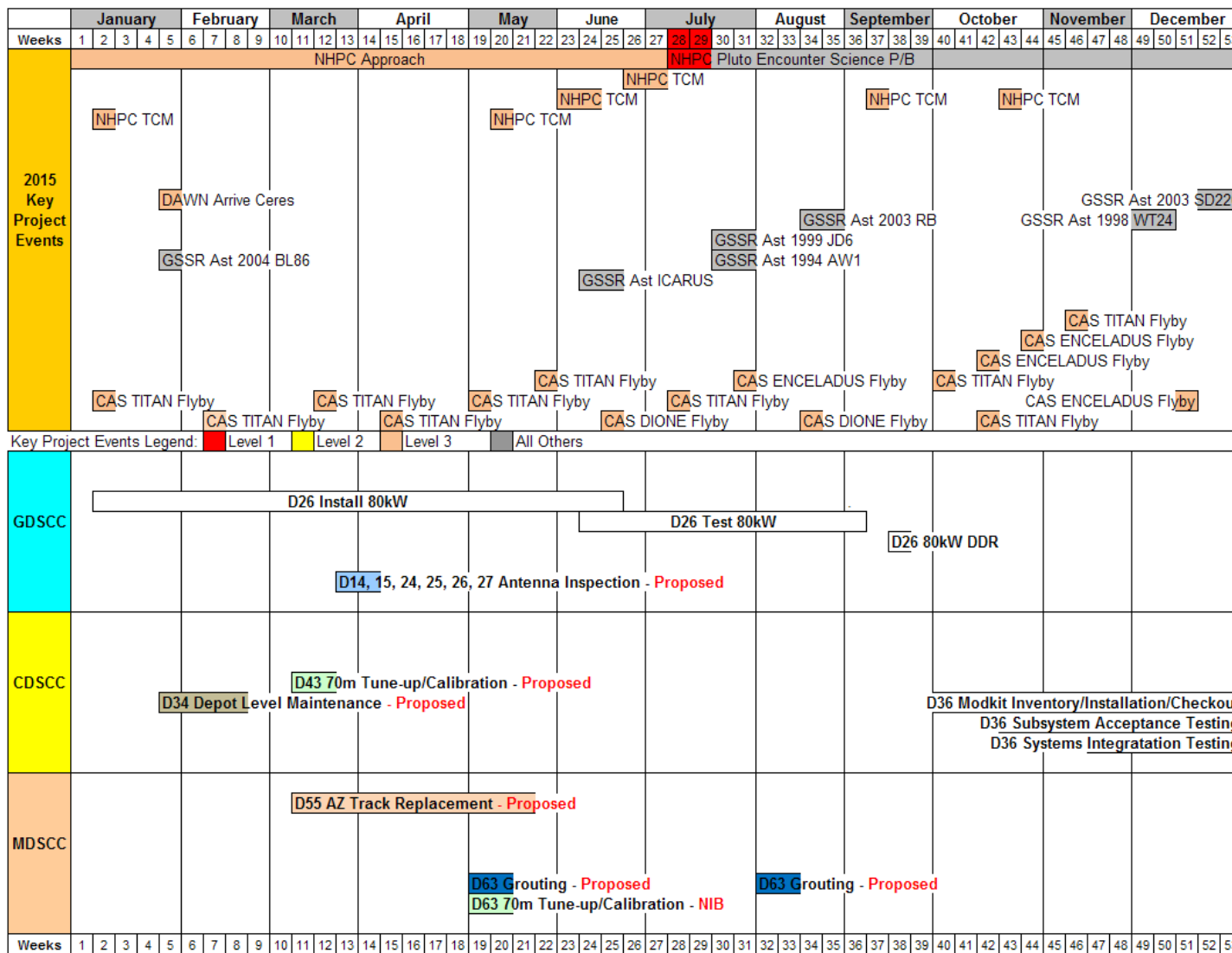


Jet Propulsion Laboratory  
California Institute of Technology

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



- 2015 -



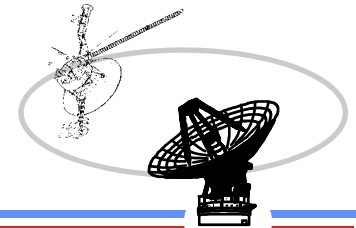
Revised: July 26, 2013



**JPL**

Jet Propulsion Laboratory  
California Institute of Technology

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



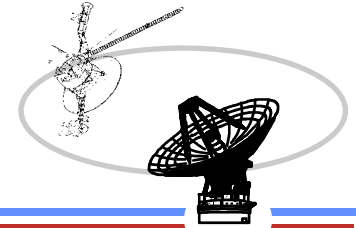
- 2016 -

	January				February				March				April				May				June				July				August				September				October				November				December							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2016 Key Project Events	ExoMars Launch								InSight Launch												JUNO JOI								ORX Launch				InSight EDL																			
	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="color:yellow">■</span> Level 2 <span style="color:orange">■</span> Level 3 <span style="color:grey">■</span> All Others																																																				
GDSCC	D25 X/Ka/Ka U/L Installation - Proposed																																	D14 APCA - Proposed																		
CDSCC	D34,35,43,45 Antenna Inspection - Proposed																																	SWUPS Installation - Proposed																		
	D36 Modkit Inventory/Installation/Checkout																																	SWUPS Installation - Proposed																		
	D36 Subsystem Acceptance Testing																																	SWUPS Installation - Proposed																		
	D36 Systems Integration Testing																																	D36 Operational																		
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: August 30, 2013



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



Jet Propulsion Laboratory  
California Institute of Technology

- 2017 -

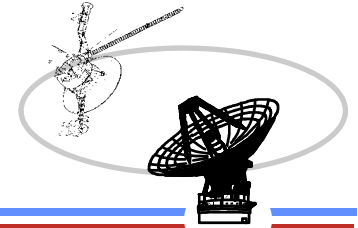
	January				February				March				April				May				June				July				August				September				October				November				December							
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2017 Key Project Events																																																				
CAS TITAN Flyby																																																				
Key Project Events Legend: <span style="color: red;">■</span> Level 1 <span style="background-color: yellow;">■</span> Level 2 <span style="background-color: orange;">■</span> Level 3 <span style="background-color: gray;">■</span> All Others																																																				
GDSCC	D14 APCA - Proposed																																																			
CDSCC	D43 APCA - Proposed																																																			
MDSCC	D63 HBA Upgrades & Life Extension - Proposed																																																			
	D63 APCA - NIB																																																			
	D54,55,63, 65 Antenna Inspection - Proposed																																																			

Revised: July 31, 2013





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



**Jet Propulsion Laboratory**  
California Institute of Technology

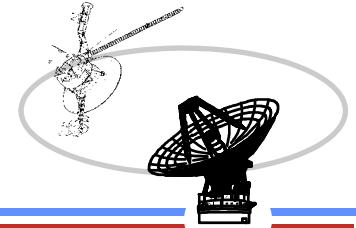
**- 2018 -**

	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				
2018 Key Project Events															Mars 2018 Launch and LEOP														SP Launch and LEOP														JWST Launch and Commissioning													
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: grey;">■</span> All Others																																																								
GDSCC															D25 AZ Track Replacement - Proposed				D25 XX/Ka Installation - NIB				D24 XX/Ka Installation - Proposed				D24 Ka2 Tune-up NIB				D14, 15, 25, 26, 24, 15, 27 Antenna Inspection - Proposed																									
CDSCC																							D34 Ka2 Tune-up																																	
MDSCC	D54 Pedestal Rehab - Proposed																																																							
Weeks																																					D54 Ka2 Tune-up NIB																			

Revised: April 25, 2013



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



Jet Propulsion Laboratory  
California Institute of Technology

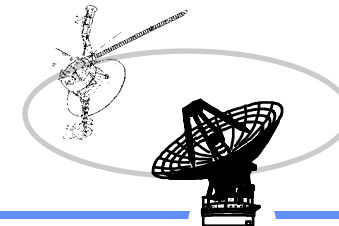
- 2019 -

	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: grey;">■</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



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



Jet Propulsion Laboratory  
 California Institute of Technology

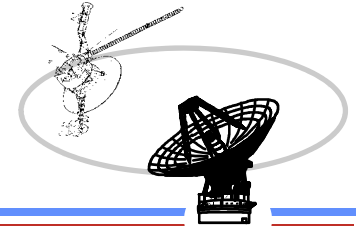
## DSN Downtime 2013

2013							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 15	250W S-Band - NIB	09/09/2013 15:00	12/21/2013 00:00	102	37 - 51	252	355
DSS 15	Depot Level Maintenance - NIB	09/09/2013 15:00	12/21/2013 00:00	102	37 - 51	252	355
DSS 15	Gain Select Installation - NIB	09/09/2013 15:00	12/21/2013 00:00	102	37 - 51	252	355
DSS 15	Maser Replacement	09/09/2013 15:00	12/21/2013 00:00	102	37 - 51	252	355
SPC 10	NMC Automated Link Build	09/17/2013 02:05	09/17/2013 09:50	0	38 - 38	260	260
DSS 54	Gain Select Installation - NIB	09/27/2013 06:00	09/27/2013 14:05	0	39 - 39	270	270
DSS 54	Gain Select Installation - NIB	10/04/2013 06:00	10/04/2013 14:30	0	40 - 40	277	277
DSS 54	Gain Select Installation - NIB	10/11/2013 06:15	10/11/2013 14:15	0	41 - 41	284	284
SPC 10	NMC Automated Link Build - Acceptance testing	10/25/2013 00:00	10/25/2013 08:00	0	43 - 43	298	298
SPC 10	NMC Automated Link Build - Acceptance testing	12/03/2013 00:00	12/03/2013 08:00	0	49 - 49	337	337
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



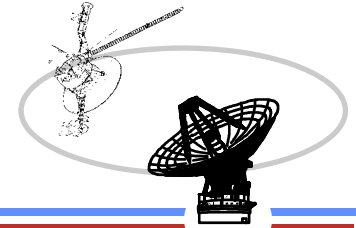
## DSN Downtime 2014

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 10	DCD 4.1 - Proposed	01/08/2014 23:10	01/09/2014 05:10	0	02 - 02	8	9
GCF 20	DSOC NMC ALB SOAK - 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
SPC 10	NMC ALB SOAK - Proposed	01/15/2014 23:10	01/16/2014 05:10	0	03 - 03	15	16
GCF 20	DSOC NMC ALB SOAK - Proposed	01/16/2014 23:10	01/17/2014 05:10	0	03 - 05	16	17
DSS 63	Digital Cam Survey - Proposed	01/29/2014 18:00	01/30/2014 06:00	0	05 - 05	29	30
DSS 63	Digital Cam Survey - Proposed	01/30/2014 18:00	01/31/2014 06:00	0	05 - 05	30	31
DSS 63	Metrology AZ Runner Measurement - Proposed	02/03/2014 19:00	02/04/2014 07:00	0	06 - 06	34	35
DSS 63	Metrology AZ Runner Measurement - Proposed	02/04/2014 19:00	02/05/2014 07:00	0	06 - 06	35	36
DSS 63	Metrology AZ Runner Measurement - Proposed	02/05/2014 19:00	02/06/2014 07:00	0	06 - 06	36	37
DSS 63	Metrology AZ Runner Measurement - Proposed	02/06/2014 19:00	02/07/2014 07:00	0	06 - 06	37	38
DSS 14	Lead Abatement - Proposed	02/10/2014 14:00	02/15/2014 02:00	4	07 - 07	41	46
DSS 45	Depot Level Maintenance - Proposed	02/10/2014 21:00	02/28/2014 06:00	17	07 - 09	41	59
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	04/11/2014 17:00	39	10 - 15	62	101
SPC 40	NMC Automated Link Build - SOAK Proposed	03/05/2014 21:00	03/06/2014 05:00	0	10 - 10	64	65
SPC 60	DCD 4.1 - Proposed	03/06/2014 07:00	03/06/2014 13:00	0	10 - 10	65	65
SPC 40	Complex Powerhouse Upgrade - Proposed	03/06/2014 19:00	03/07/2014 07:00	0	10 - 10	65	66
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	09/01/2014 00:00	174	11 - 36	69	244
DSS 26	AZ Track Replacement - Proposed	03/10/2014 15:00	09/01/2014 00:00	174	11 - 36	69	244



Jet Propulsion Laboratory  
California Institute of Technology

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



## DSN Downtime 2014

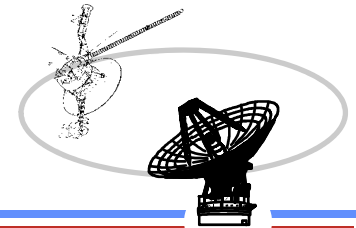
2014 (cont.)							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 26	Depot Level Maintenance - NIB	03/10/2014 15:00	09/01/2014 00:00	174	11 - 36	69	244
DSS 26	RF Reconfiguration Prep - NIB	03/10/2014 15:00	09/01/2014 00:00	174	11 - 36	69	244
DSS 55	Antenna Inspection - Proposed	03/17/2014 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
SPC 40	Complex Powerhouse Upgrade - Proposed	03/21/2014 21:00	03/22/2014 03:00	0	12 - 12	80	81
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
SPC 60	Complex Power Cutover - Proposed	04/08/2014 05:00	04/08/2014 17:00	0	15 - 15	98	98
SPC 40	Complex Powerhouse Upgrade - Proposed	04/11/2014 22:00	04/12/2014 04:00	0	15 - 15	101	102
DSS 43	Depot Level Maintenance - Proposed	04/14/2014 21:00	05/02/2014 05:00	17	16 - 18	104	122
DSS 43	2400 Vac Alternate Bus Installation - NIB	04/15/2014 14:00	04/16/2014 02:00	0	16 - 16	105	106
SPC 60	Complex Power Cutover - Proposed	05/09/2014 05:00	05/09/2014 17:00	0	19 - 19	129	129
DSS 65	Depot Level Maintenance - Proposed	05/12/2014 07:00	05/30/2014 16:00	18	20 - 22	132	150
SPC 40	Complex Powerhouse Upgrade - Proposed	06/18/2014 22:00	06/19/2014 04:00	0	25 - 25	169	170
DSS 15	Elevation Cable Wrap - Proposed	07/14/2014 15:00	08/01/2014 00:00	17	29 - 31	195	213
SPC 40	Complex Powerhouse Upgrade - Proposed	10/07/2014 21:00	10/08/2014 03:00	0	41 - 41	280	281
SPC 40	Complex Powerhouse Upgrade - Proposed	10/08/2014 21:00	10/09/2014 03:00	0	41 - 41	281	282
DSS 63	Grouting - Proposed	10/27/2014 06:00	11/28/2014 17:00	32	44 - 48	300	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



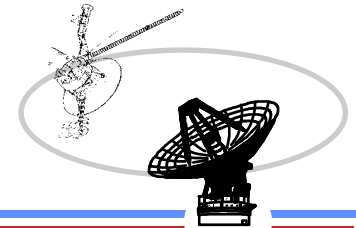
## DSN Downtime 2015

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
SPC 40	Complex Powerhouse Upgrade - Proposed	03/04/2015 19:00	03/05/2015 07:00	0	10 - 10	63	64
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/Calibration - Proposed	03/09/2015 21:00	03/21/2015 06:00	11	11 - 12	68	80
SPC 40	Complex Powerhouse Upgrade - Proposed	03/19/2015 21:00	03/20/2015 03:00	0	12 - 12	78	79
DSS 14	Antenna Inspection - Proposed	03/23/2015 15:00	03/24/2015 03:00	0	13 - 13	82	83
DSS 26	Antenna Inspection - Proposed	03/24/2015 15:00	03/25/2015 03:00	0	13 - 13	83	84
DSS 24	Antenna Inspection - Proposed	03/25/2015 15:00	03/26/2015 03:00	0	13 - 13	84	85
DSS 25	Antenna Inspection - Proposed	03/25/2015 15:00	03/26/2015 03:00	0	13 - 13	84	85
DSS 15	Antenna Inspection - Proposed	03/26/2015 15:00	03/27/2015 03:00	0	13 - 13	85	86
DSS 14	Antenna Inspection - Proposed	03/27/2015 15:00	03/28/2015 03:00	0	13 - 13	86	87
DSS 27	Antenna Inspection - Proposed	03/27/2015 15:00	03/28/2015 03:00	0	13 - 13	86	87
DSS 26	Antenna Inspection - Proposed	03/31/2015 15:00	04/01/2015 03:00	0	14 - 14	90	91
DSS 25	Antenna Inspection - Proposed	04/01/2015 15:00	04/02/2015 03:00	0	14 - 14	91	92
DSS 24	Antenna Inspection - Proposed	04/01/2015 15:00	04/02/2015 03:00	0	14 - 14	91	92
DSS 15	Antenna Inspection - Proposed	04/02/2015 15:00	04/03/2015 03:00	0	14 - 14	92	93
DSS 27	Antenna Inspection - Proposed	04/03/2015 15:00	04/04/2015 03:00	0	14 - 14	93	94
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 63	Grouting - Proposed	08/03/2015 05:00	08/16/2015 17:00	14	32 - 33	215	228



Jet Propulsion Laboratory  
California Institute of Technology

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



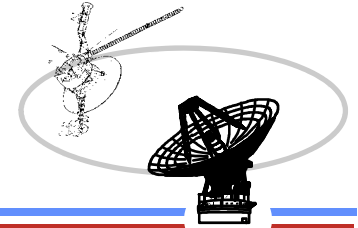
## DSN Downtime 2016

2016							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 25	X/XKa Ka U/L - Proposed	01/04/2016 15:00	04/01/2016 00:00	87	01 - 13	4	92
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	04/04/2016 06:00	04/29/2016 17:00	25	14 - 17	95	120
DSS 63	Grouting - Proposed	10/03/2016 06:00	10/28/2016 17:00	25	40 - 43	277	302
DSS 14	APCA - Proposed	10/31/2016 15:00	01/27/2017 00:00	87	44 - 04	305	27
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

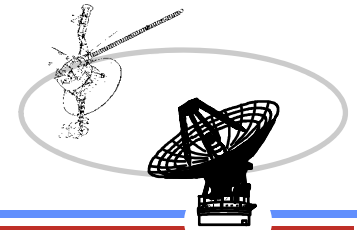


## DSN Downtime 2017

2017							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 63	APCA - NIB	01/30/2017 06:00	09/08/2017 17:00	221	05 - 36	30	251
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 43	APCA - Proposed	09/11/2017 21:00	12/01/2017 06:00	80	37 - 48	254	335



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



Jet Propulsion Laboratory  
 California Institute of Technology

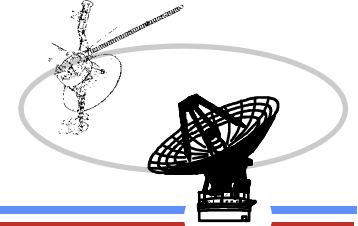
## DSN Downtime 2018

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 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	05/28/2018 21:00	06/04/2018 06:00	6	22 - 23	148	155
DSS 54	Ka2 Tune-up - NIB	09/03/2018 06:00	09/17/2018 17:00	14	36 - 38	246	260



Jet Propulsion Laboratory  
California Institute of Technology

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



## Future assets new/upgrades

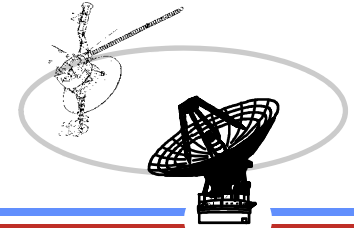
- DSS-35 Installation and Operational 2013 – 2014
  - Modkit Installation October 1, 2013 – March 14, 2014 weeks 40 – 11
  - Acceptance Testing February 25, 2014 – May 12, 2013, weeks 09 – 20
  - System Integration Testing March 14, 2014 – June 30, 2014 weeks 11 – 27
  - Operations Systems Performance Testing June 30, 2014 – August 28, 2014, weeks 27 – 35
  - 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	✓	12/07/13	✓	✓	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: 7/10/2013

✓ ✓ ✓ = Capability Recently Exists

✓ = Capability Exists

\* = To Be Commissioned

# = To Be De-Commissioned - 12/8/2013