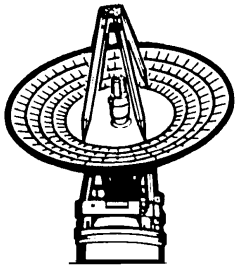
Resource Contention

Version 2.1

2003 – 2012

Napoleon Lacey

February 12, 2002



Resource Allocation Review
Agenda

- Loading Study
- Periods of Contention
- Events, Analysis and Recommendations

Resource Allocation Review
Loading Study

- Major Project Changes
- New Projects
- Changes in DSN Resource Support Request
- DSN User / Mission Planning Set
  - Ongoing Projects
  - Advanced Planning Projects
- Major DSN Downtime Changes
- Major DSN Downtimes by Date
- IPN-ISD Resource Implementation Planning Matrix

Resource Allocation Review
Loading Study

Major Project Changes Since August 2001 RARB

- **ARISE**
  - Launch moved to 06/15/2010 from 01/01/2008
  - EOPM moved to 06/15/2015 from 01/01/2013
- **Chandra**
  - EOPM moved to 07/24/2009 from 07/23/2004
  - EOEM moved to 07/24/2014 from 07/23/2009
- **Gravity Probe B**
  - EOPM moved to 01/01/2005 from 10/31/2003
- **Mars Exploration Rover A**
  - EOEM moved to 05/11/2004 from TBD

Resource Allocation Review
Loading Study

Major Project Changes (continued)

- **Mars Exploration Rover B**
  - Launch moved to 06/25/2003 from 06/27/2003
  - EOPM moved to 04/27/2004 from 05/10/2004
  - EOEM moved to 06/15/2004 from TBD
- **Radio Astron**
  - Launch moved to 06/15/2005 from 10/01/2002
  - EOPM moved to 06/15/2010 from 10/01/2007
- **Space Infrared Telescope Facility**
  - Launch moved to 01/09/2003 from 07/15/2002
  - EOPM moved to 04/19/2008 from 09/14/2007
- **Space VLBI**
  - Name changed to Mission Enhancement by Ground-based Astronomy (MEGA)

Resource Allocation Review
Loading Study

Major Project Changes (continued)

- **Stereo Ahead and Stereo Behind**
  - Launches moved to 11/15/2005 from 11/12/2005
  - EOPM moved to 02/15/2008 from 02/18/2008
  - EOEM moved to 12/15/2011 from 02/08/2011
- **Ulysses**
  - EOEM moved to 09/30/2004 from 12/31/2004
- **Highly Advanced Laboratory for Communications and Astronomy (VSOP–2)**
  - Launch moved to 06/15/2010 from 01/01/2008
  - EOPM moved to 06/15/2015 from 01/01/2013
- **Voyager 1 and 2**
  - EOEM moved to 12/31/2005 from 12/31/2019

Resource Allocation Review
Loading Study

New Projects Since August 2001 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
Selene	SELN	07/04/05	09/30/06	- - -
New Horizons	NHRZ	01/10/06	01/12/17	01/10/23
Dawn	DAWN	05/27/06	07/26/15	TBD
Kepler	KPLR	10/15/06	10/14/10	TBD
Solar Probe	SOLP	05/01/10	02/14/14	TBD

Resource Allocation Review
Loading Study

Changes in DSN Resource Support Since August 2001 RARB

- Cassini modified requirements in 2004 - 2010
- GBRA modified requirements in 2003 - 2010
- Genesis increased support in 2004
- GSSR added Asteroid 1998 SF36 in 2004
- MAP decreased Maneuver requirements in 2003 - 2006
- Mars Exploration Rover A modified requirements in 2003 - 2004
- Mars Exploration Rover B modified requirements in 2003 - 2004
- Mars Odyssey modified requirements in 2003 - 2004
- Mars Reconnaissance Orbiter modified requirements in 2005 - 2008
- MUSES-C modified requirements in 2005
- Stereo modified requirements in 2005 - 2011

Resource Allocation Review
Loading Study
DSN User / Mission Planning Set
– Ongoing 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	***MEGA***	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

Resource Allocation Review
Loading Study
DSN User / Mission Planning Set (continued)
– Ongoing Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
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	***02/07/02***
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

Resource Allocation Review
Loading Study
DSN User / Mission Planning Set (continued)
– Ongoing Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Genesis	GNS	08/08/01	09/08/04	- - -
Comet Nucleus Tour (CONTOUR)	CNTR	07/01/02	09/05/08	TBD
Space Infrared Telescope Facility	***STF***	***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

Resource Allocation Review
Loading Study
DSN User / Mission Planning Set (continued)
– 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***	- - -

Resource Allocation Review
Loading Study
DSN User / Mission Planning Set (continued)
– Advanced Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
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

Resource Allocation Review
Loading Study

Major DSN Downtime Changes Since August 2001 RARB

- **DSS-24 NSP Implementation**
  - Now planning for 10/21/2002 - 12/12/2002 (Weeks 43 - 50 / DOY 294 - 346)
  - Was planned for 10/01/02 - 11/22/2002 (Weeks 40 - 47 / DOY 274 - 326)
  - Changed for Integral Launch on 10/17/2002
- **DSS-46 Servo Drive Replacement**
  - Proposed for 04/07/2003 - 05/18/2003 (Weeks 15 - 20 / DOY 097 - 138)
  - Was planned for 05/05/2003 - 06/01/2003 (Weeks 19 - 22 / DOY 125 - 152)
  - Changed for MERA Launch on 05/30/2003
  - Downtime is extended from 4 to 6 weeks
- **DSS-66 Servo Drive Replacement**
  - Task schedule is currently in re-plan (window not specified)
  - Was planned for 06/24/2002 - 07/21/2002 (Weeks 26 - 29 / DOY 175 - 202)
  - Downtime is extended from 4 to 6 weeks

Resource Allocation Review
Loading Study
Major DSN Downtimes (Sorted by Start Date)
– 2002 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 66	Servo Drive Replacement	06/24/02	07/21/02	28	26-29	175	202
DSS 14	***70M Servo Drive Replacement***	07/15/02	09/27/02	75	29-39	196	270
DSS 14	***NIB - NSP Implementation***	07/15/02	09/27/02	75	29-39	196	270
DSS 54	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
DSS 54	***NIB - Azimuth Axle Replacement***	***10/01/02***	***10/20/02***	***20***	***40-42***	***274***	***293***
DSS 54	NIB - KA Band Encoder Mech Mod Kit Installation	10/01/02	10/20/02	20	40-42	274	293
DSS 45	NSP Implementation	10/01/02	11/22/02	53	40-47	274	326
DSS 24	NSP Implementation	***10/21/02***	***12/12/02***	***53***	***43-50***	***294***	***346***
DSS 24	NIB - KA-Band Encoder Mech Mod-Kit Installation	***10/21/02***	***11/09/02***	***20***	***43-45***	***294***	***313***
DSS 24	NIB - 20 KW X-Band TXR Installation	***10/21/02***	***12/12/02***	***53***	***43-50***	***294***	***346***
DSS 43	70M Servo Drive Replacement	11/25/02	02/09/03	77	48-06	329	040
DSS 43	NIB - Ball-Joint Pad Refurbishment	11/25/02	02/09/03	77	48-06	329	040
DSS 43	NIB - NSP Implementation	12/02/02	02/09/03	70	49-06	336	040
DSS 65	NSP Implementation	12/02/02	02/09/03	70	49-06	336	040

Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2003 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 25	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
DSS 25	NIB - 20 KW X-Band TXR Installation	02/10/03	04/06/03	56	07-14	041	096
DSS 25	***NIB - Azimuth Axle Replacement***	***02/10/03***	***04/06/03***	***56***	***07-14***	***041***	***096***
DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
DSS 34	***NIB - Azimuth Axle Replacement***	***02/10/03***	***03/02/03***	***21***	***07-09***	***041***	***061***
DSS 34	NIB - KA-Band Encoder Mech Mod-Kit Installation	02/10/03	03/02/03	21	07-09	041	061
DSS 34	NIB - 20 KW X-Band TXR Installation	02/10/03	04/06/03	56	07-14	041	096
DSS 63	70M Servo Drive Replacement	02/10/03	04/20/03	70	07-16	041	110
DSS 63	NIB - NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
DSS 63	NIB - Ball-Joint Pad Refurbishment	02/10/03	04/20/03	70	07-16	041	110
DSS 15	Antenna Controller Replacement	03/03/03	05/04/03	63	10-18	062	124
DSS 15	NIB - NSP Implementation	04/01/03	05/01/03	31	14-18	091	121
DSS 46	Servo Drive Replacement	05/05/03	06/01/03	28	19-22	125	152
DSS 54	***20 KW X-Band TXR Installation***	***07/21/03***	***08/31/03***	***42***	***30-35***	***202***	***243***
DSS 45	Antenna Controller Replacement	09/08/03	10/25/03	48	37-43	251	298

Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2004 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 65	Antenna Controller Replacement	05/10/04	06/27/04	49	20-26	131	179
DSS 14	Antenna Controller Replacement	07/05/04	10/03/04	91	28-40	187	277

Resource Allocation Review
Loading Study

IPN-ISD Resource Implementation Planning Matrix

Station	Subnet	Delivery Date	S-Band Down	S-Band Up	X-Band Down	X-Band Up	*20kW X-Band*	Ka-Band Down	Ka-Band Up	*NSP*
DSS-14	70M	XXXX	XXXX	XXXX	XXXX	XXXX	*XXXX*	TBD	N/A	*09/28/02*
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	*XXXX*	TBD	N/A	*05/02/03*
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	*12/13/02*	*12/13/02*	10/01/05	N/A	*12/13/02*
DSS-25	34B2	XXXX	N/A	N/A	XXXX	XXXX	*04/07/03*	XXXX	XXXX	*04/07/03*
DSS-26	34B2	04/02/03	N/A	N/A	04/02/03	04/02/03	*04/02/03*	04/02/03	N/A	*04/02/03*
DSS-27	34HSB	XXXX	XXXX	XXXX	N/A	N/A	*N/A*	N/A	N/A	*N/A*
DSS-34	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	*04/07/03*	01/01/05	N/A	*04/07/03*
DSS-43	70M	XXXX	XXXX	XXXX	XXXX	XXXX	*XXXX*	TBD	N/A	*02/10/03*
DSS-45	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	*XXXX*	TBD	N/A	*11/23/02*
DSS-46	26M	XXXX	XXXX	XXXX	N/A	N/A	*N/A*	N/A	N/A	*N/A*
DSS-54	34B1	XXXX	XXXX	XXXX	XXXX	XXXX	*09/01/03*	08/01/06	N/A	*11/23/02*
DSS-55	34B2	11/01/03	N/A	N/A	11/01/03	11/01/03	*11/01/03*	11/01/03	N/A	*11/01/03*
DSS-63	70M	XXXX	XXXX	XXXX	*XXXX*	XXXX	*XXXX*	TBD	N/A	*04/07/03*
DSS-65	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	*XXXX*	TBD	N/A	*02/10/03*
DSS-66	26M	XXXX	XXXX	XXXX	N/A	N/A	*N/A*	N/A	N/A	*N/A*

XXXX = Capability Currently Exists

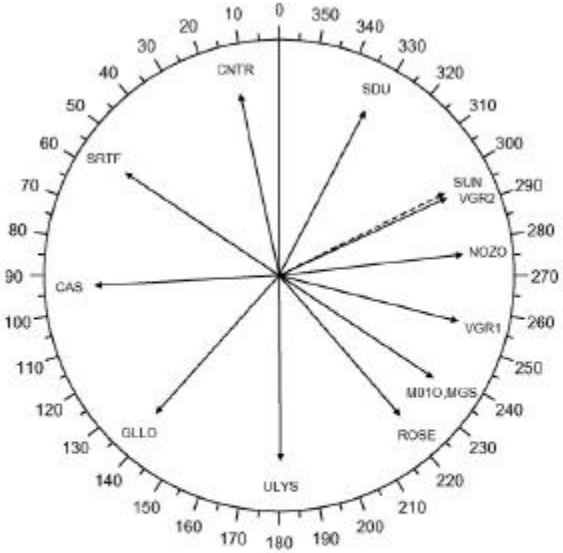
N/A = Capability Not Planned

Note: DSS-33 and DSS-53 closed on 02/07/2002

Resource Allocation Review
Periods of Contention

Month	Weeks		
	2003	2004	2005
January	01 - 05	01 - 05	01 - 04
February	06 - 09	06 - 09	05 - 08
March	10 - 13	10 - 13	09 - 13
April	14 - 17	14 - 18	14 - 17
May	18 - 22	19 - 22	18 - 21
June	23 - 26	23 - 26	22 - 26
July	27 - 31	27 - 31	27 - 30
August	32 - 35	32 - 35	31 - 34
September	36 - 39	36 - 40	35 - 39
October	40 - 44	41 - 44	40 - 43
November	45 - 48	45 - 48	44 - 47
December	49 - 52	49 - 53	48 - 52

Resource Allocation Review
Spacecraft Right Ascension
January 15, 2003



THE SPACECRAFT RIGHT ASCENSION FIGURE SHOWS THE POSITIONS OF THE SPACECRAFT IN THE SKY RELATIVE TO EACH OTHER ON THE 15TH OF EACH MONTH FOR THE YEAR INDICATED. RIGHT ASCENSTION IS COMMONLY MEASURED IN HOURS, WITH 1 HOUR = 15 DEGREES.

THE ARROW INDICATES THE CENTER OF A SPACECRAFT VIEW FROM EARTH. EXTEND 60 DEGREES ON BOTH SIDES OF THE ARROW TO CALCULATE AN EIGHT (8) HOUR VIEW PERIOD.

Resource Allocation Review
Analysis and Recommendations

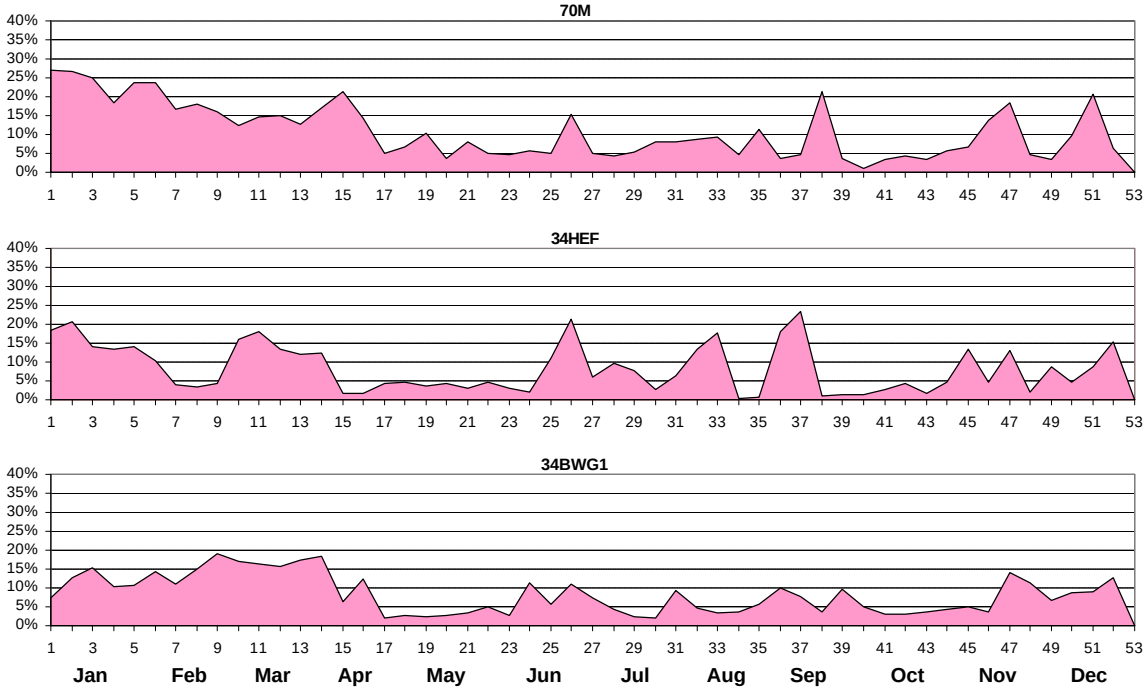
- **The RARB Red Book makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.**
  - **Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is an estimate of the amount of requested time, typically in percentage of requirements or modified requirements, that is unsupportable, based on resource availability, other users' requirements, assumed priorities, and viewperiods. The following percentages apply:**

    Low = <15%
    Moderate = 15% to 30%
    Severe = 31% to 45%
    Extreme = >45%

    Workable is a term used to express a condition wherein the projected unsupportable time is low. This condition occurs when the general forecasting analysis indicates a low percentage of unsupportable time or when RARB agreements have been made to reduce contention to a workable level. Workable essentially means that experience has shown that the remaining contention may be solved during final schedule preparations and negotiations.

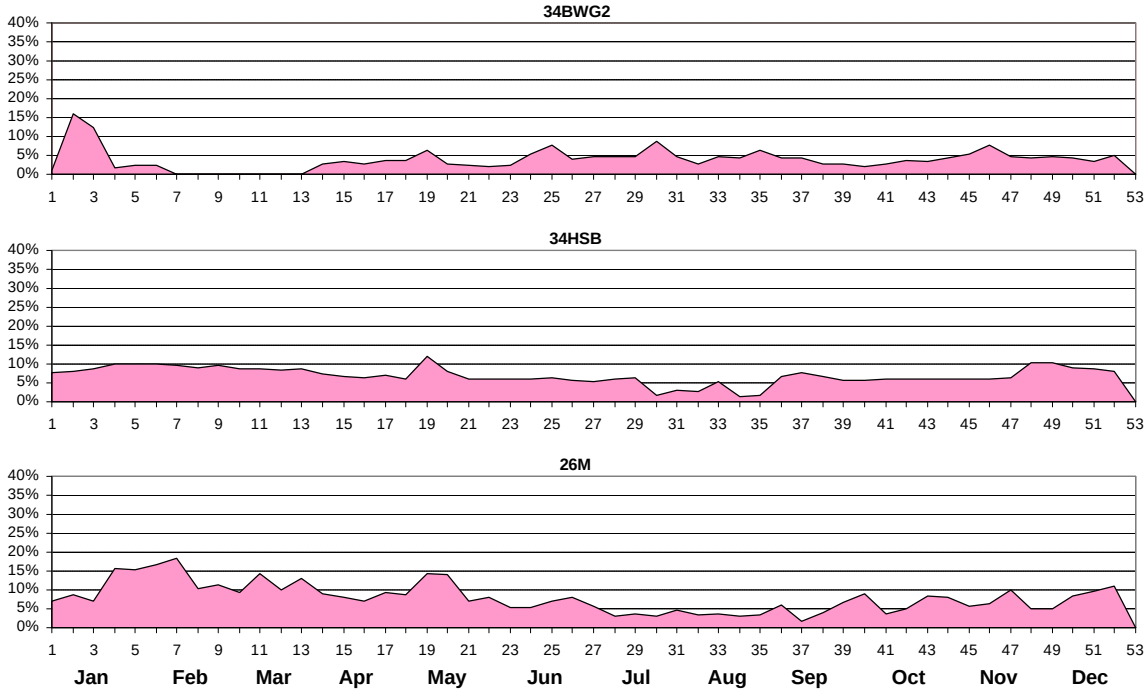
2003 Events, Analysis and Recommendations

Resource Allocation Review
Analysis and Recommendations
2003 Weekly Average User Unsupportable Time

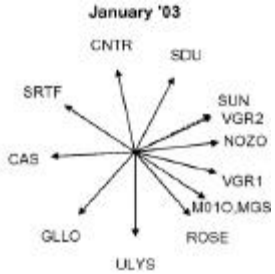


Resource Allocation Review
Analysis and Recommendations

2003 Weekly Average User Unsupportable Time (continued)



Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05)

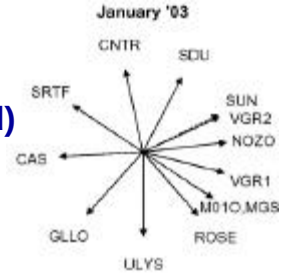


EVENTS

DSS-43 Downtime (Servo Drive Replacement)
DSS-65 Downtime (NSP)

Cassini Gravitational Wave in Weeks 01 through 03 DOY 014
Galileo Data Playback on 70M in Week 01 through Week 03 DOY 015
Mars Odyssey THEMIS Mapping on 70M
MUSES-C (TCM DOY 012) support in Week 01 - 02
Mars Global Surveyor Mapping/Beta Supplement
Rosetta Launch in Week 03 (DOY 013) and Post Launch support at DSS-54
SOHO HSO continuous coverage Week 04 and 05
SIRTF Launch in Week 02 (DOY 009) & Post Launch & IOC continuous

Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)

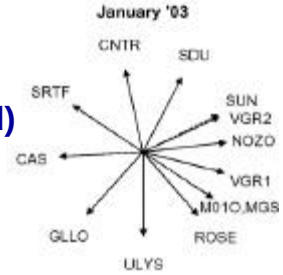


ANALYSIS

1. **(70M) Mars Odyssey THEMIS Mapping on 70M for 2 passes/day and Galileo's 70M for 2 pass per day requirement for Encounter Playback data coupled with DSS-43 downtime cause problems for the entire subnet; contention for DSS Maintenance, GBRA and Ulysses support is moderate; Galileo support contention is severe in Weeks 01 - 03; Mars Odyssey support contention is moderate in Weeks 01 - 03 and Week 05; MGS support contention is extreme.**

2. **(34M) Mars Global Surveyor support for Mars Mapping/Beta supplement causes problems for the entire subnet; DSS-65 is down for NSP Implementation causing the remaining 34HEF DSS Maintenance contention to be extreme due to Mars Global Surveyor Mapping/Beta Supplement support in contention with GBRA 24-hour supports, Space Geodesy Program, Stardust, Voyager 1, and Voyager 2. Ulysses support contention is moderate in Weeks 02 - 05.**

Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)

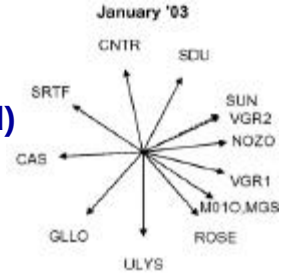


ANALYSIS (continued)

3. **Cassini Gravitational Wave support contention is moderate to severe in Weeks 02 - 03; SIRTF Post Launch support contention is moderate in Week 02.**

4. **(26M) SOHO continuous coverage requirements for HSO support in Week 04 and 05 will cause moderate contention for DSS Maintenance, and severe contention for Polar Playback and Real-Time support.**

Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)



RECOMMENDATION

*Cassini use 12 hours at DSS-25, 8 hours at DSS-54, and 4 hours at DSS-45 in Weeks 01 - 03 DOY 014. (3)

DSN reduce Antenna Cals from 8 hours to 4 hours in Weeks 01 - 03. (1)

DSN delete CAT M&E D-M4 support for 24 hours at DSS-15\45 in Week 02. (2)

GBRA reduce Host Country at DSS-45 to 8 hours in Week 02. (2)

GBRA delete Host Country at DSS-63 in Week 03. (2)

GBRA reduce Planet R/Astronomy and M-Wave Spect from 9 hours to 4 hours. (1)

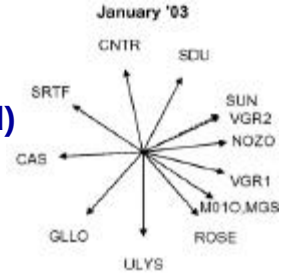
GBRA delete RA360 H20 at DSS-63. (1)

GBRA delete RA500 SOC-M4 at DSS-14\63 in Week 05. (1)

GBRA delete VLBA SOC-M4 at DSS-14\63 in Week 01. (1)

Galileo change to five 8-hour and two 6-hour passes at DSS-14 and seven 7-hour passes at DSS-63 in Week 01; change to four 7-hour and three 5-hour passes at DSS-14 and one 10-hour, two 7-hour and three 5-hour passes at DSS-63 in Week 02; requested support using DSS-14 only in Week 03. (1)

Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

Mars Global Surveyor change 6 of 14 passes from 34HEF to MSPA with Mars Odyssey at DSS-63 and use DSS-15, 45 only for remaining 8 passes. (2)

Mars Odyssey change to five 7-hour and one 4-hour passes at DSS-14 and six 8-hour and one 4-hour passes at DSS-63 in Week 01; change to five 8-hour, one 7-hour and one 4-hour passes at DSS-14 and two 8-hour and four 5-hour passes at DSS-63 in Week 02. (1)

MEGA delete support in Weeks 02 - 04. (1)

Space Geodesy Program delete all supports. (2)

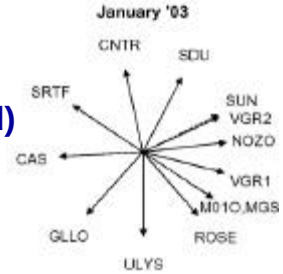
SIRTF change continuous support at DSS-25, 34, 54 to DSS-15, 34, 63 in Weeks 02 to Week 03 DOY 014 and DSS-25, 34, 63 in Week 03 DOY 015, and DSS-25, 34, 54 in Week 04 and 05. (2)

***SOHO HSO requested support on best efforts basis incurring gaps. (3, 4)**

***Ulysses move all support to DSS-14, 15, 24 using two 5-hour split passes per day as required. (1, 2)**

***Voyager 1 requested support using DSS-15, 25. (2)**

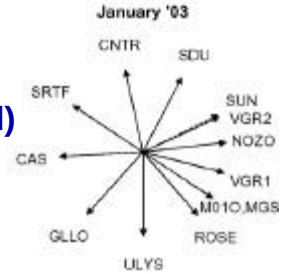
Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
CAS	DSS-45,25	9.0	8.5	1.00	0.25				2	2
CAS Gravitnl Wave	DSS-25,45,54	8.0	7.5	0.75	0.25	21	21	6		
DSS Bearing Mntc	DSS-14	8.0	8.0					1		
DSS Bearing Mntc	DSS-63	8.0	8.0				1			1
DSS Maintenance	DSS-63	8.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1	1
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-54	4.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-24	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-34	4.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-54	2.0	2.0			1	1	1	1	1
DSS Maintenance	DSS-24	2.0	2.0			1	1	1	1	1
DSS Maintenance	DSS-34	2.0	2.0			1	1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-66	8.0	6.0				1	1	1	
DSS Maintenance	DSS-66	6.0	6.0			1				1
DSS Maintenance	DSS-16	8.0	6.0				1	1	1	
DSS Maintenance	DSS-16	6.0	6.0			1				1
GLLO	DSS-14,63	8.0	4.0	1.00	0.25	14	14	6	1	1
M01O DDOR	DSS-14	8.0	4.0	1.00	0.25	1		1		1
M01O DDOR	DSS-63	8.0	4.0	1.00	0.25	1		1		1
M01O Mapping	DSS-14,63	7.0	7.0	1.00	0.25	12	14	12	14	12
MGS Map/Beta Sup	34H	7.0	4.0	1.00	0.25	14	14	14	14	14
MGS Map/Beta Sup	DSS-25,34,63	10.0	4.0	1.00	0.25	2	3	2	2	3
MUSC TCM	DSS-25,34,54	3.0	3.0	1.00	0.25	4	4			
POLR PB	26M	1.0	0.8	0.70	0.20	28	28	28	28	28
						1	**2**	**3**	**4**	**5**

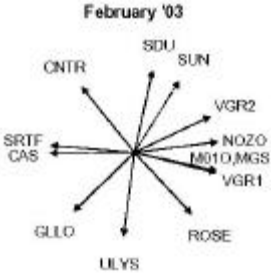
Resource Allocation Review
Analysis and Recommendations
2003 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

		Durations		Calibration		January				
User	Resource	Ave	Min	Pre	Post	1	2	3	4	5
POLR RT	26M	2.0	2.0	0.70	0.20	7	7	7	7	7
ROSE Launch	DSS-54	8.0	4.0	1.00	0.25			6	7	7
ROSE Launch	DSS-54	8.0	4.0	6.00	0.25			1		
SDU	DSS-15,45	6.0	4.0	1.00	0.25	2	2	1	1	1
SOHO	26M	9.6	6.0	0.70	0.20	7	7	7		
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14		
SOHO HSO	DSS-27	4.0	4.0	0.40	0.20				7	7
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20				14	14
SOHO HSO	DSS-16	4.0	4.0	0.70	0.20				7	7
STF IOC	DSS-25,34,54	8.0	1.0	0.75	0.25		12	21	21	21
ULYS	DSS-63,54	10.0	8.0	1.00	0.25	1	1	1	1	1
ULYS	DSS-14,24	10.0	8.0	1.00	0.25	4	4	4	4	4
ULYS	DSS-34	4.0	4.0	0.75	0.25	2	2	2	2	1
ULYS	DSS-54	6.0	4.0	0.75	0.25	2	2	2	2	1
ULYS Datation TST	DSS-63,54	12.0	10.0	2.00	0.25					1
VGR1	DSS-15	4.0	4.0	0.50	0.25	7	7	7	7	7
VGR1	34H	4.0	4.0	0.50	0.25	1				
VGR1 Routine U/L	DSS-14,63	2.5	2.5	0.75	0.25	1	1	1	1	1
VGR2	DSS-45	4.0	4.0	0.50	0.25	7	7	7	7	7
						1	2	3	4	5

Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09)

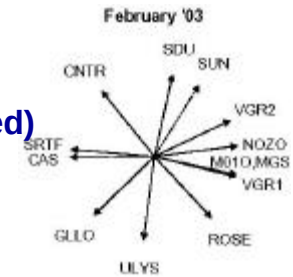


EVENTS

DSS-25 Downtime (NSP) in Weeks 07 - 09
DSS-34 Downtime (NSP) in Weeks 07 - 09
DSS-43 Downtime (Servo Drive) in Week 06
DSS-63 Downtime (Servo Drive) in Weeks 07 - 09
DSS-65 Downtime (NSP) in Week 06

Genesis Maneuver continuous on 34BWG1 in Week 06 DOY 036 and 037
Mars Odyssey THEMIS Mapping on 70M
MGS Mapping/Beta Supplement, 9 to 10 passes per week
Rosetta Post Launch support at DSS-54 only
SOHO HSO continuous coverage in Week 06 and 07
SIRTF Post Launch and IOC continuous coverage
VGR1 MAGROL at DSS-14 in Week 06 DOY 038

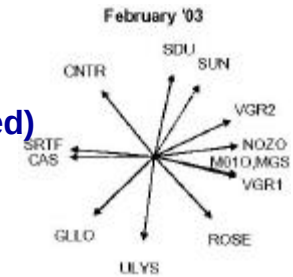
Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)



ANALYSIS

1. **(70M) Mars Odyssey THEMIS Mapping on 70M at 2 passes per day in partial Sun viewperiod combined with numerous users in their prime mission with critical events coupled with 70M downtime results in moderate to severe contention for the entire subnet; DSN Antenna Cals have moderate contention; DSS Maintenance has moderate to severe contention; GBRA has moderate contention; Galileo has moderate contention in Weeks 07 - 09; Mars Odyssey has moderate contention in Weeks 06 and 08; Ulysses has moderate contention in Week 06; Voyager 1 MAGROL at DSS-14 has extreme contention in Week 06; Voyager 2 routine support has moderate contention in Weeks 07 - 09.**

Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)

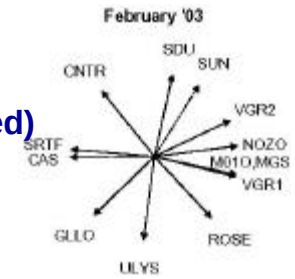


ANALYSIS (continued)

2. **(34M) MGS Mapping/Beta Supplement at 9 to 10 passes per week in partial Sun viewperiod coupled with DSS-34 downtime will cause moderate contention for the entire subnet; DSS Maintenance has moderate to extreme contention; Chandra has moderate contention in Weeks 06, 08 and 09; Genesis Maneuver has severe contention in Week 06 with DSS-24 Maintenance; contention for Rosetta Post Launch support at DSS-54 is moderate; and WIND support is also moderate in Week 08 and 09.**

3. **(26M) SOHO HSO planned for Week 06 and 07 will cause severe to extreme contention for DSS Maintenance.**

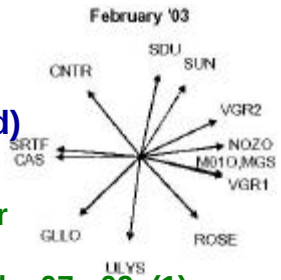
Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)



RECOMMENDATION

Chandra move 9 passes to 26M at 2 hours each. (2)
DSN delete Antenna Calibration in Weeks 06, 07 and 09. (1)
***DSS Maintenance move DSS-24 support to Tuesday. (2)**
GBRA reduce M-Wave Spect, Planet R/Astronomy, and RA360 H20 MSR at DSS-63 to 4 hours. (1)
GBRA delete VLBA SOC-M4 at DSSS14\63 in Week 06. (1)
***GSSR reduce Orbital Debris at DSS-14/15 to 4 hours in Week 07 and 09. (1)**
Mars Global Surveyor MSPA 7 passes at DSS-14, 63 in Week 06 and 08, and 3 passes at DSS-43 in Week 07 and 09 with Mars Odyssey. In addition, accommodate Voyager 1 MAGROL in Week 06. (2)
Mars Odyssey MSPA 7 passes at DSS-14, 63 in Week 06 and 08, and 3 passes at DSS-43 in Week 07 and 09 with Mars Global Surveyor. In addition, accommodate Voyager 1 MAGROL in Week 06. (2)
MEGA delete support in Week 07 and 08.
***SOHO HSO requested support on best efforts basis incurring gaps. (3)**
SIRTF in Week 06 use 7 passes at DSS-25 and 14 passes at DSS-34, 45, 54, 63. In Weeks 07 - 09 use DSS-15, 45, 54. (2)

Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)

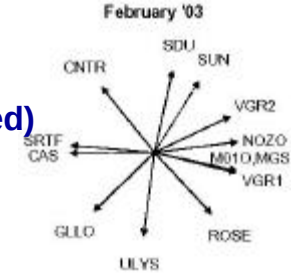


RECOMMENDATION (continued)

*Ulysses move all support to DSS-14, 15, 24 using two 5-hour split passes per day as required. (1, 2)

*VGR2 move routine support at DSS-43 to DSS-34, 45 in Weeks 07 - 09. (1)

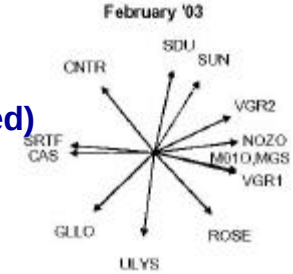
Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	February 6	7	8	9
CHDR	34B1	1.0	1.0	1.00	0.25	14			
CHDR	DSS-24,54	1.0	1.0	1.00	0.25		14	14	14
CHDR	DSS-46	2.0	2.0	0.70	0.20		7	7	7
CHDR	DSS-16,46	2.0	2.0	0.70	0.20	7			
DSS Bearing Mntc	DSS-14	8.0	8.0			1			1
DSS Bearing Mntc	DSS-43	8.0	8.0				1		
DSS Maintenance	DSS-43	8.0	8.0					1	1
DSS Maintenance	DSS-63	8.0	4.0			1			
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0				1	1	1
DSS Maintenance	DSS-54	6.0	6.0				1	1	1
DSS Maintenance	DSS-54	4.0	4.0			1			
DSS Maintenance	DSS-24	8.0	6.0				1	1	1
DSS Maintenance	DSS-24	6.0	4.0			1			
DSS Maintenance	DSS-54	2.0	2.0			1			
DSS Maintenance	DSS-24	2.0	2.0			1			
DSS Maintenance	DSS-25	8.0	6.0			1			
DSS Maintenance	DSS-46	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-66	8.0	6.0			1	1	1	
DSS Maintenance	DSS-66	4.0	4.0						1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	
DSS Maintenance	DSS-16	4.0	4.0						1
GLLO	DSS-14,63	8.0	4.0	1.00	0.25	1			
GLLO	DSS-14,43	8.0	4.0	1.00	0.25		1	1	1
GNS	34B1	8.0	4.0	1.00	0.25	5			
GNS	DSS-24,54	4.0	4.0	1.00	0.25		3	3	3
						6	**7**	**8**	**9**

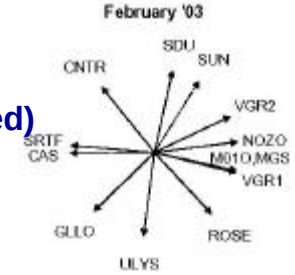
Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	February 6	7	8	9
GNS Maneuver	34B1	8.0	4.0	1.00	0.25	6			
M01O DDOR	DSS-43,63	8.0	4.0	1.00	0.25		1		1
M01O DDOR	DSS-14,43	8.0	4.0	1.00	0.25		1		1
M01O Mapping	DSS-14,43	7.0	4.0	1.00	0.25		12	14	12
M01O Mapping	DSS-14,63	7.0	7.0	1.00	0.25	14			
MGS Map/Beta Sup	34H	12.0	4.0	1.00	0.25	9	9	10	9
ROSE Launch	DSS-54	8.0	4.0	1.00	0.25	7	7	7	7
SOHO	DSS-27	4.0	4.0	0.40	0.20				2
SOHO	26M	9.6	6.0	0.70	0.20			7	
SOHO	26M	1.6	1.6	0.70	0.20			14	6
SOHO	26M	4.0	4.0	0.70	0.20				2
SOHO HSO	DSS-27	4.0	4.0	0.40	0.20	7	7		
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	14	14		
SOHO HSO	DSS-16	4.0	4.0	0.70	0.20	7	7		
SOHO TSO	DSS-14	4.0	4.0	0.45	0.25				1
SOHO TSO	DSS-27	4.0	4.0	0.40	0.20				4
SOHO TSO	DSS-46,66	8.0	4.0	0.70	0.20				10
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20				5
STF IOC	DSS-14,43,54	8.0	1.0	0.75	0.25				1
STF IOC	DSS-15,43,54	8.0	1.0	0.75	0.25		21	21	20
STF IOC	DSS-25,34,54	8.0	1.0	0.75	0.25	20			
STF IOC	DSS-25,43,54	8.0	1.0	0.75	0.25	1			
ULYS	DSS-63	10.0	8.0	1.00	0.25	1			
ULYS	DSS-14	10.0	8.0	1.00	0.25	4			
ULYS	DSS-34,63	5.0	4.0	0.75	0.25	4			
ULYS	DSS-54	10.0	8.0	0.75	0.25		1	1	1
ULYS	DSS-24	10.0	8.0	0.75	0.25		6	6	6
VGR1	DSS-14,43,65	4.0	4.0	0.50	0.25			7	
						6	**7**	**8**	**9**

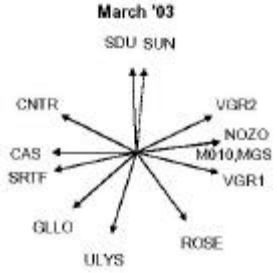
Resource Allocation Review
Analysis and Recommendations
2003 – February (Weeks 06 - 09) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	February 6	7	8	9
VGR1	DSS-15	4.0	4.0	0.50	0.25	7			
VGR1	34H	4.0	4.0	0.50	0.25		7		
VGR1	34H	8.0	4.0	0.50	0.25				7
VGR1 MAGROL	DSS-14	7.0	7.0	0.75	0.25	1			
VGR1 Routine U/L	DSS-14,63	2.5	2.5	0.75	0.25	1			
VGR1 Routine U/L	DSS-14,43	2.5	2.5	0.75	0.25		1	1	1
VGR2	DSS-43	4.0	4.0	0.50	0.25		7	7	7
VGR2	DSS-45	4.0	4.0	0.50	0.25	7			
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25		1	1	1
WIND	DSS-24,34	5.0	4.5	1.00	0.25	3			
WIND	DSS-24,54	5.0	4.5	1.00	0.25		3	3	3
WIND TCM	DSS-24	3.0	2.0	1.00	0.25		1		
						6	**7**	**8**	**9**

Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13)

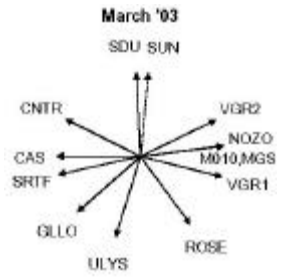


EVENTS

DSS-15 Downtime (Antenna Controller)
DSS-25 Downtime (NSP)
DSS-34 Downtime (NSP)
DSS-63 Downtime (Servo Drive)

Mars Odyssey Mapping 14 passes per week
MGS Mapping/Beta Support for 9 to 10 passes per week
Rosetta Post Launch support at DSS-54 only
SIRTF Post Launch and IOC continuous support
VGR2 DTR P/B in Week 11 and ASCAL and MAGROL in Week 12 at DSS-43

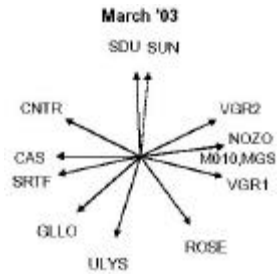
Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13) (continued)



ANALYSIS

1. **(70M) Mars Odyssey Mapping at 2 passes per day in partial Sun viewperiod combined with numerous users in their prime mission with critical events coupled with DSS-63 downtime results in moderate to severe contention for the entire subnet; Cassini has moderate contention; DSN Antenna Cals have moderate contention; DSS Maintenance has moderate to extreme contention; GBRA has moderate contention; Galileo has moderate contention; Voyager 2 ASCAL, DTR P/B and MAGROL have extreme contention in Week 11 and 12.**

Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13) (continued)

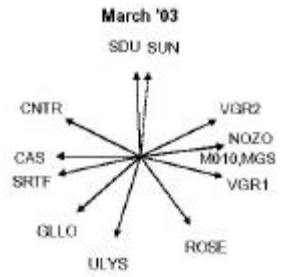


ANALYSIS (continued)

2. **(34M) MGS Mapping/Beta Supplement at 9 to 10 passes per week in partial Sun viewperiod and coupled with DSS-15, DSS-25, and DSS-34 downtimes cause moderate contention for the entire subnet; DSS Maintenance has moderate contention in Weeks 10 and 11; Mars Global Surveyor has severe to extreme contention; Chandra has moderate contention in Week 10; IMAGE has moderate contention; Polar TCM has moderate contention in Week 11; SIRTF has moderate contention; WIND has moderate contention; Voyager 1 has moderate contention in Week 10; Rosetta post-Launch support contention at DSS-54 is moderate and WIND support contention is also moderate.**

3. **(26M) DSS-34 is down for NSP Implementation causing Chandra to move support to DSS-46. Combined with SOHO routine and Polar Real-Time and Playback support, DSS Maintenance has moderate to severe contention.**

Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13) (continued)



RECOMMENDATION

*Cassini reduce to 8 hours and use DSS-45 only. (1)

DSN delete Antenna Cals in Week 10 and 11. (1)

GBRA delete DSS-45 Host Country support in Week 13. (1)

MEGA delete support in Weeks 10, 11 and 12. (1)

Mars Global Surveyor change Mapping/Beta supplement passes to MSPA with M01O at DSS-14, 43, 45, 65. In addition, accommodate Voyager 1 ASCAL, MAGROL, and DTR P/B. (1, 2)

Mars Odyssey change to MSPA with MGS and accommodate DSS Routine and Bearing Maintenance by planning short passes on maintenance days and long passes on non-maintenance days. In addition, accommodate Voyager 1 ASCAL, MAGROL, and DTR P/B. (1, 2)

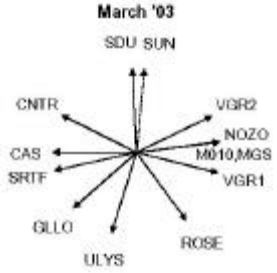
SGP delete Crust Dyn at DSS-45 in Week 10 and at DSS-65 in Week 11. (1)

SOHO delete TSO support and restore routine coverage in Week 13. In addition, accommodate 26M DSS Maintenance. (3)

*Ulysses move all support to DSS-14, 24 using two 5-hour split passes per day as required. (1, 2)

*VGR1 reduce DSS-14 negotiated passes to 4 hours in Week 10. (1)

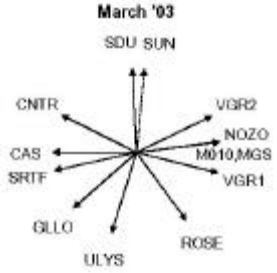
Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	March 10	March 11	March 12	March 13
CAS	DSS-14,45	9.0	8.5	1.00	0.25	2	2	2	2
CHDR	DSS-24,54	1.0	1.0	1.00	0.25	14	14	14	14
CHDR	DSS-46	2.0	2.0	0.70	0.20	7	7	7	7
DSS Bearing Mntc	DSS-14	8.0	8.0					1	
DSS Bearing Mntc	DSS-43	8.0	8.0			1			1
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-66	8.0	6.0			1	1	1	
DSS Maintenance	DSS-66	4.0	4.0						1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	
DSS Maintenance	DSS-16	4.0	4.0						1
GLLO	DSS-14,43	8.0	4.0	1.00	0.25	1	1	1	1
IMAG	DSS-24,54	0.8	0.8	1.00	0.25	13	13	13	13
IMAG	DSS-24,54	1.5	1.5	1.00	0.25	1	1	1	1
M01O DDOR	DSS-43,63	8.0	4.0	1.00	0.25		1		
M01O DDOR	DSS-43,34	8.0	4.0	1.00	0.25				1
M01O DDOR	DSS-14,43	8.0	4.0	1.00	0.25				1
M01O DDOR	DSS-14,43,65	8.0	4.0	1.00	0.25		1		
M01O Map/MGS Map	DSS-14,43,65	8.0	4.0	1.00	0.25	4	5	4	4
M01O Mapping	DSS-14,43,45,65	7.0	7.0	1.00	0.25	10	7	10	8
MGS Map/Beta Sup	DSS-65	7.5	4.0	1.00	0.25	5	5	5	5
POLR PB	26M	1.0	0.8	0.70	0.20	28	28	28	28
POLR RT	26M	2.0	2.0	0.70	0.20	7	7	7	7
						10	**11**	**12**	**13**

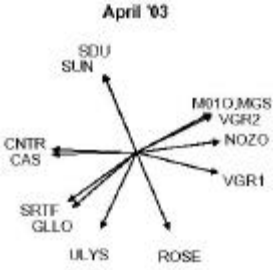
Resource Allocation Review
Analysis and Recommendations
2003 – March (Weeks 10 - 13) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	March 10	March 11	March 12	March 13
POLR TCM	DSS-46	5.0	4.0	1.00	0.25		1		
POLR TCM	DSS-66/54	5.0	4.0	1.00	0.25		2		
ROSE Launch	DSS-54	8.0	4.0	1.00	0.25	7	7	7	7
SOHO	DSS-27	4.0	4.0	0.40	0.20				2
SOHO	26M	9.6	6.0	0.70	0.20	7	7	7	
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	6
SOHO	26M	4.0	4.0	0.70	0.20				2
SOHO TSO	DSS-14	4.0	4.0	0.45	0.25				4
SOHO TSO	DSS-24	4.0	4.0	0.75	0.25				1
SOHO TSO	DSS-46,66	8.0	4.0	0.70	0.20				10
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20				5
STF IOC	DSS-14,43,54	8.0	1.0	0.75	0.25	21	21	21	21
ULYS	DSS-54	10.0	8.0	0.75	0.25	1	1	1	1
ULYS	DSS-24	10.0	8.0	0.75	0.25	6	6	6	6
VGR1	DSS-14,45,65	8.0	4.0	0.50	0.25	7			
VGR1	DSS-14,45,65	4.0	4.0	0.50	0.25			7	
VGR1	DSS-45,65	4.0	4.0	0.50	0.25		7		7
VGR1 MAGROL	DSS-14	7.0	7.0	0.75	0.25		1		
VGR1 Routine U/L	DSS-14,43	2.5	2.5	0.75	0.25	1	1	1	1
VGR2	DSS-43	4.0	4.0	0.50	0.25	7	7	7	7
VGR2 ASCAL	DSS-43	2.0	2.0	0.75	0.25			1	
VGR2 DTR P/B	DSS-43	7.4	7.4	0.75	0.25		1		
VGR2 MAGROL	DSS-43	7.0	7.0	0.75	0.25			1	
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1
WIND	DSS-24,54	5.0	4.5	1.00	0.25	3	3	3	3
						10	**11**	**12**	**13**

Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17)

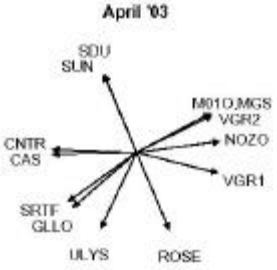


EVENTS

DSS-15 Downtime (Antenna Controller)
DSS-25 Downtime (NSP) in Week 14
DSS-34 Downtime (NSP) in Week 14
DSS-46 Downtime Proposal (Servo Drive) in Weeks 15 - 17
DSS-63 Downtime (Servo Drive) in Weeks 14 - 16
DSS-26 On line Wednesday April 2, 2003 (Week 14 DOY 092)

Cassini TCM support in Weeks 15 - 17
Genesis Maneuver continuous on 34BWG1 in Week 16 DOY 106 and 107
Mars Odyssey Mapping support for 2 passes per day
MGS Mapping/Beta Supplement for 9 to 10 passes per week
Rosetta Post Launch support in Week 14 at DSS-54 only and Nav Campaign in Week 15 and 16
SIRTF Post Launch and IOC continuous in Week 14 plus 3 days in Week 15

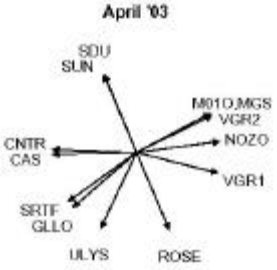
Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



ANALYSIS

1. (70M) Mars Odyssey Mapping at 2 passes per day in partial Sun viewperiod combined with numerous users in their prime mission with critical events combined with DSS-63 downtime results in moderate to severe contention for the entire subnet; Cassini has severe to extreme contention in Week 14 and 15; DSN Antenna Calibration has moderate contention; DSS Maintenance has moderate to severe contention; GBRA has moderate to severe contention in Week 14 and 15; Galileo has moderate contention in Week 14 and 15; GSSR Mercury has moderate contention in Week 14; Mars Global Surveyor has moderate contention in Week 15 and 16; SIRTF has moderate contention in Week 15; Ulysses has moderate contention in Week 15; Voyager 1 routine support has moderate to severe contention in Weeks 14 - 16.

Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)

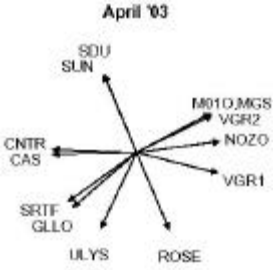


ANALYSIS (continued)

2. **(34M) MGS Mapping/Beta Supplement at 9 to 10 passes per week in partial Sun viewperiod, coupled with DSS-15, DSS-25, and DSS-34 downtimes cause moderate contention for the subnets; DSS Maintenance has moderate contention on 34BWG1 in Week 15 and 16; Genesis Maneuver has moderate contention in Week 16; IMAGE has moderate contention in Week 14; Mars Global Surveyor has severe contention on 34HEF in Week 14; Rosetta has moderate contention in Week 14 at DSS-54; SIRTF has moderate contention on 34BWG1 in Week 14 and WIND has moderate contention in Week 14.**

3. **(26M) DSS-46 proposed Downtime in Weeks 15 - 17 causes moderate contention for Polar and SOHO TSO in Week 17.**

Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



RECOMMENDATION

*Cassini use DSS-45 only in Week 14 and 15 and reduce to 8 hours. (1)

*Cluster 2 exclude use of DSS-46 in Weeks 15 - 17. (3)

DSN delete Antenna Calibration in Week 14 and 15. (1)

*DSS move DSS-24 Maintenance to Tuesday in Week 16 and delete DSS-46 Maintenance in Weeks 15 - 17. (2, 3)

GBRA delete DSS-43 and DSS-63 Host Country 24-hour support in Week 16 and 17, and M-Wave Spect & Planet R/Ast in Weeks 14 - 16. (1)

*Geotail exclude use of DSS-46 in Weeks 15 - 17. (3)

*GSSR Mercury reduce support to 4 hours. (1)

Mars Global Surveyor change Mapping/Beta supplement passes at DSS-65 to 7 hours & MSPA with M01O at DSS-14, 43, 45, 65 (1, 2)

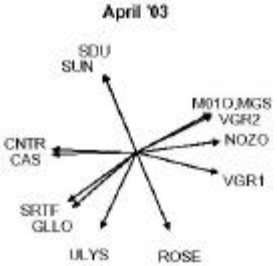
Mars Odyssey change passes to MSPA with MGS at DSS-14, 43, 45, 65 (1,2)

MEGA delete support in Weeks 14 - 16. (1)

*Polar exclude use of DSS-46 in Weeks 15 - 17. (3)

SGP delete DSS-65 Crust Dyn B-M4 24 hour support in Week 14, and delete DSS-45 Crust Dyn W-M4 18-hour support in Week 15 and 16. (1)

Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



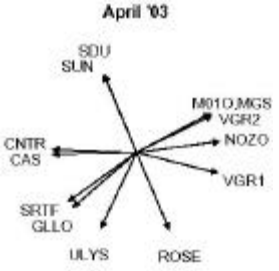
RECOMMENDATION

SOHO exclude use of DSS-46 beginning Week 15 and delete TSO support in Week 17. (3)

***Ulysses move all support to DSS-14, 24 using two 5-hour split passes per day as required. (1, 2)**

***VGR1 delete routine support at DSS-14, 45 in Week 14, at DSS-14, 43 in Week 15 and 16, and at DSS-14, 63 in Week 17. Use planned 8-hour passes at DSS-26. (1)**

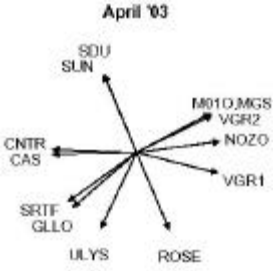
Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	April 14	April 15	April 16	April 17
CAS	DSS-14,45	9.0	8.5	1.00	0.25	2	1		
CAS TCM	DSS-45,25	9.0	4.0	1.00	0.25		2	3	4
CLU2 1/2/3/4 SSO	DSS-16/27/24/14	2.0	1.0	0.50	0.25	2	2	2	2
CLU2 1/2/3/4 SSO	DSS-46/34/45/43	2.0	1.0	0.50	0.25			1	1
CLU2 1/2/3/4 SSO	DSS-46/45/43	2.0	1.0	0.50	0.25	1	1		
CLU4 1/2/3/4 MSO	DSS-46/34/45/43	1.5	1.0	0.50	0.25			1	
DSS Bearing Mntc	DSS-14	8.0	8.0				1		
DSS Bearing Mntc	DSS-43	8.0	8.0					1	
DSS Bearing Mntc	DSS-63	8.0	8.0						1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-63	6.0	4.0						1
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	2
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0				1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-66	8.0	6.0			1	1	1	
DSS Maintenance	DSS-66	4.0	4.0						1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	
DSS Maintenance	DSS-16	4.0	4.0						1
GLLO	DSS-14,43	8.0	4.0	1.00	0.25	1	1	1	
GNS	34B1	4.0	4.0	1.00	0.25		3		3
GNS	34B1	8.0	4.0	1.00	0.25		1	5	
GNS	DSS-24,54	4.0	4.0	1.00	0.25	3			
						14	15	16	17

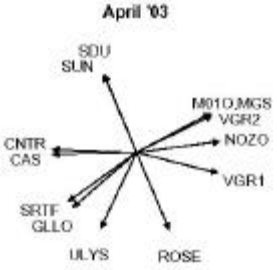
Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	April 14	April 15	April 16	April 17
GNS Maneuver	34B1	8.0	4.0	1.00	0.25			6	
IMAG	34B1	0.8	0.8	1.00	0.25		13	13	13
IMAG	34B1	1.5	1.5	1.00	0.25		1	1	1
IMAG	DSS-24,54	0.8	0.8	1.00	0.25	13			
IMAG	DSS-24,54	1.5	1.5	1.00	0.25	1			
INTG	DSS-16	5.3	0.5	0.70	0.20	7	7	7	7
M01O DDOR	DSS-43,34	8.0	4.0	1.00	0.25		1		1
M01O DDOR	DSS-25	8.0	4.0	1.00	0.25		1		1
M01O Map/MGS Map	DSS-14,43,65	8.0	4.0	1.00	0.25	5			
M01O Mapping	DSS-14,43,45,65	7.0	7.0	1.00	0.25	9			
M01O Mapping	DSS-25,34,54	7.0	7.0	1.00	0.25		12	14	12
MGS Map/Beta Sup	DSS-14,43	8.0	4.0	1.00	0.25		4	4	
MGS Map/Beta Sup	34H	12.0	4.0	1.00	0.25				10
MGS Map/Beta Sup	DSS-65	7.5	4.0	1.00	0.25	5	5	5	
POLR PB	26M	1.0	0.8	0.70	0.20	28	28	28	28
POLR RT	26M	2.0	2.0	0.70	0.20	7	7	7	7
ROSE Launch	DSS-54	8.0	4.0	1.00	0.25	7			
ROSE Nav Campaign	DSS-14,25,26	8.0	4.0	1.00	0.25		7	7	
ROSE Nav Campaign	DSS-43,34,45	5.0	5.0	1.00	0.25		2	2	
ROSE Nav Campaign	DSS-65,54	5.0	5.0	1.00	0.25		5	5	
SOHO	DSS-27	4.0	4.0	0.40	0.20				2
SOHO	26M	9.6	6.0	0.70	0.20	7	7	7	
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	6
SOHO	26M	4.0	4.0	0.70	0.20				2
SOHO TSO	DSS-14	4.0	4.0	0.45	0.25				5
SOHO TSO	DSS-46,66	8.0	4.0	0.70	0.20				10
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20				5
STF	DSS-45,65	1.0	1.0	0.75	0.25		4	7	7
						14	**15**	**16**	**17**

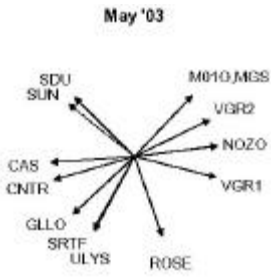
Resource Allocation Review
Analysis and Recommendations
2003 – April (Weeks 14 - 17) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	April 14	April 15	April 16	April 17
STF	DSS-25,34,54	1.0	1.0	0.75	0.25		4	7	7
STF IOC	DSS-14,43,54	8.0	1.0	0.75	0.25	21	9		
ULYS	DSS-63,54	10.0	8.0	1.00	0.25				1
ULYS	DSS-14,24	10.0	8.0	1.00	0.25		4	4	4
ULYS	DSS-43,34	4.0	4.0	1.00	0.25		2	2	2
ULYS	DSS-54,65	6.0	4.0	0.75	0.25		2	2	2
ULYS	DSS-54	10.0	8.0	0.75	0.25	1	1	1	
ULYS	DSS-24	10.0	8.0	0.75	0.25	6			
VGR1	DSS-14,63	8.0	8.0	0.50	0.25				7
VGR1	DSS-14,45	8.0	4.0	0.50	0.25	7			
VGR1	DSS-14,43	8.0	4.0	0.50	0.25		7	7	
VGR1	DSS-26	8.0	8.0	0.50	0.25	7	7	7	7
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25				1
VGR1 Routine U/L	DSS-14,43	2.5	2.5	0.75	0.25	1	1	1	
WIND	DSS-24,54	5.0	4.5	1.00	0.25	3			
WIND	34B1	5.0	4.5	1.00	0.25		3	3	3
						14	15	16	17

Resource Allocation Review
Analysis and Recommendations
2003 – May (Weeks 18 - 22)



EVENTS

DSS-15 downtime (NSP implementation) in Week 18

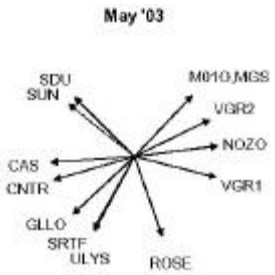
DSS-46 downtime (servo hydraulic drive replacement) in Week 19 and 20 and proposed downtime extension into Week 18

ANALYSIS

In Weeks 18 - 20, DSS-46 proposed and approved downtime causes moderate contention in the viewperiod on 26M and 34HSB subnets. SOHO, Polar, ACE, WIND, and DSS Maintenance viewperiods overlap 50 to 100%. Moving some user supports to 34BWG1 impacts WIND.

Resolve

Resource Allocation Review
Analysis and Recommendations
2003 – May (Weeks 18 - 22) (continued)



RECOMMENDATION

*DSS Maintenance schedule DSS-46 downtime in Week 18 and reduce DSS-16 and DSS-27 support in Weeks 18 - 20 to 6 hours each.

*Geotail move DSS-46 support to DSS-16, 27, 66 in Week 18.

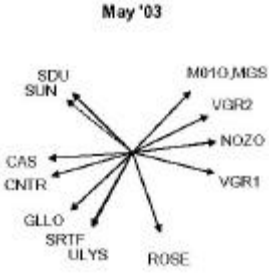
*Polar move 11 playback passes to 34BWG1 in Weeks 18 and 20. In Week 18, move 7 real-time and 7 playback passes to DSS-16, 27, 66 and 11 playback passes to 34BWG1.

*SOHO reduce 9.6-hour passes to 6 hours and schedule three 1-hour ranging passes at DSS-34BWG1 in Weeks 18 - 20; move 6-hour passes to DSS-16, 66 and 6-hour passes to DSS-16, 27, 66 in Week 18.

*WIND reduce 34BWG1 8-hour passes to 4 hours in Weeks 18 - 20.

Resolved

Resource Allocation Review
Analysis and Recommendations
2003 – May (Weeks 18 - 22) (continued)

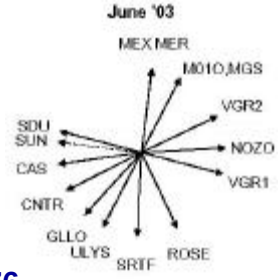


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	May 18	May 19	May 20	May 21	May 22
ACE	DSS-27	3.5	3.5	0.40	0.20	7	7	7	7	7
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0			1			1	1
DSS Maintenance	DSS-66	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1	1
GTL	26M	1.1	1.1	0.40	0.20	[illegible]			21	[illegible]
GTL	DSS-16,27,66	1.1	1.1	0.40	0.20	[illegible]	21	21	[illegible]	[illegible]
POLR PB	26M	1.0	0.8	0.70	0.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
POLR PB	DSS-16,27,66	1.0	0.8	0.70	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
POLR RT	DSS-27,66	2.0	[illegible]	0.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
POLR RT	26M	2.0	[illegible]	0[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SOHO	26[illegible]	[illegible]6	[illegible]	[illegible]	0[illegible]	[illegible]	[illegible]	[illegible]	7	7
SOHO	[illegible]	[illegible]6	[illegible]	[illegible]	[illegible]20	4			14	14
SOHO	[illegible],2[illegible]	[illegible].6	1[illegible]	0.[illegible]	[illegible].20		14	14		
SOHO	[illegible]S-1[illegible]6	[illegible]	[illegible]	0.70	0.20		7	7		
WIND	3[illegible]	[illegible]5.0	4.5	1.00	0.25	3	3	3	3	3
WIND TCM	[illegible]SS-[illegible]	3.0	2.0	0.50	0.25			1		
						18	19	20	21	22

Reset

Resource Allocation Review
Analysis and Recommendations
2003 – June (Weeks 23 - 26)



EVENTS

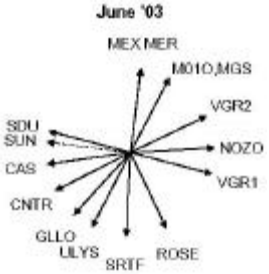
Genesis maneuver continuous on DOY 162 and 163
MERA continuous launch and TCM support
MERB continuous launch support begins in Week 26 DOY 176
Mars Express launch support in Week 23 and 24
MUSES-C TCM in Week 23 and 24
Nozomi TCM and Earth swingby (June 9) in Week 23 and 24

ANALYSIS

1. DSS-24 maintenance support losing time to Genesis maneuver on DOY 162.

2. MERA and MERB continuous requests for 34-meter support in Week 26 causes moderate to severe contention that impacts support requested for Mars Global Surveyor on 34HEF.

Resource Allocation Review
Analysis and Recommendations
2003 – June (Weeks 23 - 26) (continued)



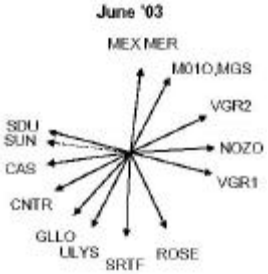
RECOMMENDATION

***DSS perform DSS-24 maintenance in Week 24 on Tuesday DOY 161. (1)**

Mars Global Surveyor delete four 34HEF passes in Week 26 and MSPA 4 additional 7-hour passes with Mars Odyssey at DSS-25, 34, 54. (2)

Mars Odyssey MSPA an additional 4 passes at DSS-25, 34, 54 with Mars Global Surveyor. (2)

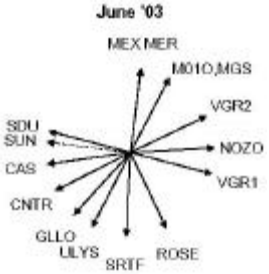
Resource Allocation Review
Analysis and Recommendations
2003 – June (Weeks 23 - 26) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	June 23	June 24	June 25	June 26
DSS Maintenance	DSS-15	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-45	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-65	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	
DSS Maintenance	DSS-54	4.0	4.0						1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	
DSS Maintenance	DSS-24	6.0	6.0						1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	
DSS Maintenance	DSS-34	4.0	4.0						1
DSS Maintenance	DSS-25	8.0	6.0			1	1		
DSS Maintenance	DSS-25	6.0	6.0					1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
GNS	34B1	4.0	4.0	1.00	0.25	3		3	3
GNS	34B1	8.0	4.0	1.00	0.25	1	5		
GNS Maneuver	34B1	8.0	4.0	1.00	0.25		6		
M01O DDOR	DSS-43,63	8.0	4.0	1.00	0.25	1		1	
M01O DDOR	DSS-25	9.0	4.0	1.00	0.25	1		1	
M01O Map/MGS Map	DSS-25,34,54	7.0	4.0	1.00	0.25	10	9	9	3
M01O Mapping	DSS-25,34,54	7.0	7.0	1.00	0.25	2	5	3	11
MERA Cruise	70M	8.0	4.0	1.00	0.25				13
MERA Cruise	34H	8.0	4.0	1.00	0.25			18	6
MERA Cruise/VLBI	DSS-14	9.0	9.0	1.00	0.25				1
MERA Cruise/VLBI	DSS-43,63	8.0	4.0	1.00	0.25				1
MERA Launch	34H	8.0	4.0	1.00	0.25	21	9		
MERA TCM	70M	8.0	4.0	1.00	0.25		1		
MERA TCM	34H	8.0	4.0	1.00	0.25		11	3	
MERB Launch	34H	8.0	4.0	1.00	0.25				9
MERB Launch	34H	8.0	4.0	3.00	0.25				3
						23	24	25	26

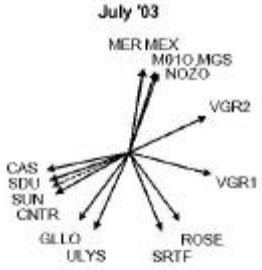
Resource Allocation Review
Analysis and Recommendations
2003 – June (Weeks 23 - 26) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	June 23	June 24	June 25	June 26
MERB Launch	34H	8.0	4.0	1.00	0.25				3
MERB Launch	DSS-34/46	8.0	8.0	3.00	0.25				1
MEX Launch	DSS-24,63	12.0	6.0	1.00	0.25	5			
MEX Launch	DSS-26,63	12.0	6.0	1.00	0.25	2	2		
MGS Map/Beta Sup	34H	12.0	4.0	1.00	0.25				4
MUSC TCM	DSS-25,34,54	3.0	3.0	1.00	0.25	4	2		
NOZO	DSS-43,34	8.0	4.0	0.75	0.25			2	
NOZO	DSS-24,54	8.0	2.0	0.75	0.25		7	7	7
NOZO	DSS-34	8.0	4.0	0.75	0.25				2
NOZO TCM	DSS-24,54	8.0	2.0	0.75	0.25	5			
						23	24	25	26

Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31)

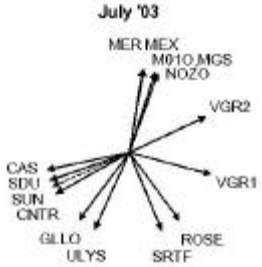


EVENTS

DSS-54 downtime (20 kW transmitter installation) in Week 30 and 31

Contour EGA
Genesis maneuver continuous DOY 211 and 212
Mars Odyssey mapping
MERA checkout in Week 29
MERB launch, TCM, checkout and early cruise
Mars Express TCM Week 29 and 30
Stardust TCM Week 29

Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31) (continued)



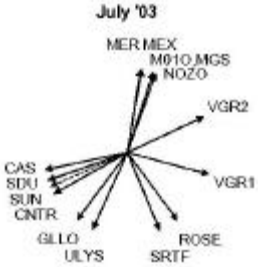
ANALYSIS

The combined mission activity, overlapping Mars viewperiods, and downtime at DSS-54 is causing significant unsupportable time for some projects.
Goldstone Solar System Radar Mars observation unsupportable time is severe in Week 30 and 31 at DSS-25 and is moderate at DSS-14.
Voyager 2 unsupportable time is moderate on 34-meter antennas in Week 29.

RECOMMENDATION

GBRA move Week 29 DSS-45 Host Country to Week 30.
Goldstone Solar System Radar reduce Mars observations in Week 30 to 3 - 4 hours each and delete Mars support in Week 31.
*Voyager 2 reduce two DSS-45 passes in Week 29 to 5 hours and support remaining 5 passes at DSS-43.

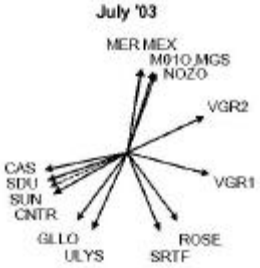
Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	July 28	July 29	July 30	July 31
CNTR	70M	8.0	6.0	1.00	0.25		1			
CNTR EGA	34H	8.0	6.0	1.00	0.25				3	5
CNTR EGA	DSS-15,45	4.0	4.0	1.00	0.25		6	8		
DSS Maintenance	DSS-15	4.0	4.0			1	1	1		
DSS Maintenance	DSS-15	6.0	6.0						1	1
DSS Maintenance	DSS-45	6.0	6.0						1	1
DSS Maintenance	DSS-45	4.0	4.0			1	1	1		
DSS Maintenance	DSS-65	6.0	6.0						1	1
DSS Maintenance	DSS-65	4.0	4.0			1	1	1		
DSS Maintenance	DSS-54	4.0	4.0			1	1	1		
DSS Maintenance	DSS-24	8.0	6.0						1	1
DSS Maintenance	DSS-24	6.0	6.0			1	1	1		
DSS Maintenance	DSS-34	6.0	6.0						1	1
DSS Maintenance	DSS-34	4.0	4.0			1	1	1		
DSS Maintenance	DSS-25	8.0	6.0					1	1	1
DSS Maintenance	DSS-25	6.0	6.0				1			
DSS Maintenance	DSS-25	4.0	4.0			1				
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
GNS	34B1	4.0	4.0	1.00	0.25	3	3	3		
GNS	DSS-24,34	4.0	4.0	1.00	0.25				3	
GNS	DSS-24,34	8.0	4.0	1.00	0.25				1	5
GNS Maneuver	DSS-24,34,66	8.0	4.0	1.00	0.25					6
GSSR Mars	DSS-14/25	7.0	7.0	1.50	0.50				1	1
M01O DDOR	DSS-43,63	8.0	4.0	1.00	0.25	1				1
M01O DDOR	DSS-43,34	8.0	4.0	1.00	0.25			1		
M01O DDOR	DSS-25	9.0	4.0	1.00	0.25	1		1		1
M01O Map/MGS Map	DSS-25,34,63	7.0	4.0	1.00	0.25		9	10	9	9
M01O Map/MGS Map	DSS-25,34,54	7.0	4.0	1.00	0.25	9				
						27	28	29	30	31

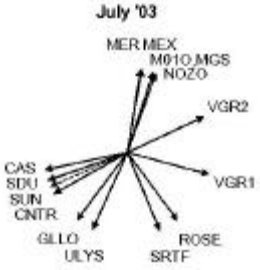
Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	July 28	July 29	July 30	July 31
M01O Mapping	DSS-25,34,54	7.0	7.0	1.00	0.25	3	5	2		
M01O Mapping	DSS-25,34	7.0	7.0	1.00	0.25				5	3
MERA Checkout	70M	8.0	4.0	1.00	0.25			10		
MERA Checkout	34H	8.0	4.0	1.00	0.25				5	
MERA Cruise	70M	8.0	4.0	1.00	0.25	4	5			
MERA Cruise	34H	8.0	4.0	1.00	0.25					3
MERA Cruise/VLBI	DSS-15	9.0	9.0	1.00	0.25					5
MERA Cruise/VLBI	DSS-45	8.0	8.0	1.00	0.25					2
MERA Cruise/VLBI	DSS-65	8.0	8.0	1.00	0.25					3
MERA VLBI	DSS-14\43,14\63	1.0	1.0	1.00	0.25	1	1	1		
MERA VLBI	DSS-15\45,15\65	1.0	1.0	1.00	0.25				1	
MERB Checkout	70M	8.0	4.0	1.00	0.25					6
MERB Checkout	34H	8.0	4.0	1.00	0.25					3
MERB Checkout/VLBI	DSS-14	9.0	4.0	1.00	0.25					1
MERB Checkout/VLBI	DSS-43,63	8.0	4.0	1.00	0.25					1
MERB Cruise	34H	8.0	4.0	1.00	0.25		3	19	13	
MERB Cruise/VLBI	DSS-45,65	8.0	4.0	1.00	0.25			1	1	
MERB Cruise/VLBI	DSS-15	9.0	4.0	1.00	0.25			1	1	
MERB Launch	34H	8.0	4.0	1.00	0.25	18	3			
MERB TCM	70M	8.0	4.0	1.00	0.25		1			
MERB TCM	34H	8.0	4.0	1.00	0.25		14			
MEX TCM	DSS-26	10.0	6.0	1.00	0.25				2	
MEX TCM	DSS-26,54	9.5	6.0	1.00	0.25		2	2		
SDU TCM	70M	4.0	4.0	1.00	0.25				6	
SDU TCM	34H	4.0	4.0	1.00	0.25					2
SDU TCM	DSS-15,34,54	4.0	4.0	1.00	0.25	5	6			
SDU TCM	DSS-26,34,54	8.0	4.0	1.00	0.25	4	2			
SDU TCM	DSS-26,34,54	4.0	4.0	1.00	0.25	5	6	14		
						27	28	29	30	31

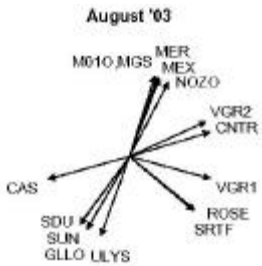
Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	28	29	30	31
VGR2	DSS-43	8.0	8.0	0.50	0.25	7	7		7	
VGR2	DSS-43,45	8.0	8.0	0.50	0.25			7		7
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
WIND	DSS-24,34	5.0	4.5	1.00	0.25				3	3
WIND	34B1	5.0	4.5	1.00	0.25	3	3	3		
WIND TCM	DSS-24	3.0	2.0	1.00	0.25					1
						27	28	29	30	31

Resource Allocation Review
Analysis and Recommendations
2003 – August (Weeks 32 - 35)



EVENTS

DSS-54 downtime (20 kW transmitter installation)
Contour EGA
GSSR Asteroid 1994PM on DOY 225 - 227, 231 and 232
MERA EDL test and TCM (continuous TCM +/- 2 days)
MERB checkout in Week 32
Mars Express navigation campaign in Week 32 and 33
Nozomi TCM in Week 33

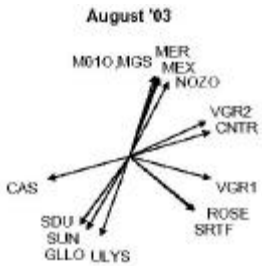
ANALYSIS

1. **Goldstone Solar System Radar Mars observation is in conflict on DOY 225 with Asteroid 1994PM observation using DSS-14 and with Mars Odyssey at DSS-25.**

2. **DSN contention at DSS-63 in the Mars viewperiod is severe, compounded by DSS-54 downtime.**

3. **MERA and MERB requests for 34HEF support exceeds DSN capability at the 34HEF in Week 32 and 33.**

Resource Allocation Review
Analysis and Recommendations
2003 – August (Weeks 32 - 35) (continued)



RECOMMENDATION

Goldstone Solar System Radar delete Mars observation in Week 33. (1)

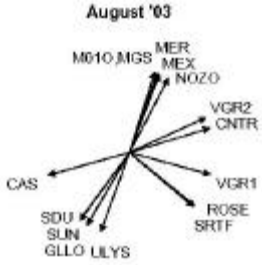
Mars Global Surveyor in Week 32 and 33 move 9 to 10 MSPA passes from DSS-24, 34, 63 and DSS-25, 34, 63 to DSS-24, 25, 34. In Week 35 MSPA 3 DSS-63 passes with Mars Odyssey at DSS-63, reducing pass duration to 7 hours. Remove DSS-63 from the antenna group on the remaining 7 passes. (2)

Mars Odyssey in Week 32 and 33, move 9 to 10 MSPA passes from DSS-24, 34, 63 and DSS-25, 34, 63 to DSS-24, 25, 34. In Week 35 MSPA 3 DSS-63 passes with Mars Global Surveyor. (2)

***MERA move 4 cruise passes in Week 32 from the 34HEF to DSS-25, 43. (3)**

***MERB in Week 32, move five 34HEF checkout passes to 70M. Delete DSS-15\45, 15\65 VLBI and include VLBI support into the overlap between 2 checkout passes. In Week 33, move 3 cruise passes to DSS-24, 25, 34 and modify the Cruise/VLBI request to use DSS-14, 15, 24, 25 for 9-hour passes and DSS-45, 43, 65, 63 for 8-hour passes. (3)**

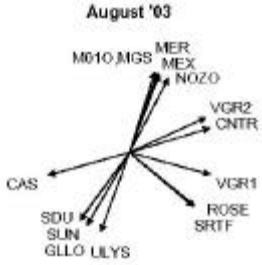
Resource Allocation Review
Analysis and Recommendations
2003 – August (Weeks 32 - 35) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	August 32	33	34	35
CNTR EGA	34H	8.0	6.0	1.00	0.25	7	7	7	3
DSS Bearing Mntc	DSS-43	8.0	8.0					1	
DSS Bearing Mntc	DSS-63	8.0	8.0			1			1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-63	6.0	4.0				1	1	
DSS Maintenance	DSS-63	8.0	4.0			1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1
DSS Maintenance	DSS-14	6.0	6.0			1		1	1
DSS Maintenance	DSS-15	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
GSSR Ast 1994PM	DSS-14	5.0	5.0	1.50	0.50		3		
GSSR Ast 1994PM	DSS-14	1.8	1.8	1.50	0.50			2	
GSSR Mars	DSS-14/25	7.0	7.0	1.50	0.50		1	4	1
M01O DDOR	DSS-43,34	8.0	4.0	1.00	0.25		1		
M01O DDOR	DSS-14	8.0	4.0	1.00	0.25				1
M01O DDOR	DSS-63	8.0	4.0	1.00	0.25				1
M01O DDOR	DSS-25	9.0	4.0	1.00	0.25		1		
M01O Map/MGS Map	DSS-24,34,63	7.0	4.0	1.00	0.25		9		
M01O Map/MGS Map	DSS-25,34,63	7.0	4.0	1.00	0.25	10		9	
M01O Mapping	DSS-43,63	7.0	4.0	1.00	0.25				12
M01O Mapping	DSS-25,34	7.0	7.0	1.00	0.25	1	3	3	
MERA Cruise	34H	8.0	4.0	1.00	0.25	4	2	3	3
MERA EDL Test	DSS-63/65	4.0	4.0	1.00	0.25	2			
						32	33	34	35

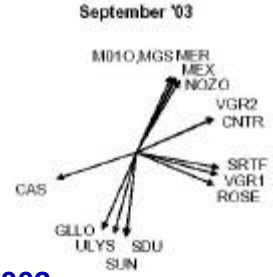
Resource Allocation Review
Analysis and Recommendations
2003 – August (Weeks 32 - 35) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	August 32	August 33	August 34	August 35
MERA TCM	70M	8.0	4.0	1.00	0.25		1		
MERA TCM	34H	8.0	4.0	1.00	0.25	6	8		
MERA VLBI	DSS-15\45,15\65	1.0	1.0	1.00	0.25	1		1	1
MERB Checkout	34H	8.0	4.0	1.00	0.25	13			
MERB Cruise	34H	8.0	4.0	1.00	0.25		3	3	2
MERB Cruise/VLBI	DSS-45,65	8.0	4.0	1.00	0.25		5		
MERB Cruise/VLBI	DSS-15	9.0	4.0	1.00	0.25		5		
MERB VLBI	DSS-15\45,15\65	1.0	1.0	1.00	0.25	1		1	1
MEX Nav Campaign	DSS-43	5.0	5.0	1.00	0.25	3	3		
MEX Nav Campaign	DSS-63	5.0	5.0	1.00	0.25	4	4		
MEX Nav Campaign	DSS-26	8.0	5.0	1.00	0.25	7	7		
MGS Map/Beta Sup	DSS-25,34,63	12.0	4.0	1.00	0.25				10
NOZO	DSS-43,34	8.0	4.0	0.75	0.25	1			
NOZO	DSS-43	8.0	4.0	0.75	0.25			1	
NOZO	DSS-24	8.0	2.0	0.75	0.25	3		1	2
NOZO TCM	DSS-24,63	8.0	2.0	0.75	0.25		4		
						32	33	34	35

Resource Allocation Review
Analysis and Recommendations
2003 – September (Weeks 36 - 39)



EVENTS

DSS-45 downtime (antenna controller replacement)
in Weeks 37 - 39

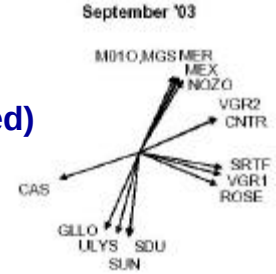
NSP precalibration reductions to 30 minutes effective 09/01/2003

Contour EGA in Week 36 and Encke encounter in Weeks 37 - 39
Mars Odyssey THEMIS mapping on 70M
MERB EDL test in Week 36 and TCM in Week 36 and 37
Genesis maneuver in Week 39

ANALYSIS

Capacity on the 70M in Weeks 36 - 38 and on the 34HEF in Week 36 and 37 is low. Contention is due to requirements for four Mars missions, Goldstone Solar System Radar Mars observation, Contour, and Voyager 2, compounded by Downtime at DSS-45.

Resource Allocation Review
Analysis and Recommendations
2003 – September (Weeks 36 - 39) (continued)



RECOMMENDATION

GSSR reduce Mars observation on DOY 245 to 3 hours.

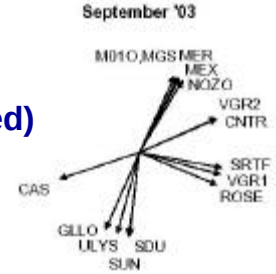
***MERA move 3 cruise passes in Week 36 and 37 to 34BWG1.**

Mars Global Surveyor MSPA 9 to 10 passes with Mars Odyssey in Weeks 36 - 38 at DSS-43, 63, reducing MSPA passes to 7 hours. Schedule 9 to 10 4-hour passes at 34BWG1.

Mars Odyssey MSPA 9 to 10 MSPA passes in Weeks 36 - 38 with Mars Global Surveyor at DSS-43, 63.

Nozomi move support in Week 39 from DSS-43 to DSS-34.

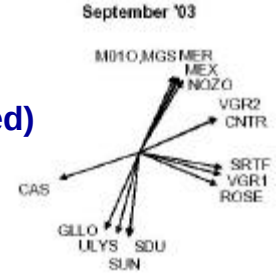
Resource Allocation Review
Analysis and Recommendations
2003 – September (Weeks 36 - 39) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	September 36	37	38	39
CNTR EGA	34H	8.0	6.0	0.50	0.25	4			
CNTR Encke	DSS-15,65	8.0	6.0	0.50	0.25			4	3
CNTR Encke	DSS-15,65	7.5	6.0	0.50	0.25		3		
DSS Bearing Mntc	DSS-14	8.0	8.0			1			1
DSS Bearing Mntc	DSS-43	8.0	8.0				1		
DSS Bearing Mntc	DSS-63	8.0	8.0					1	
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-63	10.5	8.0			1	1		
DSS Maintenance	DSS-63	6.0	4.0			1	1		
DSS Maintenance	DSS-63	8.0	4.0					1	1
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1			
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
GNS	34B1	4.0	4.0	0.50	0.25	3	3	3	
GNS	34B1	8.0	4.0	0.50	0.25			1	5
GNS Maneuver	34B1	8.0	4.0	0.50	0.25				6
M01O DDOR	DSS-43,63	8.0	4.0	0.50	0.25		2		2
M01O Map/MGS Map	DSS-43,63	7.0	4.0	0.50	0.25				9
M01O Mapping	DSS-43,63	7.0	4.0	0.50	0.25	14	12	14	3
MERA Cruise	DSS-43	4.0	4.0	0.50	0.25			1	
MERA Cruise	DSS-14,63	8.0	4.0	0.50	0.25			2	
MERA Cruise	34H	8.0	4.0	0.50	0.25	3			
						36	37	38	39

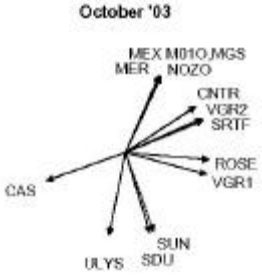
Resource Allocation Review
Analysis and Recommendations
2003 – September (Weeks 36 - 39) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	September 36	37	38	39
MERA Cruise	DSS-15,65	8.0	4.0	0.50	0.25		3		3
MERA VLBI	DSS-15\65,15\43	1.0	1.0	0.50	0.25		1	1	1
MERA VLBI	DSS-15\45,15\65	1.0	1.0	0.50	0.25	1			
MERB Cruise	DSS-15,43,65	8.0	4.0	0.50	0.25		1	2	3
MERB Cruise	DSS-15,65	8.0	4.0	0.50	0.25			1	
MERB Cruise/VLBI	DSS-45,65	8.0	4.0	0.50	0.25	1			
MERB Cruise/VLBI	DSS-15	9.0	4.0	0.50	0.25	1			
MERB EDL Test	DSS-14/15/24/25/26	4.0	4.0	0.50	0.25	2			
MERB TCM	70M	8.0	4.0	0.50	0.25		1		
MERB TCM	34H	8.0	4.0	0.50	0.25	6	6		
MERB TCM/VLBI	DSS-43,65	8.0	4.0	0.50	0.25		1		
MERB TCM/VLBI	DSS-15	9.0	4.0	0.50	0.25		1		
MERB VLBI	DSS-15\65,15\43	1.0	1.0	0.50	0.25			1	1
MGS Map/Beta Sup	DSS-15,34,65	12.0	4.0	0.50	0.25	9	9		
MGS Mapping	DSS-25,43,63	10.0	4.0	0.50	0.25			10	
MGS Mapping	DSS-25,26,54	4.0	4.0	0.50	0.25				9
NOZO	DSS-14,63	8.0	2.0	0.50	0.25				1
NOZO	DSS-43,34	8.0	4.0	0.50	0.25	1		1	
NOZO	DSS-24,54	8.0	2.0	0.50	0.25	1	2	1	1
VGR2	DSS-34	8.0	8.0	0.50	0.25	7	7	7	7
VGR2 ASCAL	DSS-43	2.0	2.0	0.50	0.25			1	
VGR2 DTR P/B	DSS-43	7.4	7.4	0.50	0.25		1		
VGR2 MAGROL	DSS-43	7.0	7.0	0.50	0.25			1	
VGR2 Routine U/L	DSS-43	2.5	2.5	0.50	0.25	1	1	1	1
						36	37	38	39

Resource Allocation Review
Analysis and Recommendations
2003 – October (Weeks 40 - 44)



EVENTS

DSS-55 On line Saturday November 1, 2003
(Week 44 DOY 305)

MERA EDL test (Madrid array) in Week 42
Contour Encke encounter
Mars Global Surveyor TCM in Week 40
SOHO HSO continuous support

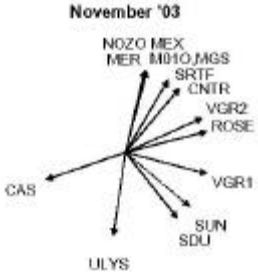
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48)



EVENTS

Contour Encke encounter
Genesis maneuver in Week 47
Mars Odyssey THEMIS mapping on 70M
MERA TCM in Week 45, checkout and approach
MERB EDL test in Week 46 and TCM in Week 47
Mars Express capture support at Madrid complex only
Nozomi TCM and approach
SOHO HSO continuous support in Weeks 45 - 47

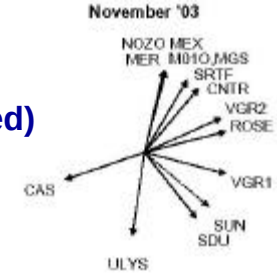
ANALYSIS

1. Goldstone Solar System Radar Asteroid 1996GT observation is in contention with MERB EDL test on DOY 317.

2. 70M and 34HEF subnets are oversubscribed in Week 46 and 47 in the Mars viewperiod. In Week 46 contention is moderate but Week 47 is severe.

3. Contention is moderate in the Sun viewperiod on 26M in Weeks 45 - 47.

Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)



RECOMMENDATION

ACE move 4 to 5 passes to DSS-46, 66 in Weeks 45 - 47. (3)

***GSSR delete Asteroid 1996GT observation in Week 46 DOY 317. (1)**

Mars Express move all support in Week 47 to DSS-55. (2)

Mars Global Surveyor reduce from eight 10-hour passes to seven 4-hour MSPA passes with Mars Odyssey in Week 47 and schedule seven 4-hour stand-alone passes using DSS-25, 26, 55. (2)

Mars Odyssey in Week 46 use only 4 passes at DSS-63 and receive remaining support using DSS-14, 43. In Week 47, reduce from eight 10-hour passes to seven 4-hour MSPA passes with MGS and seven 4-hour stand-alone passes. (2)

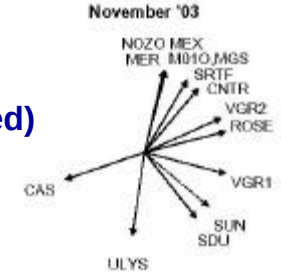
***MERB move 4 TCM passes from 34HEF to 70M in Week 47. (2)**

Nozomi move DSS-43 support to DSS-34 in Week 47. (2)

***VGR1 delete support at DSS-43, 54 in Week 47 and 48, and use seven 8-hour passes planned at DSS-26 for support. (2)**

***VGR2 reduce 3 DSS-34 passes in Week 47 to 4 hours and move support to DSS-43, 45. (2)**

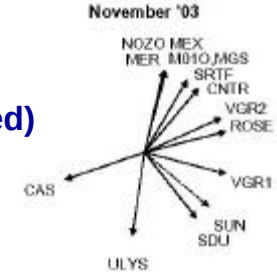
Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 45	46	47	48
ACE	DSS-27	3.5	3.5	0.40	0.20				7
ACE	DSS-16	3.5	3.5	0.70	0.20	7	7	7	
CNTR	70M	8.0	6.0	0.50	0.25		3		
CNTR	DSS-43,63	4.0	4.0	0.50	0.25		4		
CNTR Encke	34H	8.0	6.0	0.50	0.25	11	20	5	5
CNTR Encke	DSS-65	6.0	6.0	0.50	0.25		1		
CNTR Encke	DSS-45	4.0	4.0	0.50	0.25			2	2
CNTR Encke	DSS-65	4.0	4.0	0.50	0.25			2	2
DSS Bearing Mntc	DSS-14	8.0	8.0			1			1
DSS Bearing Mntc	DSS-43	8.0	8.0				1		
DSS Bearing Mntc	DSS-63	8.0	8.0					1	
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-63	6.0	4.0					1	
DSS Maintenance	DSS-63	8.0	4.0			1	1		1
DSS Maintenance	DSS-14	8.0	8.0			1		1	1
DSS Maintenance	DSS-14	6.0	6.0				1		
DSS Maintenance	DSS-15	8.0	6.0			1		1	
DSS Maintenance	DSS-15	4.0	4.0				1		
DSS Maintenance	DSS-15	6.0	6.0						1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	
DSS Maintenance	DSS-45	4.0	4.0						1
DSS Maintenance	DSS-65	6.0	6.0			1		1	
DSS Maintenance	DSS-65	4.0	4.0				1		1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1		1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
						45	**46**	**47**	**48**

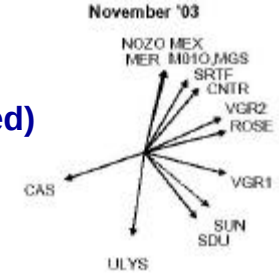
Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 45	46	47	48
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0						1
DSS Maintenance	DSS-27	6.0	6.0			1	1	1	
DSS Maintenance	DSS-46	6.0	6.0						1
DSS Maintenance	DSS-66	8.0	6.0						1
DSS Maintenance	DSS-66	4.0	4.0			1	1	1	
DSS Maintenance	DSS-46	4.0	4.0			1	1	1	
DSS Maintenance	DSS-16	8.0	6.0						1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	
GNS	34B1	4.0	4.0	0.50	0.25	3	3		3
GNS	34B1	8.0	4.0	0.50	0.25		1	5	
GNS Maneuver	34B1	7.5	4.0	0.50	0.25			6	
GSSR Ast 1990OS	DSS-14	8.0	8.0	1.50	0.50	1	4		
GSSR Ast 1996GT	DSS-14	5.0	5.0	1.50	0.50		3	1	
M01O Map/MGS Map	70M	7.0	4.0	0.50	0.25	9	10		
M01O Map/MGS Map	70M	10.0	8.0	0.50	0.25			8	8
M01O Mapping	70M	7.0	4.0	0.50	0.25	5	4		
M01O Mapping	DSS-14,43	7.0	4.0	0.50	0.25			5	5
MERA Approach	DSS-34,54,55	8.0	4.0	0.50	0.25			4	10
MERA Approach	DSS-25	8.0	8.0	0.50	0.25			3	3
MERA Approach/VLBI	DSS-15,14	9.0	9.0	0.50	0.25			1	2
MERA Approach/VLBI	DSS-45,43	8.0	4.0	0.50	0.25				1
MERA Approach/VLBI	DSS-65,63	8.0	4.0	0.50	0.25			1	1
MERA Checkout	70M	8.0	4.0	1.00	0.25			8	
MERA Cruise	34H	8.0	4.0	0.50	0.25		3		
MERA TCM	70M	8.0	4.0	0.50	0.25	1			
MERA TCM	34H	8.0	4.0	0.50	0.25	10			
MERA TCM/VLBI	DSS-15	9.0	9.0	0.50	0.25	2			
						45	46	47	48

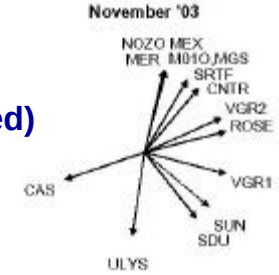
Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 45	46	47	48
MERA TCM/VLBI	DSS-45,65	8.0	4.0	0.50	0.25	2			
MERB Cruise	34H	8.0	4.0	0.50	0.25			1	2
MERB Cruise	DSS-25,26,55	8.0	4.0	0.50	0.25	5	5		
MERB EDL Test	DSS-14/15/24/25/26	4.0	4.0	0.50	0.25		2		
MERB TCM	70M	8.0	4.0	0.50	0.25			1	
MERB TCM	34H	8.0	4.0	0.50	0.25			12	
MERB TCM/VLBI	DSS-15	9.0	4.0	0.50	0.25			1	
MERB TCM/VLBI	DSS-45,65	8.0	4.0	0.50	0.25			1	
MERB VLBI	DSS-15\65,15\43	1.0	1.0	0.50	0.25				1
MERB VLBI	DSS-25\55,26\55	1.0	1.0	0.50	0.25	1	1		
MEX Capture	DSS-63	8.0	5.0	0.50	0.25			1	1
MEX Capture	DSS-63,65	4.0	4.0	0.50	0.25			4	4
MEX Capture	DSS-63	9.9	5.0	0.50	0.25	3	3		
MEX Capture	DSS-54,55	9.9	5.0	0.50	0.25	4	4	4	4
MGS Mapping	DSS-25,26,55	4.0	4.0	0.50	0.25	9	10		
NOZO	DSS-43,34	8.0	4.0	0.50	0.25	1	1		
NOZO	DSS-43,34	6.0	4.0	0.50	0.25			2	2
NOZO Approach	DSS-24,54	8.0	2.0	0.50	0.25		1		3
NOZO Approach	DSS-24,54	5.0	2.0	0.50	0.25			2	
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25	3			
SOHO	26M	9.6	6.0	0.70	0.20				7
SOHO	26M	1.6	1.6	0.70	0.20				14
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	6	6	6	
SOHO HSO	DSS-27	4.0	4.0	0.40	0.20	1	1	1	
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	14	14	14	
SOHO HSO	DSS-16	4.0	4.0	0.70	0.20	1	1	1	
VGR1	DSS-43,54	4.0	4.0	0.50	0.25	7	7	7	7
VGR1	DSS-26	8.0	8.0	0.50	0.25	7	7	7	7
						45	**46**	**47**	**48**

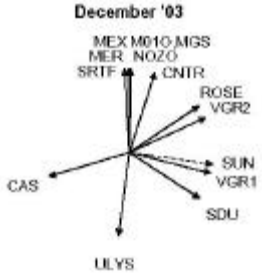
Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 45	46	47	48
VGR1 ASCAL	DSS-14	2.0	2.0	0.50	0.25	1			
VGR1 MAGROL	DSS-14	4.0	4.0	0.50	0.25	1			
VGR1 MAGROL	DSS-43	4.0	4.0	0.50	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.50	0.25	1	1	1	1
VGR2	DSS-43,45	4.0	4.0	0.50	0.25			8	
VGR2	DSS-45	8.0	8.0	0.50	0.25		2		
VGR2	DSS-34	8.0	8.0	0.50	0.25	7	5	3	7
VGR2 Routine U/L	DSS-43	2.5	2.5	0.50	0.25	1	1	1	1
						45	**46**	**47**	**48**

Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52)



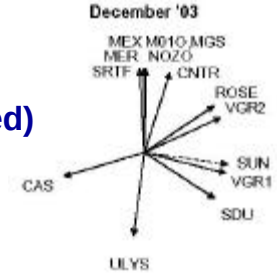
EVENTS

Cassini gravitational wave experiment in Week 51 and 52
Gravity Probe B quarterly epoch in Week 51
Mars Express capture
Mars Odyssey THEMIS mapping on 70M
MERA approach
MERB checkout and approach
Nozomi TCM and approach

ANALYSIS

The entire network is severely oversubscribed during the Mars viewperiod in Weeks 50 - 52.

Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52) (continued)



RECOMMENDATION

*DSS Maintenance reduce DSS-16 and DSS-66 support to 6 hours in Week 50 and 51. In Week 52 delete DSS-15, 24, 45, 54 and 55 maintenance support from the plan due to station Christmas Holiday observance.

Gravity Probe B move Week 51 support to Week 49.

Mars Global Surveyor delete one MSPA pass with Mars Odyssey in Week 50. In Week 52, delete two MSPA passes with Mars Odyssey and move one MSPA pass to DSS-24.

Mars Odyssey in Week 50 and 52 delete stand-alone mapping support on 70M. In Week 50 delete one MSPA pass with Mars Global Surveyor, in Week 51 reduce to 7 stand-alone passes, in Week 52 delete two MSPA passes with Mars Odyssey and move one MSPA pass to DSS-24.

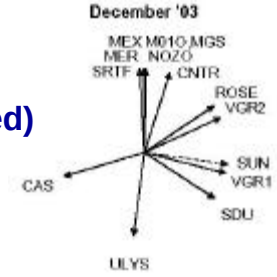
*MERB move Week 52 four approach/VLBI passes from 34BWG1 to 70M and two DSS-15 approach passes to DSS-14.

Nozomi move DSS-43 support in Week 50 and 51 to DSS-34.

*SOHO reduce three 9.6-hour passes to 6 hour each in Weeks 50 - 52.

*Voyager 2 reduce to 5-hour passes at DSS-34 in Week 49 and 51.

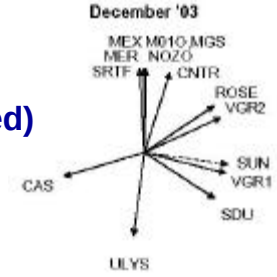
Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	December 49	December 50	December 51	December 52
CAS	DSS-25	9.0	8.5	0.50	0.25	2	2		
CAS Gravitnl Wave	DSS-45	5.0	5.0	0.50	0.25			7	7
CAS Gravitnl Wave	DSS-65,54	4.0	4.0	0.50	0.25			14	14
CAS Gravitnl Wave	DSS-25	12.0	8.0	0.50	0.25			7	7
DSS Bearing Mntc	DSS-14	8.0	8.0					1	
DSS Bearing Mntc	DSS-43	8.0	8.0			1			1
DSS Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-63	6.0	4.0				1		
DSS Maintenance	DSS-63	8.0	4.0			1		1	1
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	1
DSS Maintenance	DSS-15	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-65	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-66	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
M01O Map/MGS Map	70M	7.0	4.0	0.50	0.25		9		9
M01O Map/MGS Map	70M	10.0	8.0	0.50	0.25	8			
M01O Mapping	70M	7.0	4.0	0.50	0.25	4	5	14	5
MERA Approach	70M	8.0	4.0	0.50	0.25				4
						49	50	51	52

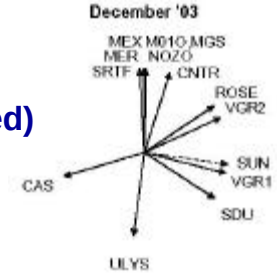
Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	December 49	50	51	52
MERA Approach	DSS-45,65	8.0	4.0	0.50	0.25		8	11	
MERA Approach	DSS-15	8.0	4.0	0.50	0.25		3	4	
MERA Approach	34H	8.0	4.0	0.50	0.25				3
MERA Approach	DSS-34,54,55	8.0	4.0	0.50	0.25	10			
MERA Approach	DSS-25	8.0	8.0	0.50	0.25	4			
MERA Approach/VLBI	DSS-43,63	8.0	4.0	0.50	0.25				1
MERA Approach/VLBI	DSS-15,14	9.0	9.0	0.50	0.25	2			
MERA Approach/VLBI	DSS-45,43	8.0	4.0	0.50	0.25	1			
MERA Approach/VLBI	DSS-65,63	8.0	4.0	0.50	0.25	1			
MERA Approach/VLBI	DSS-15	9.0	9.0	0.50	0.25		4	3	5
MERA Approach/VLBI	DSS-45	8.0	8.0	0.50	0.25		2	1	2
MERA Approach/VLBI	DSS-65	8.0	8.0	0.50	0.25		2	2	2
MERA TCM	DSS-14,45,65	8.0	4.0	0.50	0.25				3
MERA TCM	DSS-43,63	8.0	4.0	0.50	0.25				1
MERB Approach	70M	8.0	4.0	0.50	0.25		2	11	
MERB Approach	DSS-15	8.0	8.0	0.50	0.25				3
MERB Approach	DSS-45,65	8.0	4.0	0.50	0.25				7
MERB Approach/VLBI	DSS-43,63	8.0	4.0	0.50	0.25		2	3	
MERB Approach/VLBI	DSS-34,54	8.0	4.0	0.50	0.25				4
MERB Approach/VLBI	DSS-24	9.0	4.0	0.50	0.25		2	3	4
MERB Checkout	70M	8.0	4.0	0.50	0.25		6		
MERB Checkout	34H	8.0	4.0	0.50	0.25	12			
MERB Checkout/VLBI	DSS-43,63	8.0	4.0	0.50	0.25		1		
MERB Checkout/VLBI	DSS-15	9.0	9.0	0.50	0.25	1			
MERB Checkout/VLBI	DSS-45,65	8.0	4.0	0.50	0.25	1			
MERB Checkout/VLBI	DSS-24	9.0	4.0	0.50	0.25		1		
MEX Capture	DSS-63	9.9	5.0	0.50	0.25				1
MEX Capture	DSS-63	8.0	5.0	0.50	0.25	1			
						49	50	51	52

Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52) (continued)

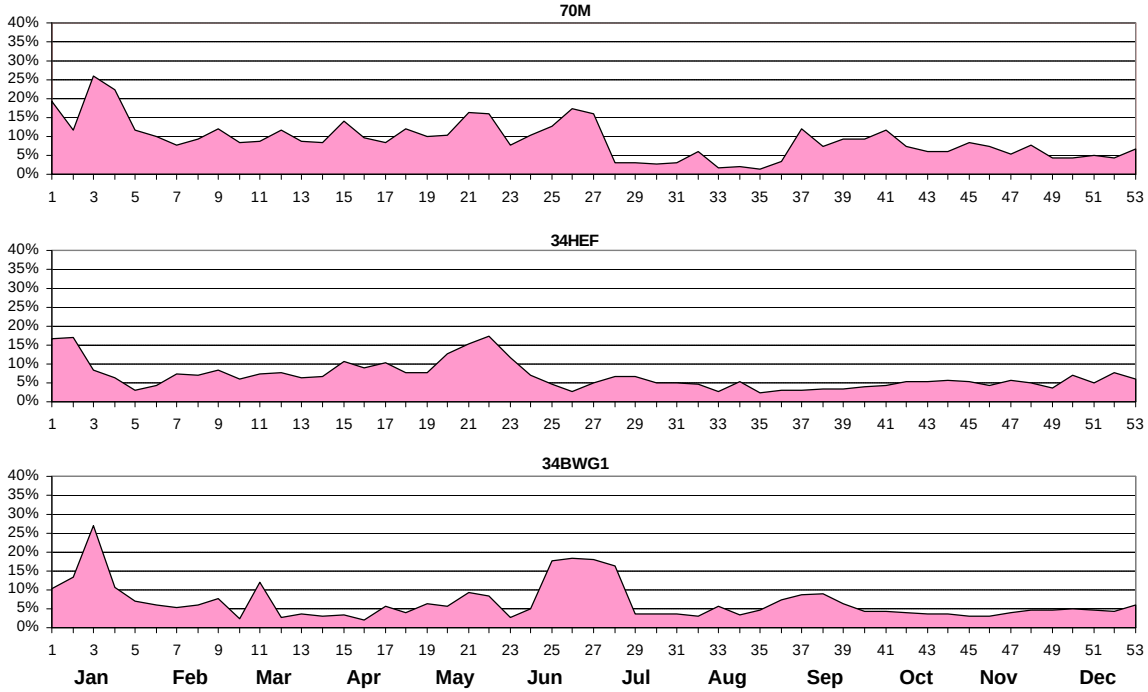


RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	December 49	50	51	52
MEX Capture	DSS-63,65	4.0	4.0	0.50	0.25	4			
MEX Capture	DSS-54,55	9.9	5.0	0.50	0.25	4	7	7	6
MGS Mapping	DSS-25,26,55	4.0	4.0	0.50	0.25		9		9
MGS TCM	DSS-34	6.0	4.0	0.50	0.25			2	
MGS TCM	DSS-26,34,55	8.0	4.0	0.50	0.25			8	
NOZO	DSS-43,34	8.0	4.0	0.50	0.25		2	2	2
NOZO	DSS-43,34	6.0	4.0	0.50	0.25	2			
NOZO Approach	DSS-24,54	8.0	2.0	0.50	0.25	3	7		7
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25			7	
SOHO	26M	9.6	6.0	0.70	0.20	7	7	7	7
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	14
VGR2	DSS-43,34	8.0	8.0	0.50	0.25	7			
VGR2	DSS-34	8.0	8.0	0.50	0.25		7	7	7
VGR2 MAGROL	DSS-43	7.0	7.0	0.50	0.25			1	
VGR2 Routine U/L	DSS-43	2.5	2.5	0.50	0.25	1	1	1	1
						49	**50**	**51**	**52**

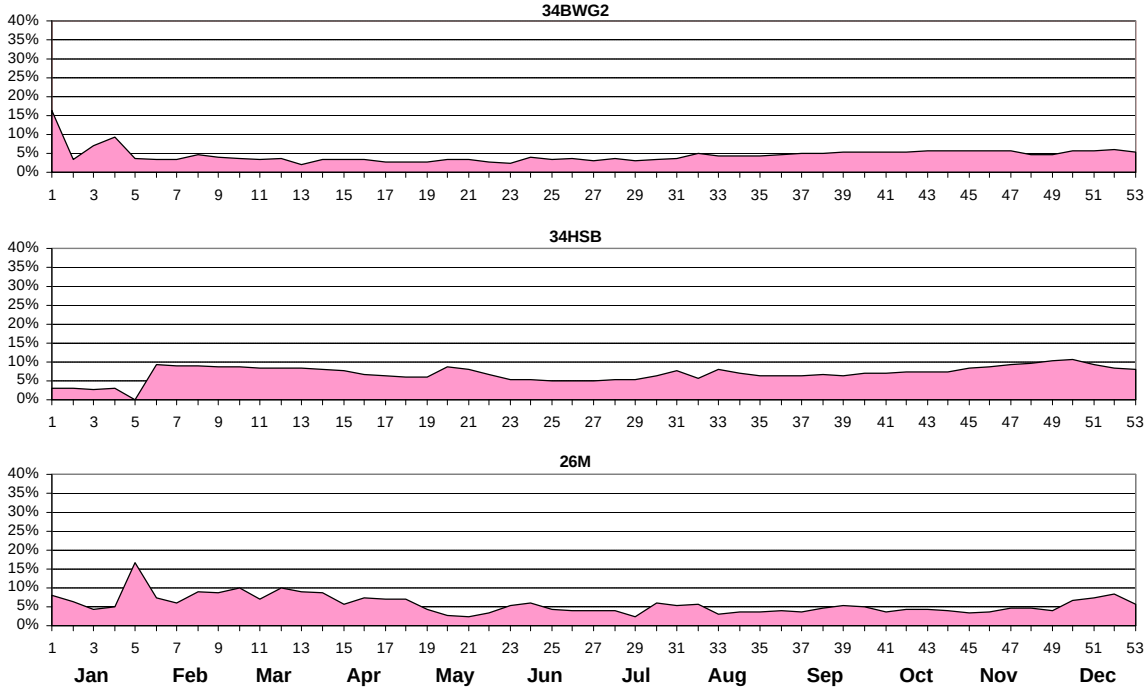
2004 Events, Analysis and Recommendations

Resource Allocation Review
Analysis and Recommendations
2004 Weekly Average User Unsupportable Time

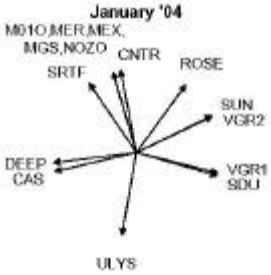


Resource Allocation Review
Analysis and Recommendations

2004 Weekly Average User Unsupportable Time (continued)



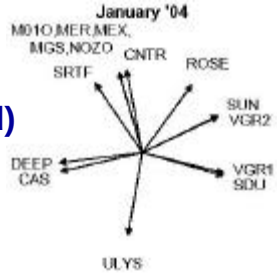
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05)



EVENTS

Cassini Gravitational Wave continuous support in Weeks 01 - 04
Deep Impact Launch in Week 01 and Launch Phase
Genesis Maneuver in Week 03 DOY 023
Gravity Probe B support in Week 01
GSSR Asteroid 6239 Minos at DSS-14 in Week 05 DOY 030 - 032
Mars Odyssey THEMIS Mapping on 70M
MERA Mars Approach/VLBI/TCM/EDL and Surface Ops
MERB Mars Approach/VLBI/TCM/EDL and Surface Ops
Mars Express Capture in Week 02 and 03 and Bi-Static Radar in Week 05
Mars Global Surveyor TCM in Week 02 and 03
MUSES-C TCM in Week 01 and 02
Nozomi MOI/TCM and Mars Arrival in Week 01
Stardust Comet P/Wild 2 Encounter and Playback in Weeks 01 - 03
Ulysses JCA -14 days (Week 04 DOY 022), JCA -7 days (Week 05 DOY 029), and continuous on the 34BWG1 in Week 04 and 05
WIND TCM in Week 01 and 02

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)

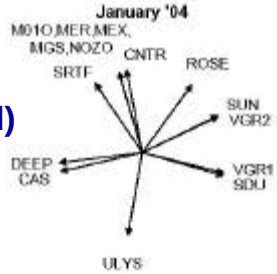


ANALYSIS

Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **70M subnet has severe contention throughout Weeks 01 - 05. The Mars Missions (Mars arrival and Surface Ops activities for MERA and MERB, M01O THEMIS Mapping, MEX Capture and MGS Mapping) and Stardust P/Wild 2 Encounter and playback requests for 70M resources impact each other and DSS Maintenance (DSS-14 previously reduced to 1 Bearing and 1 Routine Maintenance). Additional contention is caused by DSN Antenna Cals, GBRA Host Country, M-Wave Spect, and Planet R/AST, Gravity Probe B, GSSR Asteroid Minos and Mercury Radar observation, MAP, and VGR2 viewperiod overlap into Mars and DSS Maintenance viewperiods.**

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)

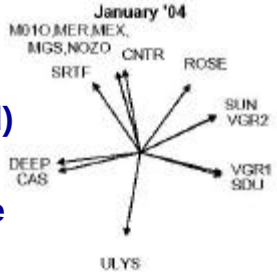


ANALYSIS (continued)

2. 34HEF subnet has severe contention in Weeks 01 - 03. Cassini GW continuous support, Deep Impact launch and launch phase support through Week 04, along with MERA and MERB Approach/VLBI, TCM, EDL, and Surface U/L through Week 04 add to the contentions. Cluster 2 SSO/MSO, DSN Clock Sync and Cat M&E, DSS Maintenance, Stardust TCM, and VGR2 supports also impact the 34HEF subnet.

3. Contention on 34BWG1 is severe due to Deep Impact Launch and Launch Phase support, MERA TCM and EDL Array, MERB Approach/VLBI, and WIND TCM in Week 01. Moderate contention in Weeks 02 - 05 is caused by Deep Impact Launch Phase support, GNS Maneuver continuous support, MEX Capture and Orbital Science, MGS Mapping and TCM, MUSES-C TCM, Ulysses Jupiter Encounter (16 to 21 passes per week), VGR2 and WIND routine support.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)

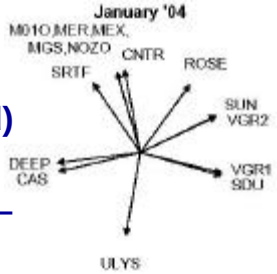


ANALYSIS (continued)

4. Contention on the 34BWG2 is moderate throughout these weeks. The contention is caused by MERA Surface U/L, MERB Approach, TCM and EDL Array, MEX Capture and MSPA support with MGS, MGS Mapping, TCM and MSPA support with MEX, and routine support for SIRTF and VGR1.

5. Moderate Contention on the 26M Subnet is caused by routine ACE support, Deep Impact Launch, DSS Maintenance, routine Polar RT/PB and SOHO.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION

– General Recommendations for Entire Month –

Cassini reduce 8-hour supports to 4 hours at DSS-45, increase DSS-25 support to 10 - 12 hours, and reduce 8-hour supports at DSS-65 to 6 - 7 hours, incurring daily gaps of 1 - 4 hours at the Canberra/Madrid overlap. (2, 3, 4)

DSN Antenna Cals delete support in Week 01 and reduce to 4 hours in Weeks 02, 03, and 05. (1)

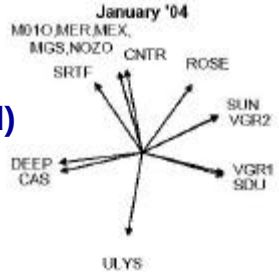
GBRA Host Country schedule support in three 8-hour increments and move to Week 05. M-Wave Spect delete support in Week 01 and 02, reduce three 8-hour supports to 4 hours in Week 03 and 04, and reduce three 8-hour supports to two 4-hour passes in Week 05. Planet R/AST delete support in Week 01 and 02 and reduce Weeks 03 - 05 supports to 4 hours. (1)

Gravity Probe B move support from Week 01 to Week 05. (1)

***GSSR reduce Asteroid Minos two 8-hour supports to 5 hours and reduce Mercury observation support from 6 hours to 4 hours. (1)**

***MAP move supports to DSS-43, 63 in Weeks 02 - 05. (1)**

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

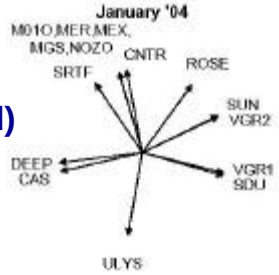
– General Recommendations for Entire Month (continued) –

***Polar move four 26M RT passes and four 26M PB passes to DSS-27. (5)**

***SOHO move four 6-hour 26M supports to DSS-27. (5)**

***VGR2 change all supports to two 4-hour split passes per day at DSS-43, 45, 34. (1, 2, 3)**

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

– Week 01 –

Deep Impact reduce DSS-15 supports from 8 hours to 4 hours and increase pass duration to full view at DSS-34 and DSS-54. (2, 3, 5)

M01O reduce seven 8-hour supports to 4 hours/pass. (1)

MERA Approach/VLBI use 10 hour supports at DSS-14, reduce 8 hour DSS-43 and DSS-63 supports to 7 hours and delete requests for 34HEF. Delete hot-backup coverage for TCMs (two passes). (1, 2, 3, 4)

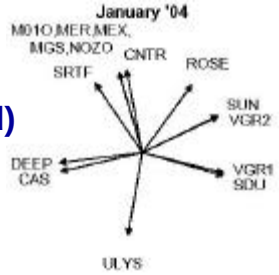
***MERB move DSS-15 Approach and Approach/VLBI support to DSS-26. (2)**

***Stardust increase six 8-hour supports to 9 hours and use DSS-43, reduce six 8-hour passes at DSS-14, 63 to 6 hours in duration. Retain one 8-hour pass at DSS-14. Retain planned 4 hour supports at DSS-14 and DSS-63. (1, 3)**

***Ulysses use 5 hour split passes at DSS-24, 15, 34 as required. (3)**

***WIND move TCM to Week 05 and reduce routine support to 4 hours. (3)**

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

– Week 02 –

*Cluster 2 delete DSS-15 and DSS-45 from SSO Array support. (2)

Deep Impact maintain continuous coverage; use DSS-24 instead of DSS-15, use split passes of 4 - 5 hours in duration at DSS-54, 55, and use requested support at DSS-34. (2, 3, 4, 5)

DSN Clock Sync VLBI move support to Week 04. (2)

Mars Odyssey Mapping reduce seven 7-hour supports to five supports. (1)

*MERB use DSS-15 and DSS-26 for Approach and Approach/VLBI support. (1, 2, 4)

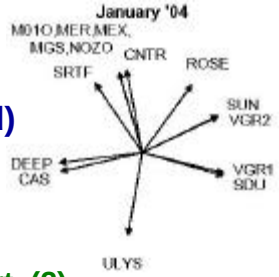
MGS TCM support on 34BWG1, use 4-hour split passes, delete stand-alone Mapping support on the 34BWG2, and use 4 planned MSPA supports with MEX (2, 4)

*Stardust P/Wild 2 requested support using full view (10 - 12 hours) at DSS-43 and 7-hour supports at DSS-14 and DSS-63. (1)

*Ulysses use split passes of 5 hours in duration at DSS-54, 24. (3)

*WIND move TCM to Week 06 and reduce routine support to 4 hours. (3)

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

– Week 03 –

***Cluster 2 delete DSS-15 and DSS-45 from SSO Array support. (2)**

Deep Impact maintain continuous coverage; use DSS-24 instead of DSS-15, use split passes of 4 - 5 hour duration at DSS-54, 55, and use requested support at DSS-34. (1, 2, 3, 4)

M01O reduce fourteen 8-hour supports to seven 4-hours; use planned MSPA with MERA and accommodate DSS Maintenance by reducing one DSS-14 support by 5 hours, one DSS-43 support by 3 hours, and one DSS-63 support by 4 hours. (1)

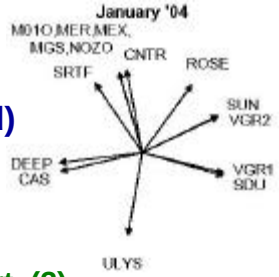
***MERA MSPA with M01O accommodate DSS Maintenance by reducing one DSS-14 support by 5 hours, one DSS-43 support by 3 hours, and one DSS-63 support by 4 hours. (1)**

MERB use DSS-15, 26 for Approach and Approach/VLBI support. (1, 2, 4)

MGS TCM support on DSS-26, 55, use 4-hour split passes. (2, 3, 4)

***Stardust P/Wild 2 requested support use full view (10 - 12 hours) at DSS-43 and 7-hour supports at DSS-14 and DSS-63. (1)**

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RECOMMENDATION (continued)

– Week 04 –

***Cluster 2 delete DSS-15 and DSS-45 from SSO Array support. (3)**

Deep Impact maintain continuous coverage; use DSS-24 instead of DSS-15, using split passes of 4 - 5 hour duration at DSS-54, 55, and use requested support at DSS-34. (2, 3, 4)

M01O reduce ten 8-hour supports to seven 4-hour supports; use planned MSPA with MERA and accommodate DSS Maintenance by reducing one DSS-14 support by 5 hours, one DSS-43 support by 3 hours, and one DSS-63 support by 4 hours. (1)

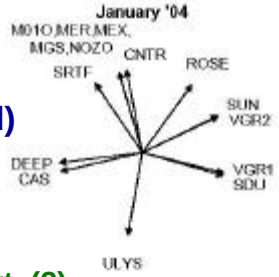
MERA MSPA with M01O and accommodate DSS Maintenance by reducing one DSS-14 support by 5 hours, one DSS-43 support by 3 hours, and one DSS-63 support by 4 hours. (1)

MERB use DSS-15, 26 for Approach and Approach/VLBI support. (3)

MGS delete two DSS-26 stand-alone Mapping supports, use 4 planned MSPA supports with MEX and use three 4 - 5 hour split passes at DSS-34, 45. (2, 3, 4)

Ulysses reduce continuous support to 16 hours U/L and D/L per day. (3)

Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)

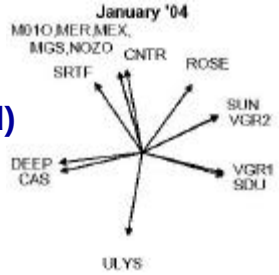


RECOMMENDATION (continued)

– Week 05 –

***Cluster 2 delete DSS-15 and DSS-45 from SSO Array support. (2)**
DSN Cat M&E VLBI move support to Week 07. (2)
M01O reduce two stand-alone passes from 8 hours to 6 hours and one MSPA with MERA pass from 8 hours to 5 hours. (1)
MERA MSPA with M01O reduce one pass from 8 hours to 5 hours. (1)
MGS use 4 to 5-hour split passes. (1, 2)
Ulysses reduce continuous support to 16 hours U/L and D/L per day. (3)

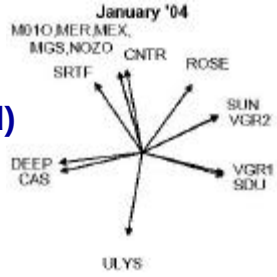
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
ACE	DSS-27	3.5	3.5	0.40	0.20	6	6	6	6	6
ACE	26M	3.5	3.5	0.70	0.20	1	1	1	1	1
CAS	DSS-45,25	9.0	8.5	0.50	0.25					2
CAS Gravitnl Wave	DSS-45,65,25	8.0	7.5	0.50	0.25	21	21	21	15	
CHDR	34B1	1.0	1.0	0.50	0.25	7	7	7	7	21
CHDR	26M	2.0	2.0	0.70	0.20	14	14	14	14	
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	2.0	1.0	0.50	0.25	2	2	2	2	2
CLU2 1/2/3/4 SSO	DSS-46/34/45/43	2.0	1.0	0.50	0.25	1	1	1	1	1
CLU4 1/2/3/4 MSO	DSS-46/34/45/43	1.5	1.0	0.50	0.25					1
DEEP Launch	DSS-34/45/46	8.0	8.0	4.00	0.25	1				
DEEP Launch Phase	DSS-15,34,54	8.0	4.0	0.50	0.25	8	21	21		
DEEP Launch Phase	DSS-15,34	8.0	4.0	0.50	0.25				9	
DEEP Launch Phase	34H	8.0	4.0	0.50	0.25					7
DEEP Launch Phase	DSS-54	6.0	4.0	0.50	0.25				4	
DEEP Launch Phase	DSS-26	8.0	4.0	0.50	0.25				4	
DSS Bearing Mntc	DSS-14	8.0	8.0					1		
DSS Bearing Mntc	DSS-43	8.0	8.0			1			1	
DSS Bearing Mntc	DSS-63	8.0	8.0							1
DSS Maintenance	DSS-43	8.0	8.0					1		
DSS Maintenance	DSS-43	8.0	8.0							1
DSS Maintenance	DSS-63	6.0	4.0							1
DSS Maintenance	DSS-63	8.0	8.0			1		1	1	
DSS Maintenance	DSS-14	8.0	8.0			1		1	1	2
DSS Maintenance	DSS-43	8.0	8.0				1			
DSS Maintenance	DSS-63	8.0	8.0				1			
DSS Maintenance	DSS-14	8.0	8.0				1			
DSS Maintenance	DSS-15	8.0	6.0					1		1
DSS Maintenance	DSS-15	6.0	6.0			1	1			
						1	2	3	4	5

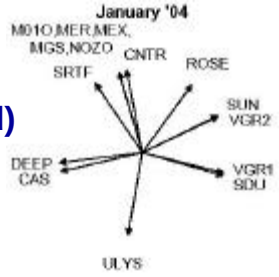
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
DSS Maintenance	DSS-15	4.0	4.0						1	
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1		1
DSS Maintenance	DSS-65	4.0	4.0						1	
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1	
DSS Maintenance	DSS-24	8.0	6.0			1	1		1	1
DSS Maintenance	DSS-24	8.0	6.0					1		
DSS Maintenance	DSS-34	6.0	6.0			1	1		1	1
DSS Maintenance	DSS-34	4.0	4.0					1		
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	6.0	6.0			1	1	1	1	
DSS Maintenance	DSS-46	6.0	6.0							1
DSS Maintenance	DSS-66	8.0	6.0							1
DSS Maintenance	DSS-46	4.0	4.0			1	1	1	1	
DSS Maintenance	DSS-66	4.0	4.0			1	1	1	1	
DSS Maintenance	DSS-16	8.0	6.0							1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	1	
GNS	34B1	4.0	4.0	0.50	0.25	3			3	3
GNS	DSS-24,54	4.0	4.0	0.50	0.25		3			
GNS	DSS-24,54	8.0	4.0	0.50	0.25		1	5		
GNS Maneuver	34B1	8.0	4.0	0.50	0.25			6		
GSSR Ast 6239 Mino	DSS-14	8.0	8.0	1.50	0.50					2
M01O Map/MERA D/L	70M	8.0	4.0	0.50	0.25			7	5	7
M01O Map/MERA D/L	70M	4.0	4.0	0.50	0.25				2	
M01O Mapping	70M	7.0	4.0	0.50	0.25		7			
M01O Mapping	70M	4.0	4.0	0.50	0.25	2				
						1	2	3	4	5

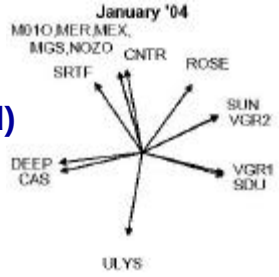
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	January 2	January 3	January 4	January 5
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	3	14	10	7
MAP.	70M	0.7	0.6	1.25	0.25	7	7	7	7	7
MERA Approach/VLBI	DSS-14	9.0	9.0	0.50	0.25	3				
MERA Approach/VLBI	DSS-43,63	8.0	8.0	0.50	0.25	4				
MERA Approach/VLBI	DSS-14,15	9.0	4.0	0.50	0.25	3				
MERA Approach/VLBI	DSS-43,45	8.0	4.0	0.50	0.25	3				
MERA Approach/VLBI	DSS-63,65	8.0	4.0	0.50	0.25	3				
MERA EDL	70M	8.0	4.0	0.50	0.25	3				
MERA EDL Array	DSS-15/24/25/26	4.0	4.0	0.50	0.25	1				
MERA EDL Array	DSS-65/54/55	4.0	4.0	0.50	0.25	1				
MERA Surf.	70M	8.0	4.0	0.50	0.25		7			
MERA Surf. Up	34H	3.0	1.0	0.50	0.25					7
MERA Surf. Up	DSS-26,55	3.0	1.0	0.50	0.25			7		
MERA Surf. Up	DSS-26	3.0	1.0	0.50	0.25				7	
MERA TCM	DSS-63/65	8.0	4.0	0.50	0.25	2				
MERB Approach	DSS-14,15	8.0	4.0	0.50	0.25			2		
MERB Approach	DSS-43,45	8.0	4.0	0.50	0.25			4		
MERB Approach	DSS-63,65	8.0	4.0	0.50	0.25			4		
MERB Approach	DSS-15	8.0	4.0	0.50	0.25	1	3			
MERB Approach	DSS-45,65	8.0	4.0	0.50	0.25	5	10		2	
MERB Approach	DSS-26,34,55	8.0	4.0	0.50	0.25	6				
MERB Approach/VLBI	DSS-14	9.0	9.0	0.50	0.25			1	4	
MERB Approach/VLBI	DSS-43	8.0	8.0	0.50	0.25			1	2	
MERB Approach/VLBI	DSS-63	8.0	8.0	0.50	0.25				1	
MERB Approach/VLBI	DSS-15	9.0	9.0	0.50	0.25	3	4	3	2	
MERB Approach/VLBI	DSS-45	8.0	8.0	0.50	0.25	2	2	1	2	
MERB Approach/VLBI	DSS-65	8.0	8.0	0.50	0.25	1	2	2	2	
MERB EDL	70M	8.0	4.0	0.50	0.25				3	
						1	2	3	4	5

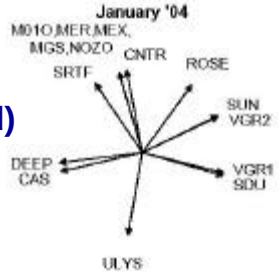
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
MERB EDL Array	DSS-45/34	4.5	4.0	0.50	0.25				1	
MERB EDL Array	DSS-15/24/25/26	4.5	4.0	0.50	0.25				1	
MERB EDL U/L	DSS-43,63	8.0	4.0	0.50	0.25				4	
MERB Surf.	70M	8.0	4.0	0.50	0.25					7
MERB TCM	70M	8.0	4.0	0.50	0.25			3		
MERB TCM	DSS-15/26	8.0	4.0	0.50	0.25				2	
MEX Capt/MGS Map	DSS-63	8.0	5.0	0.50	0.25				1	
MEX Capt/MGS Map	DSS-63	4.0	4.0	0.50	0.25				1	
MEX Capt/MGS Map	DSS-55	8.0	5.0	0.50	0.25				4	
MEX Capt/MGS Map	DSS-55	11.0	5.0	0.50	0.25	7				
MEX Capture	DSS-63,54,55	8.0	5.0	0.50	0.25		3	3		
MEX Capture	DSS-63,54	8.0	5.0	0.50	0.25		4			
MEX Capture	DSS-63,55	8.0	5.0	0.50	0.25			4		
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25					7
MEX Orbital Sci	DSS-24	6.0	6.0	0.50	0.25				1	
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25					1
MGS Mapping	34H	8.0	4.0	0.50	0.25					
MGS Mapping	DSS-26,34	8.0	4.0	0.50	0.25	2			3	
MGS Mapping	DSS-26,34,55	8.0	4.0	0.50	0.25					9
MGS TCM	DSS-34	4.0	4.0	0.50	0.25		4	4		
MGS TCM	DSS-26,55	8.0	4.0	0.50	0.25		6	6		
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25	4	2			
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25	4				
POLR PB	26M	1.0	0.8	0.70	0.20	28	28	28	28	28
POLR RT	26M	2.0	2.0	0.70	0.20	7	7	7	7	7
SDU P/Wild 2	70M	8.0	8.0	0.50	0.25	13	15	6		
SDU P/Wild 2	70M	4.0	4.0	0.50	0.25	3				
SDU P/Wild 2	DSS-15,65	4.0	4.0	0.50	0.25		2			
						1	2	3	4	5

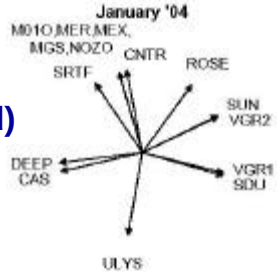
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
SDU TCM	34H	8.0	6.0	0.50	0.25					2
SDU TCM	34H	4.0	4.0	0.50	0.25				14	12
SDU TCM	DSS-15,65	4.0	4.0	0.50	0.25	2		10		
SOHO	26M	8.0	6.0	0.70	0.20					2
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	14	6
SOHO	26M	6.0	6.0	0.70	0.20	7	7	7	7	
SOHO TSO	26M	8.0	4.0	0.70	0.20					15
ULYS	DSS-54	10.0	8.0	0.50	0.25	1				
ULYS	DSS-24,34	10.0	8.0	0.50	0.25	6	4			
ULYS	DSS-54	8.0	8.0	0.50	0.25		3			
ULYS Jupiter ENC	34B1	8.0	7.0	0.50	0.25					21
ULYS Jupiter ENC	DSS-24	12.0	7.0	0.50	0.25			7		
ULYS Jupiter ENC	DSS-34,54	4.0	4.0	0.50	0.25			7		
ULYS Jupiter ENC	DSS-54	6.0	5.0	0.50	0.25				7	
ULYS Jupiter ENC	DSS-24,34	8.0	7.0	0.50	0.25				14	
VGR1	DSS-26	8.0	8.0	0.50	0.25	7	7	7	7	
VGR1	DSS-25,26	8.0	4.0	0.50	0.25					7
VGR1	DSS-25,26	4.0	4.0	0.50	0.25					
VGR1	DSS-55	4.0	4.0	0.50	0.25	7	7	7	7	7
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1	1
VGR2	DSS-43	8.0	8.0	0.50	0.25					4
VGR2	DSS-45	8.0	8.0	0.50	0.25			3		3
VGR2	DSS-45	6.0	4.0	0.50	0.25	4	3			
VGR2	DSS-34,45	8.0	8.0	0.50	0.25				7	
VGR2	DSS-34	8.0	8.0	0.50	0.25	3				
VGR2	DSS-34	6.0	6.0	0.50	0.25		4			
VGR2	DSS-34	5.0	5.0	0.50	0.25			4		
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
						1	**2**	**3**	**4**	**5**

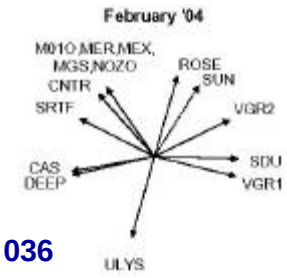
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	2	3	4	5
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3
WIND TCM	DSS-24\34	3.0	2.0	0.50	0.25	1	1			
						1	2	3	4	5

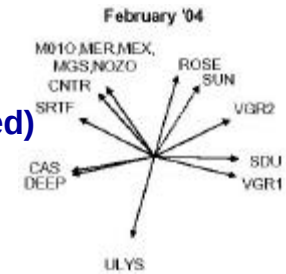
Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09)



EVENTS

EVN E500 J-M4 at DSS-14\63 in Week 08
GSSR Asteroid 6239 Minos at DSS-14 in Week 06 DOY 033 - 036
Mars Odyssey THEMIS Mapping 70M only, 7 stand-alone passes
M01O THEMIS Mapping using MSPA with MERA & MERB on 70M
MERA Surface Ops
MERB Surface Ops
Ulysses Jupiter Closest Approach (Week 06 DOY 036), Meridional and Radial Alignment (Week 09 DOY 057), and continuous on 34BWG1
VGR1 MAGROL at DSS-14 in Week 06 DOY 037

Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)



ANALYSIS

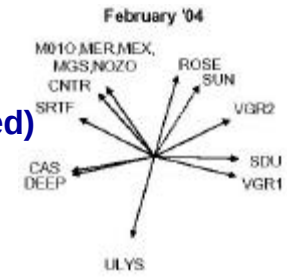
Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **70M contention is severe. Contention on the 70M is caused by M01O, MERA & MERB, and MEX viewperiod overlap with daylight Maintenance by approximately 5 hours, GSSR Asteroid Minos viewperiod overlap with M01O, MERA & MERB, and MEX at DSS-14, EVN simultaneous 24 hour support at DSS-14\63, DSN Antenna Cals, and GBRA RA500 SOC-M4 simultaneous 24-hour support at DSS-14\63, M-Wave Spect, and Planet R/AST.**

2. **34HEF contention is moderate. DSS Maintenance has unsupportable time in Week 06 and 07 due to DSN Cat M&E simultaneous 24 hour support , GBRA Host Country 12-hour support, MGS Mapping, and VGR2 Routine support.**

3. **34BWG1 contention is moderate. WIND has unsupportable time due to Ulysses Meridional and Radial Alignment and VGR2 Routine support.**

Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)



RECOMMENDATION

DSN Cat M&E use two 12-hour increments. (2)

***DSS Maintenance reduce one routine 8-hour support at DSS-14 to 6 hours in Week 09. (1)**

EVN receive requested support using three 8-hour supports. (1)

GBRA Host Country change support to two 8-hour supports. (2)

RA500 receive requested support using 8-hour increments. (1)

M-Wave Spect delete support in Week 06, and reduce support to 4 hours and use DSS-43 only in Weeks 07 - 09. (1)

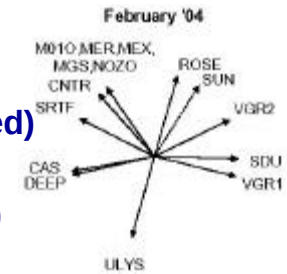
Planet R/AST delete support in Week 06 and 09, and reduce support to 4 hours in Week 07 and 08. (1)

***GSSR Asteroid Minos move one 5-hour support to Week 05. (1)**

M01O reduce seven 8-hour Mapping passes to two 4-hour supports in Week 06 and 09 and five 4-hour supports in Week 07 and 08. M01O/MERA MSPA support reduce seven 8-hour supports to three 8-hour and four 4-hour supports in Week 06 and 09. (1)

MERA/M01O MSPA support reduce seven 8-hour supports to three 8-hour and four 4-hour supports in Week 06 and 09. (1)

Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)



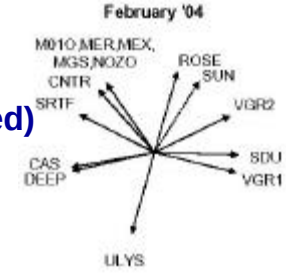
RECOMMENDATION (continued)

Ulysses reduce to fourteen 8-hour passes per week. (1, 2, 3)

***WIND move all support to DSS-34. (3)**

***VGR2 reduce seven 8-hour supports at DSS-34 and DSS-45 to 6 hours. (3)**

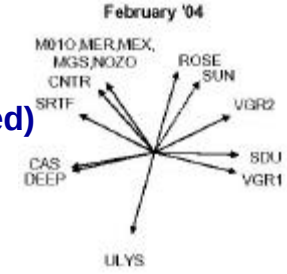
Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	February 6	7	8	9
DSS Bearing Mntc	DSS-14	8.0	8.0			1			1
DSS Bearing Mntc	DSS-43	8.0	8.0				1		
DSS Bearing Mntc	DSS-63	8.0	8.0					1	
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-63	10.5	8.0			1	1		1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			1	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
GSSR Ast 6239 Mino	DSS-14	5.0	5.0	1.50	0.50	2			
M01O Map/MERA D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7
M01O Map/MERB D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	7	7	7
MERA Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7
MERB Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	34H	8.0	4.0	0.50	0.25		9	9	10
MGS Mapping	DSS-26,34,55	8.0	4.0	0.50	0.25	10			
ULYS Jupiter ENC	34B1	8.0	7.0	0.50	0.25	21	19	21	21
ULYS Jupiter ENC	DSS-34	6.0	5.0	0.50	0.25		1		
						6	7	8	9

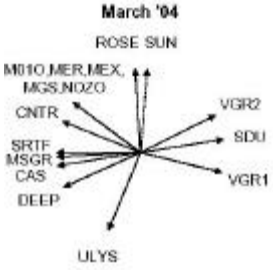
Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	February 6	February 7	February 8	February 9
VGR1	DSS-65	8.0	4.0	0.50	0.25			7	7
VGR1	DSS-25,26	8.0	4.0	0.50	0.25	7	7	7	7
VGR1	DSS-55	4.0	4.0	0.50	0.25	7	7		
VGR1 MAGROL	DSS-63,15	4.0	4.0	0.75	0.25	2			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
VGR2	DSS-45	8.0	8.0	0.50	0.25	6	6	6	6
VGR2	DSS-34	8.0	8.0	0.50	0.25	1	1	1	1
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1
						6	**7**	**8**	**9**

Resource Allocation Review
Analysis and Recommendations
2004 – March (Weeks 10 - 13)



EVENTS

Genesis maneuver in Week 11 DOY 070 and 071
Mars Odyssey THEMIS, 70M
MERA surface operations using MSPA with Mars Odyssey
MERB surface operations using MSPA with Mars Odyssey
Messenger launch support begins in Week 11 DOY 070

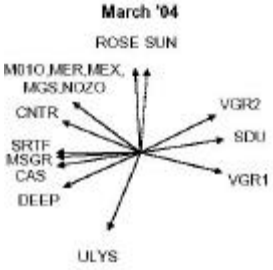
ANALYSIS

Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **Mars Odyssey 7 stand-alone passes and MERA and MERB 14 MSPA passes with Odyssey cause moderate to severe contention with DSS Maintenance. Contention is compounded by Goldstone Solar System Radar Mercury observation planed in Week 11.**

2. **Severe contention on the 34BWG1 in Week 11. SOHO and Polar are in contention with DSS Maintenance, Genesis maneuver and Messenger launch support.**

Resource Allocation Review
Analysis and Recommendations
2004 – March (Weeks 10 - 13) (continued)



RECOMMENDATION

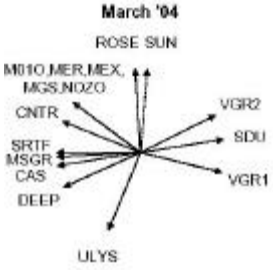
*GSSR reduce Week 11 Mercury request to 3 hours in duration. (1)

Mars Odyssey reduce 4 stand-alone passes to 4 hours in Weeks 11 - 13. (1)

*Polar move support in Week 11 from 34BWG1 to 26M. (2)

*SOHO move TSO support to Week 10, delete all support requested on the 34BWG1 in Week 11 and restore nominal support request for Week 11 on the 26M. (2)

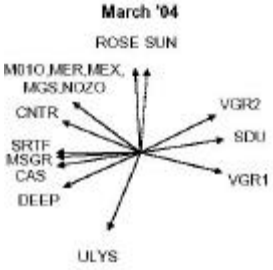
Resource Allocation Review
Analysis and Recommendations
2004 – March (Weeks 10 - 13) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	March 10	11	12	13
DSS Bearing Mntc	DSS-14	8.0	8.0					1	
DSS Bearing Mntc	DSS-43	8.0	8.0			1			1
DSS Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-63	10.5	8.0			1		1	1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1		1	1
DSS Maintenance	DSS-54	4.0	4.0				1		
DSS Maintenance	DSS-24	8.0	6.0			1		1	1
DSS Maintenance	DSS-24	8.0	6.0				1		
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
GNS	34B1	4.0	4.0	0.50	0.25	3		3	3
GNS	34B1	8.0	4.0	0.50	0.25	1			
GNS	DSS-24,34	8.0	4.0	0.50	0.25		5		
GNS Maneuver	DSS-54	4.0	4.0	0.50	0.25		2		
GNS Maneuver	DSS-24,34	8.0	4.0	0.50	0.25		4		
M01O Map/MERA D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7
M01O Map/MERB D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	7	7	7
MERA Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7
MERB Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7
						10	11	12	13

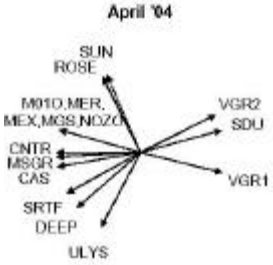
Resource Allocation Review
Analysis and Recommendations
2004 – March (Weeks 10 - 13) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	March 10	March 11	March 12	March 13
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7		7	7
MEX Orbital Sci	DSS-24,54	4.0	4.0	0.50	0.25		7		
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	34H	8.0	4.0	0.50	0.25	9	9	10	9
MSGR	DSS-26,34,54	8.0	4.0	0.50	0.25				5
MSGR Launch	DSS-26,34,54	8.0	4.0	0.50	0.25		12	7	
MSGR Launch	DSS-26,34,54	8.0	4.0	3.00	0.25		3		
POLR PB	34B1	1.0	0.8	0.50	0.25		12		
POLR PB	26M	1.0	0.8	0.70	0.20	28	16	28	28
POLR RT	34B1	2.0	2.0	0.50	0.25		3		
POLR RT	26M	2.0	2.0	0.70	0.20	7	4	7	7
SOHO	34B1	8.0	6.0	0.50	0.25		2		
SOHO	26M	9.6	6.0	0.70	0.20	7		7	7
SOHO	26M	8.0	6.0	0.70	0.20				
SOHO	26M	1.6	1.6	0.70	0.20	14	6	14	14
SOHO TSO	34B1	8.0	4.0	0.50	0.25		1		
SOHO TSO	26M	8.0	4.0	0.70	0.20		14		
						10	11	12	13

Resource Allocation Review
Analysis and Recommendations
2004 – April (Weeks 14 - 18)



EVENTS

Mars Express Orbital Science, 34BWG1 and Bi-Static R/S, 70M

Mars Odyssey THEMIS mapping, continuous 70M

MERA surface uplink, 34HEF and surface operations using MSPA with Mars Odyssey

MERB surface uplink, 34HEF and surface operations using MSPA with Mars Odyssey

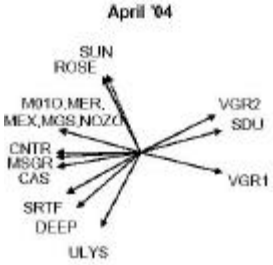
ANALYSIS

Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **Moderate to severe contention on the 70M in the Mars viewperiod. DSS Maintenance unsupportable time is severe. Goldstone Solar System Radar Mercury viewperiod overlaps the Mars viewperiod, adding to contention.**

2. **Moderate to severe contention in the Mars viewperiod on the 34HEF. DSS Maintenance unsupportable time is severe.**

Resource Allocation Review
Analysis and Recommendations
2004 – April (Weeks 14 - 18) (continued)



RECOMMENDATION

***GSSR delete Mercury observations requested in Weeks 15, 16, and 18. (1)**

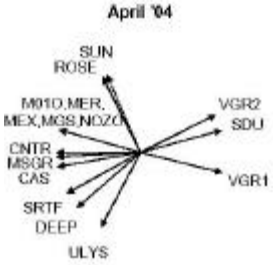
Ground Based Radio Astronomy reduce Host Country on 70M in Week 15 and 16 and at DSS-45 in Week 17 to 8 hours each. (1)

Mars Odyssey reduce 4 stand-alone passes in each week to 4 hours. (1)

Mars Global Surveyor move 3 passes per week from 34HEF to 34BWG1. (2)

Space Geodesy Program reduce DSS-45 Crustal Dynamics support in Week 15 from 24 hours to 8 hours. (2)

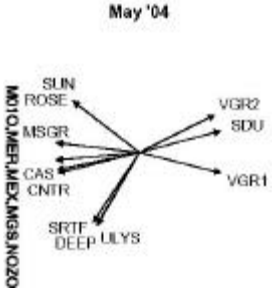
Resource Allocation Review
Analysis and Recommendations
2004 – April (Weeks 14 - 18) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	April 14	15	16	17	18
DSS Bearing Mntc	DSS-14	8.0	8.0				1			1
DSS Bearing Mntc	DSS-43	8.0	8.0					1		
DSS Bearing Mntc	DSS-63	8.0	8.0			1			1	
DSS Maintenance	DSS-43	8.0	8.0			1	1		1	1
DSS Maintenance	DSS-63	10.5	8.0				1	1		1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1		1
DSS Maintenance	DSS-24	8.0	6.0						1	
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1	1
M01O Map/MERA D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7	7
M01O Map/MERB D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	7	7	7	7
MERA Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7	7
MERB Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7	7
MEX Orbital Sci	DSS-15,65	6.0	6.0	0.50	0.25		3		4	
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	4	7	3	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1	1
MGS Mapping	34H	8.0	4.0	0.50	0.25	9	10	9	9	10
						14	**15**	**16**	**17**	**18**

Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22)

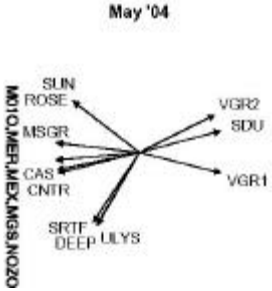


EVENTS

DSS-65 Downtime (Antenna Controller Replacement) in Weeks 20 - 22

Cassini Saturn Approach/TCM in Week 22
Deep Impact TCM in Week 22
EVN E500 J-M4 simultaneous support at DSS-14\63 in Week 22
Genesis Maneuver continuous in Week 22 DOY 146 and 147
GBRA RA500 SOC-M4 simultaneous support at DSS-14\63 in Week 21
Gravity Probe B quarterly epoch
Mars Odyssey THEMIS Mapping 7 - 10 stand-alone passes and Mapping using MSPA with MERA, MERB, and MGS on 70M
Mars Express Bi-Static Radar and Orbital Science
MUSES-C Earth Swingby/Rendezvous in Week 22
Nozomi Radio Science
VGR1 ASCAL on DOY 125 and MAGROL on DOY 128 in Week 19

Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



ANALYSIS

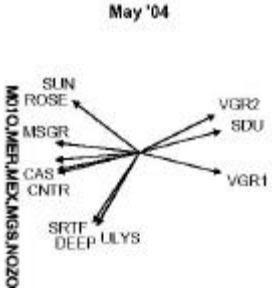
Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **70M DSS Bearing and Routine Maintenance daylight hours overlap the Mars viewperiod. MEX Bi-Static Radar, M01O Mapping, M01O/MSPA with MERA, M01O MSPA with MERB, M01O MSPA with MGS, and Nozomi R/S, Gravity Probe B, and GSSR Mercury Radar are in contention with DSS Maintenance.**

2. **VGR1 ASCAL and MAGROL have moderate contention with MEX Bi-Static Radar, M01O Mapping, and Nozomi R/S.**

3. **Moderate contention on the 70M subnet is due to overlapping activities of EVN E500 J-M4 (24 hours) in Week 22, GBRA activities (RA500 SOC-M4, 24 hours, in Week 21, M-Wave Spect, and Planet R/AST) and GSSR Mercury Radar with M01O Mapping/MSPA support, MERB, MGS, DSS Maintenance, MEX, and Nozomi.**

Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)

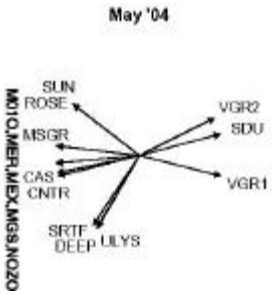


ANALYSIS

4. DSS-65 is down and DSS-15, 45 Maintenance have severe contention due to MGS Mapping and SGP Crustal Dynamic W-M4 in Week 21 and 22.

5. Severe contention on the 34BWG1 is caused by viewperiod overlap of Lunar-A, SOHO HSO, Ulysses, WIND, and Polar.

Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



RECOMMENDATION

DSN Delete Antenna Cals in Week 21 and 22. (1, 2, 3)

*DSS-14 reduce one routine maintenance from 8 hours to 6 hours and DSS-63 reduce 10 hour routine maintenance to 8 hours in Week 21 and 22. (1, 2)

EVN E500 J-M4 split support into two 8-hour increments. (1, 2, 3)

Ground Based R/A RA500 SOC-M4 move support to Week 23 and split support into three 8-hour increments. Delete GBRA M-Wave Spect, and Planet R/AST in Week 21 and 22. (1, 2, 3)

Gravity Probe B reduce DSS-14 support to 8 hours or move quarterly epoch to Week 28. (1, 2, 3)

*GSSR Mercury reduce support to 3 hours. (1, 2, 3)

M01O reduce 3 supports to 4 hours to accommodate DSS Bearing and Routine Maintenance. (1, 2)

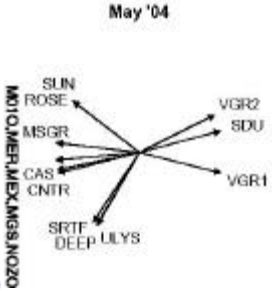
*MEX schedule support at DSS-63 only. (1, 2, 3)

MGS requested support using DSS-15, DSS-45, 34BWG1, and 34BWG2 while accommodating maintenance. (4)

Nozomi schedule two supports at DSS-63 and one support at DSS-14. (1, 2)

*Polar receive requested support using 26M and DSS-34. (5)

Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



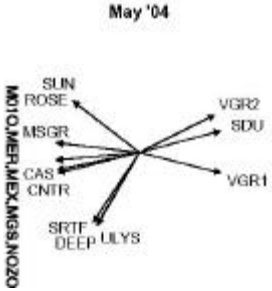
RECOMMENDATION (continued)

*SOHO HSO receive requested support using 26M, 34HSB, and 34BWG1. (5)

Space Geodesy Program Crustal Dynamic delete support. (4)

*WIND receive requested support using DSS-24, 34. (5)

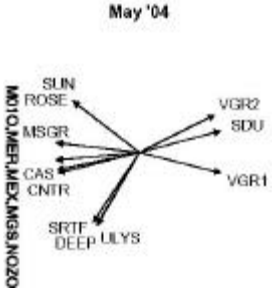
Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	May 19	May 20	May 21	May 22
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	7	7	7	6
CAS TCM Day	DSS-45,25,54,63	8.0	4.0	0.50	0.25				3
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25	1	1	1	
DEEP TCM	DSS-15,45,55	8.0	5.0	0.50	0.25				7
DSS Bearing Mntc	DSS-14	8.0	8.0					1	
DSS Bearing Mntc	DSS-43	8.0	8.0			1			1
DSS Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-63	10.5	8.0			1		1	1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1			
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
GNS	34B1	4.0	4.0	0.50	0.25	6	4	3	
GNS	34B1	8.0	4.0	0.50	0.25	4	2	2	4
GNS Maneuver	34B1	8.0	4.0	0.50	0.25				6
LUNA	DSS-24,54	8.0	6.0	0.50	0.25		7	7	
LUNA	DSS-16,66	8.0	6.0	0.70	0.20				7
M01O Map/MERA D/L	70M	8.0	4.0	0.50	0.25	7	2		
M01O Map/MERB D/L	70M	8.0	4.0	0.50	0.25	7	7	7	7
M01O Map/MGS Map	70M	8.0	4.0	0.50	0.25		4	5	4
						19	20	21	22

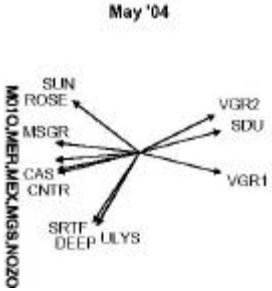
Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	May 19	May 20	May 21	May 22
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	8	9	10
MERA Surf. Up	34H	3.0	1.0	0.50	0.25	7	2		
MERB Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	7	7
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	34H	8.0	4.0	0.50	0.25	9	4	5	4
MGS Mapping	DSS-15,45	8.0	4.0	0.50	0.25		5	5	5
MUSC Earth Swingby	DSS-25,34,54	3.0	3.0	0.50	0.25				4
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25			4	
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3
POLR PB	34B1	1.0	0.8	0.50	0.25	12	12	12	12
POLR PB	26M	1.0	0.8	0.70	0.20	16	16	16	16
POLR RT	34B1	2.0	2.0	0.50	0.25	3	3	3	3
POLR RT	26M	2.0	2.0	0.70	0.20	4	4	4	4
SOHO	34B1	8.0	6.0	0.50	0.25	2			
SOHO	26M	1.6	1.6	0.70	0.20	6			
SOHO HSO	DSS-34,54	8.0	6.0	0.50	0.25		2	2	2
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20		6	7	7
SOHO HSO	DSS-27	4.0	4.0	0.40	0.20		1		
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20		12	12	12
SOHO TSO	34B1	8.0	4.0	0.50	0.25	1			
SOHO TSO	26M	8.0	4.0	0.70	0.20	14			
ULYS	DSS-24,54	10.0	8.0	0.50	0.25	6	6	6	5
ULYS	DSS-34,54	10.0	8.0	0.50	0.25				1
VGR1	DSS-65	4.0	4.0	0.50	0.25	7			
VGR1	DSS-26	8.0	8.0	0.50	0.25		7	7	7
VGR1	DSS-25,26	8.0	4.0	0.50	0.25	7			
VGR1	DSS-55	4.0	4.0	0.50	0.25	7			
						19	20	21	22

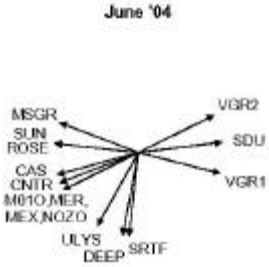
Resource Allocation Review
Analysis and Recommendations
2004 – May (Weeks 19 - 22) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	May 19	May 20	May 21	May 22
VGR1 ASCAL	DSS-14	2.0	2.0	0.75	0.25	1			
VGR1 MAGROL	DSS-14	7.0	7.0	0.75	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3
						19	20	21	22

Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26)

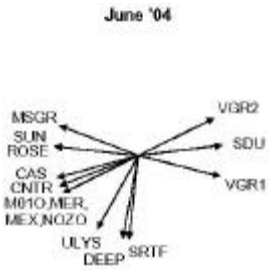


EVENTS

DSS-65 Downtime (Antenna Controller Replacement)

Cassini Saturn Approach/TCM Day in Week 25
Deep Impact TCM in Weeks 23 - 25
GSSR Asteroid 1998 SF36 in Week 25 and 26
Mars Odyssey THEMIS Mapping 70M
Mars Odyssey MSPA with MERB in Weeks 23 - 25
Mars Express Bi-Static Radar, Orbital Science, and Occultation
MERB Surface Uplink
Messenger Venus Flyby 1 DOY 176 in Weeks 24 - 26
MUSES-C Earth Swingby in Week 23 DOY 155
Nozomi Radio Science
SOHO HSO continuous
WIND TCM in Week 26

Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)



ANALYSIS

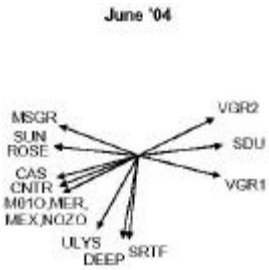
Note: MERA and MERB landing sites have not yet been selected. Therefore, the analysis conducted in the following weeks is on a best efforts basis.

1. **DSS Bearing and Routine Maintenance have severe contention on the 70M Subnet due to viewperiod overlap with Cassini in Week 25, GSSR 1998 SF36 in Week 26, MEX Bi-Static Radar, M01O Mapping, M01O MSPA with MERB, and Nozomi R/S.**

2. **DSS-65 is down and DSS-45 maintenance has severe contention due to Cassini approach and TCM Day in Week 25, Deep Impact TCM, MERB Surface Uplink, MGS Mapping, and GBRA Host Country 12 hour support in Week 25.**

3. **DSS Maintenance has severe contention on the 34BWG1 due to Cassini TCM Day in Week 25, Deep Impact Cruise support in Week 26, MEX Orbital Science & Occultation in Week 25 and 26, Messenger routine and Venus Flyby 1 in Week 25 and 26, WIND routine and TCM support in Week 26, and SOHO HSO continuous.**

Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)



RECOMMENDATION

*Cassini TCM Day requested support use maximum view at DSS-25, reduce DSS-45 from 8-hour supports to 4 hours, and use 8-hour supports at DSS-54, 55. (2)

Deep Impact use DSS-15, 45, 34. (2)

*DSS Maintenance reduce DSS-24 support from 8 hours to 6 hours in Week 25 and 26; reduce DSS-45 from 6 hours to 5 hours; and reduce DSS-14 from one 8-hour routine maintenance to one 6-hour support in Week 23 and 26. (1, 2)

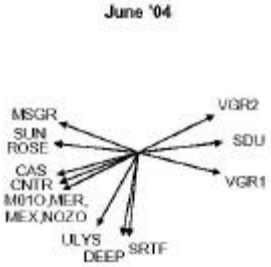
GBRA Host Country change 12 hour support to two 8-hour supports. (2)

M01O Mapping reduce three supports from 8 hours to 4 hours in Weeks 23 and 26, reduce four supports from 8 hours to 4 hours in Week 24, and reduce five supports from 8 hours to 4 hours in Week 25. (1)

*MEX use DSS-14 only in Week 23 and DSS-63 only in Week 24 and 26; plan Occultation and Orbital Science supports at DSS-24, 65, 25, 55 in Week 25 and 26. (1, 3, 4)

Nozomi plan two supports at DSS-14 and one at DSS-63 in Week 23 and plan two supports at DSS-63 and one at DSS-14 in Week 24 and 26. (1)

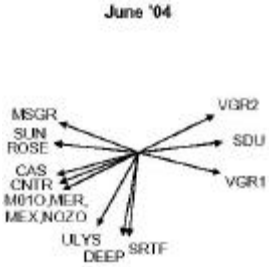
Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)



RECOMMENDATION (continued)

***Polar requested support use DSS-27, 46, and 34BWG1. (3,4)**
***SOHO HSO requested support use 26M, DSS-27, 24. (3, 4)**
***VGR2 use seven 8-hour passes at DSS-43, 45, 34. (2)**

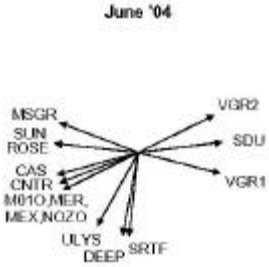
Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	June 23	June 24	June 25	June 26
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	7	7	6	7
CAS TCM Day	DSS-45,25,54,63	8.0	4.0	0.50	0.25			3	
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25				1
DEEP TCM	DSS-15,45,55	8.0	5.0	0.50	0.25	9	13	7	
DSS Bearing Mntc	DSS-14	8.0	8.0				1		
DSS Bearing Mntc	DSS-43	8.0	8.0					1	
DSS Bearing Mntc	DSS-63	8.0	8.0			1			1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-63	10.5	8.0				1	1	
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
GSSR Ast 1998 SF36	DSS-14	8.0	8.0	1.50	0.50			2	3
GSSR Ast 1998 SF36	DSS-14	7.0	7.0	1.50	0.50				1
M01O Map/MERB D/L	70M	8.0	4.0	0.50	0.25	7	7	2	
M01O Mapping	70M	7.0	4.0	0.50	0.25	7	7	12	14
MERB Surf. Up	34H	3.0	1.0	0.50	0.25	7	7	2	
MEX Occultations	DSS-24,54	16.0	8.0	0.50	0.25			7	7
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	DSS-15,45	8.0	4.0	0.50	0.25	3			
						23	24	25	26

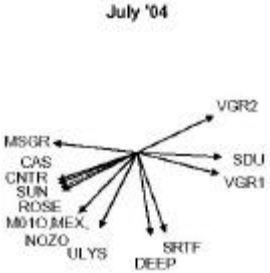
Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	June 23	June 24	June 25	June 26
MSGR	DSS-26,34,54	8.0	4.0	0.50	0.25	2	5		
MSGR Venus FB1	DSS-26,34,54	8.0	4.0	0.50	0.25			7	7
MUSC Earth Swingby	DSS-25,34,54	3.0	3.0	0.50	0.25	4			
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3
SOHO HSO	DSS-34,54	8.0	6.0	0.50	0.25	2	2	2	2
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	12	12	12	12
VGR2	DSS-45	8.0	8.0	0.50	0.25			7	7
VGR2	DSS-34,45	16.0	16.0	0.50	0.25		7		
VGR2	DSS-34,45	8.0	8.0	0.50	0.25	7			
VGR2	DSS-34	8.0	8.0	0.50	0.25			1	1
VGR2	DSS-34	4.0	4.0	0.50	0.25			6	6
VGR2 MAGROL	DSS-43	7.0	7.0	0.75	0.25			1	
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3
WIND TCM	DSS-24,34	3.0	2.0	0.50	0.25				1
						23	24	25	26

Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31)

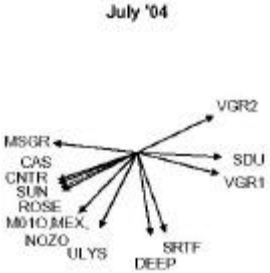


EVENTS

DSS-14 Downtime (Antenna Controller Replacement) in Weeks 28 - 31

Cassini Saturn Orbit Insertion in Week 27
CONTOUR Earth Gravity Assist in Weeks 28 - 31
Genesis maneuver continuous in Week 27 DOY 182 and 183
Gravity Probe B 70M support in Week 29
Mars Odyssey THEMIS mapping on 70M
Mars Express Bi-Static Radar, Orbital Science, and Occultation
Messenger Venus Post Flyby 1 in Week 27 and 28
MUSES-C TCM in Week 27 and 28
Nozomi Radio Science
SOHO HSO continuous

Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31) (continued)



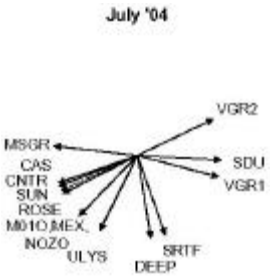
ANALYSIS

1. **Severe contention in Week 27 during the Cassini Saturn Orbit Insertion continuous support. Weeks 28 - 31, DSS-14 is down for Antenna Controller Replacement, causing severe contention at DSS-43, 63. 70M DSS Bearing and Routine Maintenance hours overlap with Cassini, CONTOUR, MEX Bi-Static Radar, Nozomi R/S (Week 28), and with M01O Mapping.**

2. **Moderate contention on 34HEF with Deep Impact, GBRA Host Country, M01O Mapping, SGP Crustal Dynamic, and VGR1 routine support.**

3. **Severe contention on 34BWG1 caused by Chandra, Deep Impact Cruise, Messenger Post Venus Flyby 1, MEX Orbital Science and Occultation, MUSES-C TCM, SOHO HSO, and routine support for Polar RT and PB, Ulysses, VGR2, and WIND.**

Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31) (continued)



RECOMMENDATION

CONTOUR use split pass support at DSS-43, 63 (viewperiod at DSS-63 is approximately 4 hours) for requested support. (1)

DSN Antenna Calibration reduce to 4 hours. (1)

***DSS Maintenance in Week 27 delete DSS-14 Bearing and Routine Maintenance (DSS-14 down in Weeks 28 - 31) and DSS-63 6-hour Routine Maintenance. (1)**

M01O reduce three passes to 4 hours in Week 27. Change from eleven 7-hour to ten 8-hour and one 5-hour supports in Weeks 28, 30, and 31. In Week 29, reduce support from eleven 7-hour to seven 8-hour and two 5-hour supports. (1)

***MEX requested support, use DSS-24, 54, 26, 55 for Occultation support in Week 27 and 28. (3)**

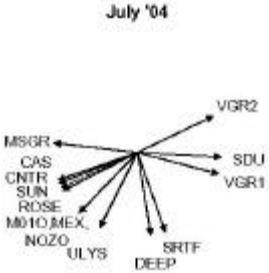
***Polar requested support, use 26M and DSS-27. (3)**

***SOHO HSO requested support, use 26M and DSS-27. (3)**

***VGR1 requested support, use DSS-25, 65, 55. (2)**

***VGR2 requested support, use DSS-45, 43. (3)**

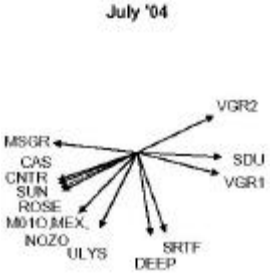
Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	28	29	30	31
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	5				
CAS SOI	70M	8.0	4.0	0.50	0.25	3				
CAS Tour	DSS-65,25	9.0	4.0	0.50	0.25	3	7	7	7	7
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21	21
CNTR	DSS-43,63	8.0	6.0	0.50	0.25		1			
CNTR EGA	34H	8.0	6.0	0.50	0.25		3	4	3	4
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25	1	1	1	1	1
DSS Bearing Mntc	DSS-14	8.0	8.0			1				
DSS Bearing Mntc	DSS-43	8.0	8.0				1			1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-63	10.5	8.0			1				
DSS Maintenance	DSS-63	6.0	4.0			1				
DSS Maintenance	DSS-14	8.0	8.0			2				
DSS Maintenance	DSS-63	8.0	8.0				1	1	1	1
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1	1
GNS	34B1	4.0	4.0	0.50	0.25		4	2	4	4
GNS	34B1	8.0	4.0	0.50	0.25	5		5		
GNS Maneuver	34B1	8.0	4.0	0.50	0.25	6				
M01O Map/MEX R/S	DSS-63	7.0	4.0	0.50	0.25		1	1	1	1
M01O Mapping	70M	7.0	4.0	0.50	0.25	14				
						27	28	29	30	31

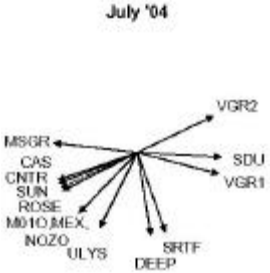
Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	July 28	July 29	July 30	July 31
M01O Mapping	DSS-43,63	7.0	4.0	0.50	0.25		11	11	11	11
M01O Mapping	DSS-45,65	7.0	4.0	0.50	0.25		2	2	2	2
MEX Occultations	DSS-24,54	16.0	8.0	0.50	0.25	7	7			
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1				
MSGR	DSS-26,34,54	8.0	4.0	0.50	0.25			2	2	2
MSGR Venus FB1	DSS-26,34,54	8.0	4.0	0.50	0.25	7	4			
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25	4	2			
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3				
NOZO RS	DSS-25,65	3.0	2.0	0.50	0.25		3	3	3	3
POLR PB	34B1	1.0	0.8	0.50	0.25	12	12	12		
POLR PB	26M	1.0	0.8	0.70	0.20	16	16	16	28	28
POLR RT	34B1	2.0	2.0	0.50	0.25	3	3	3		
POLR RT	26M	2.0	2.0	0.70	0.20	4	4	4	7	7
SOHO HSO	DSS-34,54	8.0	6.0	0.50	0.25	2	2	2		
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7	7
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	12	12	12	14	14
ULYS	DSS-24,34	10.0	8.0	0.50	0.25	6	6			
ULYS	DSS-34,54	10.0	8.0	0.50	0.25			6	6	6
VGR1	DSS-65	4.0	4.0	0.50	0.25				7	
VGR1	DSS-26,65	8.0	8.0	0.50	0.25	14	14	14		14
VGR1	DSS-25,26	8.0	4.0	0.50	0.25				7	
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1				
VGR1 Routine U/L	DSS-43,63	2.5	2.5	0.75	0.25		1	1	1	1
VGR2	DSS-45	8.0	8.0	0.50	0.25	7		7		
VGR2	DSS-34,45	16.0	16.0	0.50	0.25		7		7	7
VGR2	DSS-34	8.0	8.0	0.50	0.25	1				
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
						27	**28**	**29**	**30**	**31**

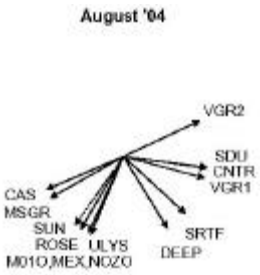
Resource Allocation Review
Analysis and Recommendations
2004 – July (Weeks 27 - 31) (continued)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	28	29	30	31
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3
						27	28	29	30	31

Resource Allocation Review
Analysis and Recommendations
2004 – August (Weeks 32 - 35)



EVENTS

Contour Earth gravity assist
Genesis maneuver

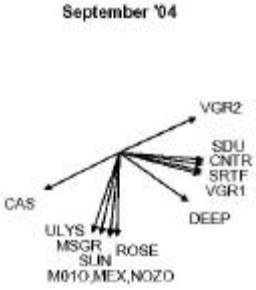
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2004 – September (Weeks 36 - 40)



EVENTS

Contour Earth gravity assist in Week 37
Genesis maneuver, Earth return and backup orbit
Mars Express solar corona in Weeks 38 - 40
Stardust TCM support

ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2004 – October (Weeks 41 - 44)

EVENTS

Genesis backup orbit
Gravity Probe B quarterly epoch in Week 43
Mars Express solar corona
Stardust TCM support

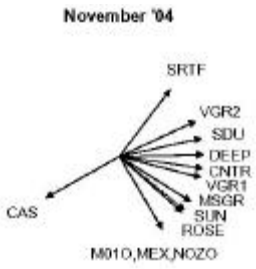
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2004 – November (Weeks 45 - 48)



EVENTS

Mars Express solar corona
Mars Odyssey relay

ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2004 – December (Weeks 49 - 53)

EVENTS

Cassini probe checkout and release in Weeks 50 - 52
Deep Impact Earth flyby in Weeks 50 - 53

ANALYSIS

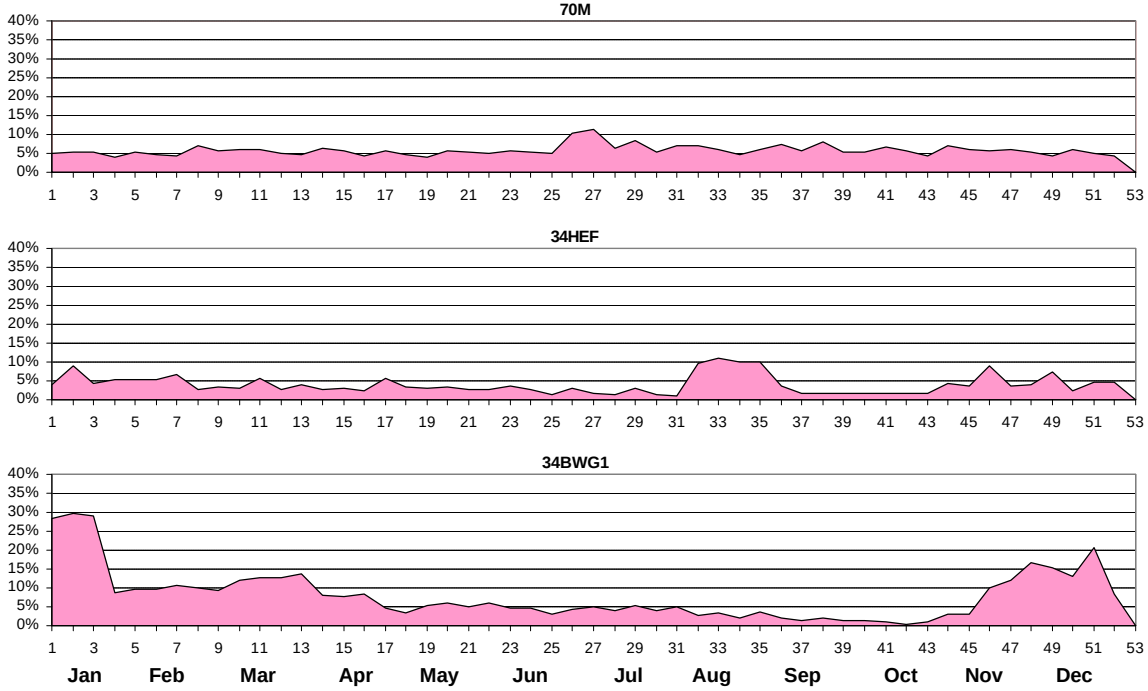
The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

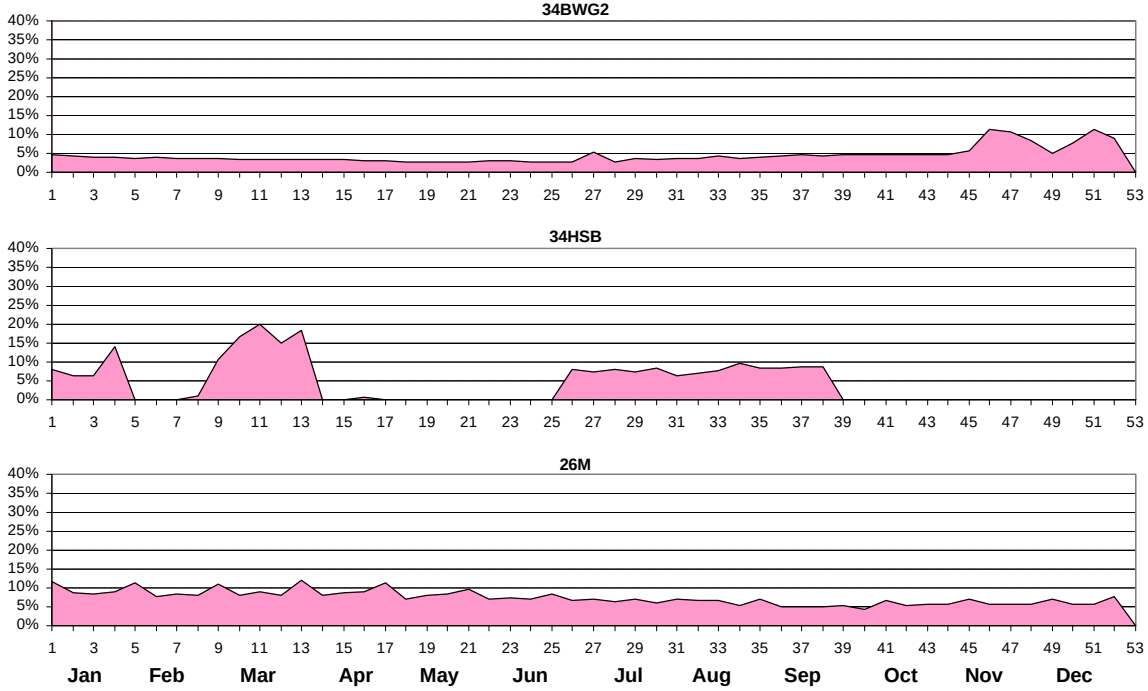
2005 Events, Analysis and Recommendations

Resource Allocation Review
Analysis and Recommendations
2005 Weekly Average User Unsupportable Time

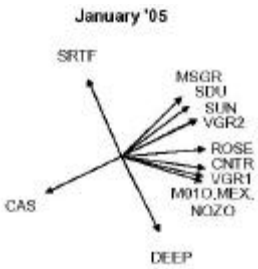


Resource Allocation Review
Analysis and Recommendations

2005 Weekly Average User Unsupportable Time (continued)



Resource Allocation Review
Analysis and Recommendations
2005 – January (Weeks 01 - 04)



EVENTS

Cassini Probe Entry support in Week 02
CONTOUR Earth Gravity Assist support
Deep Impact Earth Flyby support in Weeks 01 - 03
Mars Express Occultation support in Weeks 01 - 03

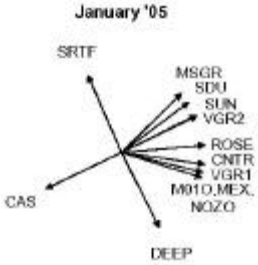
ANALYSIS

Extreme contention in Weeks 01 - 03 at DSS-25 and DSS-54 caused by Mars Express Occultation, Earth Science, and Mars Odyssey supports.

RECOMMENDATION

*Mars Odyssey move DSS-54 support to DSS-55 in Weeks 01 - 03. (1)

Resource Allocation Review
Analysis and Recommendations
2005 – January (Weeks 01 - 04)

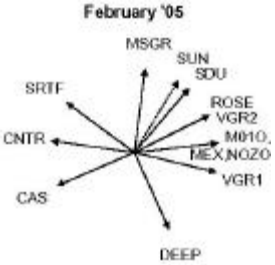


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	January 1	January 2	January 3	January 4
CAS Probe Entry	DSS-45,65,25	8.8	4.0	0.50	0.25		14		
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	1	2
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25		1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	5		5	4
CNTR	70M	8.0	6.0	0.50	0.25	1			
CNTR EGA	34H	8.0	6.0	0.50	0.25		4	3	5
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25	[illegible]	[illegible]	[illegible]	[illegible]
DEEP Earth FB	DSS-15,45,65	8.0	4.0	0.50	0.25	[illegible]	[illegible]	[illegible]	[illegible]
DSS Maintenance	DSS-54	6.0	6.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
DSS Maintenance	DSS-24	8.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
M01O Relay	[illegible]24,54	8.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]
MEX Occultations	DS[illegible]4,5	[illegible]9	[illegible]	[illegible]	[illegible]5	[illegible]	[illegible]	7	[illegible]
MEX Orbital Sci	DS[illegible]24	[illegible]0	[illegible]	[illegible]	[illegible]25	7	7	7	7
MEX R/S Bi Static	[illegible]-1[illegible]	[illegible].0	3[illegible]	0.[illegible]	[illegible].25	1	1	1	1
						1	2	3	4

Results

Resource Allocation Review
Analysis and Recommendations
2005 – February (Weeks 05 - 08)



EVENTS

CONTOUR Earth Gravity Assist 34HEF support
VGR1 70M MAGROL support in Week 05 DOY 035

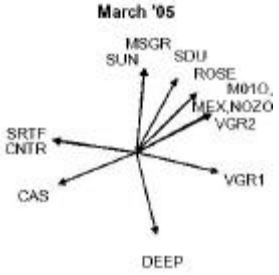
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2005 – March (Weeks 09 - 13)



EVENTS

CONTOUR Earth Gravity Assist 34HEF support in Week 09
GSSR Asteroid 1998WT DSS-14 support in Week 09 and 10
MAP Maneuver 70M support in Week 11
VGR2 DTR Playback DSS-43 support in Week 10 DOY 068

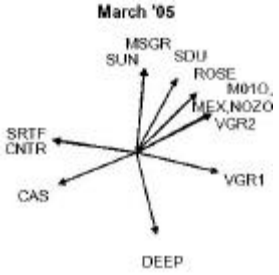
ANALYSIS

Moderate conte[illegible]n in We[illegible] ca[illegible]y Mars Express Orbital Science, and D[illegible] at DSS-24, 54 and Mars Odyssey supp[illegible]at [illegible]34, 54 .

RECOMMENDATION

***Mars Express move DSS-54 support to DSS-55 in Weeks 10-13.**

Resource Allocation Review
Analysis and Recommendations
2005 – March (Weeks 09 - 13)

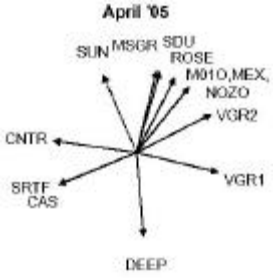


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	March 9	10	11	12	13
CNTR EGA	34H	8.0	6.0	0.50	0.25	3				
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25	1	1	1	1	1
DSS Bearing Mntc	DSS-14	8.0	8.0					1		
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0				1	1	1	
DSS Maintenance	DSS-24	8.0	6.0				1	[illegible]	[illegible]	1
DSS Maintenance	DSS-34	6.0	6.0							
GSSR Ast 1998WT	DSS-14	10.0	5.0	1.50	[illegible]					
M01O Relay	DSS-25,34,54	8.0	[illegible]	0.[illegible]	[illegible]					
MAP.	70M[illegible]	0.7	[illegible]	1[illegible]	[illegible]			4	[illegible]	[illegible]
MAP. Mnvr.	70[illegible]	[illegible]0	[illegible]	1[illegible]	[illegible]5			1		
MAP. Mnvr.	7[illegible]	[illegible]0		1[illegible]	[illegible]25			2		
MEX Orbital Sci	[illegible]-2[illegible]	[illegible].0	6[illegible]	0.[illegible]	0.25	7	7	7	7	7
MEX R/S Bi Static	[illegible]S-1[illegible]3	[illegible].0	[illegible]	0.50	0.25	1	1	1	1	1
VGR2	[illegible]-4[illegible]	[illegible]6.0	8.0	0.50	0.25	7	7	7	7	7
VGR2 DTR P/B	[illegible]SS-4[illegible]	7.4	7.4	0.75	0.25		1			
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
						9	10	11	12	13

Results

Resource Allocation Review
Analysis and Recommendations
2005 – April (Weeks 14 - 17)



EVENTS

Deep Impact TCM support in Weeks 15 - 17
VGR1 DTR array DSS-14/15 support in Week 17 DOY 118

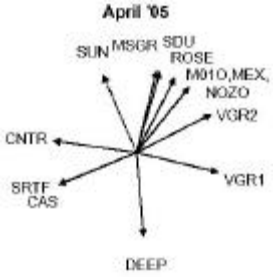
ANALYSIS

Moderate contention in Week 17 at DSS-15 is caused by Deep Impact TCM, Voyager 1 DTR Array, and DSS Maintenance, compounded by DSN CAT M&E and Space Geodesy Program 24-hour support.

RECOMMENDATION

Space Geodesy Program move support from Week 17 to Week 14.

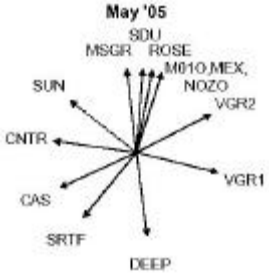
Resource Allocation Review
Analysis and Recommendations
2005 – April (Weeks 14 - 17)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	April 14	April 15	April 16	April 17
DEEP Cruise	DSS-15,34,54	8.0	5.0	0.50	0.25	1			
DEEP TCM	DSS-15,34,54	8.0	5.0	0.50	0.25		1	4	7
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	14	14
VGR1 DTR Array	DSS-14/15	7.4	7.4	0.75	0.25				1
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
						14	**15**	**16**	**17**

Resource Allocation Review
Analysis and Recommendations
2005 – May (Weeks 18 - 21)



EVENTS

Deep Impact Comet Approach in Week 21
Deep Impact TCM in Weeks 18 - 20
VGR1 ASCAL (DOY 123) and MAGROL (DOY 126) in Week 18

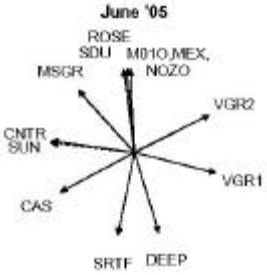
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2005 – June (Weeks 22 - 26)



EVENTS

Deep Impact Comet Approach in Weeks 22 - 25 and
Comet Encounter support in Week 26
MUSES-C Rendezvous in Week 22
SOHO HSO continuous support in Week 26

ANALYSIS

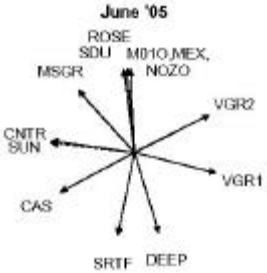
Severe contentions at DSS-27 between DSS Maintenance and SOHO HSO support in Week 26

Resolve

RECOMMENDATION

*DSS reduce DSS-27 maintenance from 8 hours to 6 hours in Week 26.

Resource Allocation Review
Analysis and Recommendations
2005 – June (Weeks 22 - 26)

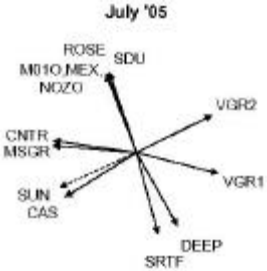


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	June 22	23	24	25	26
DEEP Comet App	DSS-15,34,54	8.0	6.0	0.50	0.25	5	7	7	7	
DEEP Comet Enc	70M	8.0	4.0	0.50	0.25					8
DEEP Comet Enc	DSS-15,34,54	8.0	4.0	0.50	0.25					15
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1	1
MUSC Mission Phase	DSS-25,34,54	8.0	8.0	0.50	0.25				1	1
MUSC Rendezvous	DSS-25,34,54	8.0	8.0	0.50	0.25		4	4		
SOHO	26M	9.6	6.0	0.70	0.20		7	[illegible]		
SOHO	26M	8.0	6.0	0.70	0.20					
SOHO	26M	1.6	1.6	0.70	[illegible]		[illegible]			
SOHO HSO	DSS-27	8.0	[illegible]	[illegible]	[illegible]					
SOHO HSO	[illegible]6,66	8.0	[illegible]	[illegible]	[illegible]					[illegible]
SOHO TSO	26[illegible]	[illegible]0	[illegible]	[illegible]	[illegible]0				15	
						[illegible]	23	24	25	26

Results

Resource Allocation Review
Analysis and Recommendations
2005 – July (Weeks 27 - 30)



EVENTS

Deep Impact Comet impact in Week 27 DOY 185
Deep Impact Comet Encounter in Week 27 DOY 185
MAP Maneuver Week 27
MESSENGER Earth Flyby in Week 29 and 30
SOHO HSO continuous support

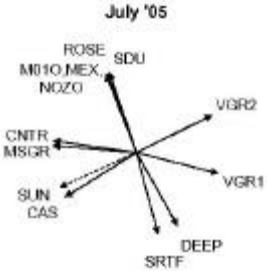
ANALYSIS

Severe contention at DSS-27 between DSS Maintenance and SOHO HSO support.

RECOMMENDATION

***DSS reduce DSS-27 maintenance from 8 hours to 6 hours.**

Resource Allocation Review
Analysis and Recommendations
2005 – July (Weeks 27 - 30)

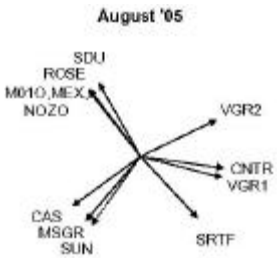


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	July 27	July 28	July 29	July 30
DEEP Comet Enc	70M	8.0	4.0	0.50	0.25	3			
DEEP IMPACT	DSS-14/15/24/25/26	8.0	4.0	0.50	0.25	1			
DEEP Playback	DSS-15,34,54	8.0	6.0	0.50	0.25	2	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1
MAP.	70M	0.7	0.6	1.25	0.25	4	7	7	7
MAP. Mnvr.	70M	5.0	5.0	1.25	0.25	[illegible]	[illegible]	[illegible]	[illegible]
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25	[illegible]	[illegible]	[illegible]	[illegible]
MSGR	34H	4.0	3.0	0.50	0.25	[illegible]	[illegible]	[illegible]	[illegible]
MSGR	DSS-26,34,54	4.0	3.0	0.50	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
MSGR Earth FB	DSS-26,34,54	8.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
SOHO HSO	[illegible]S-27	8.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7	[illegible]
SOHO HSO	DS[illegible]6,[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1[illegible]	14	14
						[illegible]	28	29	30

Results

Resource Allocation Review
Analysis and Recommendations
2005 – August (Weeks 31 - 34)



EVENTS

GSSR Asteroid 1992UY4 in Week 31
Mars Reconnaissance Orbiter Launch DOY 220
    Launch and TCM (DOY 235) support in Weeks 32 - 34
SOHO HSO continuous support
VGR1 MAGROL support in Week 31 DOY 218

ANALYSIS

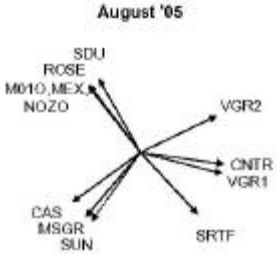
1. Moderate contention in Weeks 32 - 34 on DSS-14 caused by VGR1, Cassini, Mars Reconnaissance Orbiter Launch and TCM, and Routine Maintenance.

2. Severe contention in Week 31 caused by VGR1 MAGROL and GSSR Asteroid 1992UY4 at DSS-14.

3. Severe contention at DSS-27 between DSS Maintenance and SOHO HSO support.

Resolve

Resource Allocation Review
Analysis and Recommendations
2005 – August (Weeks 31 - 34)



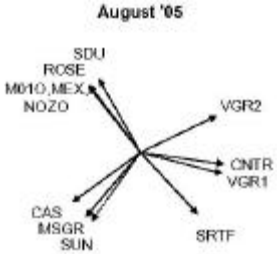
RECOMMENDATION

***DSS reduce DSS-15 and DSS-27 maintenance from 8 hours to 6 hours. (1, 3)**

***GSSR Asteroid 1992UY4 plan supports to accommodate 'GR1 MAGROL on DOY 218. (2)**

Resolve

Resource Allocation Review
Analysis and Recommendations
2005 – August (Weeks 31 - 34)

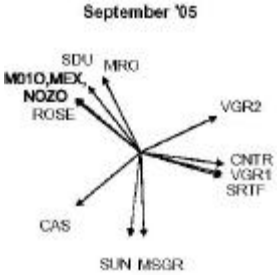


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	August 31	August 32	August 33	August 34
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	1	2	1	2
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25	1	1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	5	4	5	4
DSS Bearing Mntc	DSS-14	8.0	8.0				1		
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
DSS Maintenance	DSS-15	8.0	6.0				1	1	1
DSS Maintenance	DSS-45	6.0	6.0				1	[illegible]	[illegible]
DSS Maintenance	DSS-65	6.0	6.0						
DSS Maintenance	DSS-27	8.0	6.0						
GSSR Ast 1992UY4	DSS-14	6.0	[illegible]	1.[illegible]	[illegible]				
MRO Launch	34H[illegible]	8.0	[illegible]	[illegible]	[illegible]			5	1[illegible]
MRO Launch	34[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]		
MRO Launch	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		18	6	
MRO Launch	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		1		
MRO TCM	[illegible]	[illegible]	[illegible]	0.50	0.25				3
MRO TCM	3[illegible]	8.0	4.0	0.50	0.25				1
SOHO HSO	[illegible]	8.0	6.0	0.40	0.20	7	7	7	7
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	14	14	14	14
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	14	14
VGR1 MAGROL	DSS-14	7.0	7.0	0.75	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
						31	32	33	34

Result

Resource Allocation Review
Analysis and Recommendations
2005 – September (Weeks 35 - 39)



EVENTS

Mars Reconnaissance Orbiter Post Launch support in Week 35 and 36

SOHO HSO continuous support in Weeks 35 - 38

VGR2 DTR Playback in Week 36 DOY 250

ANALYSIS

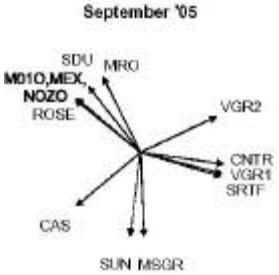
Severe contentions at DSS-27 between DSS Maintenance and SOHO HSO support in Weeks 35 - 38

RECOMMENDATION

*DSS reduce DSS-27 maintenance from 8 hours to 6 hours in Weeks 35 - 38.

Resolved

Resource Allocation Review
Analysis and Recommendations
2005 – September (Weeks 35 - 39)

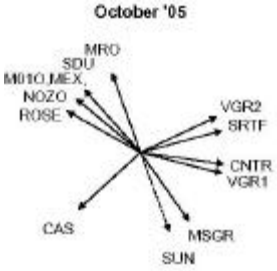


RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	September 35	36	37	38
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1
MRO	34H	8.0	4.0	0.50	0.25		5	7	7
MRO Launch	34H	8.0	4.0	0.50	0.25	21	6		
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	14	14	14	14
VGR2	DSS-43,45	16.0	8.0	0.50	0.25		7	7	7
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25		1	1	1
						[illegible]	3	3	3

Resolve

Resource Allocation Review
Analysis and Recommendations
2005 – October (Weeks 40 - 43)



EVENTS

MAP Maneuver in Week 43
Stardust TCM in Week 42 and 43
VGR1 DTR Array Playback in Week 43 DOY 299

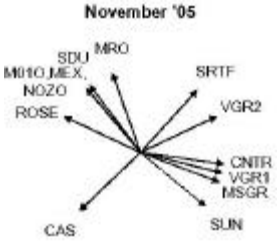
ANALYSIS

The contention level is workable and should resolve during final schedule preparations and negotiations.

RECOMMENDATION

None.

Resource Allocation Review
Analysis and Recommendations
2005 – November (Weeks 44 - 47)



EVENTS

Mars Express Occultation in Week 47
Mars Reconnaissance Orbiter TCM in Week 44 and 45
MUSES-C Asteroid Departure in Week 46 DOY 319
Stardust TCM support
Stereo Ahead and Stereo Behind Launch (DOY 319) support in Week 46 and 47
VGR1 ASCAL (DOY 305) and MAGROL (DOY 308) in Week 44

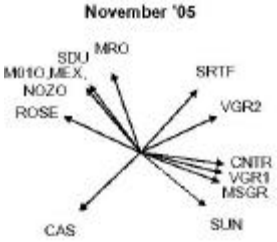
ANALYSIS

1. Moderate contention in Week 46 and 47 caused by Mars Odyssey, Mars Express Orbital Science, and Stereo Ahead and Stereo Behind launch support at DSS-54.

2. Moderate contention at DSS-26 and DSS-55 in Week 46 and 47 caused by maintenance and Voyager 1.

3. Moderate contention in Week 46 caused by Mars Odyssey, Stardust TCM, and Stereo Ahead and Stereo Behind launch support on 34BWG2.

Resource Allocation Review
Analysis and Recommendations
2005 – November (Weeks 44 - 47)



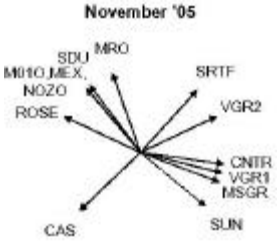
ANAYSIS (continued)

4. Moderate contention for Voyager 2 caused by DSS Maintenance, Mars Reconnaissance Orbiter, and Stereo Behind launch support at DSS-45 in Week 46.

RECOMMENDATION

Mars Express use DSS-24, 63 in Week 46 and 47. (1)
Mars Odyssey move support to the 70M in Week 46 and 47. (3)
Stardust move 2 TCM passes to the 34HEF in Week 46. (3)
*Voyager 1 move 2 passes to DSS-15, 65 in Week 46. (2)
*Voyager 2 reduce routine support to seven 8-hour passes and use DSS-43 in Week 46. (4)

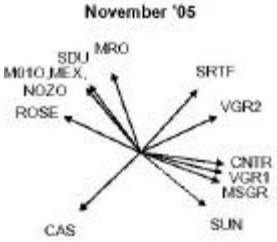
Resource Allocation Review
Analysis and Recommendations
2005 – November (Weeks 44 - 47)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 44	45	46	47
DSS Maintenance	DSS-15	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-55	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
M01O Relay	DSS-25,34,54	8.0	4.0	0.50	0.25	7	7	7	7
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1
MRO	34H	8.0	4.0	0.50	0.25	3	5	7	7
MRO DDOR Test	15\45,15\65	1.0	1.0	0.50	0.25			2	2
MRO TCM	34H	8.0	4.0	0.50	0.25	12	6		
MRO TCM	34B1	8.0	4.0	0.50	0.25	1			
MSGR	34H	4.0	3.0	0.50	0.25		1		1
MSGR	DSS-26,34,54	4.0	3.0	0.50	0.25	2	1	2	1
MUSC Departure	DSS-25,34,54	8.0	8.0	0.50	0.25			2	
MUSC Mission Phase	DSS-25,34,54	8.0	8.0	0.50	0.25	1	1	1	
SDU TCM	DSS-25,34,65	8.0	4.0	0.50	0.25			2	
SDU TCM	DSS-25,34,54	4.0	4.0	0.50	0.25	10	14	12	14
STA. Launch	DSS-25,34,55	7.5	7.0	0.50	0.25				3
STA. Launch	DSS-25,34,55	8.0	4.0	3.00	0.25			3	
STA. Launch	DSS-25,34,55	8.0	7.0	0.50	0.25			15	
STA. Maneuver	DSS-25,34,55	7.9	4.0	0.50	0.25				3
STA. Phasing	DSS-25,34,55	2.0	1.0	0.50	0.25				12
STB Launch	DSS-26,45,54	8.0	4.0	0.50	0.25			3	3
						44	45	46	47

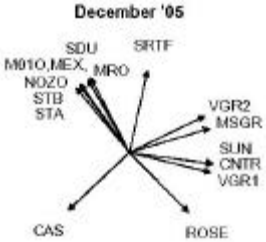
Resource Allocation Review
Analysis and Recommendations
2005 – November (Weeks 44 - 47)



RESOURCE REQUEST (continued)

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	November 44	45	46	47
STB Launch	DSS-26,45,54	8.0	4.0	0.50	0.25			15	
STB Maneuver	DSS-26,45,54	8.0	6.0	0.50	0.25				3
STB Phasing	DSS-26,34,54	2.0	1.0	0.50	0.25				12
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	14	14
VGR1 ASCAL	DSS-14	2.0	2.0	0.75	0.25	1			
VGR1 MAGROL	DSS-14	7.0	7.0	0.75	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	7	7	7	7
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1
						44	**45**	**46**	**47**

Resource Allocation Review
Analysis and Recommendations
2005 – December (Weeks 48 - 52)



EVENTS

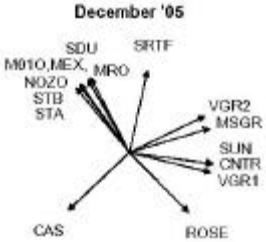
Mars Express Occultation in Weeks 48 - 50
Mars Reconnaissance Orbiter TCM in Week 48 and 49
Rosetta Earth Swingby
Stardust TCM
Stardust Earth Entry support in Week 52
Stereo Ahead and Stereo Behind Launch support

ANALYSIS

1. **Severe contention in Weeks 48 - 52 caused by Mars Express Occultation and Orbital Science, Mars Odyssey support, and Stereo Behind Maneuver on the 34BWG1.**

2. **Severe contention in Week 49 DOY 340 caused by Stereo Behind Maneuver and Mars Reconnaissance Orbiter TCM support on the 34HEF.**

Resource Allocation Review
Analysis and Recommendations
2005 – December (Weeks 48 - 52)



ANALYSIS (continued)

3. Severe contention in Week 49 and 52 caused by Stereo Ahead Maneuver, Mars Reconnaissance Orbiter TCM, and Mars Odyssey support on the 34 BWG1 (DSS-34).

4. Severe contention in Week 48 and 52 caused by Stereo Ahead Maneuver and Stereo Behind Maneuver on the 34BWG2 (DSS-25).

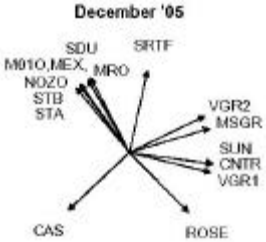
RECOMMENDATION

Mars Odyssey move support from DSS-54 to DSS-55 in Weeks 48 - 51 and from DSS-34 to DSS-45 in Week 49 and 52. (1, 3)

*Stereo Ahead move Maneuver support from DSS-25 to DSS-15 in Week 48 and 52. (4)

*Stereo Behind move Maneuver support from DSS-45 to DSS-43 in Week 49. (2)

Resource Allocation Review
Analysis and Recommendations
2005 – December (Weeks 48 - 52)



RESOURCE REQUEST

User	Resource	Durations Ave	Durations Min	Calibration Pre	Calibration Post	December 48	49	50	51	52
M01O Relay	DSS-25,34,54	8.0	4.0	0.50	0.25	7	7	7	7	7
MEX Occultations	DSS-24,54	10.9	5.0	0.50	0.25	7	7	7	7	
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7	7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1	1	1	1
MRO	34H	8.0	4.0	0.50	0.25	5	3	7	7	7
MRO TCM	34H	8.0	4.0	0.50	0.25	6	12			
MRO TCM	34B1	8.0	4.0	0.50	0.25		1			
MSGR	34H	4.0	3.0	0.50	0.25		1		1	
MSGR	DSS-26,34,54	4.0	3.0	0.50	0.25	2	1	2	1	2
ROSE Swingby	DSS-24,54	4.0	3.0	0.50	0.25	7	7	7	7	4
SDU Entry	DSS-25,34,54	8.0	4.0	0.50	0.25					2
SDU TCM	DSS-25,34,54	4.0	4.0	0.50	0.25	12	2	2	14	12
STA. Maneuver	DSS-25,34,55	7.9	4.0	0.50	0.25	3		3	9	
STA. Maneuver	DSS-25,34,55	7.9	4.0	0.50	0.25					3
STA. Maneuver	DSS-25,34,55	7.0	4.0	0.50	0.25		3			
STA. Phasing	DSS-25,34,55	2.0	1.0	0.50	0.25	12	15	12	9	12
STB Maneuver	DSS-26,45,54	8.0	6.0	0.50	0.25	2	3	3	9	3
STB Maneuver	DSS-26,45,54	7.9	6.0	0.50	0.25	1				
STB Phasing	DSS-26,34,54	2.0	1.0	0.50	0.25	12	15	12	9	12
						48	**49**	**50**	**51**	**52**

Resource Allocation Review
Supplemental Material

May be found on the RAPSO WWW Homepage at:

http://rapweb.jpl.nasa.gov

- **Ongoing Users Negotiated Requirements**
  - Individual User Loading Profiles
- **Resource Allocation Review Board Information**
  - Supplemental Yearly Information containing
    - Major Events Timeline
    - User Loading Profiles
    - Monthly Subnet Support Projection