JOINT USERS RESOURCE ALLOCATION PLANNING (JURAP) MEETING

January 17, 2001

Jet Propulsion Laboratory
California Institute of Technology

4800 Oak Grove Drive
Pasadena, CA 91109-8099

(818) 354-4321

February 25, 2002
Refer to: 930–02–002–ESB:lc

TO: Distribution

FROM: Eugene S. Burke

SUBJECT: Minutes for the Joint Users Resource Allocation Planning Committee Meeting held January 17, 2002.

NEXT JURAP MEETING:

Thursday, March 21, 2002
JPL Bldg. 303, Room 411 B 1:00 p.m.

Please note: There will be NO JURAP Meeting during the month of February, due to the RARB on February 12

Attendees:

V. Altunin	J. Hall	G. Martinez	B. Toyoshima
R. Bartoo	K.Kim	K. Moyd	J. Valencia
B. Brymer	A. Kwok	B. Ryan	S. Waldherr
D. Doody	N. Lacey	M. Slade	

The Joint Users Resource Allocation Planning Committee meets monthly to review the status of Flight Projects, the requirements of other resource users, and to identify future requirements and outstanding conflicts. The last regular meeting was held on January 17, 2001 at the Jet Propulsion Laboratory.

Introductory Remarks / Conflict Resolutions – N. Lacey

N. Lacey chaired the meeting, welcoming everyone to the JURAP, and reminding the Project representatives of the upcoming February RARB, and of the importance of reviewing the RARB Red Book material and submitting inputs to the RAP team by January 28th. Open Action Items from the August 2001 RARB were addressed. Format changes to the February RARB presentation material were defined.

Deep Space 1 (DS1) Final Report – K. Moyd

This may be the last JURAP meeting for DS1. On December 18, the spacecraft's X-band and Ka-band transmitters were commanded "Off". Currently, DS1's orientation is X-axis pointed to the sun. Should the spacecraft lose its sun-pointing, the battery power supply will last for only a few hours. In early March 2002, DS1 will be at opposition and the spacecraft, while sun-pointed, will also be Earth-pointed. The project may consider turning "On" the Ka-band signal for DSN testing (non-DSN operations) during opposition.

RARB Action Items – N. Lacey

Nap Lacey summarized the Actions Items (AI) assigned by the August 2001 RARB. AI #6 remains open and is past due. AI #7 remains open and a review is planned for October 2002, to discuss landing sites. IA #9 remains open. IA #10 is closed with Ulysses (I.J. Webb) agreeing to accept 2-hour gaps at Madrid.

Resource Analysis Team – K. Kim

On-going activities include MADB/TIGRAS testing and training. Special load studies for Galileo Extended Mission, Genesis Backup Return, INTEGRAL launch change, MEX, and LUNAR are in progress. Weeks 9-12 were released to the DSN on January 02, 2002. Week 13 will be released January 18, 2002. Weeks 35-39 will start negotiations on February 8, 2002.

DSS Downtime Forecast – J. Valencia

The scheduling of DSS-16 Servo Drive Retrofit is in progress and Weeks 31-33 in 2002 look favorable. DSS-16 Servo Drive task will be scheduled after the CONTOUR launch phase window, which ends on July 26. In an attempt to not impact MERA Launch activities, a proposal was submitted to move DSS-46 Servo Drive task from Weeks 19-22 to 15-20, while increasing the downtime by two weeks. To accommodate the INTEGRAL launch planned for Week 42, the antenna downtime at DSS-24 for NSP and X-Band 20kW transmitter has been moved from Weeks 40-47 to Weeks 43-50, 2002. The DSS-66 Servo Drive task planned for Weeks 26- 29, has been deleted from the 2002 downtime schedule. A new implementation date has yet to be determined.

Goldstone Solar System Radar – M. Slade

In December 2001, the Goldstone Solar System Radar (GSSR) conducted seven successful tracks using DSS-14 and DSS-13 on near-Earth Asteroid 1998 WT24. Efforts to receive the Goldstone transmissions were made by Russia, China, and Japan, with the only confirmed reception by the Italian Medicina antenna. There are eleven GSSR near near-Earth Asteroid Nereus tracks scheduled at DSS-14 in January 2002.

Radio Astronomy / Special Activities – G. Martinez

George reported that 2001 was not a good year for the DSN in meeting project requirements and stressed the importance of keeping Catalog M&E and Clock Sync activities in the DSN schedule. Delta-DOR needs the data collected from Catalog M&E and Clock Sync activities. Mars 01 Odyssey and MGS benefit by using these data for navigation refining purposes. Moreover, the Mars Exploration Rovers will use Delta-DOR throughout the cruise phase, and Delta –DOR capability is considered mission-critical. Nap Lacey recommended the MER projects become actively involved and assist in keeping those activities that support Delta-DOR in the schedule.

FLIGHT PROJECTS REPORTS

Voyager – J. Hall

Voyager 1 and Voyager 2 operational status is nominal and overall DSN support is good. Voyager 1 heliocentric distance is 83.5 astronomical units (AU) with a round trip light time (RTLT) of approximately 23h 19m. Voyager 1 released 1.7 hours of scheduled support to accommodate Mars 01 Odyssey. Voyager 2 heliocentric distance is 66.1 AU with a RTLT of approximately 18h 33m. Voyager 2 released 2.1 hours of scheduled support to accommodate Cluster. Jeff reported that the RAP recommendation of moving DSS-14 support of Voyager1 MAGROL to DSS-63, to resolve contention in Week 31 with GSSR Asteroid 1992UY4, is not doable. He would, however, consider using DSS-15.

Cassini – D. Doody

Excellent support was provided by the DSN this reporting period. Operations will be essentially with the spacecraft in the Quiet Cruise Subphase mode through July 8, 2002. Nominal and minor spacecraft instrument anomalies and recoveries are worked in near-real-time. The Gravitational Wave Experiment (GWE) #1, that began in late November 2001, and ended early January 2002, is completed, with Radio Science receiving 90% of the planned data. The next Ka-band Radio Science collection is planned during the Superior Conjunction, in June 2002.

Genesis, MAP, ACE, and IMAGE – S. Waldherr

MAP spacecraft operations are nominal and the L-2 station-keeping maneuver #1 was successfully executed on January 16, 2002.

ACE spacecraft operations are nominal and four routine maneuvers are planned in January 2002.

IMAGE spacecraft operations are nominal and there are no immediate resource issues or concerns.

GENESIS spacecraft operations are nominal and the L-1 station-keeping maneuver #1b successfully executed on January 16th 2002.

The Fame project has been cancelled.

Mars Mission Management Office (MGS, M01O) - E. Brower

MGS Flight Operations, science instruments, and flight support systems remain green. The MER landing site selection is planned for April 2002. DSN support of the Mars 01 Odyssey (M01O) aerobraking continues throughout January. The Martian Radiation Environment Experiment (MARIE) onboard M01O has failed. The spectrometer was designed to measure energy radiation levels as the spacecraft orbited the planet.

Ulysses – B. Brymer

Spacecraft operations are nominal and the nutation control campaign has ended. Spacecraft reconfigurations and instrument calibrations are performed as required, and spacecraft earth-pointing maneuvers are performed every 5 days. Five significant discrepancy reports (DRs) were written during this JURAP period.

Galileo – B. Compton

Galileo routine activities include propulsion maintenance activities and gyro performance tests. The Orbit Trim Maneuver (OTM-104) was successfully executed. The I-32 encounter playback performed successfully after an anomaly with the DMS was resolved. A Buffered Telemetry Demodulator- related problem caused loss of playback data over DSS-63.

Stardust - R. Ryan

DSN support has generally been good this reporting period. The spacecraft is healthy and remains in nominal cruise mode with a distance of 3.58 Astronomical Units from Earth. Stardust is farther from the Sun than any U.S. solar-powered spacecraft, and the solar panels are performing better than expected. Trajectory Maneuver #7 has been rescheduled from March 2002, to mid-January 2002. Planning and testing for Comet Wild-2 encounter is ongoing, with the possibility of using Asteroid Annefrank to support encounter readiness testing.

U.S. Space VLBI / MEGA – V. Altunin

VSOP will end operations in early February 2002. Valery thanked the DSN for its outstanding five years of VSOP support. He briefly discussed the history of the SLVI project, and provided charts illustrating the DSN tracking history and the published papers resulting from Radio Astronomy Observations performed with the support of the DSN.

Chandra – P. Beyer

(No presentation)

DSN Operations – J. Hodder

(No oral presentation – but back-up material is included in Minutes)

JURAP Science Advisor – E. Smith

(No presentation)

ISTP, WIND, POLAR, SOHO, GEOTAIL, Cluster II – A. Chang

(No presentation)

The next JURAP meeting will be held:

Thursday, March 21, 2002, at JPL
in Bldg. 303, Room 411, at 1:00 p.m.

PLEASE NOTE: THERE WILL BE NO JURAP MEETING IN FEBRUARY!

Note: If you would like to participate in the meeting by teleconferencing, call (818) 354-2626 to be connected.

ACE
Afkhami, F. . . . . GSFC m/s 428.2
Sodano, R. J. . . . . GSFC m/s 581.0

Canberra Deep Space Communications Complex
Churchill, P. . . . . CDSCC
Jacobsen, R. . . . . CDSCC
O'Brien, J. J. . . . . CDSCC
Ricardo, L. . . . . CDSCC
Robinson, A. . . . . CDSCC
Wiley, B. . . . . CDSCC

Cassini
Arroyo, B. 264-235
Chin, G. E 230-310
Doody, D. F. 230-310
Frautnick, J. C. 230-301
Gustavson, R. P. 230-301
Maize, E. H. 230-104
Mitchell, R. T. (PM) 230-205
Webster, J. L. 230-104

Chandra
Bucher, S. . . . . SAO
Gage, K. R. . . . . SAO
Lavoie, A. R. (PM) . . . . . MSFC Org. FD03
Marsh, K. . . . . SAO
Weisskopf, M. C. (PS) . . . . . MSFC Org. SD50
Wicker, D. . . . . SAO
Williams, B. . . . . SAO
Wright, G. M. . . . . MSFC Org. FD03

Europa
Arroyo, B. 264-235
McNamee, J.B. (PM) 301-335
Simpson, K.A. 301-335

Galileo
Compton, B. 230-102
Huynh, J. C. 230-102
Medina-Gussie, M. 301-371
Pojman, J. L. 238-538
Theilig, E. E. (PM) 264-525

Genesis
Arroyo, B. 264-235
Burnett, D. S. . . . . CIT 170-25
Hirst, E. A. 264-570
Sasaki, C. N. (PM) 264-370
Sweetnam, D. N. 264-370
Tay, P. 264-235
Yetter, K. E. 264-235

Goldstone Deep Space Communications Complex
Holmgren, E. DSCC-25
Massey, K. DSCC-61
McCoy, J. DSCC-57
Millmore, D. DSCC-37

Goldstone Orbital Debris Radar (GODR)
Goldstein, R. M. (PM) 300-227

Goldstone Solar System Radar (GSSR)
Haldemann, A. F. 238-420
Hills, D. L. 238-420
Ostro, S. J. (PS) 300-233
Slade, III, M. A. (PM) 238-420
Wolken, P. R. 507-105

Gravity Probe-B
Arroyo, B. 264-235
Keiser, M. (PS) . . . . . Stanford Univ.
Shapiro, Prof. I. I. . . . . Smithsonian Astrophys. Obsrv.

IMAGE
Abramo, C. A. 507-120
Burley, R. J. . . . . GSFC m/s 632.0
Green, J. L. . . . . GSFC m/s 630

IPN-ISD / General
Doms, P. E. 303-400
Polansky, R. G. 303-400
Stelzried, C. T. 303-407
Weber, III, W.J. 303-400

IPN-ISD / DSMS Engineering
Freiley, A. J. 303-404
Kimball, K. R. 303-404
Klose, J. C. 303-404
Kurtik, S. C. 303-210
Osman, J. W. 303-210
Sible, Jr., R. W. 303-404
Statman, J. I. 303-404

IPN-ISD / DSMS Operations
Almassy, W. T. 502-420
Berman, A. L. 303-403
Covate, J. T. 507-120
Dillard, D. E. 507-120
Frazier, R. 507-120
Gillam, I. T. 502-400
Green, J. C. 507-120
Hodder, J. A. 303-403
Knight, A. G. 507-120
Landon, A. J. 507-105
Martinez, G. 507-120
Nevarez, R. E. 502-400
Recce, D. J. 303-403
Roberts, J. P. 502-400
Salazar, A. J. 303-403

Schroeder, H. B. 507-120
Short, A. B. 507-120
Wackley, J. A. 303-403
Watzig, G. A. 502-420
Wert, M. 502-420

IPN-ISD DSMS Plans & Commitments

Abraham, D. S. 303-402
Altunin, V. I. 303-402
Bathker, D. A. 303-402
Benson, R. D. 303-402
Beyer, P. E. 303-402
Black, C. A. 303-402
Cesarone, R. J. 303-402
Chang, A. F. 303-402
Gillette, R. L. 303-402
Griffith, D. G. 303-402
Holmes, D. P. 303-402
Kwok, A. 303-402
Luers, E. B. 303-402
Miller, R. B. 303-402
Moyd, K. 303-402
Peng, T. K. 303-402
Poon, P. T. 303-402
Slusser, R. A. 303-402
Waldherr, S. 303-402
Yetter, B. G. 303-402

IPN-ISD / DSMS RAPSO

Bartoo, R. H. 303-403
Borden, C. S. 301-165
Burke, E. S. 303-403
Caputo, R. 514-200
Hampton, E. 600-174
Kehrbaum, J. M. 301-180
Kim, K. 600-174
Lacey, N. 600-174
Lineaweaver, S. 600-174
Martinez, K. A. 600-174
Morris, D. G. 303-403
Valencia, J. 600-174
Wang, Y-F. 301-165
Zendejas, S. C. 301-165

ISTP (Cluster II)

Abramo, C. A. 507-120
Christensen, J. L. . . . . GSFC m/s 404.0
Dutilly, R. N. . . . . GSFC m/s 581.1
Gurnett, D. . . . . U. of Iowa
Mahmot, R. E. (PM) . . . . . GSFC m/s 444.0
Pickett, J. . . . . U. of Iowa

ISTP (GEOTAIL/POLAR/SOHO/WIND)

Abramo, C. A. 507-120
Alexander, H. 502-320
Bush, R. I. . . . . Stanford Univ.
Carder, M. E. . . . . GSFC 450.C
Dutilly, R. N. . . . . GSFC m/s 581.1
Giles, B. L. . . . . GSFC m/s 692.0
Hearn, S. P. . . . . GSFC m/s 450.C
Mahmot, R. E. . . . . GSFC m/s 444.0
Machado, M. J. . . . . GSFC m/s 428.2
Milasuk-Ross, J. . . . . GSFC m/s 428.5
Miller, K. A. . . . . GSFC m/s 450.C
Nace, E. M. . . . . GSFC m/s 450.8
Odendahl, S. K. . . . . GSFC m/s 581.0

JPL/General

Burgess, L. N 230-107
Burton, M. E. 169-506
Finley, S. G. 11-116
Gershman, R. 264-440
Holladay, J. A. 303-404
Jurgens, R. F. 238-420
Kahn, P. B. 301-486
Kliore, A. J. 161-260
Kobrick, M. 300-233
Moore, W. V. 161-260
Morabito, D. D. 161-260
Naudet, C. J. 238-600
Robbins, P. E. 161-260
Silva, A. 149-200
Smith, J. L. 301-180
Taylor, A. H. 264-538
Toyoshima, B. 301-276
Winterhalter, D. 169-506
Woo, H. W. 126-110
Yung, C. S. 238-808

Madrid Deep Space Communications Complex

Chamarro, A. . . . . MDSCC
Gimeno, J. . . . . MDSCC
Gonzalez, C. . . . . MDSCC
Martin, A. . . . . MDSCC
Rosich, A. . . . . MDSCC

MAP

Abramo, C. A. 507-120
Coyle, S. E. . . . . GSFC m/s 581.0
Dew, H. C. . . . . GSFC m/s 423.0
Mahmot, R. E. (PM) . . . . . GSFC m/s 444.0

Mars Exploration Rover (MER A & B)
Adler, M. T-1723
Arroyo, B. 264-235
Chadbourne, P. 230-207
Crisp, J. A. (PS) 241-105
Erickson, J. K. T-1723
Ludwinski, J.M. T-1722
Roncoli, R. B. 301-140L
Theisinger, P. C. (PM) 301-455

Mars Express Orbiter
Arroyo, B. 264-235
Horttor, R. L. (PM) 238-540
Thompson, T. W. 300-227

Mars Global Surveyor
Albee, A. (PS) 264-282
Arroyo, B. 264-235
Brower, E. E. 264-235
Thorpe, T. E. (PM) 264-214
Yetter, K. E. 264-235

Mars Program Office
Cutts, J. A. 264-426
Jordan, Jr., J. F. 264-472
McCleese, D. J. 264-426
Naderi, F. M. 264-438

Mars Reconnaissance Orbiter Project
Arroyo, B. 264-235
Graf, J. E. (PM) 264-440
Johnston, M. D. 301-140L
Lock, R. E. 301-140L

Mars 2001 Odyssey Mission
Arroyo, B. 264-235
Gibbs, R.G. 264-255
Harris, J. A. 301-455
Landano, M. R. (PM) 264-725
Mase, R. A. 264-380
Saunders, R. S. (PS) 180-701
Spencer, D. A. 264-255

NASA Headquarters
Costrell, J. A. . . . . Code MT
Geldzahler, B. . . . . Code SR
Hertz, P. . . . . Code SR
Holmes, C. P. . . . . Code SR
Spearing, R. E. . . . . Code M-3

NASA/ARC/General
Campo, R. A. . . . . ARC 244-14

NASA/GSFC/General
Barbehenn, G. M. . . . . GSFC m/s 440.8
Levine, A. J. . . . . GSFC m/s 452.0
Martin, J. B. . . . . GSFC m/s 451.0

NASA/SOMO
Dalton, J. T. . . . . GSFC m/s 720.0
Dowen, A. Z. 303-400
Hall, V. F. . . . . JSC Code TG
Morse, G. A. . . . . JSC Code TA
Thompson, E. W. . . . . JSC Code GA

NOZOMI (Planet B)
Arroyo, B. 264-235
Tay, P. 264-235
Yetter, K. E. 264-235

PFPD / Mission Management Office
Morris, R. B. 264-235
Varghese, P. 264-235

Radio Astronomy
Klein, M. J. (PM) 303-402
Kuiper, T. B. (PS) 169-506
Martinez, G. 507-120
Wolken, P. R. 507-105

Reference Frame Calibration
Altunin, V. I. 303-402
Cangahuala, A. (PM) 301-125J
Jacobs, C. 238-600

Space Infrared Telescope Facility (SIRTF)
Arroyo, B. 264-235
Gallagher, D. B. (PM) 264-767
Kwok, J. H. 264-767

StarLight Mission
Arroyo, B. 264-235
Carrion, C. 301-250D
Livesay, L. L. (PM) 301-451
Spradlin, G. L. 303-402

Stardust
Arroyo, B. 264-235
Duxbury, T. C. (PM) 264-379
Hirst, E. 264-570
Ryan, R. E. 301-285
Tay, P. 264-235
Yetter, K. E. 264-235

Ulysses / Voyager
Arroyo, B. 264-235
Brymer, B. F. 264-114
Cummings, A. C. . . . . CIT 220-47
Hall, Jr., J. C. 264-801
Massey, E. B. (PM) 264-801
Medina-Gussie 301-225
Nash, J. C. 264-114
Smith, E. J. (PS - ULS) 169-506
Stone, E.C. (PS - VGR) . . . . . CIT 220-47
Yetter, K. E. 264-235

U.S. Space VLBI

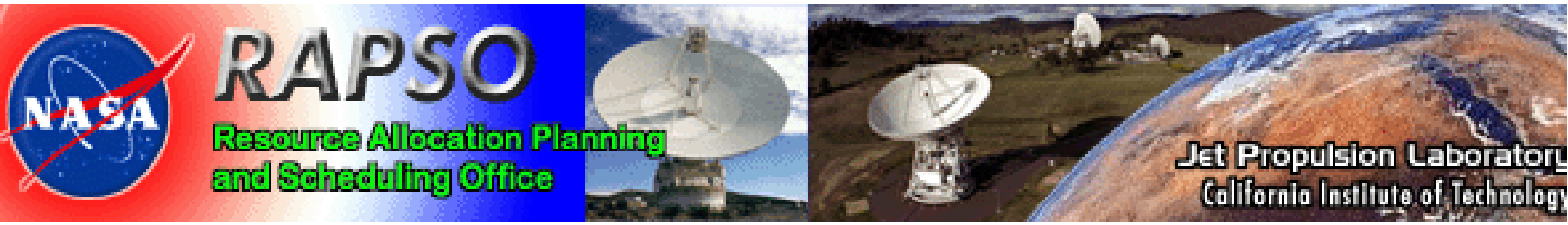
Altunin, V. I. 303-402
Miller, K. J. 264-828
Preston, R.A. (PS) 238-332
Smith, J. G. (PM) 264-828

Other Organizations

Crimi, G. F. . . . . SAIC
Laemmel, G. . . . . DLR-GSOC
Wanke, H. . . . . DLR-GSOC

Please mark any additions, deletions, or corrections to this distribution list and return to:

David G. Morris
Jet Propulsion Laboratory
4800 Oak Grove Drive, 303-403
Pasadena, CA 91109 / 818-393-3535
email: David.G.Morris@jpl.nasa.gov



JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

Action Item Status
From 21 August 2001 RARB

David G. Morris

January 17, 2002

Action Item Summary

AI#	*CP#*	*Year*	*Month(s)*	*Week(s)*	*Subnet*	*System*	*Responsible*	*Due Date*	*Status*
01	**All**	**2003**	**pre-Nov. '03**	**All**	**All**	**DSS**	**A. Salazar**	**10/21/2001**	**Closed**

ACTION: DSMS Operations Office shall assess the overall impact of the recommendations to reduce Preventative Maintenance on the all Subnets and to provide the Resource Allocations Planning Team with a risk and budgeting assessment of whether additional maintenance hours are needed. The board noted that many of the Contentions identified in 2003 use DSS Maintenance to relieve the over-subscription and requested that they evaluate the readiness needed to prepare for the expected sustained high use in late 2003 through early 2004. This action should reference the opportunity to perform maintenance activities during extended downtime for all antennas in the nine-month period in late 2002 through early 2003.

RESPONSE: DSS Maintenance will accept the agreements made at the August RARB. They will continue to monitor the level of maintenance at the antennas.

Action Item Summary

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
02	N/A	N/A			70M	SVLB	V. Altunin	10/21/2001	Closed

ACTION: Request change of name from Space VLBI to something without the word Space. The name causes confusion between two separate but required activities. One is to provide support to an orbiting spacecraft (HALCA, a.k.a. VSOP); the DSN uses 11 meter and 26 meter antennas to track the spacecraft. The second is to co-observe the same radio source as the spacecraft with ground-based radio telescopes; the DSN currently supports using 70-meter antennas at certain frequencies.

RESPONSE: The name has changed to Mission Enhancement by Ground-based Astronomy (MEGA). Currently, the PSLA for this ground-based activity shows requirements to support HALCA through 2/1/02 and FAME in 2002-2005.

Action Item Summary

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
03	14	2003	June – July	26-29	34H	MER B	J. Erickson	9/21/2001	Closed

ACTION:MER B shall specify the launch period for the spacecraft. This will clarify the contention and may alter the recommendation for this period.

RESPONSE: Presently the MER B launch period begins June 25 and concludes July 12, 2003.

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
04	16	2003	Oct. – Nov.	43-46	34H	RAT	N. Lacey	10/21/2001	Closed

ACTION: Resource Analysis Team shall redistribute the support load so that MER A receives no greater than 20 percent of its support using DSS-55. In addition, MER B noted that they could be scheduled on DSS-55 to support subnet overloads as necessary.

RESPONSE: The Resource Analysis Team has redistributed the planned MER A and MER B support on DSS-55 as specified.

Action Item Summary

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
05	27,31	2003	Sept. – Dec.	39-51	26M	RAT SOHO	N. Lacey R. Bush	9/14/2001	Closed

ACTION: Due to RARB recommended and project acceptance of deletion for the last four weeks of Helio-Seismology Observation (HSO) in 2003, the SOHO project requested another 30-day period earlier in 2003 to replace this lost observation.

RESPONSE: SOHO accepted the alternate recommendation of continuous coverage during weeks 4-7 (Jan. - Feb.) in 2003.

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
06	41	2004	January	1	34H	CAS DEEP MER A/B	R. Mitchell J. McKinney J. Erickson	11/21/2001	Open

ACTION:MER A & B in their Approach phase shall resolve contention support from Canberra and Spain in the first 6 days of week 1 in 2004 with Cassini Gravitational Wave Experiment and Deep Impact's use of two 34 meter antennas for initial acquisition (Canberra).

Action Item Summary

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
07	41-44	2004	January	1-4	34H	MER A/B CAS	J. Erickson R. Mitchell	7/1/2002	Open

ACTION:Provide MER A & B Landing Site coordinates. This will allow better planning of antenna usage in January 2004 during surface operations.

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
08	46	2004	January	1	34B1	MER A NOZO	J. Erickson A. Chang	10/21/2001	Pending

ACTION:MER A to study impact of either removing DSS-24 from EDL array in order to provide post MOI support to Nozomi TCM or to investigate the option of maintaining the array while providing MSPA and uplink support to Nozomi from DSS-24.

RESPONSE: This support should be feasible if DSS-24 is primarily dedicated to Nozomi and the MER A support (X-band RCP signal) will use the Radio Science Receiver (RSR) and should not need the Block V Receiver (BVR). Of course there are many operational considerations and variables in this action that still need to be understood.

Action Item Summary

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
09	47	2004	January	2	34B1	DEEP MEX	J. McKinney R. Horttor	2/1/2002	Open

ACTION:Deep Impact shall evaluate the impact of taking regular gaps in post-launch coverage due to Mars Express Orbiter's post MOI support needs over DSS-54.

AI#	CP#	Year	Month(s)	Week(s)	Subnet	System	Responsible	Due Date	Status
10	49	2004	January	4	34B1	ULYS	I.J. Webb	10/21/2001	Open

ACTION:Ulysses shall investigate the possibility of using a non-DSN antenna for support or taking a regular two hour gap at Madrid (DSS-54).

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

Resource Analysis Team

January 17, 2002

Kevin Kim

◆ RESOURCE NEGOTIATION STATUS

- 2002 WEEKS 9 – 12 (THRU 03/24/2002) WAS RELEASED TO DSN ON 01/02/2002
- 2002 WEEK 13 (THRU 03/21/2002) IS DUE TO BE RELEASED ON 01/18/2002
- 2002 WEEKS 35 – 39 (THRU 09/29/2002) WILL GO INTO NEGOTIATIONS STARTING 02/08/2002

- **SPECIAL STUDIES/ACTIVITIES**

- **ON-GOING ACTIVITIES**
  - MADB/TIGRAS TESTING AND TRAINING
  - GALILEO EXTENDED MISSION STUDY
  - GENESIS BACKUP RETURN STUDY
  - IMAGE EXTENDED MISSION
  - INTEGRAL LAUNCH CHANGE
  - LUNAR-A LOAD STUDY
  - MEX LOAD STUDY
  - MESSENGER LOAD STUDY

- **RARB – FEBRUARY 12, 2002**
  - CONTENTIONS TO COVER YEARS 2003 THRU 2005
  - TIMELINE POSTED
  - DISTRIBUTION PACKAGE POSTED
  - PRELIMINARY VERSION POSTED
  - RIGHT ASCENSION CHARTS FOR 2002 – 2012 POSTED

HTTP://RAPWEB.JPL.NASA.GOV

DSN User / Mission Planning Set
2002 - 2012

ONGOING/PLANNED PROJECTS				
Project	Acronym	Launch or Start	EOPM	EOEM
DSN VLBI Clock Sync and Catalog M&E	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Space Geodyssey	SGP	--	--	--
Voyager 2	VGR2	08/20/77	10/15/89	12/31/05
Voyager 1	VGR1	09/05/77	12/31/80	12/31/05
Goldstone Solar System Radar	GSSR	04/01/85	--	--
Galileo	GLLO	10/18/89	12/07/97	09/21/03
Ulysses	ULYS	10/06/90	09/11/95	09/30/04
ISTP - Geotail	GTL	07/24/92	07/24/95	09/30/05
ISTP - Wind	WIND	11/01/94	11/01/97	09/30/05
Mission Enhancement by Ground-based Astronomy	SVLB	02/01/95	12/31/03	- - -
ISTP - SOHO	SOHO	12/02/95	05/02/98	12/30/05
ISTP - Polar	POLR	02/22/96	08/23/97	09/30/05
Gravity Probe B	GPB	06/01/96	01/01/05	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	06/01/04
Highly Advanced Laboratory for Communications and Astronomy	VSOP	02/12/97	09/30/01	02/28/02
Advance Composition Explorer	ACE	08/25/97	02/01/01	01/31/05
Cassini	CAS	10/15/97	06/30/08	06/30/10
Nozomi (Planet-B)	NOZO	07/03/98	12/31/05	TBD
Stardust	SDU	02/07/99	01/14/06	- - -
Chandra X-ray Observatory	CHDR	07/23/99	07/24/09	07/24/14
Imager for Magnetopause-to-Aurora Global Exploration	IMAG	03/25/00	05/30/02	05/30/04
Cluster 2 - S/C #2 (Samba)	CLU2	07/16/00	02/15/03	09/19/05
Cluster 2 - S/C #3 (Rumba)	CLU3	07/16/00	02/15/03	09/19/05
Cluster 2 - S/C #1 (Salsa)	CLU1	08/09/00	02/15/03	09/19/05
Cluster 2 - S/C #4 (Tango)	CLU4	08/09/00	02/15/03	09/19/05
2001 Mars Odyssey	M01O	04/07/01	08/01/04	09/19/07
Microwave Anisotropy Probe	MAP	06/30/01	10/01/03	10/01/06
Genesis	GNS	08/08/01	09/08/04	- - -
Comet Nucleus Tour (CONTOUR)	CNTR	07/01/02	09/05/08	TBD
Space Infrared Telescope Facility	SRTF	01/09/03	04/19/08	- - -
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/18/07
MUSES - C	MUSC	12/14/02	06/05/07	- - -
Rosetta	ROSE	01/13/03	07/10/13	- - -
Mars Express Orbiter	MEX	05/23/03	02/11/06	08/03/08
Mars Exploration Rover - A	MERA	05/30/03	04/06/04	05/11/04
Mars Exploration Rover - B	MERB	06/25/03	04/27/04	06/15/04
Deep Impact	DEEP	01/02/04	08/05/05	- - -
Messenger	MSGR	03/10/04	04/06/10	- - -
RadioAstron*	RADA	06/15/05	06/15/10	TBD

* Planning dates

DSN User / Mission Planning Set

2002 - 2012

ADVANCED PLANNING PROJECTS				
Project	**Acronym**	**Launch or Start**	**EOPM**	**EOEM**
Lunar - A	LUNA	08/09/03	07/18/04	- - -
Selene	SELN	07/04/05	09/30/06	- - -
Mars Reconnaissance Orbiter	MRO	08/08/05	11/26/08	12/31/10
Stereo Ahead	STA	11/15/05	02/18/08	02/15/11
Stereo Behind	STB	11/15/05	02/18/08	02/15/11
New Horizons	NHRZ	01/10/06	01/12/17	01/10/23
Dawn	DAWN	05/27/06	07/26/15	TBD
StarLight	SL	06/06/06	11/30/06	- - -
Kepler	KPLR	10/15/06	10/14/10	TBD
Mars Smart Lander 2007	M07L	09/04/07	08/19/10	TBD
Mars Competed Scout 2007	M07S	09/04/07	11/19/08	TBD
Mars CNES Orbiter 2007	M07O	09/09/07	08/11/08	08/12/10
Mars ASI/NASA Telecommunications Orbiter 2007	M07T	09/09/07	08/09/18	TBD
ARISE	ARSE	06/15/10	06/15/15	- - -
Highly Advanced Laboratory for Communications and Astronomy	VSP2	06/15/10	06/15/15	- - -
Europa Orbiter	EURO	03/15/08	03/10/12	TBD
Mars ASI/NASA Science Orbiter 2009	M09O	10/04/09	08/29/12	TBD
Solar Probe	SOLP	05/01/10	02/14/14	TBD
Mars CNES MSR Lander 2011	M11L	10/30/11	09/10/14	TBD
Mars CNES MSR Orbiter 2011	M11O	10/30/11	07/22/14	TBD

TMOD Resource Implementation Planning Matrix

Station	Subnet	First Delivery Date	S-Band Down	S-Band Up	X-Band Down	X-Band Up	Ka-Band Down	Ka-Band Up	Ku-Band Up and Down	Close
DSS-14	70M	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-16	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-24	34B1	XXXX	XXXX	XXXX	XXXX	5/1/2003	10/1/2005	N/A	N/A	N/A
DSS-25	34B2	XXXX	N/A	N/A	XXXX	XXXX	XXXX	XXXX	N/A	N/A
DSS-26	34B2	4/2/2003	N/A	N/A	4/2/2003	4/2/2003	4/2/2003	N/A	N/A	N/A
DSS-27	34HSB	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-28	34B2	TBD	N/A	N/A	TBD	TBD	N/A	N/A	N/A	N/A
DSS-33	11M	XXXX	N/A	N/A	XXXX	XXXX	N/A	N/A	XXXX	2/1/2002
DSS-34	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	1/1/2005	N/A	N/A	N/A
DSS-43	70M	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-45	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-46	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A
DSS-53	11M	XXXX	N/A	N/A	XXXX	XXXX	N/A	N/A	XXXX	2/1/2002
DSS-54	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	8/1/2006	N/A	N/A	N/A
DSS-55	34B2	11/1/2003	N/A	N/A	11/1/2003	11/1/2003	11/1/2003	N/A	N/A	N/A
DSS-63	70M	XXXX	XXXX	XXXX	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-65	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	TBD	N/A	N/A	N/A
DSS-66	26M	XXXX	XXXX	XXXX	N/A	N/A	N/A	N/A	N/A	N/A

XXXX = Capability Currently Exists
N/A = Capability Not Planned

1/17/2002

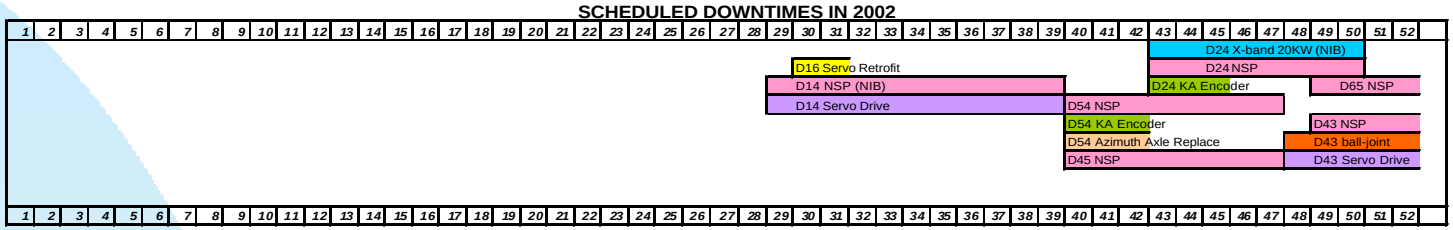
Major DSN Antenna Downtime Status

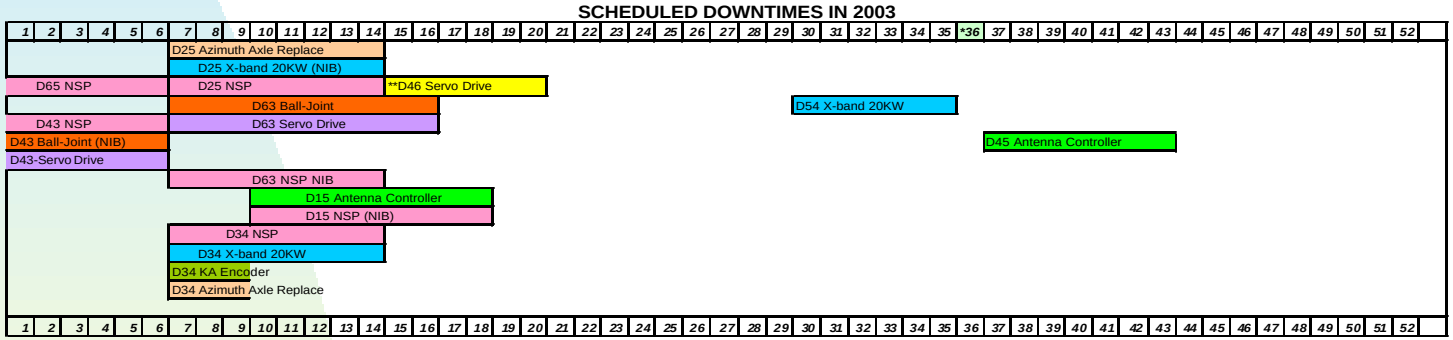
Jose Valencia
January 17, 2002

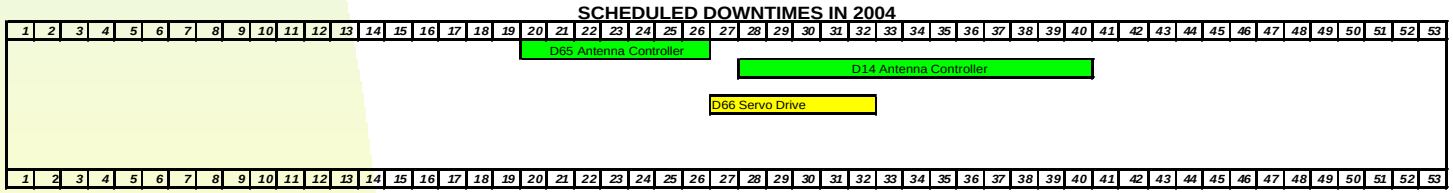
Antenna Downtime Schedule

MAJOR DSN DOWNTIMES by DATE								
Year	Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
2002	DSS 14	NSP Implementation	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 14	NIB - 70M Servo Drive Replacement	07/15/02	09/27/02	75	29-39	196	270
2002	DSS 24	NSP Implementation	10/21/02	12/12/02	53	43-50	294	346
2002	DSS 24	NIB - 20 KW X-Band TXR Installation	10/21/02	12/12/02	53	43-50	294	346
2002	DSS 24	NIB - KA-Band Encoder Mech Mod-Kit Installation	10/21/02	11/09/02	20	43-45	294	313
2002	DSS 43	70M Servo Drive Replacement	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - Ball-Joint Pad Refurbishment	11/25/02	02/09/03	77	48-06	329	040
2002	DSS 43	NIB - NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2002	DSS 45	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
2002	DSS 54	NIB - KA Band Encoder Mech Mod Kit Installation	10/01/02	10/20/02	20	40-42	274	293
2002	DSS 54	NIB - Azimuth Axle Replacement	10/01/02	10/20/02	20	40-42	274	293
2002	DSS 65	NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
2003	DSS 15	Antenna Controller Replacement	03/03/03	05/04/03	63	10-18	062	124
2003	DSS 15	NIB - NSP Implementation	04/01/03	05/01/03	31	14-18	091	121
2003	DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - 20 KW X-Band TXR Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 25	NIB - Azimuth Axle Replacement	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - 20 KW X-Band TXR Installation	02/10/03	04/06/03	56	07-14	041	096
2003	DSS 34	NIB - KA-Band Encoder Mech Mod-Kit Installation	02/10/03	03/02/03	21	07-09	041	061
2003	DSS 34	NIB - Azimuth Axle Replacement	02/10/03	03/02/03	21	07-09	041	061
2003	DSS 45	Antenna Controller Replacement	09/08/03	10/25/03	48	37-43	251	298
2003	DSS 46	Servo Drive Replacement	05/05/03	06/01/03	28	19-22	125	152
2003	DSS 54	20 KW X-Band TXR Installation	07/21/03	08/31/03	42	30-35	202	243
2003	DSS 63	70M Servo Drive Replacement	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - Ball-Joint Pad Refurbishment	02/10/03	04/20/03	70	07-16	041	110
2003	DSS 63	NIB - NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
2004	DSS 14	Antenna Controller Replacement	07/05/04	10/03/04	91	28-40	187	277
2004	DSS 65	Antenna Controller Replacement	05/10/04	06/27/04	49	20-26	131	179

Antenna Downtime Time-Line







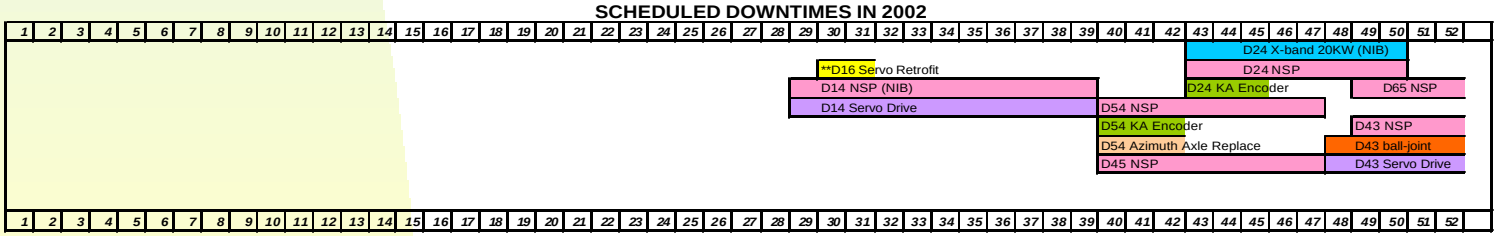
** Proposed D46 Servo Drive times

Changes to Antenna Downtime Schedule Since November 2001 JURAP

- DSS-16 Servo Drive Retrofit
  - Scheduling of task is in progress; looking at Weeks 30-32 in 2002
- DSS-46 Servo Drive
  - To not impact Mars Exploration Rover-A Launch a proposal to move task from Weeks 19-22 to 15-20 has been worked. In addition, 2 weeks have been added to the downtime.
  - Move is pending February 2002 RARB approval
- DSS-24 NSP/X-Band 20Kw transmitter
  - Task has moved from Weeks 40-47 to Weeks 43-50, 2002 to accommodate INTEGRAL launch support planned in Week 42
- DSS-66 Servo Drive
  - Task has been removed from Weeks 26-29, 2002
  - New implementation date to be determined; looking at 2004

Tasks in Progress or Remaining in 2002

- Currently, there are no major Antenna tasks in progress
- Tasks remaining in 2002
  - DSS-16 Servo Drive Retrofit
  - DSS-14 NSP/Servo Drive
  - DSS-24 NSP/X-Band 20Kw/KA-Band Encoder
  - DSS-54 NSP/KA-Band Encoder/Azimuth Axis Replacement
  - DSS-65 NSP
  - DSS-43 NSP
  - DSS-43 Ball-joint Pad Refurbishment
  - DSS-43 Servo Drive
  - DSS-45 NSP



DSN Operations

Jim Hodder

January 17, 2002

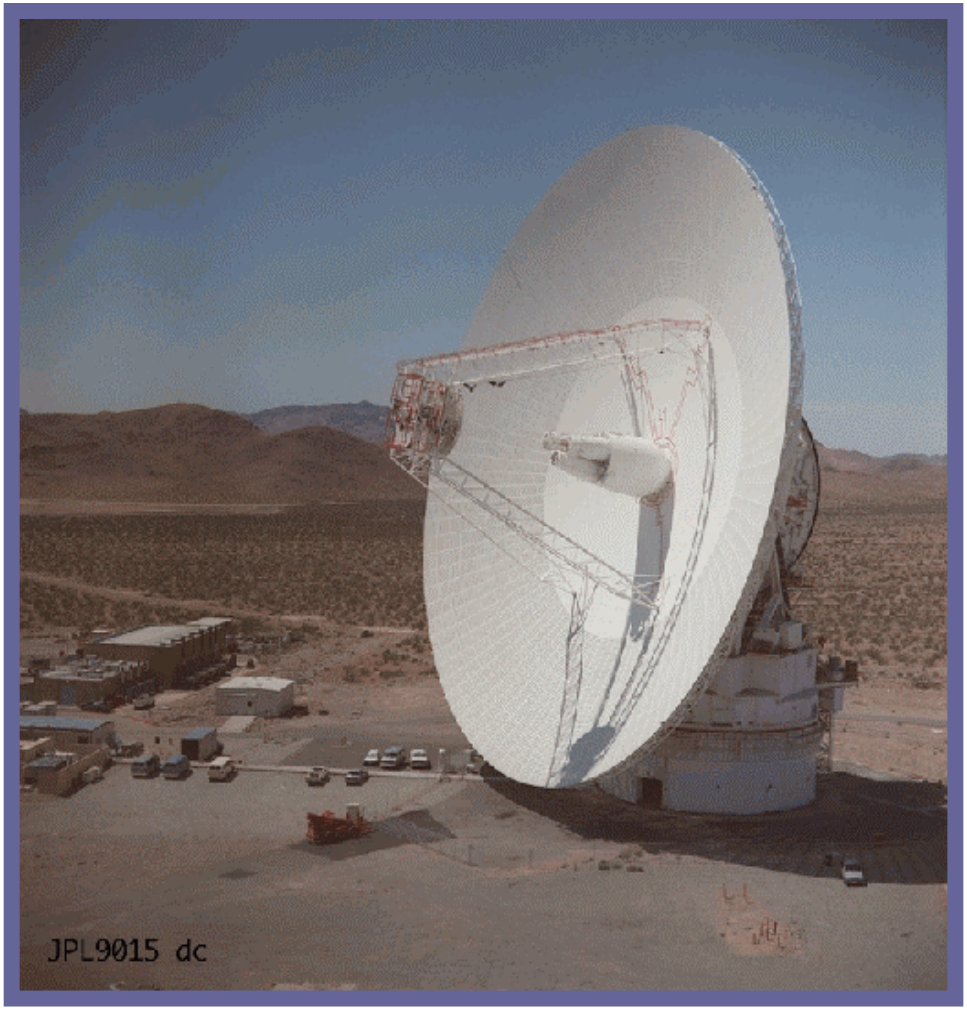
NASA Jet Propulsion Laboratory

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

DSN System Availability

Data Type	November 2001	December 2002
Telemetry	99.4%	98.9%
Tracking	98.3%	97.5%
Command	98.1%	97.9%
Monitor	98.9%	99.3%
Radio Science	97.0%	98.6%
VLBI	99.3%	99.4%

Goldstone Solar System Radar



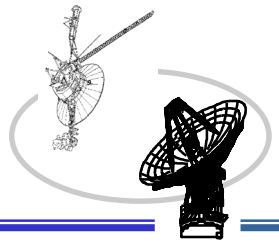
Martin A. Slade

Jan. 17, 2002

NASA Jet Propulsion Laboratory

Joint Users Resource Allocation Planning Committee Meeting

Goldstone Solar System Radar (GSSR)



•From Dec. 12, 2001 to Dec. 18, 2001, the Goldstone Solar System Radar carried out 7 successful tracks (DSS-14 ->DSS-13)on near-Earth Asteroid 1998 WT24.

•Attempts to receive the Goldstone transmissions were also made from Russia, China, and Japan, with the only confirmed reception at the Italian antenna at Medicina

• News coverage on the radar observations appeared on the Sky & Telescope web site, including an animated GIF of the Goldstone radar images. See:

`http://www.skypub.com/news/news.shtml#Rotating1998WT2`

• In January 2002, GSSR has 11 tracks on near-Earth Asteroid Nereus scheduled at DSS-14

Joint Users Resource Allocation Planning Committee

Radio Astronomy and Special Activities

George Martinez

January 17, 2001

Cat M & E

- Two Cat M & Es in November (314/321).
  - The first Catalog since DOY 209/210 (28/29 July) – 104 days.
  - The first Catalog for both baselines since DOY 174/176 (23/25 June) – 138 days.

- Project Requirements
  - 1 Catalog per baseline (15/45, 15/65) every 6 weeks.

Delta DOR

- Delta Differential One-Way Ranging (ΔDOR, DDOR)
  - Most accurate navigation type.
  - Provides complementary data type to Doppler/Range.
  - 47 Delta DOR measurements with Mars Odyssey.

- Mars Exploration Rover (MER)
  - MER will use Delta DOR throughout cruise for both spacecraft.
  - From the minutes of the Preliminary Design and Critical Design Reviews (PDR/CDR) for Delta DOR Re-Implementation held on 1/07/02:

    "In the mean time, the stakes have been raised substantially. Delta -DOR support of MER during phase 2 of this task is now considered mission-critical capability. In addition this capability is being considered as a baseline by a large number of future missions."

Delta DOR - continued

- Maintain Radio Source Catalog
  - Clock Syncs need to be scheduled per requirements (1 clock sync every 14 days).
    - Earth Motion
  - Cat M & Es need to be scheduled per requirements (both baselines every 6 weeks).
    - Quasar Coordinates
    - Station Location
  - DSS-65 maximum Azimuth slew rate needs to be restored to 0.8 deg/sec from the current 0.25 deg/sec.

Misc.

- George Resch will be missed.

Joint Users Resource Allocation Planning Meeting

SPECTRUMASTRO

K. Moyd

January 17, 2001

http://nmp.jpl.nasa.gov/ds1/

DS1 Status

PREVIOUS MONTH'S ACTIVITIES AND CURRENT STATUS:

- **All of the ion engine tests planned for the Hyper-extended mission were completed.**
- **A solar panel characterization test was done.**
- **Ka-band was left on until December 18 to support DSN testing. None was done.**
- **Ranging was left on between tracks until December 18 to support DSS-26 ranging tests. None were done.**
- **On December 18 the spacecraft was commanded into safing. Prior to that, the safing sequences were changed to force the X- and Ka- transmitters to turn off and stay off in case of safing.**
  - **Loss of signal occurred as expected at 21:00:09 UTC (1:00:09 p.m. PST). Signal could not be re-acquired.**

SPECTRUMASTRO

DS1 Status

PREVIOUS MONTH'S ACTIVITIES AND CURRENT STATUS: (Con't)

- **Current expected status: X-axis pointed to sun.**
- **Expected lifetime is of the order of six months to a year.**
  - **The limiting resource is hydrazine for attitude control. Once the spacecraft can no longer stay sun-pointed, power can be provided by the battery for only a few hours.**

NEAR TERM PLANS:

- **In early March, DS1 will be at opposition. Thus, the spacecraft, while sun-pointed will also be Earth-pointed.**
  - **There is some consideration of turning on the Ka-band signal for DSN testing.**
  - **All DSN scheduling, configuration, etc., would be under the control of the DSN engineers, not the DS1 Project.**

JPL

SPECTRUMASTRO

DEEP SPACE 1

MISSION SUMMARY

October 24, 1999	Launch
October, 1999 – July, 2000	Validation of eleven of the twelve technologies. Key ones were ion propulsion, new solar panel technology, SDST, Ka-band, beacon, remote agent, MICAS, PEPE.
July 29, 1999	Flyby of Asteroid Braille with closest approach of 28 km. Validation of twelfth technology, autonomous navigation not complete because the asteroid was dimmer than expected and the Active Pixel Sensor was unable to detect it. Infrared spectra were collected.
August - November, 1999	Start of Extended Mission. Thrusting to achieve an encounter with Comet Wilson-Harrington. Autonomous navigation used to control the thrusting.
November, 1999	Collected two days of Mars infrared spectral observations.
November 11, 1999	Failure of Stellar Reference Unit (SRU) – the primary means of attitude determination.
November - December, 1999	Spacecraft sun-pointed. Downlink data rate 79 b/s with 70-meter antenna.
January – June, 2000	Spacecraft sun-pointed except for labor-intensive turns to Earth every two weeks. Mars data collected in November successfully downlinked.
Jun 8, 2000	Loaded software to allow attitude determination using the MICAS camera, sun sensor and gyros.

JPL

SPECTRUMASTRO

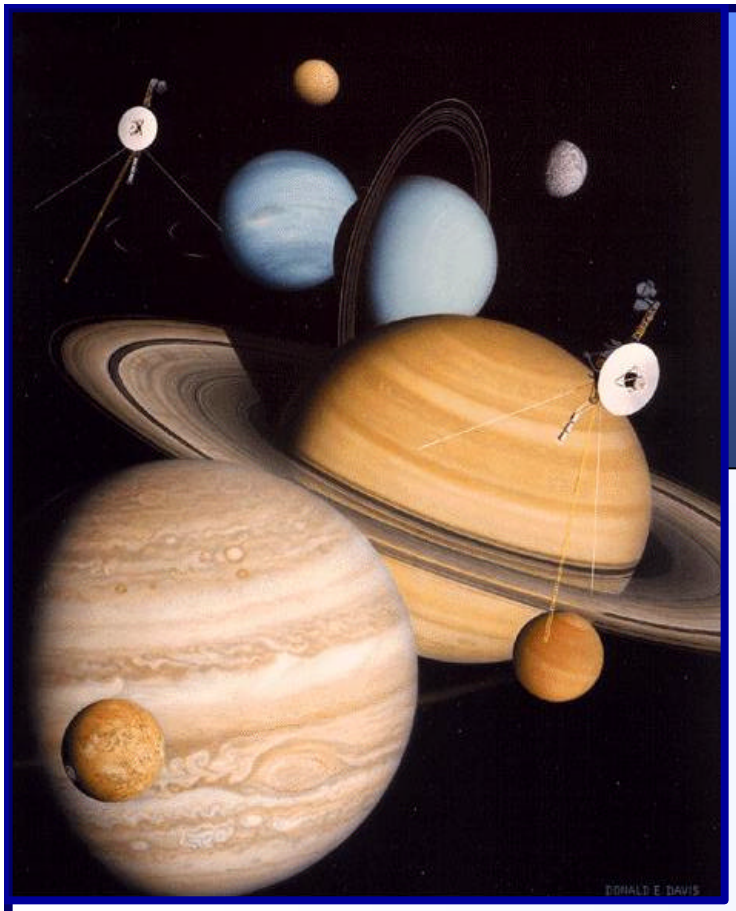
DEEP SPACE 1

MISSION SUMMARY (Con't.)

June 28, 2000	Started thrusting to achieve a flyby of Comet Borrelly. (Wilson-Harrington had to be dropped as a target because of the SRU failure. Comet Borrelly had been planned as the second target of the extended mission.)
September 21, 2001	Flyby of Comet Borrelly at closets approach of ~2100 km. Highest resolution images of a comet nucleus. Also collected infrared spectral data and fields-and-particles data.
October – December, 2001	Hyper-extended Mission. Conducted tests of the ion engine and solar panels. Collected solar wind data using PEPE.
December 18, 2001	Spacecraft put into sun-pointing state with transmitters off.

JPL

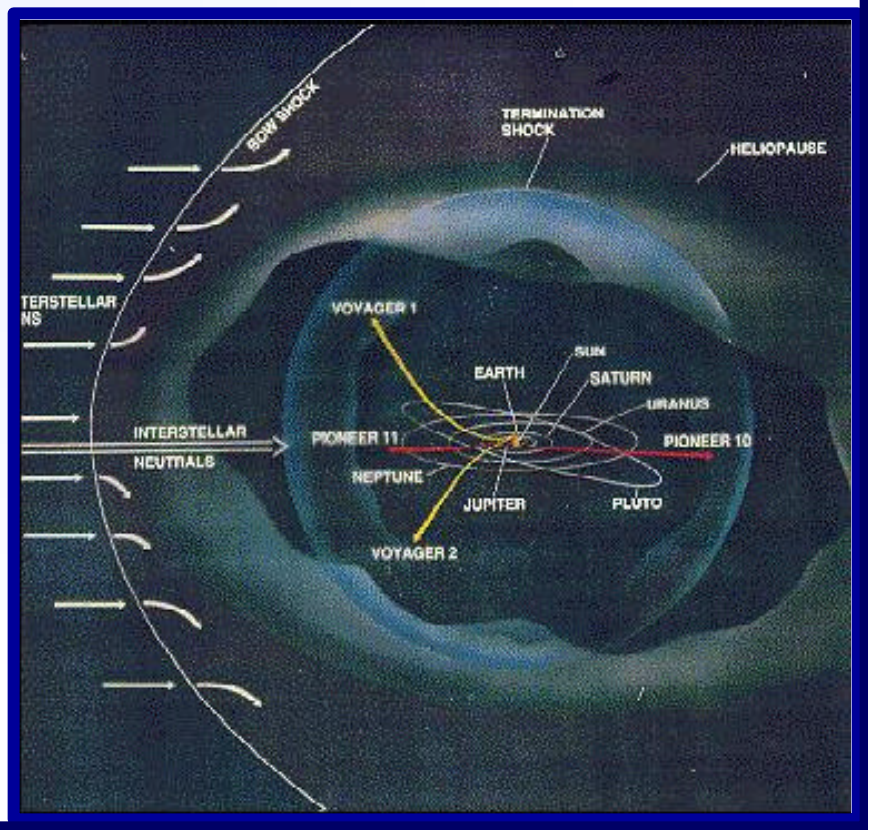
SPECTRUMASTRO



VOYAGER

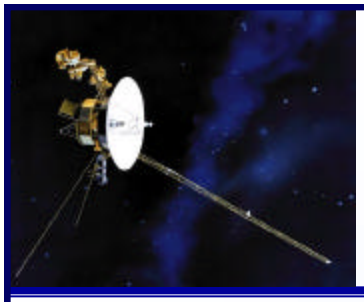
FLIGHT OPERATIONS

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



J. C. Hall, Jr.
January 17, 2002
NASA Jet Propulsion Laboratory

http://vraptor.jpl.nasa.gov



VOYAGER

FLIGHT OPERATIONS

FLIGHT SYSTEM STATUS

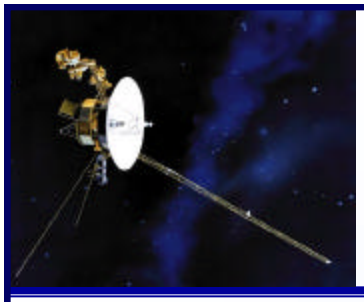
MISSION STATUS

VOYAGER 1

* HELIOCENTRIC DISTANCE – 83.5 AU, RTLT – 23h19m00s
- SPACECRAFT REMAINS HEALTHY
- MAJOR ACTIVITY: PLAYBACK

VOYAGER 2

* HELIOCENTRIC DISTANCE – 66.1 AU, RTLT – 18h33m12s
- SPACECRAFT REMAINS HEALTHY
- MAJOR ACTIVITY: MAGROL



VOYAGER

FLIGHT OPERATIONS

GROUND SYSTEM STATUS

(November 10, 2001 –January 11, 2002)

DSN – OVERALL SUPPORT – GOOD

TOTAL SUPPORT TIME, OUTAGE TIME, % of OUTAGE TIME

S/C	SCHED SUPPORT	ACTUAL SUPPORT	70M TIME	SIGNIFICANT OUTAGE TIME	% of OUTAGE TIME
31	664.3	662.6*	88.6	29.0 (4.2)	5.0
32	598.2	596.1**	181.6	2.5 (1.6)	0.7

***Released 1.7 hours of DSS-25 support to MARS ODYSSEY.**
****Released 2.1 hours of DSS-34 support to CLUSTER**

VOYAGER HOMEPAGE - http://vraptor.jpl.nasa.gov

CASSINI

http://saturn.jpl.nasa.gov/cassini/index.shtml

Joint Users Resource Allocation Planning (JURAP) Committee Meeting

Dave Doody

January 17, 2001

NASA / Jet Propulsion Laboratory

CASSINI

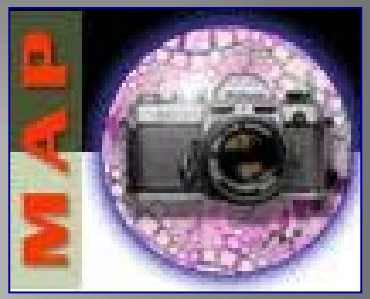
- In Quiet Cruise Subphase through 8 July 2002
  - S/C remains HGA-to-Earth except for specific short activities
- Operations are Basically Nominal
  - PSG this week at JPL
  - Tour Science Planning continues
  - SOI “Smart Burn” under development to provide correct energy in case of anomalies
  - Cassini Public Engagement Re-plan in progress
  - Good DSN Support
    - RNG problem continues under investigation
    - NOP still being revised
    - Minor anomalies being worked in real time, minimal data loss
    - Participating in test of BVR F/W v5.1.4 by commanding S/C to Bi-ϕ D/L.
  - Minor S/C instrument anomalies being worked and recovered near real time
    - ISS Haze anomaly in work (ref ISA Z71910)

CASSINI

- Gravitational Wave Experiment #1 Completed
  - Experiment ran 24 hours/day, 7 days/week, DSN coverage for 40 days and 40 nights
  - Cassini's first prime mission science
  - MAPS data was also acquired during the period
  - Very good DSN support
    - Many new subsystems were used for first time, with procedures and anomaly mitigations evolving near R/T
    - RS received ~90% of planned data
    - Work continues on NMC/Ka-U/L EXC frequency snapping problem, and X-U/L XFR tune-out problem
  - Next Ka-band RS data will be Superior Conjunction Experiment June 2002
  - Back on thrusters again; Science instruments released from "quiet" mode

INTERPLANETARY NETWORK AND INFORMATION SYSTEMS DIRECTORATE

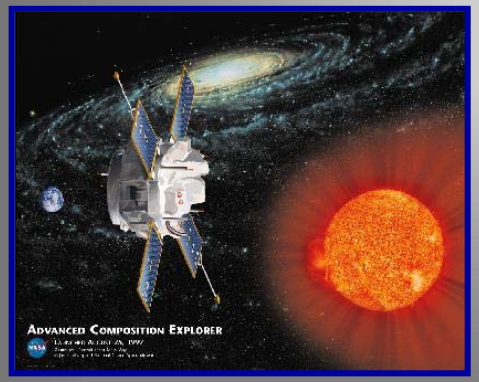
http://genesismission.jpl.nasa.gov/



http://map.gsfc.nasa.gov/

Flight Project Reports:

Genesis/MAP/ACE/IMAGE



http://www.srl.caltech.edu/ACE/

JPL

Steve Waldherr
TMS Manager

January 17, 2002

http://pluto.space.swri.edu/IMAGE/

MAP

- MAP successfully performed an L-2 station keeping maneuver #1 on 16 January 2002
  - DSS-24 supported pre maneuver activities
  - DSS-43 supported maneuver
  - DSS-54 supported post maneuver activities
- Spacecraft operations continue nominally
- No resource issues/concerns

ACE

- ACE routine maneuver schedule for January 2002
  - January 2, 16:53 GMT
  - January 14, 14:10 GMT
  - January 25, 16:35 GMT
- ACE operations continue nominally
- No resource issues/concerns

IMAGE

- Spacecraft operations continue nominally
- No resource issues/concerns

GENESIS

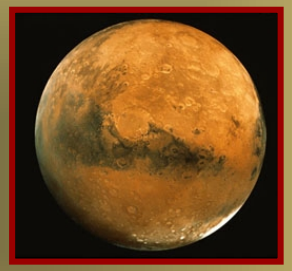
- GENESIS successfully performed station keeping maneuver #1b for the L-1 on 16 January 2002.
- Spacecraft operations continue nominally
- Spacecraft health and status nominal
  - Power-nominal
  - Propulsion-nominal
  - Telcom-nominal
  - Thermal-as predicted
- Science collection phase has gone smoothly
- No resource issues/concerns

Mars Global Surveyor

Flight Operations Status

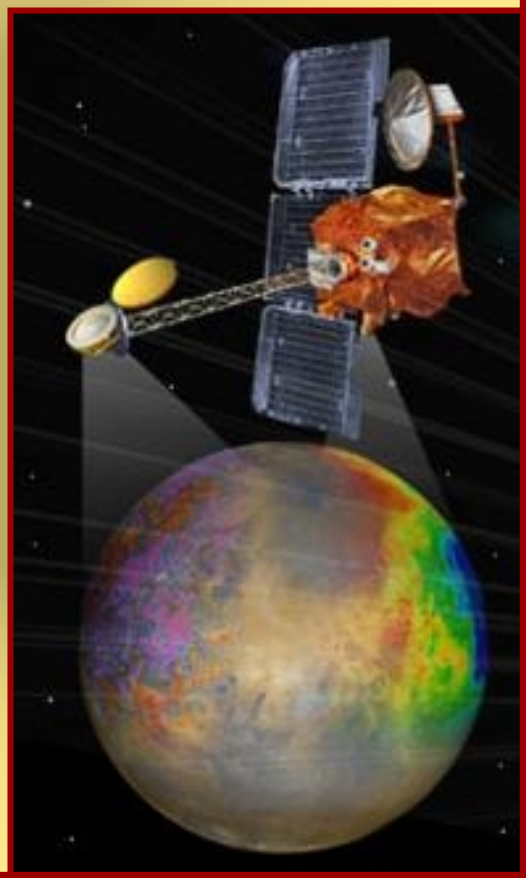
Presentation to the

Joint Users Resource Allocation Planning (JURAP) Meeting



E. E. Brower

January 17, 2001



http://mars.jpl.nasa.gov/missions/present/globalsurveyor.html

Agenda

- Program / Project Status
- Recent Events/Accomplishments
- Upcoming Events
- Mission Assessment
- Issues

Program / Project Status

Technical				Schedule				Resources				Programmatic			
SEPT	OCT	NOV	DEC	SEPT	OCT	NOV	DEC	SEPT	OCT	NOV	DEC	SEPT	OCT	NOV	DEC
G	G	G	G	G	G	G	G	G	G	G	G	G	G	G	G

Detailed Description: (for items identified as yellow or red)

Technical:

Schedule:

Resources:

Programmatic:

NOTE: This is a rolling 4-month picture

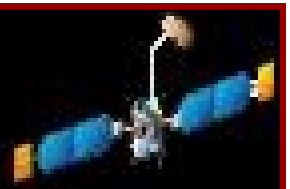
G	No current problem All commitments can be met
Y	Major problem Identified solution Commitment is in jeopardy
R	Major problem No identified solution Commitment cannot be met

MGS

Events

- Last 3 Months:

– Microphonics test	OCT 6
– MOLA Diagnostic Test#5	OCT 10
– MOC focus tests	OCT 8-15
– A/B 4/d playback sequences began	OCT 17
– C-mode entry	OCT 19
– C-mode recovery/causal reviews	OCT 22, 30
– Odyssey A/B support initiation	OCT23
– High Rate bias test	DEC 10
– Odyssey A/B support end	JAN, 10
– MPL imaging	JAN 11-12



Recent Accomplishments

- Spacecraft began fifth year of orbital operation on September 11, 2001
- 207 ROTO sequences executed to date. ROTO during comm. periods capability implemented Sept. 26. Seven performed to date
- Spacecraft went into contingency mode on Sept. 6, and Oct. 19. STAREX converged on bad star following ROTO sequence. Return to full operations within in three days. No ROTOs during 1st month of Odyssey support.
- Special MGS issue of JGR ready for November release. One-year mapping report: 28 papers (>600 pages).
- Dust storm press conference held Oct. 11.
- Planetary Quarantine report submitted to PQ Officer.
- Second year mapping archive completed.

Recent Accomplishments (Cont'd)

P Took 100,000th image. MOLA Radiometry Mode funded

P Received E2 Mission with science authorization on Nov. 27

P Received NASA approval for Planetary Quarantine Report; no raise maneuver

N Conducted High Rate bias test on Dec. 10

N Received request from Program Scientist for MPL site imaging for NIMA

P Published new results in Science (Dec. 7); press release at AGU Dec. 12

P Continued Odyssey aerobraking atmospheric monitoring/rapid data return

N Continued C-mode entry investigation/testing and procedure improvement

P Signed MER/MGS MOA includes up to two passes/day/rover science return

P Completed 1000th day of mapping. Distributed primary mission final science report (Special JGR issue)

P Resumed both ingress/egress occultations using new Radio Science Receiver

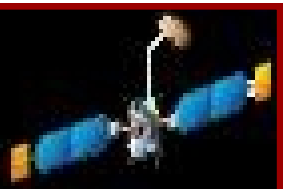
N Special MPL site imaging sequence conducted. Two swathes taken on January 11, 2002

P Begun planning daily ROTO observations for remainder of 24h/7d MSPA tracking period(January 30) with new safeguards to avoid C-mode entry (automated ROTOs to begin January 22)

P Continued planning ROTO improvements for Beta Supplement period

Codes:

P	Per Plan
F	Per Plan, but not previously forecasted in this report
N	Not previously planned
L1,2,3	Late -- 1st, 2nd, 3rd time slipped
C	Canceled -- not needed



Upcoming Events

- **Next 12 Months**:

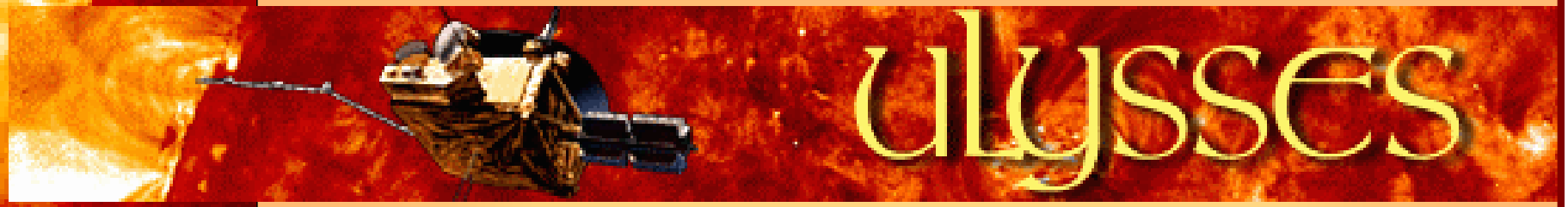
– Resume automated ROTOs	JAN 22
– Resume 10h/d DSN tracking	JAN 31
– Minimum data rate	MAR 18 (21kbs)
– Beta Supplement	MAR 20
– End of extended mission (E1)	APR 22
– E2 Mission start	APR 22
– E1 first half Archive Complete	APR 30

Mission Assessment

- Spacecraft is in good health.
- UHF tests on June25-28 to confirmed relay health.
- Expect to fulfill most extended mission objectives (complete MER site coverage may become E2 mission objective).
- Expect to satisfy MER EDL Requirements.
- Chances of operation through 2004 are good.

Issues

- None

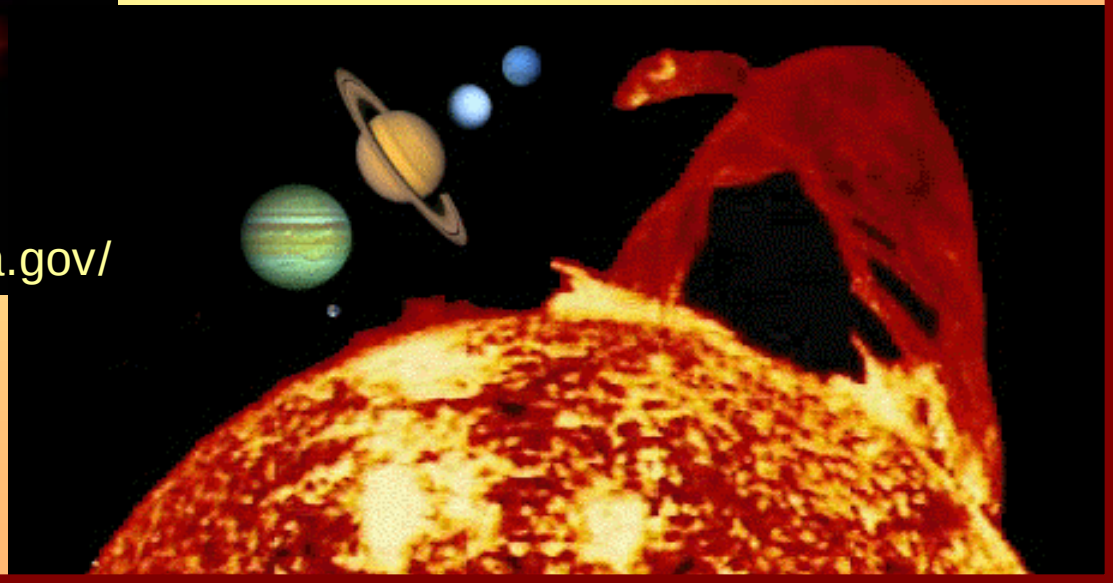


JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

B. Bryner

January 17, 2002

NASA Jet Propulsion Laboratory



ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

- **SPACECRAFT OPERATIONS ARE NOMINAL. THE SPACECRAFT IS IN CONTINUOUS VIEW FROM THE NORTHERN HEMISPHERE AND OUT OF VIEW FROM THE SOUTHERN HEMISHERE. THE NUTATION CONTROL CAMPAIGN HAS BEEN COMPLETED AND GROUND SUPPORT HAS RETURNED TO BASIC SUPPORT REQUIREMENTS.**

- **SPACECRAFT RECONFIGURATIONS AND INSTRUMENT CALIBRATIONS ARE PERFORMED AS REQUIRED.**

- **SPACECRAFT EARTH POINTING MANEUVERS ARE BEING PERFORMED EVERY 5 DAYS.**

- **SIGNIFICANT DISCREPANCY REPORTS FOR THIS JURAP PERIOD ARE LISTED BELOW.**

- **DOY 341/04:35 → 05:15, DSS-63, DR:M100355; BVR WAS UNABLE TO ACQUIRE SCI-512 TELEMETRY BEFORE END OF TRACK. 40 MINUTES OF REALTIME TELEMETRY LOST.**

- **DOY 350/18:00 → 19:00, DSS-54, DR:M100402; LOW POWER TRANSMITTER RED. UNABLE TO RAISE BEAM VOLTAGE. LOST THIS COMMAND WINDOW COMPLETELY.**

ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

- **DOY 350/18:51 4 19:02, DSS-54, DR:M100404; TGC4 LOST INTERFACE AT BIT RATE CHANGE FROM SCI-512 TO SCI-1024. 12 MINUTES OF TELEMETRY LOST**

- **DOY 353/16:30 → 16:47, DSS-14, DR:G100636; PROCEDURAL. TELEMETRY DEGRADED DUE TO ERRONEOUS SUB-REFLECTOR CONTROLLER BIAS VALUES. CORRECT BIAS OFFSETS WERE ENTERED TO MAKE GOOD.**

- **DOY 357/15:00 → 15:23, DSS-54, DR:M100435; COMMAND ABORT ON CPA4. SWAPPED TO CPA2 TO MAKE GOOD. COMMANDING DELAYED 23 MINUTES FOR RECONFIGURATION AND REVALIDATION**

- **DOY 357/19:41 → 20:03, DSS-54, DR:M100436; ANTENNA WENT TO BRAKE WITH 'AZ BRAKE FAILED TO RELEASE' ALARM. 22 MINUTES OF REALTIME TELEMETRY LOST.**

- **DOY 005/20:00 → 20:20, DSS-24, DR:G100684; TGC PREDICTS HAD AN ERRONEOUS BIT RATE CHANGE AT 20:00 DUE TO VOICE MISCOMMUNICATIONS. PREDICTS WERE DISREGARDED AND MANUAL ACQUISITION OF TELEMETRY WAS MADE TO MAKE GOOD. 20 MINUTES OF REALTIME TELEMETRY LOST.**

ULYSSES

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE

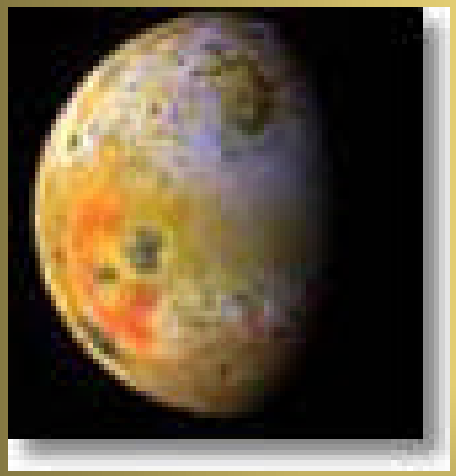
- **DOY 008/19:00 4 19:55, DSS-63, DR:M100481; TRANSMITTER TRIPPED OFF DUE TO LOW ELEVATION INTERLOCK. PASS WAS COMPLETED DOWNLINK ONLY WITH LOSS OF 50 MINUTES OF RANGING ACTIVITY.**

- **DOY 008/20:32 4 20:56, DSS-63, DR:M100482; PROCEDURAL. LATE TELEMETRY ACQUISITION DURING BIT RATE CHANGE FROM SCI-1024 TO 2048(1/1) DUE TO ERRONEOUS SUB-CARRIER FREQUENCY. 24 MINUTES OF REAL-TIME TELEMETRY LOST.**

- **DOY 013/00:00 → 00:07, DSS-54, DR:M100491; TELEMETRY PREDICTS ENTERED AT RADIO DAY CHANGE (DUE TO CONTINUOS VIEW) CAUSED THE BVR TO DROP LOCK. EXAMINATION OF PREDICT SET FOUND SUB-CARRIER AND BIT RATE IN ERROR. 7 MINUTES OF REALTIME TELEMETRY LOST.**

- **DOY 014/23:24 → 23:50, DSS-54, DR:M100498; MOVING PROCESS FROM NMC TO LMC IN ORDER TO RESTORE MONITOR DATA WHEN LMC LOST CONTROL OF ANTENNA RESULTING IN AN ANTENNA HALT AND TRANSMITTER OFF. 26 MINUTES OF REALTIME TELEMETRY LOST.**

JOINT USERS RESOURCE ALLOCATION PLANNING COMMITTEE



Brad Compton

January 17, 2002

NASA Jet Propulsion Laboratory

http://galileo.jpl.nasa.gov/

GALILEO EUROPA MISSION

ROUTINE ACTIVITIES

- Propulsion maintenance activities
- DMS conditionings
- Gyro performance test
- Science instrument MROs
- Attitude maintenance turns

GALILEO EUROPA MISSION

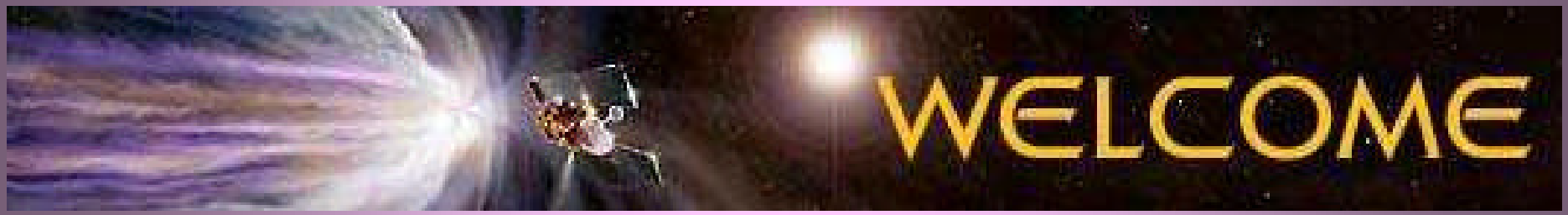
SIGNIFICANT EVENTS

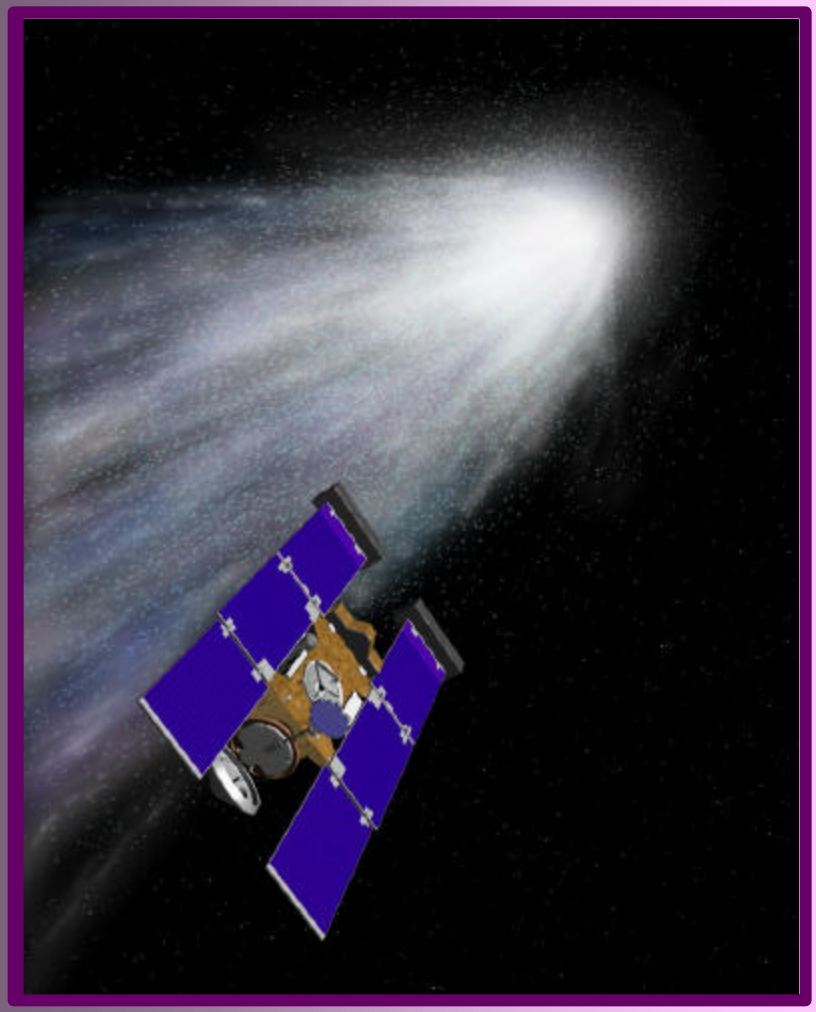
- Performed an Orbit Trim Maneuver (OTM-104)
  - Project was able to cancel OTM-105 (pre-encounter OTM) due to the accuracy of the previous apojove maneuver
- Resolved the DMS anomaly (possible bad spot on tape) and completed the I-32 encounter data playback
  - Lost a significant amount of playback data due to a DSS 63 Buffered Telemetry Demodulator (BTD) problem that persisted from 19 Dec. through 3 Jan.
- Io 33 encounter closest approach occurred at 6:44 am at an altitude of 100 km – closest of any encounter to date

GALILEO EUROPA MISSION

PROJECT PLANS

- Initiate I-33 playback
- Continue routine activities
- Next encounter Amalthea 34 on 5 November





STARDUST

JOINT USERS
RESOURCE ALLOCATION
PLANNING COMMITTEE

R. E. Ryan

January 17, 2001

NASA Jet Propulsion Laboratory

http://stardust.jpl.nasa.gov

STARDUST
Report to JURAP

STATUS

SPACECRAFT IS HEALTHY (1/17/02)

PRESENTLY 3.58 AU from EARTH

00:59:00 RTLT

2.64 AU from SUN

SPACECRAFT IS IN NOMINAL CRUISE

- **BIT RATE IS AT 252 bps (on HGA)**
- **SUPERIOR CONJUNCTION ON DECEMBER 25**
  ONE DEGREE SEP, Earth 3.5 AU, Sun 2.6 AU
- **MAX EARTH RANGE WAS 3.59 AU ON JANUARY 06**

- **WE ARE FARTHER FROM THE SUN THAN ANY U.S. SOLAR POWERED SPACECRAFT, HEADING FOR 2.72 AU (Apr 17-18).**
  - **THE SOLAR PANELS ARE PREFORMING VERY WELL**

STARDUST
Report to JURAP

- **CURRENT ACTIVITIES**
  - **DSM-2 (TCM-7) HAS BEEN RE-SCHEDULED FROM MARCH 13 TO JANUARY 18, 2002**
    - **SPACECRAFT POWER MARGINS**
  - **PLANNING AND TESTING FOR ENCOUNTER**
    - **SPACECRAFT TEST LAB HARDWARE UPGRADE IN PROCESS**
    - **PROBABLE USE OF ANNEFRANK (11/02) AS ENCOUNTER TEST FOR WILD-2**

- **IPN-ISD SUPPORT HAS BEEN GOOD THIS PAST PERIOD**

STARDUST
Report to JURAP

http://stardust.jpl.nasa.gov

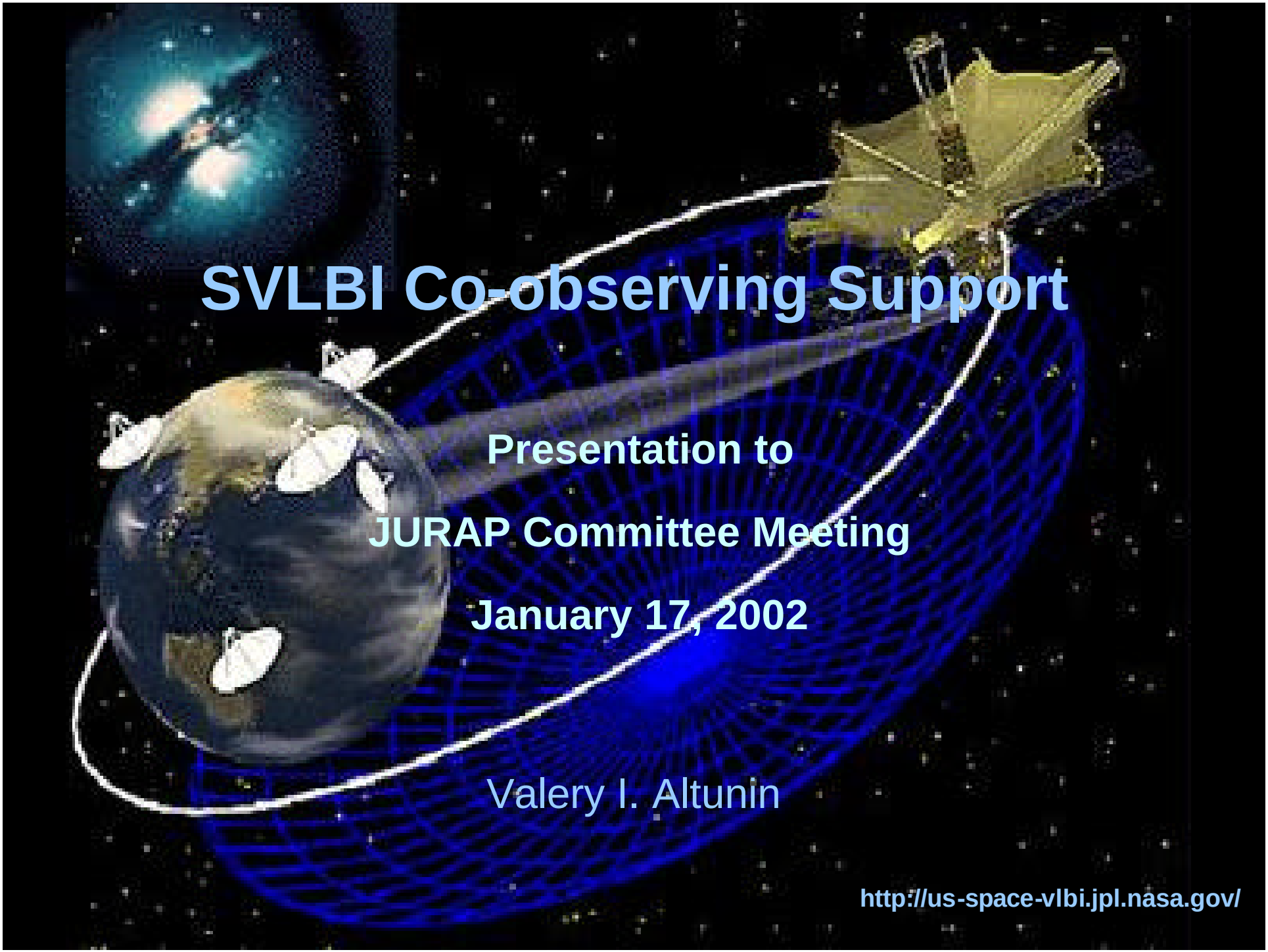
CHECK OUT THIS HOMEPAGE

UPCOMING EVENTS

MAXIMUM SOLAR RANGE, 2.72 AU
APRIL 18, 2002

INTERSTELLAR DUST COLLECTION 2
SECOND AEROGEL DEPLOY
JULY 27 TO DECEMBER 9, 2002

ASTERIOD ANNEFRANK FLYBY
NOVEMBER 2, 2002



SVLBI Co-observing Support

Presentation to

JURAP Committee Meeting

January 17, 2002

Valery I. Altunin

http://us-space-vlbi.jpl.nasa.gov/

SVLBI Co-observing Support (JURAP, 01/18/02)

- After five years of successful operations, NASA will stop support the VSOP mission in early February.

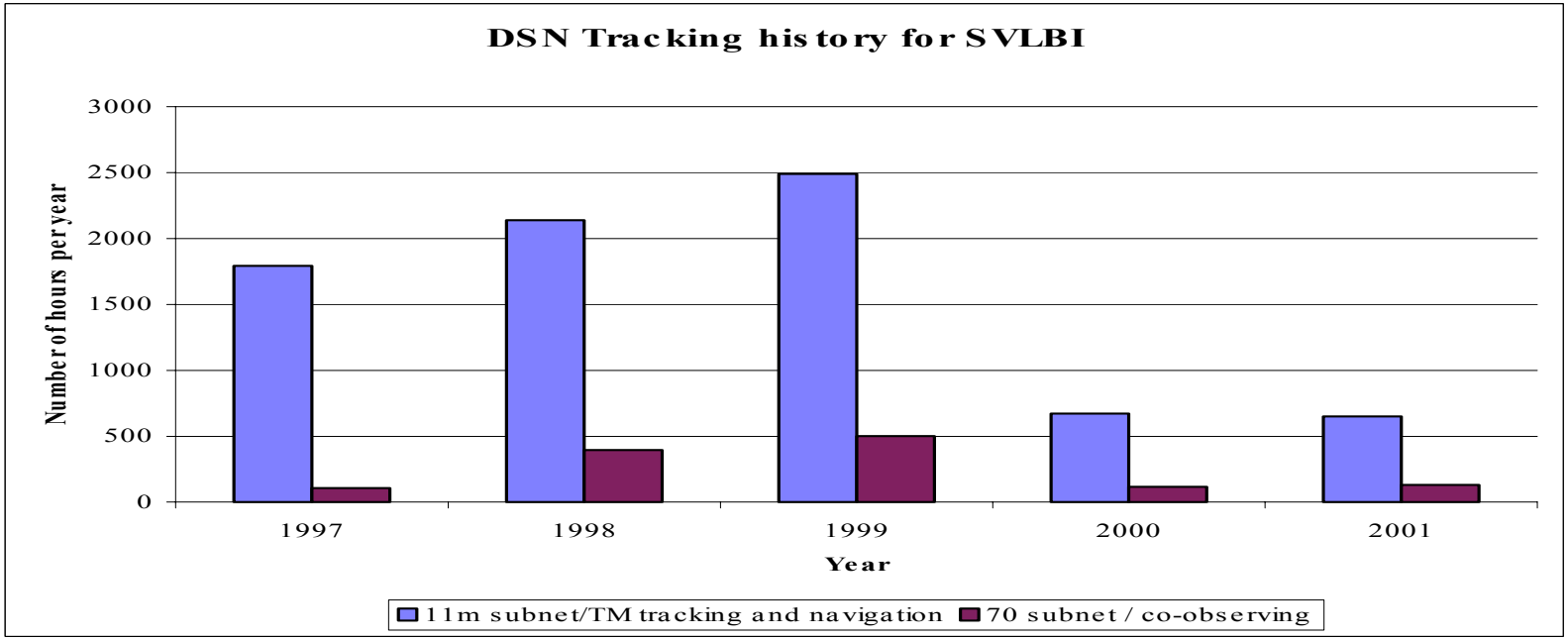
Thanks DSN

for the outstanding support of the mission.

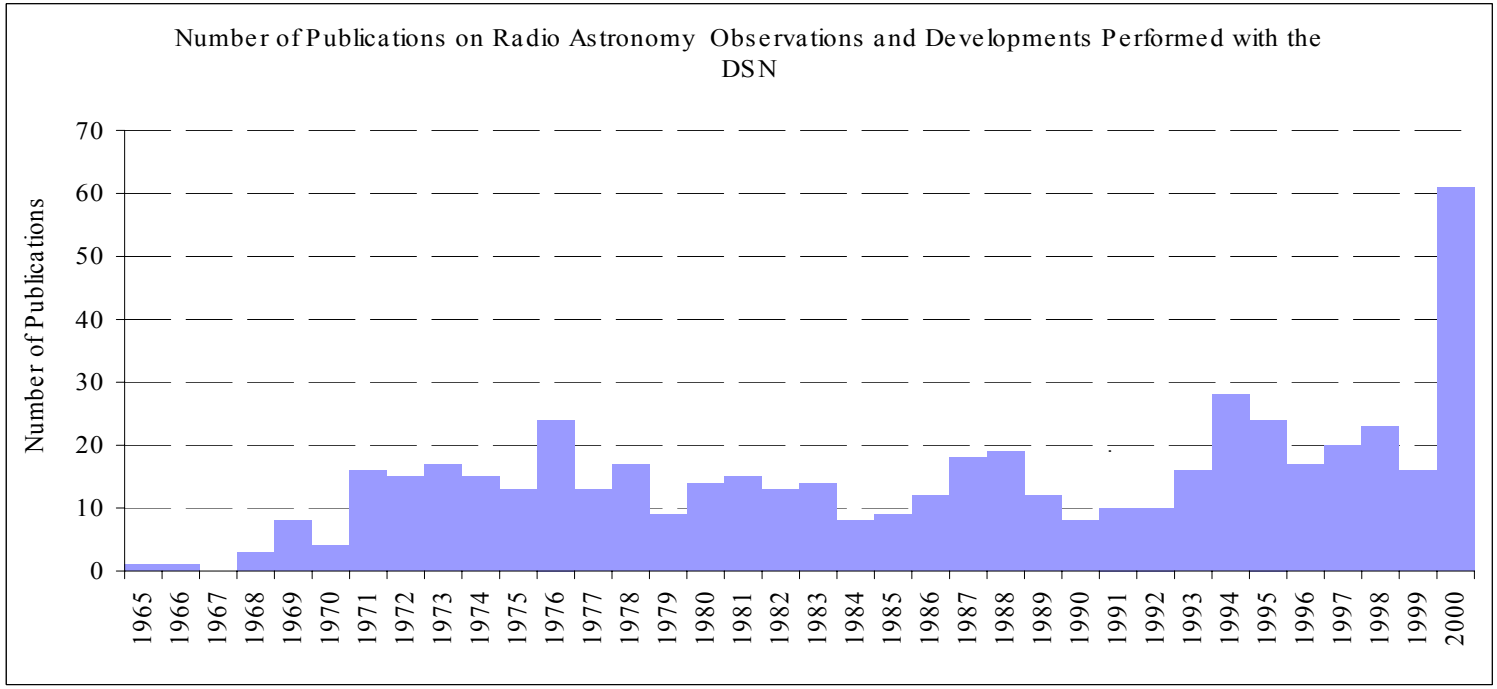
SVLBI Co-observing Support (JURAP, 01/18/02)

- The DSN support have included:
  - 11 m subnet tracking (high data rate TM ~ 128 Mps at Ku band, Doppler measurements
    - Occasionally, an emergency support by 26 m subnet at S-band
  - Orbit determination by MMNAV team
  - 70m subnet co-observing support

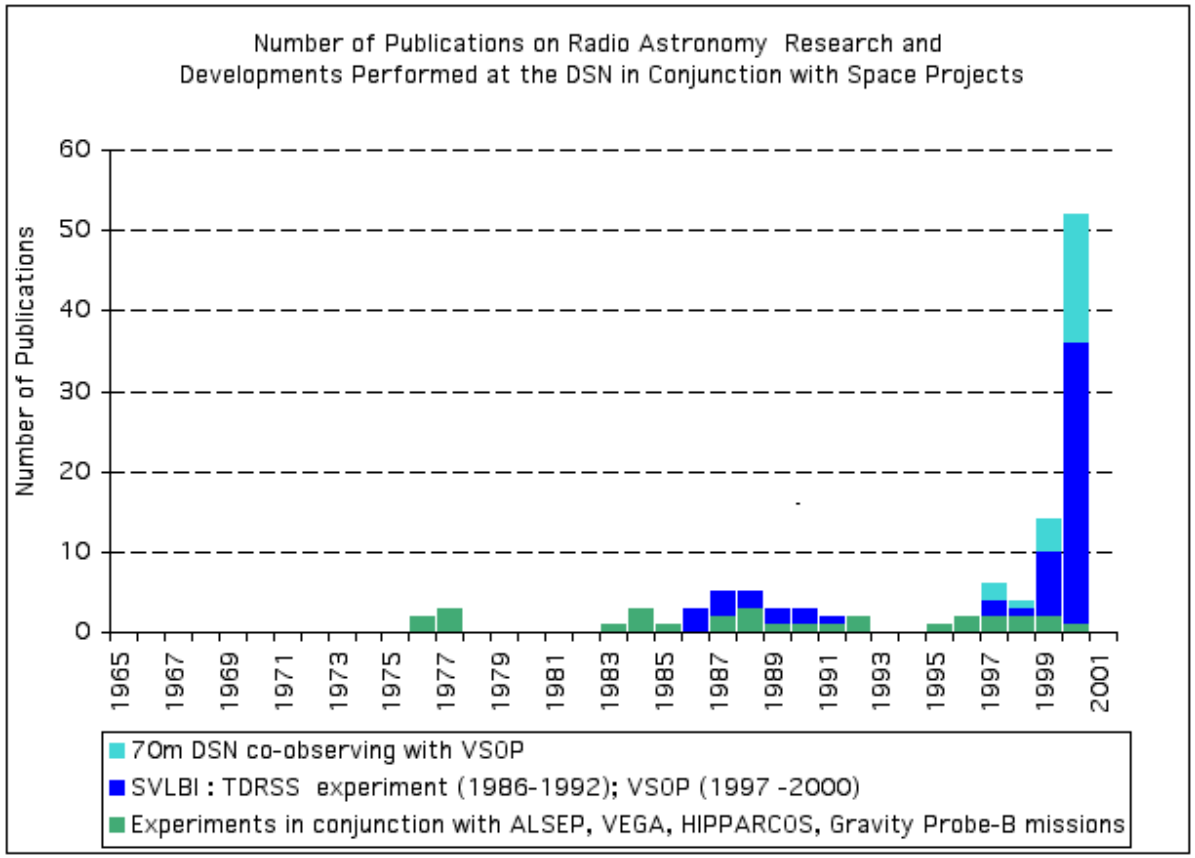
SVLBI Co-observing Support (JURAP, 01/18/02)



SVLBI Co-observing Support (JURAP, 01/18/02)



SVLBI Co-observing Support (JURAP, 01/18/02)



MEGA

- Mission Enhancement by Ground-based Astronomy (MEGA):
  - Support the experiments that will increase output of space astronomy missions
    - SVLBI prelaunch surveys
    - Reference Frame extension for FAME/SIM mission