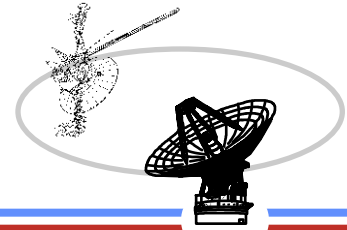




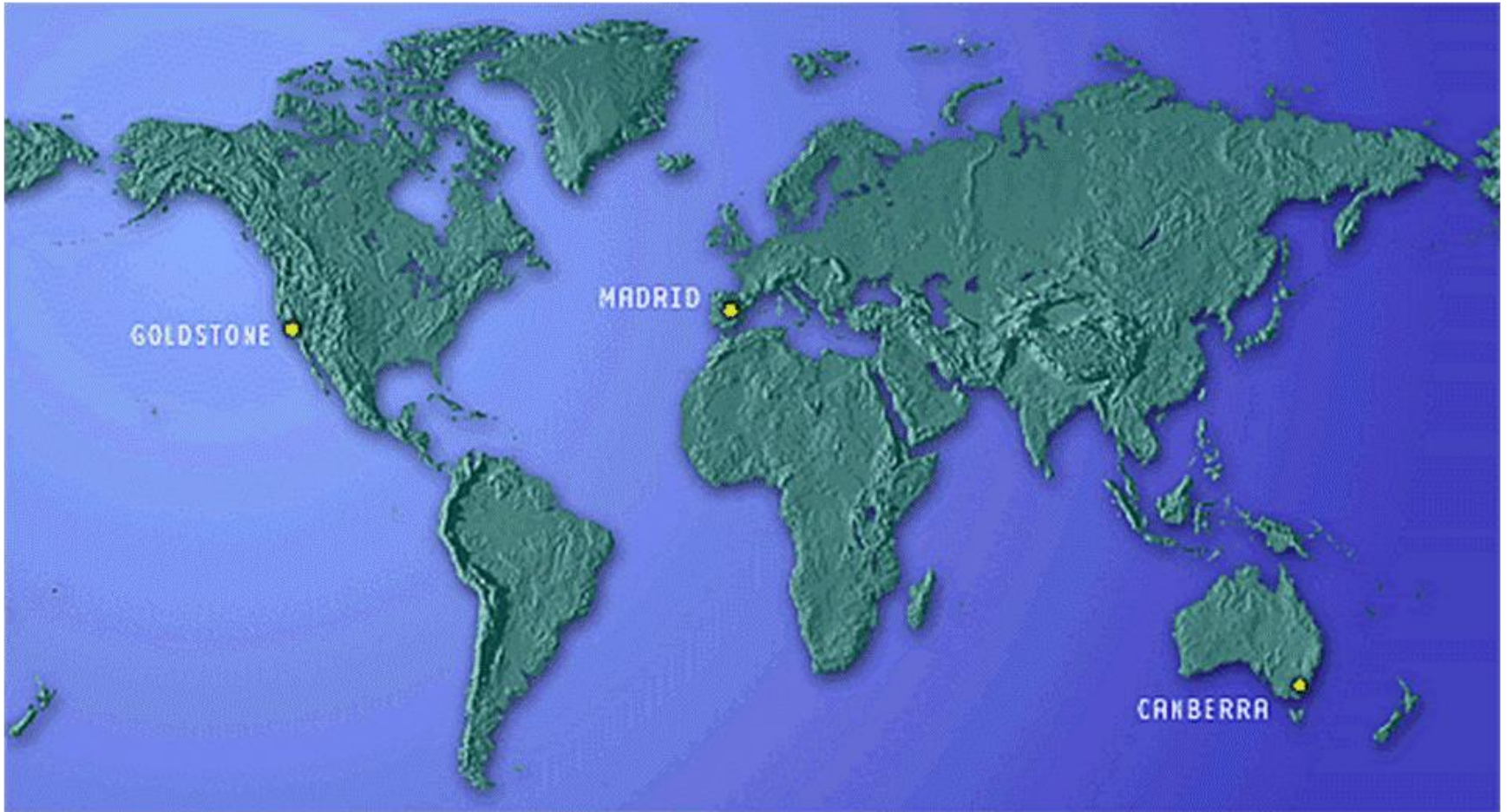
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Deep Space Network (DSN)  
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## DSN Antenna Downtime Status and Forecast

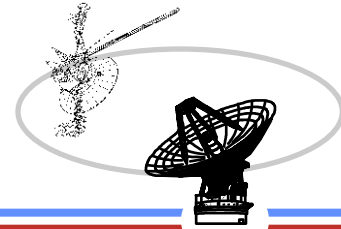




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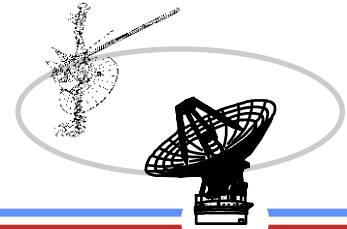


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Quad Leg Work	DSS-14	May 2014	Dec 2014	19, 29, 50	David Allen, Erik Holmgren	Quad Leg Work downtime requires a total of 12 prime shift days with tracking available off shift. Week 50 has two days, Tues and Thurs. Dropped material through reflector panel, additional days were added in December downtime to make repairs and replace reflector panel.
Replace Sub Reflector Cable	DSS-14	Jul 2014	Jul 2014	28	Jeff Mason	Request 5 days. Tracking available during night hours after the first 2 nights. As of 7/21 test were being conducted on new cable due to errors. Cable is unstable. Cable is not in fabrication. It will be replaced during December downtime. <b>Procurement for parts is ongoing.</b>
AZ Track Level C/O	DSS-55 DSS-65 DSS-54	Aug 2014	Sept 2014	34 35 37	Renee Miller, Bernardo Lopez	34M antenna requires 10 hour blocks each year 1 each week during week nights, avoiding weekends <b>DSS-55, 65, and 54 are complete.</b> Bernardo will check for these check outs and why the other complexes do not do this. Block of additional time added for Pintle bearing survey



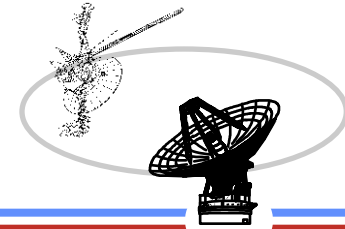
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## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
NMC ALB A/T and SOAK	MDSCC	Aug 2014	Aug 2014	35	Jim Buckley, Shirley Cizmar, Dave Taylor	With the upcoming Level-1 MAVEN and MOM events in which Goldstone and Canberra will be under MCC, the NMC Dev Team would like to begin SOAK installation at Madrid in order to use the standard 30 day SOAK period. GDSCC and CDSCC will be installed after the Level-1 events are completed. Will check status after MDSCC SOAK to see if they can move forward with the remaining two SOAKs. <b>MDSCC NMC task in week 35 is complete</b>
	CDSCC	Oct 2014	Oct 2014	41		
	GDSCC	Oct 2014	Oct 2014	44		
NMC SPS AM Install	GDSCC	April 2015	April 2015	16		NMC SPS AM downtime was requested at the July downtime meeting scheduled for April 2015 timeframe
	CDSCC	April 2015	April 2015	17		
	MDSCC	April 2015	April 2015	18		
HBA 10 DEG	DSS-63	Oct 2014	Oct 2014	40	David Munoz Mochon, Bernardo Lopez	Requested two additional nights in Oct. timeframe,

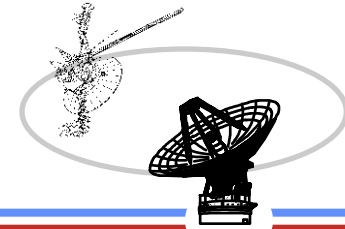


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Complex wide Electrical Maintenance	SPC-10	Oct 2014	Oct 2014	41	David Lloyd	Week 34 12-hour downtime was moved to week 41 due to MOM activities Could work on Quad Leg during this time.
TXR RF Characterization	MDSCC	Oct 2014	Oct 2014	42 & 43	Harout Matossian	With insufficient manpower to perform the TXR RF Characterization and the 70M DLM tasks that also starts in week 43, we prefer to schedule the TXR task in the normal 9 hour dayshift timeframe on antenna maintenance days..
Grouting	DSS-63	Oct 2014	Nov 2014	43 – 48	Dave Taylor, David Munoz Mochon, Bernardo Lopez, Asim Sehic	An additional week (43) was added to first grouting in 2014 in preparation for the DSN 50 <sup>th</sup> anniversary. Nov. 2014, S-Band Maser Replacement is NIB May 2015, 70m Tune-up and calibration is NIB to May 2015 grouting. Groutings are only 2 weeks to allow support of NHPC <b>5 weeks is scheduled but may need additional time.</b> Per mission requirements in 2017 have reduced time to 10 weeks and will place APCA downtime as stand alone in 2018. No issues at this time. The SHMT will be worked on 11/3, Engineer will be there in early November.
		May 2015	May 2015	20 & 21		
		Aug 2015	Aug 2015	32 & 33		
		Feb 2016	Mar 2016	05 – 09		
		Jul 2016	Aug 2016	30 – 34		
		Feb 2017	Apr 2017	08 – 17		



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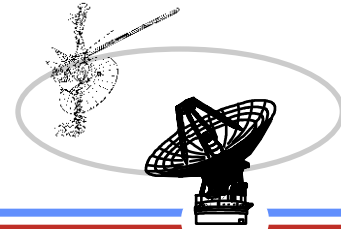
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## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
80kW Installation	DSS-26	Oct 2014	June 2015	44 – 24	Erik Holmgren Pam Rothman, Daniel Olson	Downtime will start in week 44 of 2014 and end week 24 of 2015. Downtime will end in preparation the NHPC Pluto encounter in mid July. AZ Track will be NIB to the 80kW facility prep. Unknown if 80kW is ready. Could be a personnel availability problem.
70M Tune-up and calibration	DSS-14	Dec 1, 2014	Dec 19, 2014	49 – 51	Jose Perez Dave Taylor	These are In preparation for NHPC Pluto Encounter <b>DSS-14 extended two extra days to install the new L-Band feed horn.</b>
	DSS-43	Mar 18, 2015	April 3, 2015	12 – 14	David Allen John Phillips	Additional time added to replace time lost in 2014 during HBA <b>John and Dave will compare tasks for DSS-14 &amp; DSS-43.</b>
	DSS-43	<b>Aug 18, 2015</b>	<b>Aug 28, 2015</b>	<b>34 – 35</b>		<b>DSS-43 Tune-up was moved from week 8 &amp; 9 to weeks 34 &amp; 35 due to Dawn's safing event</b>
	DSS-63	May 2015	May 2015	20 & 21		This is scheduled NIB to May Grouting Tasks for these downtimes should be similar for each complex.
Ka U/L Engineering Test	DSS-25	Jan 2015	Jan 2015	4	Andre Jongeling	The Engineers are requesting 4 daylight days T-F 8 hours each to complete this task. Monday is a holiday.

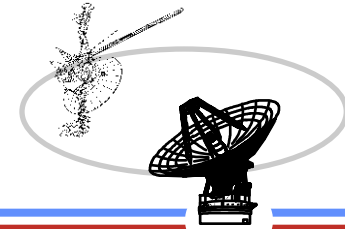


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## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Complex downtime for Power House Commission	CDSCC	Apr 2015	Apr 2015	15	John Phillips, Craig Phillips, Dave Taylor	Moved from Mar to April 2015 (Apr 9 & 10). Begins after Cassini pass
		Dec 2015	Dec 2015	49 & 52		Moved from August to December. This is a placeholder until the complex confirms. Possible PLC VOI Conflict These could change. Will talk with John Phillips and Cameron Lyon, could be money issues. <b>Dave will have dates by October meeting</b>
Antenna Inspections/ <b>TXR RF Characterization</b>	GDSCC	Apr 2015	Apr 2015	17 & 18	Dave Taylor	2015 Antenna Inspections moved from weeks 13 & 14. Check with engineer for TXR RF Characterization needed in 2015.  Moved from week 1 & 2 due to CDSCC Holiday schedule. Unknown status at this time. Moved from weeks 16 & 17 due to Easter. <b>Inspections require 12 hours, 8 hours NIB to maintenance with 4 hours following for TXR RF Characterization during inspections.</b>
	CDSCC	Apr 2018	Apr 2018	15 & 16	Andrew Brooks	
		Jan 2016	Jan 2016	03 & 04	<b>Harout Matossian</b>	
MDSCC	Apr 2017	Apr 2017	17 & 18			
DCD v.5.1 software installation	GDSCC/DSOC	Aug, 2015	Aug 2015	32	Anna Fan, Sheila Garrett	All complexes require installation of DCD 5.1. A minimum of 6 hours is required. Goldstone installation is first, 30 day separation from the next install which will be CDSCC or MDSCC, a minimum of 2 week separation from the 2 <sup>nd</sup> and 3 <sup>rd</sup> install. This is on track.
	MDSCC	Sep 2015	Sep 2015	37		
	CDSCC	Sep 2015	Sep 2015	39		

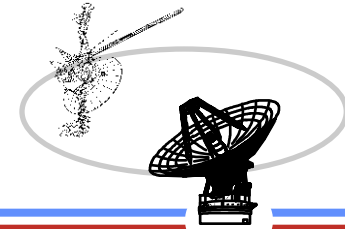


## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
AZ Track Replacement	DSS-55	Aug 2015	Oct 2015	34 – 44	Pam Rothman Asim Sehic	Downtime will begin one day late on DOY 230 vice 229 due to Cassini activities. This is still a go.
	DSS-25	Feb 2018	Apr 2018	05 - 14		This is NIB to XX/Ka Installation
Depot Level Maintenance	DSS-34	Nov 2015	Dec 2015	49 & 50	John Phillips	DSS-34 moved to December time frame with CDSCC concurrence
APCA	DSS-14	March 2016	June 2016	10 – 23	Anna Fan, Barzia Tehrani	DSS-14 extended an additional 2 weeks Antenna Painting added for 4 weeks during downtime
	DSS-43	Nov 2017	Jan 2018	44 – 03		DSS-43 extended to 12 weeks
	DSS-63	Feb 2018	April 2018	18 – 29		DSS-63 APCA is now stand alone and moved to 2018 at this time.
SWUPS Installation	CDSCC	Apr 5 2016	Apr 5 2016	14	Anna Fan, Dave Taylor	Must be done in daylight. There is a connection to the power house.
		Apr 20 2016	Apr 20 2016	16		Two blocks in a 3 week period. Need to avoid InSight activities. Dave will get a list of the tasks being performed during this downtime. There may al be Fire Detection issues.
		May 4 2016	May 4 2016	18		<b>Many only need 2 blocks. This might be combined with Powerhouse Commission into 1 task. A vendor needs to be chose.</b>



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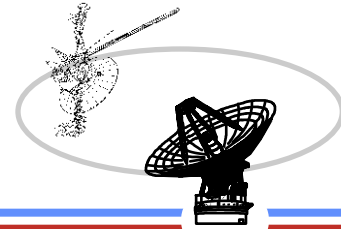
## Antenna Downtime Status and Forecast

Downtime	Antenna	Start Date	End Date	Weeks	POC	Notes
Ka2 Tune-up	DSS-54	Jan 23, 2017	Feb 3, 2017	04 & 05	Wendy Hodgkin	<p>These downtimes are being moved to 2017 with DSS-54 being the first Tune-up . All Tune-up will be standalone. These need to be completed prior to the end of June 2017.</p> <p>This is budget/resource driven</p> <p>There is a task to build 4<sup>th</sup> Ka2/S-Band capabilities.</p>
	DSS-24	Mar 13, 2017	Mar 24, 2017	11 & 12		
	DSS-34	May 14, 2017	May 26, 2017	20 & 21		
XX/Ka Installation	DSS-25	Jan 2018	April 2018	01 – 14	Wendy Hodgkin	XX/Ka requires 14 weeks - AZ Track will be NIB in weeks 05-14
	DSS-24	Apr 30, 2018	Jul 9, 2018	18 – 27		Needs to happen as soon after JNO end of mission as possible. DSS-24 is not funded at this time, but still in the plan to proceed with downtime.
Pedestal Rehab	DSS-54	Nov 4, 2019	Apr 30, 2021	46 – 17	Bernardo Lopez	<p>This Rehab could take 15 – 18 months to complete. <b>Servo Replacement and Transmitter Replacement will be NIB.</b> DSS-56 will become operational October 1, 2019 with Ka2/S-Band feed. If DSS-54 is not available for JWST, the Ka2 will be installed at DSS-55. If we wait for DSS-56 to become operational and DSs-54 can operate until then, DSS-54 will start Pedestal Rehab <b>the first weeks of Nov 2019 and end the last week of April 2021.</b></p>





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## 70m Major Downtimes 2014 - 2018

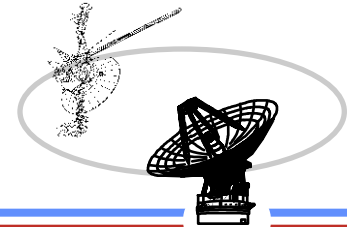
Downtime	Antenna	Start Date	End Date	Weeks	Status	Number of Days	Notes and next downtime date
70m Tune-up Calibration	DSS-14	Dec 1, 2014	Dec 19, 2014	49 – 51	Approved	18	Extended 2 extra days for L-Band Feed Next downtime March of 2016
APCA	DSS-14	Mar 7, 2016	Jun 10, 2016	10 – 23	Proposed	95	
70m Tune-up Calibration	DSS-43	Mar 16, 2015	Apr 3, 2015	12 – 14	Approved	18	Next downtime is August of 2017
70m Tune-up Calibration	DSS-43	Aug 17, 2015	Aug 28, 2015	34 – 35	Approved	10	Moved from week 8&9 due to Dawn safing event Next downtime is October of 2017
APCA	DSS-43	Oct 30, 2017	Jan 19, 2018	44 – 03	Proposed	80	
Grouting S-Band Maser Replacement	DSS-63	Oct 20, 2014	Nov 28, 2014	43 – 48	Approved NIB to Grouting	39	Next downtime is May of 2015
Grouting 70m Tune-up Calibration	DSS-63	May 11, 2015	May 24, 2015	20 – 21	Approved NIB to grouting	13	Next down time is August of 2015
Grouting	DSS-63	Aug 3, 2015	Aug 16, 2015	32 – 33	Approved	14	Next downtime is February of 2016
Grouting	DSS-63	Feb 1, 2016	Mar 3, 2016	05 – 09	Proposed	32	Next downtime is July of 2016
Grouting	DSS-63	Jul 25, 2016	Aug 26, 2016	30 – 34	Proposed	32	Next downtime is February of 2017
Grouting	DSS-63	Feb 20, 2017	Apr 28, 2017	08 – 17	Proposed	67	Next downtime is April of 2018
APCA	DSS-63	Apr 30, 2018	July 20, 2018	18 – 29	Proposed	80	



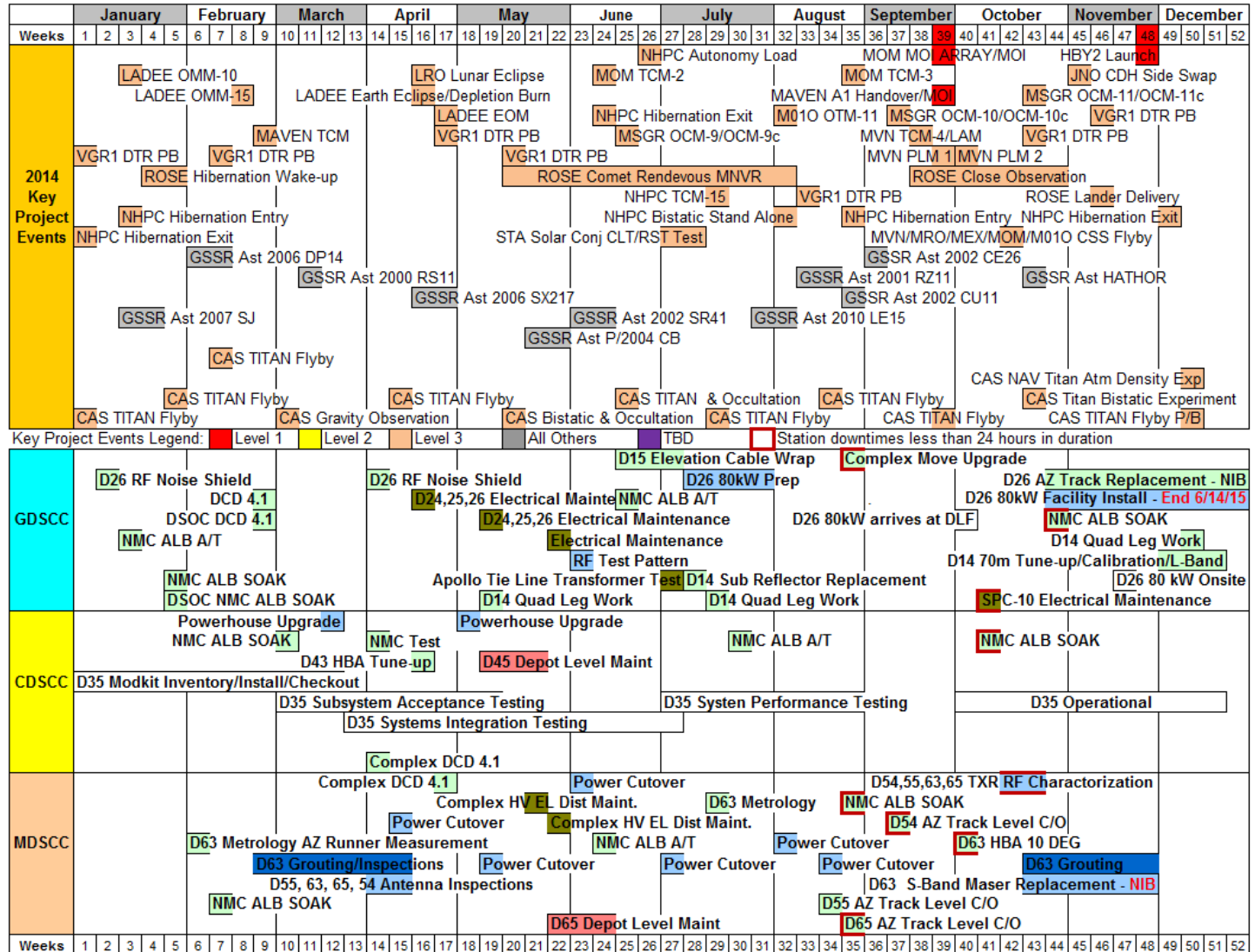
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- 2014 -



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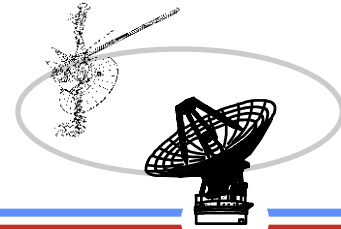
Downtime October 7, 2014 10



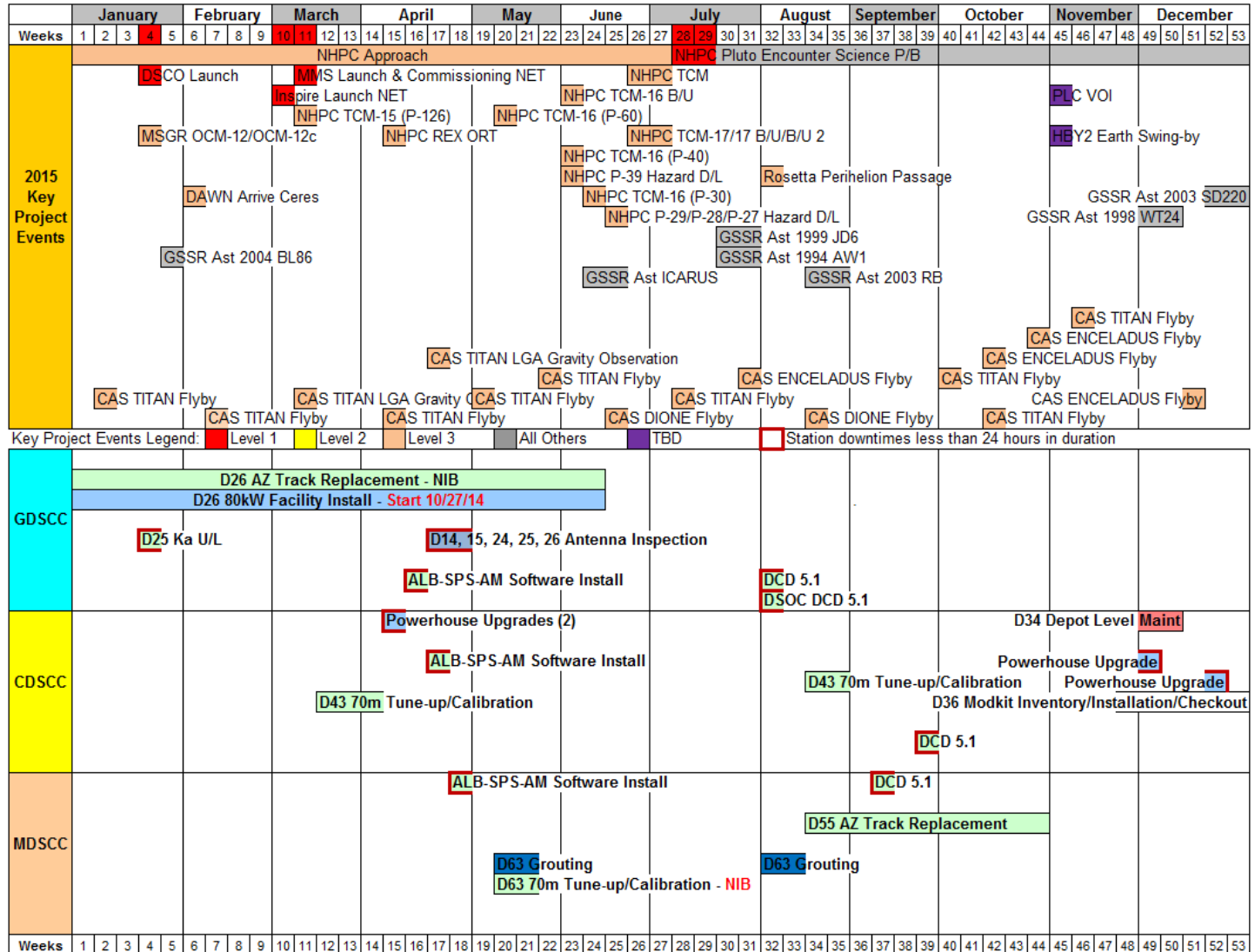
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- 2015 -

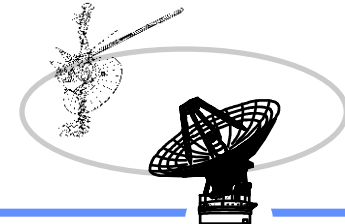


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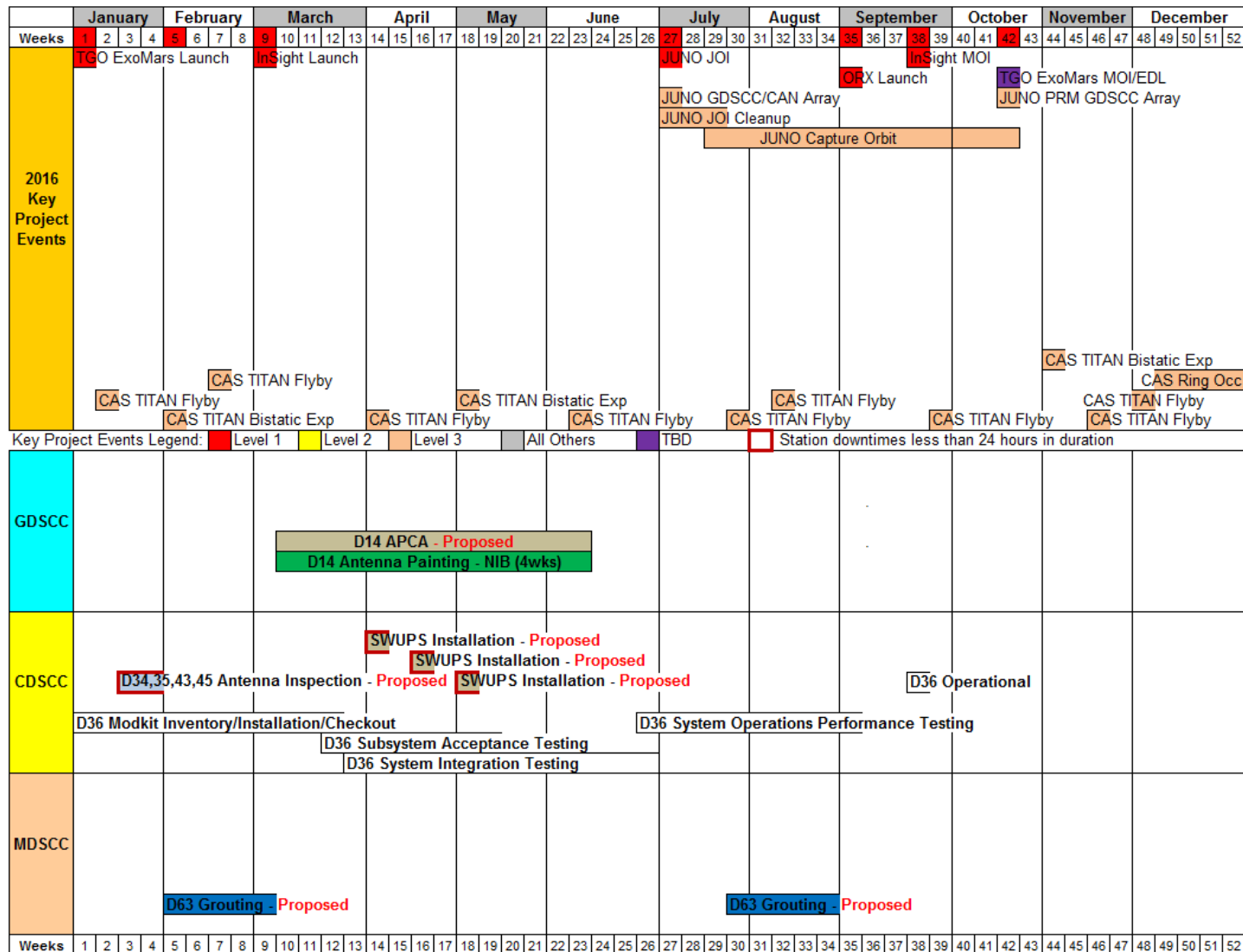


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- 2016 -

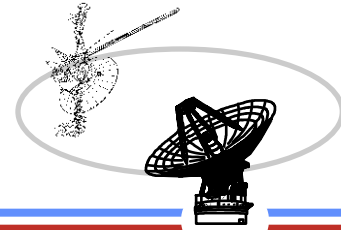


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Downtime October 7, 2014 12



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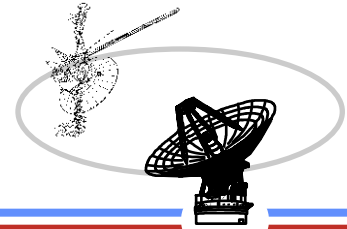


- 2017 -

	January				February				March				April				May				June				July				August				September				October				November				December																																																															
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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 <span style="color:purple">■</span> TBD <span style="border:1px solid red; padding: 0 2px;"> </span> Station downtimes less than 24 hours in duration																																																																																																												
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CDSCC																																																	D34 Ka2 Tune-up - Proposed																				D43 APCA																																							
MDSCC	D54 Ka2 Tune-up - Proposed																																				D63 Grouting - 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																																																								



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**- 2018 -**

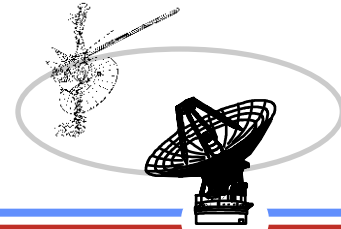
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Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2018 Key Project Events	Mars 2018 Launch and LEOP														SP Launch and LEOP														JWST Launch and Commissioning																							
	HYB2 Target Asteroid 1999 Ju3 Arrival																																																			
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 <span style="color: purple;">■</span> TBD <span style="border: 1px solid red; padding: 0 2px;"> </span> Station downtimes less than 24 hours in duration																																																				
GDSCC	D25 XX/Ka Installation														D25 AZ Track Replacement - NIB														D24 XX/Ka Installation																							
	D14, 15, 25, 26, 24, 15 Antenna Inspection																																																			
CDSCC	D43 APCA - Proposed																																																			
MDSCC	D63 APCA														D56 Modkit Installation, System Integration and System Level Testing																																					
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52

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



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- 2019 -

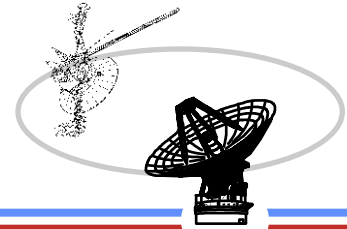
	January					February					March					April					May					June					July					August					September					October					November					December				
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52								
2019 Key Project Events						SPP Beacon					SPP Solar Enc										ORX Tag 1 Reh					Tag 1					SPP Solar Enc										SPP Venus Flyby																			
																															HYB2 Target Asteroid 1999 Ju3 Departure																													
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 <span style="color: purple;">■</span> TBD <span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px;"></span> Station downtimes less than 24 hours in duration																																																												
GDSCC																																																												
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MDSCC	D56 Modkit Installation, System Integration and System Level Testing																										D56 Operational																																	
																											D54 Pedestal Rehab end April 2021 - Proposed D54 Servo/MTR Replacement - N/A																																	
																											D53 Modkit Installation, System Integration and System Level Testing																																	
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52								

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- 2020 -

	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	
2020 Key Project Events	HYB2 Earth Re-Entry																																																				
	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 <span style="color: purple;">■</span> TBD <span style="border: 1px solid red; display: inline-block; width: 10px; height: 10px; vertical-align: middle;"></span> Station downtimes less than 24 hours in duration																																																				
	GDSCC																																																				
	CDSCC																																																				
	MDSCC	<div style="background-color: lightgreen; padding: 2px;">D54 Pedestal Rehab end April 2021 - Proposed</div> <div style="background-color: green; padding: 2px;">D54 Servo/XMTR Replacement - NIB</div> <div style="border-top: 1px solid black; padding: 2px;"> <span style="float: left;">D53 Modkit Installation, System Integration and System Level Testing</span> <span style="float: right;">D53 Operational</span> </div>																																																			
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	

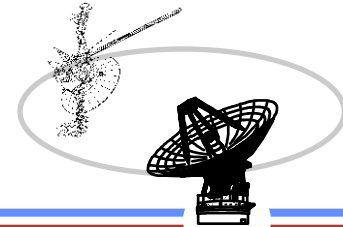
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# Interplanetary Network Directorate (IND) Deep Space Network (DSN) Resource Allocation Planning Service



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- 2021 -

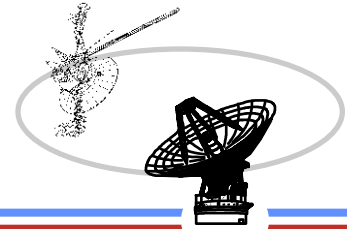
	January					February				March				April				May				June				July				August				September				October				November				December						
Weeks	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52
2021 Key Project Events																																																				
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="background-color: #CCCCCC; border: 1px solid black;">■</span> All Others <span style="background-color: purple;">■</span> TBD <span style="border: 1px solid red;">□</span> Station downtimes less than 24 hours in duration																																																				
GDSCC																																																				
CDSCC																																																				
MDSCC	D54 Pedestal Rehab Begin November 2019 - Proposed																																																			
	D54 Servo/XMTR Replacement - NIB																																																			
	D53 Modkit Installation, System Integration and System Level Testing																																								D53 Operational											
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: October 3, 2014

Downtime October 7, 2014 17



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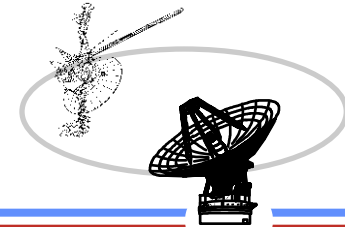
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## DSN Downtime 2014

2014							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 10	Complex Electrical Maintenance	10/08/2014 12:25	10/09/2014 00:25	0	41 - 41	281	282
SPC 40	NMC ALB SOAK	10/07/2014 13:20	10/07/2014 19:15	0	41 - 41	280	280
DSS 55	TXR RF Characterization	10/13/2014 06:00	10/13/2014 15:00	0	42 - 42	286	286
DSS 54	TXR RF Characterization	10/14/2014 06:00	10/14/2014 15:00	0	42 - 42	287	287
DSS 63	TXR RF Characterization	10/16/2014 06:00	10/16/2014 15:00	0	42 - 42	289	289
DSS 65	TXR RF Characterization	10/17/2014 06:00	10/17/2014 15:00	0	42 - 42	290	290
DSS 55	TXR RF Characterization	10/20/2014 06:00	10/20/2014 15:00	0	43 - 43	293	293
DSS 63	Grouting	10/20/2014 06:00	11/28/2014 17:00	39	43 - 48	293	332
DSS 63	S-Band Maser Replacement - NIB	10/20/2014 06:00	11/28/2014 17:00	39	43 - 48	293	332
DSS 65	TXR RF Characterization	10/21/2014 06:00	10/21/2014 15:00	0	43 - 43	294	294
DSS 63	TXR RF Characterization	10/23/2014 06:00	10/23/2014 15:00	0	43 - 43	296	296
DSS 54	TXR RF Characterization	10/24/2014 06:00	10/24/2014 15:00	0	43 - 43	297	297
DSS 26	80kW Install	10/27/2014 15:00	06/13/2015 00:00	228	44 - 24	300	164
DSS 26	AZ Track Replacement - NIB	10/27/2014 15:00	06/13/2015 00:00	228	44 - 24	300	164
SPC 10	NMC ALB SOAK	11/01/2014 05:20	11/01/2014 09:40	0	44 - 44	305	305
DSS 14	70M Tune-up/Calibration	12/01/2014 15:00	12/19/2014 13:00	18	49 - 51	335	353
DSS 14	Quad Leg Work	12/09/2014 14:00	12/11/2014 23:00	2	50 - 50	343	345



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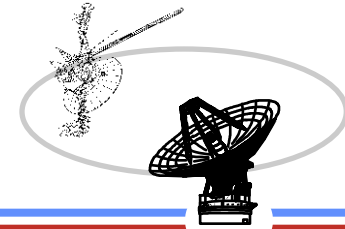
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## DSN Downtime 2015

2015							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 25	Ka U/L	01/20/2015 15:00	01/20/2015 23:00	0	04 - 04	20	20
DSS 25	Ka U/L	01/21/2015 15:00	01/21/2015 23:00	0	04 - 04	21	21
DSS 25	Ka U/L	01/22/2015 15:00	01/22/2015 23:00	0	04 - 04	22	22
DSS 25	Ka U/L	01/23/2015 15:00	01/23/2015 23:00	0	04 - 04	23	23
DSS 43	70m Tune-up/Callibration	03/18/2015 01:00	04/03/2015 06:00	16	12 - 14	77	93
SPC 40	Complex Powerhouse Upgrade	04/09/2015 21:00	04/10/2015 03:00	0	15 - 15	99	100
SPC 40	Complex Powerhouse Upgrade	04/10/2015 21:00	04/11/2015 03:00	0	15 - 15	100	101
SPC 10	ALB-SPS-AM Software install	04/15/2015 06:00	04/15/2015 12:00	0	16 - 16	105	105
DSS 14	Antenna Inspection	04/20/2015 15:00	04/21/2015 03:00	0	17 - 17	110	111
DSS 26	Antenna Inspection	04/21/2015 15:00	04/22/2015 03:00	0	17 - 17	111	112
DSS 24	Antenna Inspection	04/22/2015 15:00	04/23/2015 03:00	0	17 - 17	112	113
DSS 25	Antenna Inspection	04/22/2015 15:00	04/23/2015 03:00	0	17 - 17	112	113
SPC 40	ALB-SPS-AM Software install	04/23/2015 13:00	04/23/2015 19:00	0	17 - 17	113	113
DSS 15	Antenna Inspection	04/23/2015 15:00	04/24/2015 03:00	0	17 - 17	113	114
DSS 14	Antenna Inspection	04/27/2015 15:00	04/28/2015 03:00	0	18 - 18	117	118
DSS 26	Antenna Inspection	04/28/2015 15:00	04/29/2015 03:00	0	18 - 18	118	119
DSS 25	Antenna Inspection	04/29/2015 15:00	04/30/2015 03:00	0	18 - 18	119	120
DSS 24	Antenna Inspection	04/29/2015 15:00	04/30/2015 03:00	0	18 - 18	119	120
SPC 60	ALB-SPS-AM Software install	04/29/2015 22:00	04/30/2015 04:00	0	18 - 18	119	120
DSS 15	Antenna Inspection	04/30/2015 15:00	05/01/2015 03:00	0	18 - 18	120	121
DSS 63	70m Tune-up/Calibration - NIB	05/11/2015 06:00	05/24/2015 17:00	13	20 - 21	131	144
DSS 63	Grouting	05/11/2015 06:00	05/24/2015 17:00	13	20 - 21	131	144
DSS 63	Grouting	08/03/2015 05:00	08/16/2015 17:00	14	32 - 33	215	228



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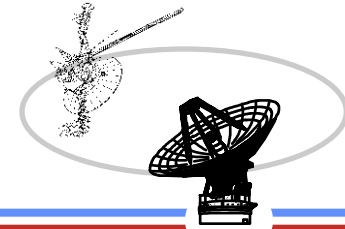
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## DSN Downtime 2015

2015							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
SPC 10	DCD V5.1	08/05/2015 17:00	08/05/2015 23:00	0	32 - 32	217	217
GCF 20	DSOC DCD V5.1	08/05/2015 17:00	08/05/2015 23:00	0	32 - 32	217	217
DSS 43	70m Tune-up/Callibration	08/17/2015 21:00	08/28/2015 06:00	10	34 - 35	229	240
DSS 55	AZ Track Replacement	08/18/2015 06:00	10/30/2015 17:00	73	34 - 44	230	303
SPC 60	DCD V5.1	09/09/2015 07:00	09/09/2015 13:00	0	37 - 37	252	252
SPC 40	DCD V5.1	09/24/2015 22:00	09/25/2015 04:00	0	39 - 39	267	268
DSS 34	Depot Level Maintenance	11/30/2015 21:00	12/11/2015 05:00	10	49 - 50	334	345
SPC 40	Complex Powerhouse Upgrade	12/04/2015 21:00	12/05/2015 09:00	0	49 - 49	338	339
SPC 40	Complex Powerhouse Upgrade	12/21/2015 21:00	12/22/2015 03:00	0	52 - 52	355	356



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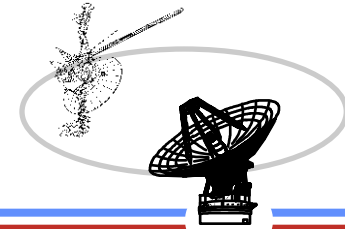
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## DSN Downtime 2016

2016							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 43	Antenna Inspection - Proposed	01/19/2016 22:00	01/20/2016 14:00	1	03 - 03	19	20
DSS 34	Antenna Inspection - Proposed	01/20/2016 22:00	01/21/2016 14:00	1	03 - 03	20	21
DSS 45	Antenna Inspection - Proposed	01/21/2016 22:00	01/22/2016 14:00	1	03 - 03	21	22
DSS 35	Antenna Inspection - Proposed	01/21/2016 22:00	01/22/2016 14:00	1	03 - 03	21	22
DSS 43	Antenna Inspection - Proposed	01/26/2016 22:00	01/27/2016 06:00	0	04 - 04	26	27
DSS 34	Antenna Inspection - Proposed	01/27/2016 22:00	01/28/2016 06:00	0	04 - 04	27	28
DSS 45	Antenna Inspection - Proposed	01/28/2016 22:00	01/29/2016 06:00	0	04 - 04	28	29
DSS 63	Grouting - Proposed	02/01/2016 06:00	03/04/2016 17:00	32	05 - 09	32	64
DSS 14	Antenna Painting 4wks NIB	03/07/2016 15:00	06/11/2016 00:00	95	10 - 23	67	163
DSS 14	APCA - Proposed	03/07/2016 15:00	06/11/2016 00:00	95	10 - 23	67	163
SPC 40	SWUPS Installation - Proposed	04/05/2016 21:00	04/06/2016 09:00	0	14 - 14	96	97
SPC 40	SWUPS Installation - Proposed	04/20/2016 21:00	04/21/2016 09:00	0	16 - 16	111	112
SPC 40	SWUPS Installation - Proposed	05/04/2016 21:00	05/05/2016 09:00	0	18 - 18	125	126
DSS 63	Grouting - Proposed	07/25/2016 06:00	08/26/2016 17:00	32	30 - 34	207	239



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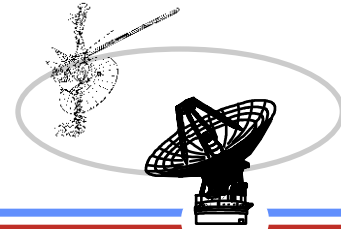
## DSN Downtime 2017

2017							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 54	Ka2 Tune-up - Proposed	01/23/2017 07:00	02/03/2017 17:00	11	04 - 05	23	34
DSS 63	Grouting	02/20/2017 06:00	04/28/2017 17:00	67	08 - 17	51	118
DSS 24	Ka2 Tune-up - Proposed	03/13/2017 15:00	03/25/2017 00:00	11	11 - 12	72	84
DSS 55	Antenna Inspection - Proposed	04/24/2017 07:00	04/24/2017 23:00	1	17 - 17	114	114
DSS 65	Antenna Inspection - Proposed	04/25/2017 07:00	04/25/2017 23:00	1	17 - 17	115	115
DSS 63	Antenna Inspection - Proposed	04/26/2017 07:00	04/26/2017 23:00	1	17 - 17	116	116
DSS 54	Antenna Inspection - Proposed	04/27/2017 07:00	04/27/2017 23:00	1	17 - 17	117	117
DSS 55	Antenna Inspection - Proposed	05/01/2017 07:00	05/01/2017 15:00	0	18 - 18	121	121
DSS 65	Antenna Inspection - Proposed	05/02/2017 07:00	05/02/2017 15:00	0	18 - 18	122	122
DSS 54	Antenna Inspection - Proposed	05/05/2017 07:00	05/05/2017 15:00	0	18 - 18	125	125
DSS 34	Ka2 Tune-up - Proposed	05/14/2017 21:00	05/26/2017 06:00	11	19 - 21	134	146
DSS 43	APCA - Proposed	10/30/2017 21:00	01/19/2018 06:00	80	44 - 03	303	19



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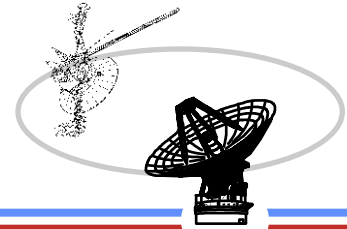


## DSN Downtime 2018

2018							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 25	XX/Ka Installation	01/04/2018 15:00	04/07/2018 00:00	92	01 - 04	4	97
DSS 25	AZ Track Replacement - NIB	01/29/2018 15:00	04/07/2018 00:00	67	04 - 14	29	97
DSS 14	Antenna Inspection	04/09/2018 15:00	04/10/2018 06:00	1	15 - 15	99	100
DSS 26	Antenna Inspection	04/10/2018 15:00	04/11/2018 06:00	1	15 - 15	100	101
DSS 25	Antenna Inspection	04/11/2018 15:00	04/12/2018 06:00	1	15 - 15	101	102
DSS 15	Antenna Inspection	04/12/2018 15:00	04/13/2018 06:00	1	15 - 15	102	103
DSS 14	Antenna Inspection	04/16/2018 15:00	04/17/2018 00:00	0	16 - 16	106	107
DSS 26	Antenna Inspection	04/17/2018 15:00	04/18/2018 00:00	0	16 - 16	107	108
DSS 24	Antenna Inspection	04/18/2018 15:00	04/19/2018 06:00	1	16 - 16	108	109
DSS 24	XX/Ka Installation	04/30/2018 15:00	07/07/2018 00:00	67	18 - 27	120	188
DSS 63	APCA	04/30/2018 21:00	07/20/2018 06:00	80	18 - 29	120	201



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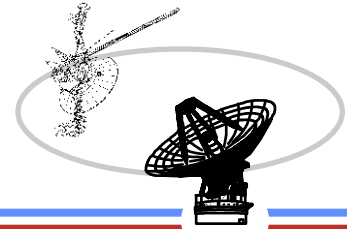
## DSN Downtime 2019

2019							
Site	Details	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 54	Pedestal Rehab	11/04/2019 06:00	04/30/2021 17:00	543	45 - 17	308	120
DSS 54	Servo Replacement - NIB	11/04/2019 06:00	04/30/2021 17:00	543	45 - 17	308	120
DSS 54	Transmitter Replacement - NIB	11/04/2019 06:00	04/30/2021 17:00	543	45 - 17	308	120





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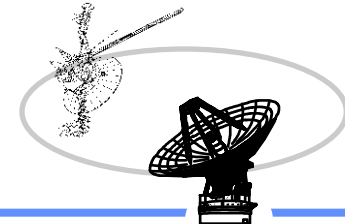
## Future assets new/upgrades

- ❑ DSS-35 Installation and Operational 2013 – 2014
  - ❑ Modkit Installation October 1, 2013 – March 21, 2014 weeks 47 – 12
  - ❑ Acceptance Testing March 5, 2014 – May 6, 2013, weeks 10 – 19
  - ❑ System Integration Testing March 14, 2014 – June 30, 2014 weeks 13 – 27
  - ❑ Operations Systems Performance Testing June 30, 2014 – August 28, 2014, weeks 27 – 35
  - ❑ Operational October 1, 2014
  
- ❑ DSS-26 80kW Installation 2014 – 2015
  - ❑ 80kW arrive at DLF February 9, 2015
  - ❑ DDR September, 2015, week 38
  
- ❑ DSS-36 Installation and Operational 2016
  - ❑ Modkit inventory/install/checkout November 23, 2015 – March 21, 2016 Weeks 48 – 12
  - ❑ Acceptance testing March 22, 2016 – May 13, 2016 weeks 12 – 19
  - ❑ System Integration Testing March 29, 2014 June 30, 2016 Weeks 13 – 26
  - ❑ Operations System Performance Testing June 30, 2016 – August 29, 2016 weeks 26 – 35
  - ❑ Operational date October 1. 2016



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# 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-23*	34B2	N/A	N/A	10/01/24	10/01/24	10/01/24	10/01/24	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	✓	✓	✓	✓	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	10/01/22	10/01/22	10/01/22	N/A	N/A	N/A	N/A
40	DSS-34	34B1	✓	✓	✓	✓	✓	N/A	✓	✓	N/A
40	DSS-35*	34B2	N/A	N/A	✓	✓	✓	N/A	N/A	N/A	N/A
40	DSS-36*	34B2	N/A	N/A	10/01/16	10/01/16	10/01/16	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-53*	34B2	N/A	N/A	10/01/20	10/01/20	10/01/20	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	10/01/19	10/01/19	10/01/19	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: 10/1/2014

✓ ✓ ✓ = Capability Recently Exists

✓ = Capability Exists

\* = To Be Commissioned