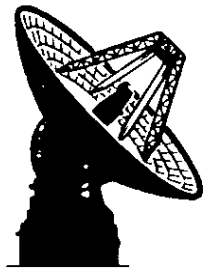
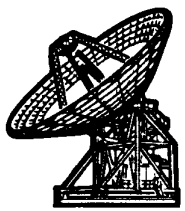


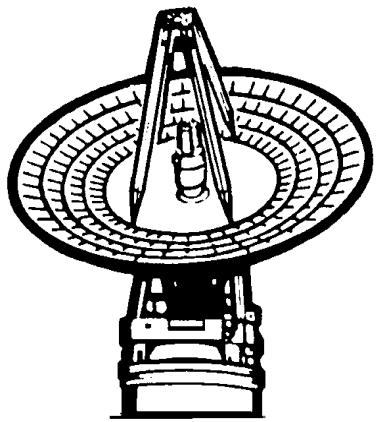
Resource Contention

Version 2.2

2003 – 2012

Napoleon Lacey





August 13, 2002

Resource Allocation Review
Agenda

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

Resource Allocation Review
Loading Study

- Major Project Changes
- New and Deleted Projects
- Changes in DSN Resource Support Request
- DSN User / Mission Planning Set
  - Ongoing Projects
  - Advanced Planning Projects
- Major DSN Downtimes
- IND Resource Implementation Planning Matrix

Resource Allocation Review
Loading Study

Major Project Changes Since February 2002 RARB

- **Clock Sync and Cat M&E**
  - Project name changed to Reference Frame Calibration (RFC)
- **Deep Impact**
  - User acronym changed from Deep Impact (DEEP) to Deep Impact Flyby (DIF)
- **Mars ASI/NASA Marconi Telecommunications Orbiter 2007**
  - Launch changed from 09/09/2007 to 08/23/2007
  - EOPM changed from 08/09/2018 to 07/18/2018
- **Mars CNES Premier Orbiter 2007**
  - Launch changed from 09/09/2007 to 09/11/2007
- **Mars Competed Scout 2007**
  - EOPM changed from 11/19/2008 to 08/19/2008

Resource Allocation Review
Loading Study

Major Project Changes Since February 2002 RARB

- **Mars Smart Lander 2007**
  - Mission deleted and replaced with Mars Smart Lander 2009
  - Launch changed from 09/04/07 to 10/25/2009
  - EOPM changed from 08/19/2010 to 08/09/2013
- **Stereo Ahead / Behind**
  - Deleted Extended Mission Phase 02/16/2008 – 02/15/2011

Resource Allocation Review
Loading Study

New Projects Since February 2002 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
Mars Smart Lander 2009	M09L	10/25/09	08/09/13	TBD
Space Technology 5	ST5	07/15/04	10/15/04	TBD

Resource Allocation Review
Loading Study

Deleted Projects Since February 2002 RARB

Project	Acronym	Launch or Start	EOPM	EOEM
Europa Orbiter	EURO	03/15/08	03/10/12	TBD
Mars Smart Lander 2007	M07L	09/04/07	08/19/10	TBD
New Horizons	NHRZ	01/10/06	01/12/17	01/10/23
StarLight	SL	06/06/06	11/30/06	- - -

Resource Allocation Review
Loading Study

Changes in DSN Resource Support Since February 2002 RARB

- Cassini Gravity Wave Experiment moved from December 2003 - February 2004 to October 2003 - November 2003. Start of Saturn Approach is now January 2004.
- Mars Exploration Rovers -A and -B have delayed landing site selection to June 2003. Presently using Gusev for MERA and Hematite for MERB as planning sites for EDL support during complex overlap periods.
- Mars Express moved the start of capture operations (Approach / MOI) from October 27, 2003 to November 17, 2003.
- Mars Global Surveyor increased support requirements in late 2003 through End of Extended Mission (EOEM) June 1, 2004.
- Mars Odyssey reduced support in Weeks 47 - 52 of 2003 and in 2004, reduced MSPA supports with MERA and/or MERB Surface operations.
- Mars Reconnaissance Orbiter added Ka-Band support requirements in September 2005 - January 2006.
- Nozomi added Delta DOR support from May, 2003 - December, 2003.
- Stereo Ahead and Behind modified Prime Science Phase requirements in 2006 - 2008.

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

Project	Acronym	Launch or Start	EOPM	EOEM
DSN Antenna Calibration	DSN	--	--	--
DSS Maintenance	DSS	--	--	--
European VLBI Network	EVN	--	--	--
Ground Based Radio Astronomy	GBRA	--	--	--
Reference Frame Calibration (Clock Sync and Catalog M&E)	DSN	--	--	--
Space Geodesy	SGP	--	--	--
Pioneer 10 ACS	***PN10***	***03/03/72***	***07/01/97***	***09/30/08***
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
ISTP - SOHO	SOHO	12/02/95	05/02/98	12/30/05

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

Project	Acronym	Launch or Start	EOPM	EOEM
ISTP - Polar	POLR	02/22/96	08/23/97	09/30/05
Gravity Probe B	GPB	06/01/96	01/01/05	TBD
Mars Global Surveyor	MGS	11/07/96	02/01/01	06/01/04
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	- - -
Mission Enhancement by Ground-based Astronomy	MEGA	***02/01/02***	12/31/03	- - -
Comet Nucleus Tour (CONTOUR)	CNTR	07/01/02	09/05/08	TBD
International Gamma Ray Astrophysics Lab	INTG	10/17/02	12/18/04	12/18/07
MUSES - C	MUSC	***11/20/02***	06/05/07	- - -
Space Infrared Telescope Facility	STF	01/09/03	04/19/08	- - -
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	***DIF***	01/02/04	08/05/05	- - -
Messenger	MSGR	03/10/04	04/06/10	- - -
Space Technology 5	***ST5***	***07/15/04***	***10/15/04***	***TBD***

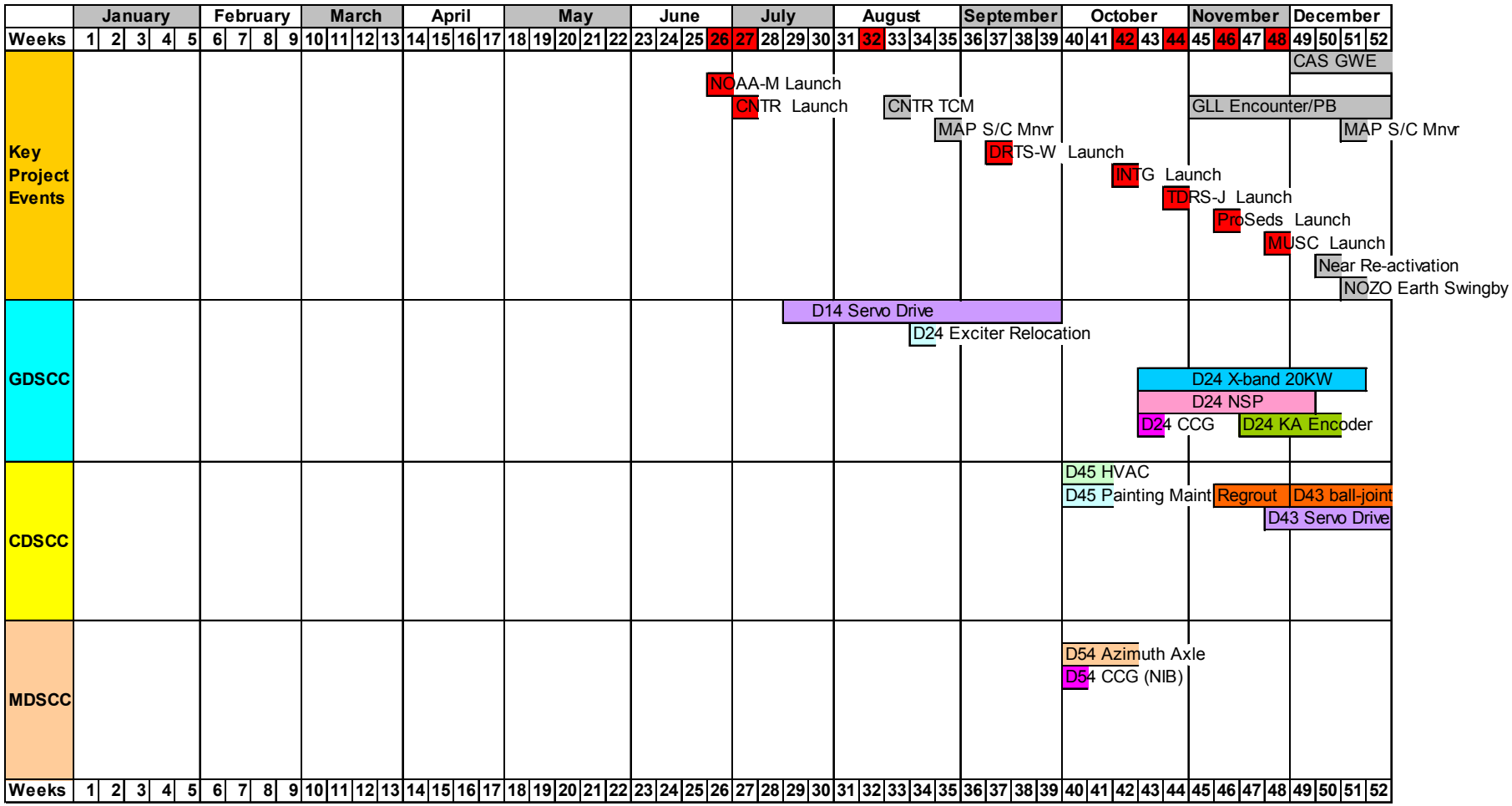
Resource Allocation Review
Loading Study
DSN User / Mission Planning Set (continued)
– Advanced Planning Projects –

Project	Acronym	Launch or Start	EOPM	EOEM
Lunar - A	LUNA	***08/15/03***	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	***- - -***
Stereo Behind	STB	11/15/05	02/18/08	***- - -***
Dawn	DAWN	05/27/06	07/26/15	TBD
Kepler	KPLR	10/15/06	10/14/10	TBD
Mars Competed Scout 2007	M07S	09/04/07	***08/19/08***	TBD
Mars CNES Premier Orbiter 2007	M07O	***09/11/07***	08/11/08	08/12/10
Mars ASI/NASA Marconi Telecommunications Orbiter 2007	M07T	***08/23/07***	***07/18/18***	TBD
Mars ASI/NASA Science Orbiter 2009	M09O	10/04/09	08/29/12	TBD
Mars Smart Lander 2009	***M09L***	***10/25/09***	***08/09/13***	***TBD***
Solar Probe	SOLP	05/01/10	02/14/14	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
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

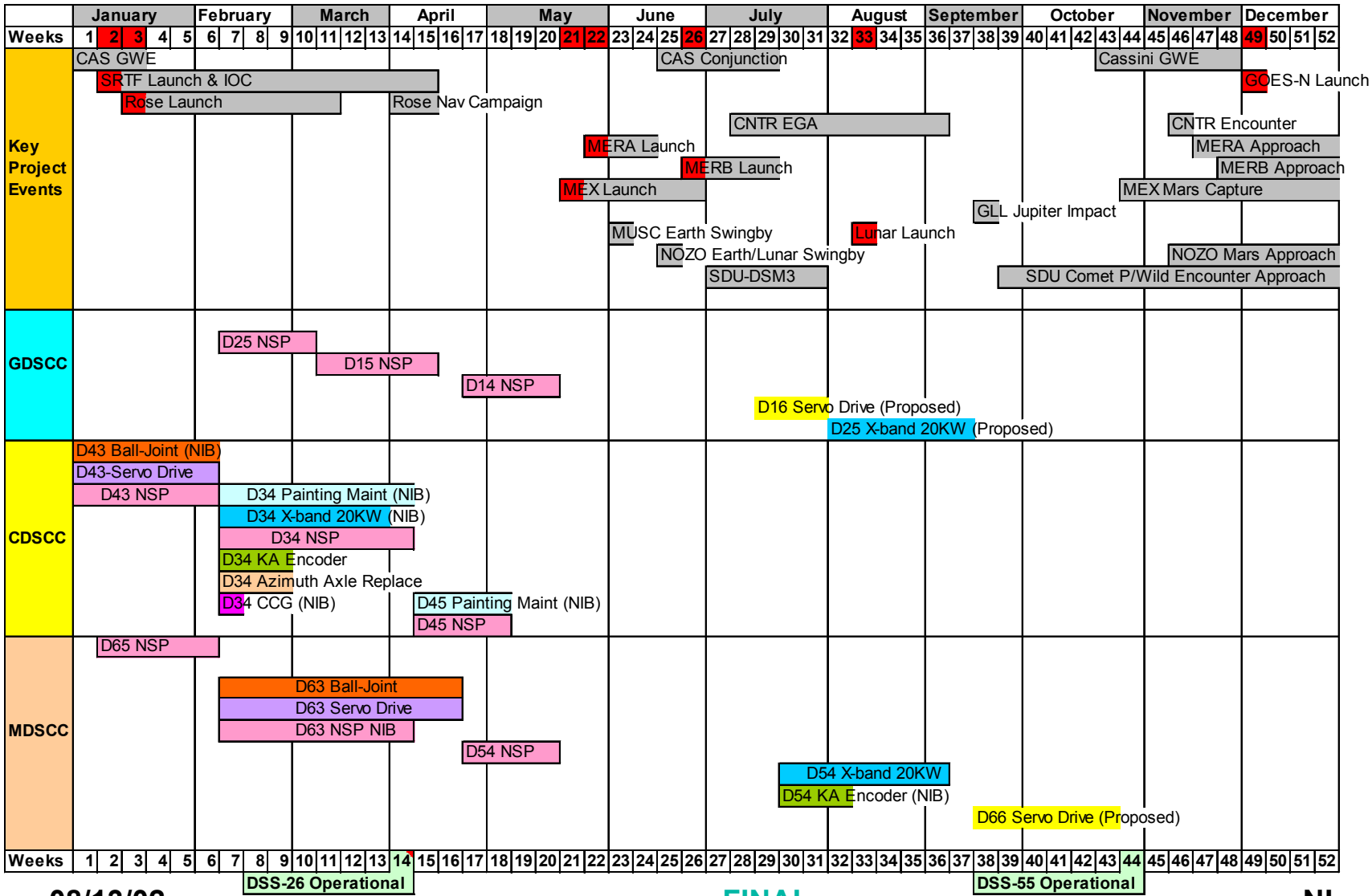
Resource Allocation Review
Loading Study
Major DSN Downtimes (Sorted by Site)
– 2002 –



Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2002 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 14	70M Servo Drive Replacement	07/15/02	09/27/02	75	29-39	196	270
DSS 24	***Exciter Relocation***	***08/21/02***	***08/25/02***	***5***	***34-34***	***233***	***237***
DSS 24	***20 KW X-Band TXR Installation***	10/21/02	***12/22/02***	***63***	***43-51***	294	***356***
DSS 24	***NIB - CCG Task***	***10/21/02***	***10/27/02***	***7***	***43-43***	***294***	***300***
DSS 24	NIB - KA-Band Encoder Mech Mod-Kit Installation	10/21/02	11/09/02	20	43-45	294	313
DSS 24	***NIB - NSP Implementation***	10/21/02	***12/02/02***	***43***	***43-49***	294	***336***
DSS 43	***Hydrostatic Bearing Regrout***	***11/17/02***	***11/24/02***	***8***	***46-47***	***321***	***328***
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 45	***DSS 45 HVAC Upgrade***	***10/01/02***	***10/08/02***	***8***	***40-41***	***274***	***281***
DSS 45	***NIB - Painting Maintenance***	***10/01/02***	***10/08/02***	***8***	***40-41***	***274***	***281***
DSS 54	***Azimuth Axle Replacement***	10/01/02	10/20/02	20	40-42	274	293
DSS 54	***NIB - CCG task***	***10/01/02***	***10/07/02***	***7***	***40-41***	***274***	***280***
DSS 54	NIB - KA Band Encoder Mech Mod Kit Installation	10/01/02	10/20/02	20	40-42	274	293

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



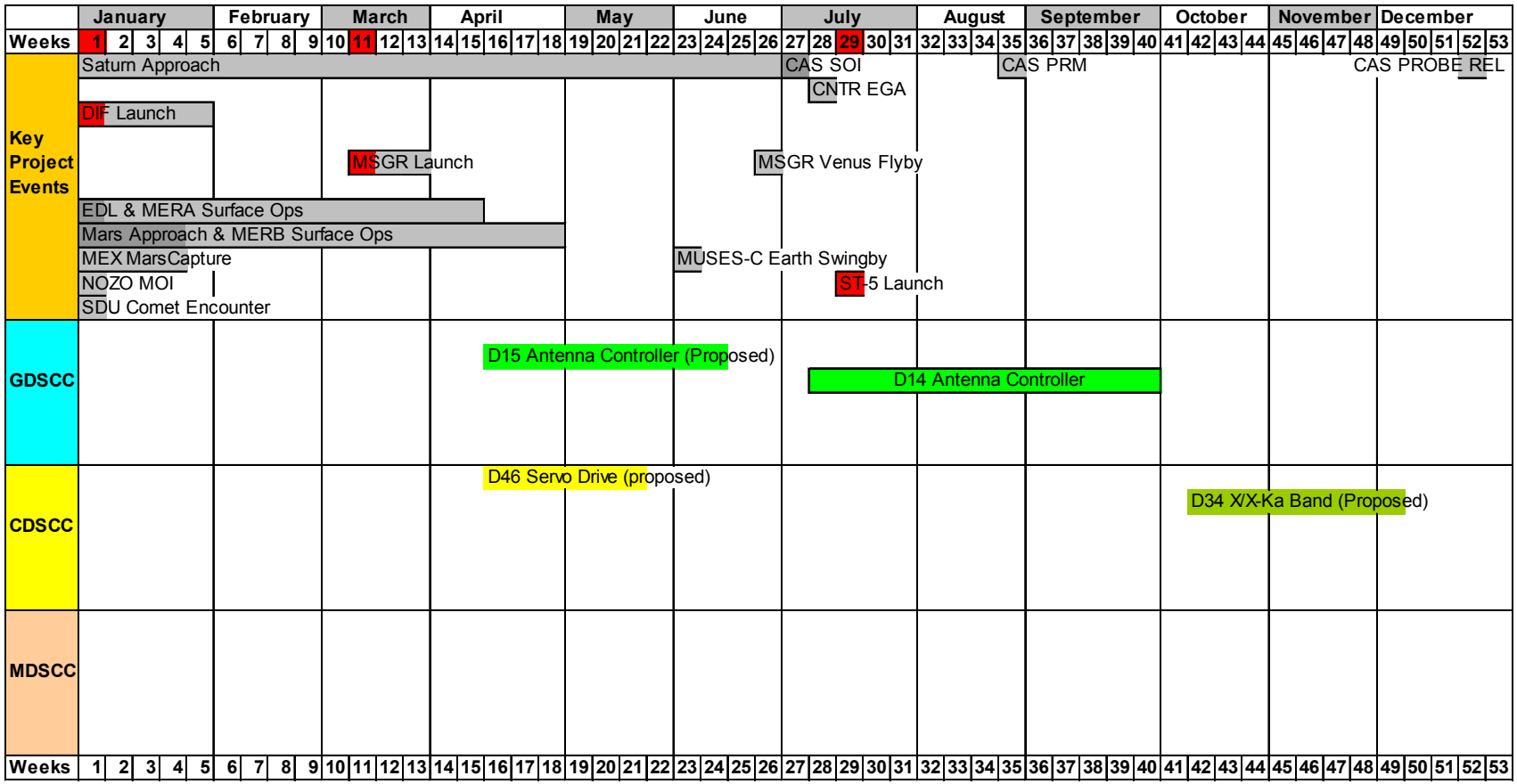
Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2003 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 14	NSP Implementation	*04/21/03*	*05/12/03*	*22*	*17-20*	*111*	*132*
DSS 15	*NSP Implementation*	*03/10/03*	*04/09/03*	31	*11-15*	*069*	*099*
DSS 16	*Servo Drive Replacement - PROPOSAL*	*07/14/03*	*08/03/03*	*21*	*29-31*	*195*	*215*
DSS 25	NSP Implementation	02/10/03	*03/09/03*	*28*	*07-10*	041	*068*
DSS 25	*20 KW X-Band TXR - PROPOSAL*	*08/04/03*	*09/14/03*	*42*	*32-37*	*216*	*257*
DSS 34	NSP Implementation	02/10/03	04/06/03	56	07-14	041	096
DSS 34	*NIB - CCG Task*	*02/10/03*	*02/16/03*	*7*	*07-07*	*041*	*047*
DSS 34	NIB - KA-Band Encoder Mech Mod-Kit Installation	02/10/03	03/02/03	21	07-09	041	061
DSS 34	*NIB - Azimuth Axle Replacement*	*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 34	*NIB - Painting Maintenance*	*02/10/03*	*04/06/03*	*56*	*07-14*	*041*	*096*
DSS 43	NIB - NSP Implementation	*01/02/03*	02/09/03	*39*	*01-06*	*002*	040
DSS 45	NSP Implementation	*04/07/03*	*05/02/03*	*26*	*15-18*	*097*	*122*
DSS 45	*NIB - Painting Maintenance*	*04/07/03*	*05/02/03*	*26*	*15-18*	*097*	*122*
DSS 54	20 KW X-Band TXR Installation	07/21/03	*09/07/03*	*49*	*30-36*	202	*250*

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

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 54	NSP Implementation	***04/21/03***	***05/12/03***	***22***	***17-20***	***111***	***132***
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 63	***NIB - Bearing Regrout***	***02/10/03***	***04/20/03***	***70***	***07-16***	***041***	***110***
DSS 65	NSP Implementation	***01/07/03***	02/09/03	***34***	***02-06***	***007***	040
DSS 66	Servo Drive Replacement - ***PROPOSAL***	***09/15/03***	***10/26/03***	***42***	***38-43***	***258***	***299***

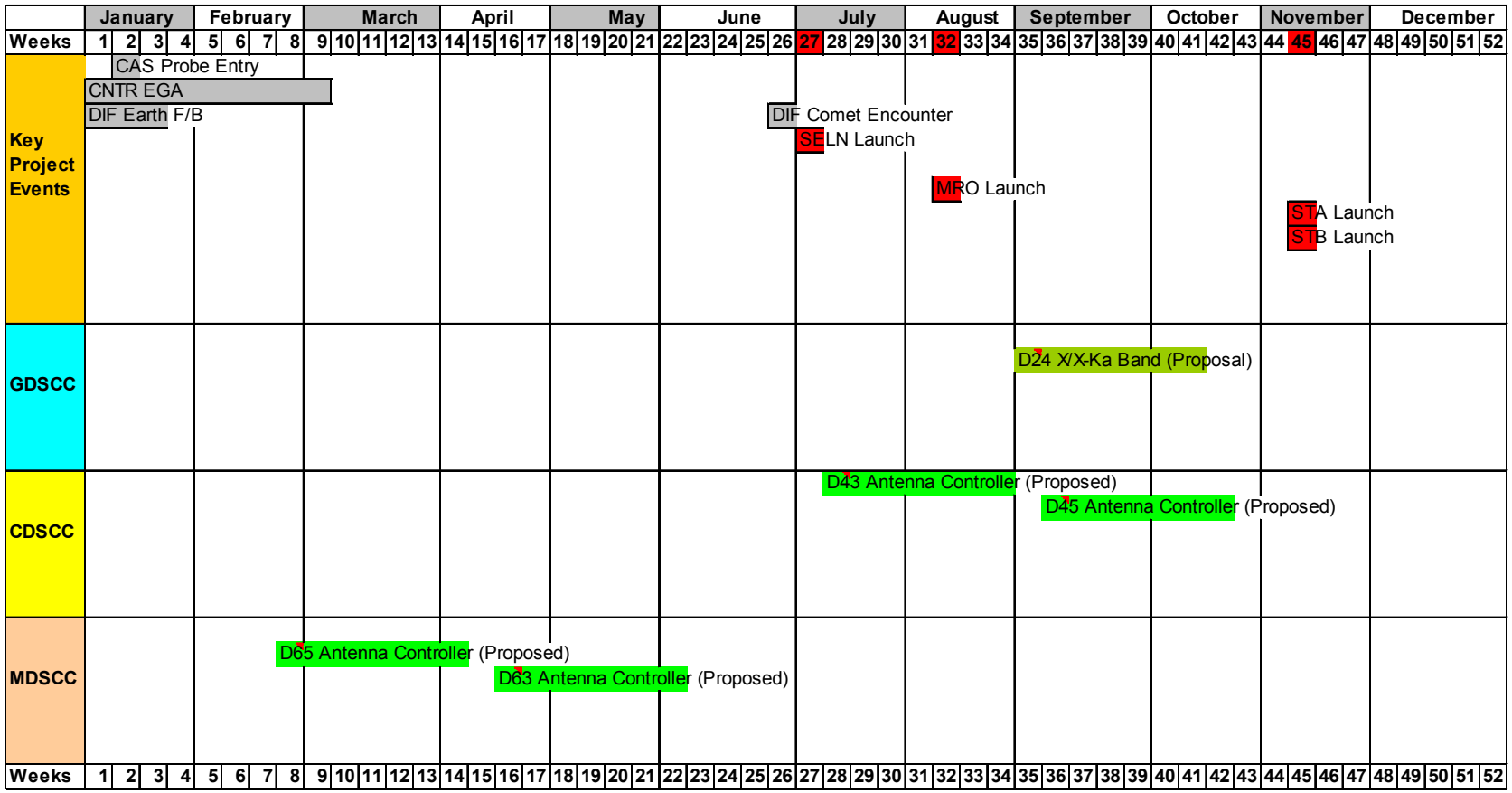
Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2004 –



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

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 14	Antenna Controller Replacement	*07/07/04*	10/03/04	*89*	28-40	*189*	277
DSS 15	Antenna Controller Replacement *- PROPOSAL*	*04/12/04*	*06/13/04*	*63*	*16-24*	*103*	*165*
DSS 34	*X/X Ka - Band - PROPOSAL*	*10/11/04*	*11/28/04*	*49*	*42-48*	*285*	*333*
DSS 46	Servo Drive Replacement *- PROPOSAL*	*04/12/04*	*05/23/04*	*42*	*16-21*	*103*	*144*

Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2005 –



Resource Allocation Review
Loading Study
Major DSN Downtimes (continued)
– 2005 –

Site	Description	Start	End	Duration (Days)	Weeks	Start DOY	End DOY
DSS 24	*X/X Ka - Band - PROPOSAL*	*08/29/05*	*10/09/05*	*42*	*35-40*	*241*	*282*
DSS 43	*Antenna Controller Replacement - PROPOSAL*	*07/11/05*	*08/28/05*	*49*	*28-34*	*178*	*240*
DSS 45	Antenna Controller Replacement *- PROPOSAL*	*09/05/05*	*10/23/05*	*49*	*36-42*	*248*	*296*
DSS 63	*Antenna Controller Replacement - PROPOSAL*	*04/18/05*	*06/05/05*	*49*	*16-22*	*108*	*156*
DSS 63	*NIB - Bearing Regrout - PROPOSAL*	*04/18/05*	*06/05/05*	*49*	*16-22*	*108*	*156*
DSS 65	Antenna Controller Replacement *- PROPOSAL*	*02/21/05*	*04/10/05*	*49*	*08-14*	*052*	*100*

Resource Allocation Review
Loading Study

IND 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	***05/13/03***
DSS-15	34HEF	XXXX	XXXX	N/A	XXXX	XXXX	XXXX	TBD	N/A	***04/10/03***
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	***12/23/02***	***12/23/02***	10/01/05	N/A	***12/23/02***
DSS-25	34B2	XXXX	N/A	N/A	XXXX	XXXX	***09/01/03***	XXXX	XXXX	***03/10/03***
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	***05/03/03***
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	***05/13/03***
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	***04/21/03***
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

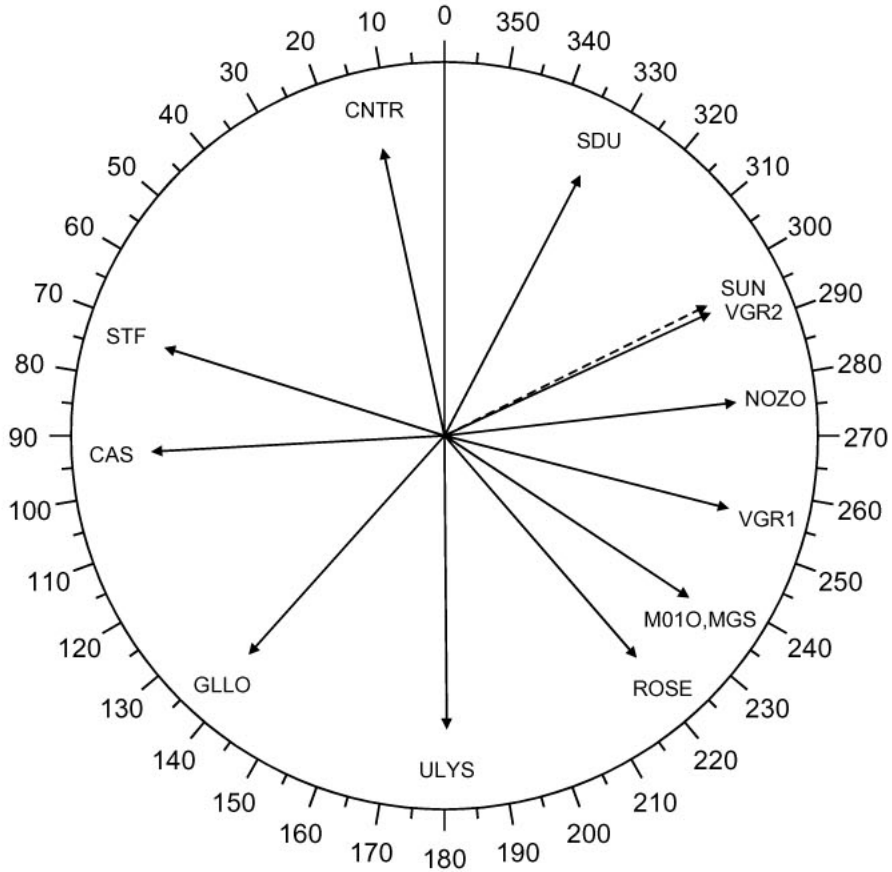
N/A = Capability Not Planned

07/11/02

Resource Allocation Review
Periods of Contention

Month	Weeks		
	2003	2004	2005
January		01 - 05	01 - 04
February		06 - 09	05 - 08
March		10 - 13	09 - 13
April		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, 50, 51, and 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

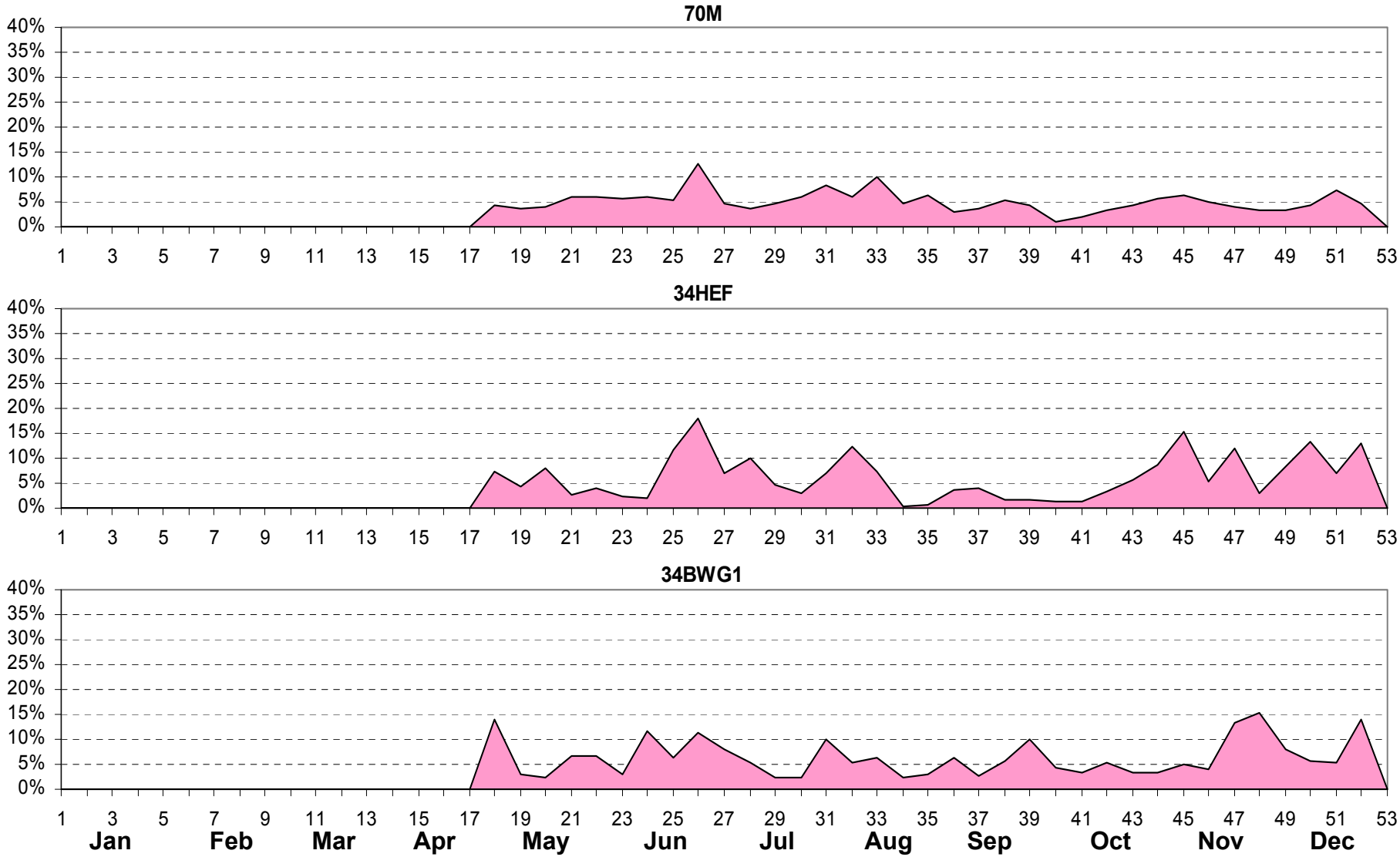
- The RARB Red Book makes reference to monthly contention as low, moderate, severe, and extreme. The explanation of these terms is listed below.
  - Projected unsupportable time is expressed as low, moderate, severe, or extreme in the Analysis sections of this document. Projected unsupportable time is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

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

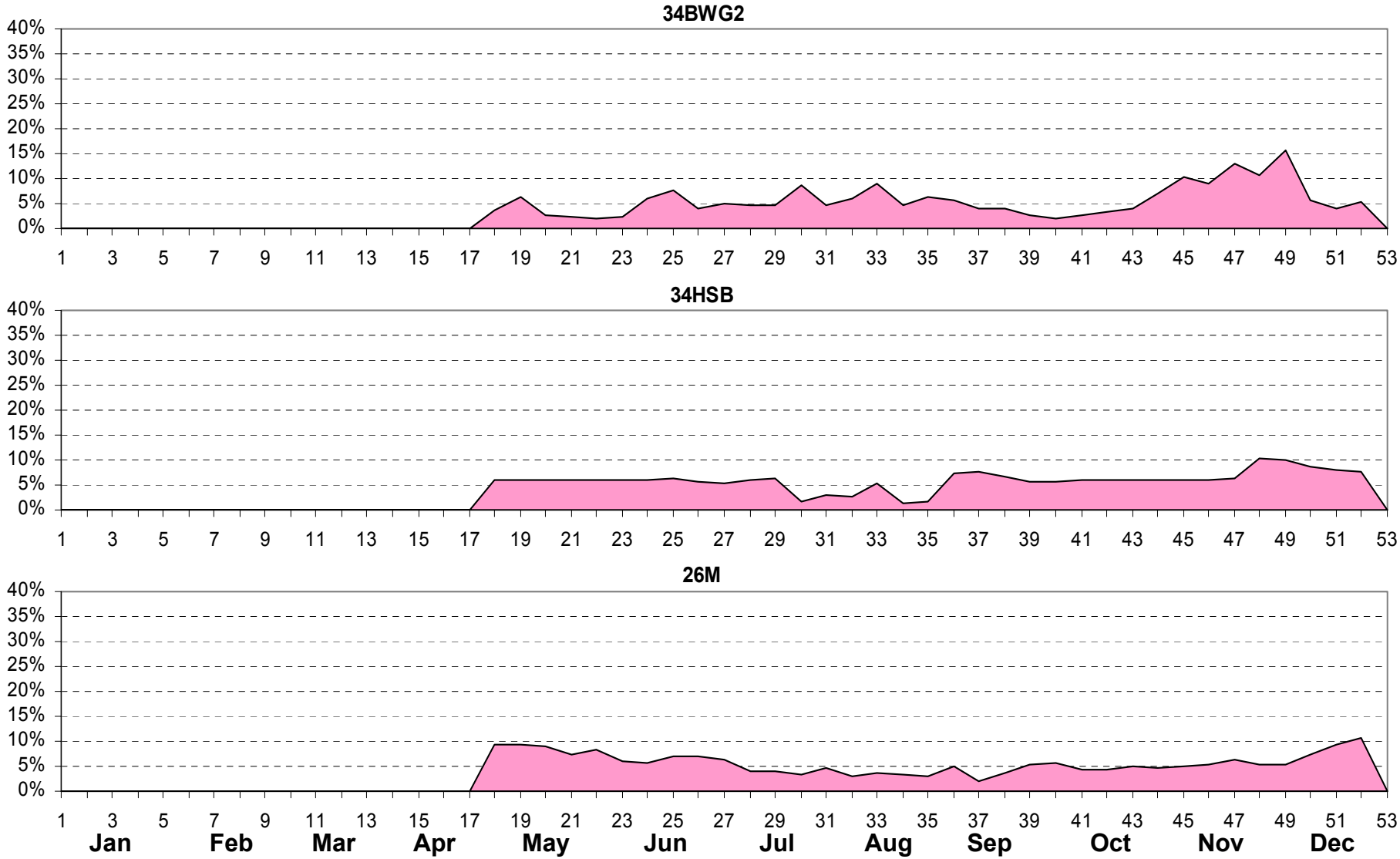
    Workable is a term used to express a condition wherein the projected unsupportable time is low. Experience has shown that the remaining contention may be resolved during mid-range planning and negotiations.
- Recommendations agreed to by Projects/Users are color-coded in « GREEN » surrounded by brackets.
- Changes to the FINAL RARB Book are color-coded in RED.

2003 Events, Analysis and Recommendations

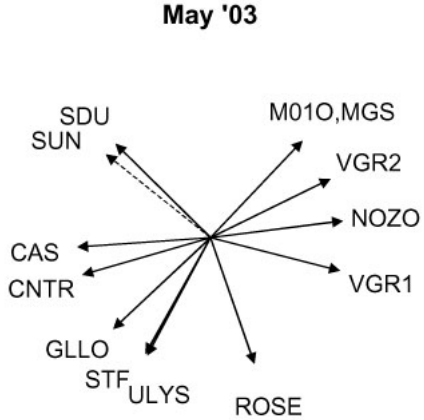
Resource Allocation Review
Analysis and Recommendations
2003 Weekly Average User Unsupportable Time



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



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



EVENTS

DSS-14 Downtime (NSP implementation) in Weeks 18-20

DSS-45 Downtime (NSP implementation) in Week 18

DSS-54 Downtime (NSP implementation) in Weeks 18-20

European VLBI Network E500 J-M4 quarterly epoch in Week 21

Gravity Probe B quarterly epoch in Week 20

Mars Exploration Rover-A Launch in Week 22, DOY 150

Mars Express Launch in Week 21, DOY 143

Wind TCM in Week 20, DOY 133

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

ANALYSIS

1. (34BWG1) The Contention in Week 18 on the 34BWG1 Subnet is severe for Mars Global Surveyor Mapping/Beta support and Wind routine support due to overlap in viewperiod with Mars Odyssey, Nozomi, and daylight viewperiod for DSS maintenance. Contention in Week 22 is moderate for Mars Exploration Rover-A launch and launch support, impacting Cluster SSO, DSS maintenance, Mars Odyssey, Mars Odyssey MSPA with Mars Global Surveyor, Nozomi Delta DOR, and Wind routine support.

2. (34BWG2) Contention on the 34BWG2 in Week 19 is moderate at DSS-25 for Mars Odyssey Delta DOR and MSPA support with Mars Global Surveyor due to overlap in viewperiod with Cassini TCM and DSS maintenance (daylight viewperiod).

   The contention levels on the 70M, 34HEF, 34HSB and the 26M Subnet are workable and should resolve during mid-range planning and negotiations.

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

RECOMMENDATION

« Mars Global Surveyor » in Week 18, reduce 4 of 9 supports to 7 hours and MSPA with Mars Odyssey at DSS-25,45,65 and schedule four 5-hour standalone supports at DSS-43,63. Move Week 22 MSPA support with Mars Odyssey from DSS-25,34,54 to DSS-25,45,54 to accommodate Mars Exploration Rover-A launch. (1, 2)

« Mars Odyssey » in Week 18, change 4 of 14 standalone passes to MSPA with Mars Global Surveyor at DSS-25,45,65. Move Week 19 support from DSS-25,34,65 to DSS-25,45,65. Move Week 22 MSPA support with Mars Global Surveyor from DSS-25,34,54 to DSS-25,45,54 to accommodate Mars Exploration Rover-A launch. (1, 2)

« Wind » move three routine supports from DSS-24,34 to DSS-24 and add one 2-hour pre-maneuver support at DSS-34 in Weeks 18 and 19. (1)

Resource Allocation Review Analysis and Recommendations

2003 – May (Weeks 18 - 22) (continued)

RESOURCE REQUEST

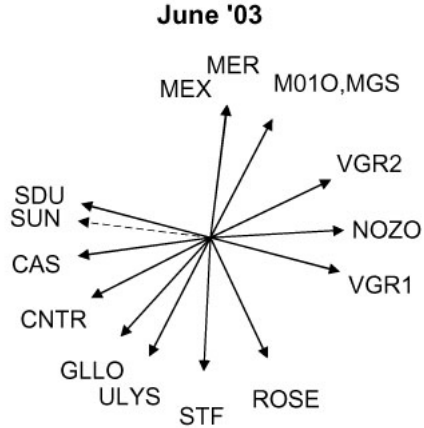
User	Resource	Durations		Calibration		May				
		Ave	Min	Pre	Post	18	19	20	21	22
CAS	DSS-45,25	9.0	4.0	1.00	0.25			1	2	2
CAS TCM	DSS-45,25	9.0	4.0	1.00	0.25		4	2		
CAS TCM	DSS-34,25	9.0	4.0	1.00	0.25	3				
CAS TCM Day	DSS-34,65,25	8.0	4.0	1.00	0.25	3				
CLU2 1/2/3/4 SSO	DSS-34/45/43/46	2.0	2.0	0.50	0.25		1	1	1	1
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-46/34/43	2.0	1.0	0.50	0.25	1				
CLU4 1/2/3/4 MSO	16/27/24/15	1.5	1.0	0.50	0.25			1		
DSN Antenna Cal	70M	8.0	4.5					1		
DSN Antenna Cal	DSS-43,63	4.5	4.5			1	1			
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-54	6.0	6.0					1	1	1
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			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
DSS Maintenance	DSS-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	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	1	1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-16	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-63	10.5	8.0			1	1		1	1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0					1	2	2
EVN E500 J-M4	DSS-14\63	16.0	12.0	1.50	0.50				2	
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50			1		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		May				
		Ave	Min	Pre	Post	18	19	20	21	22
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50			1		
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50			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-25	9.0	4.0	1.00	0.25		1		1	
M01O Map/MGS Map	DSS-25,34,54	7.0	4.0	2.00	0.25					5
M01O Mapping	DSS-25,34,54	7.0	4.0	1.00	0.25				12	9
M01O Mapping	DSS-25,34,65	7.0	4.0	1.00	0.25	14	12	14		
MERA Launch	34H	8.0	4.0	1.00	0.25					3
MERA Launch	34H	8.0	4.0	3.00	0.25					3
MERA Launch	34H	8.0	4.0	1.00	0.25					3
MERA Launch	DSS-34/46	8.0	8.0	3.00	0.25					1
MEX Launch	DSS-24,54	12.0	6.0	1.00	0.25				2	
MEX Launch	DSS-24,63	12.0	6.0	1.00	0.25					7
MEX Launch	DSS-24,54	12.0	6.0	3.00	0.25				1	
MGS Map/Beta Sup	34H	12.0	4.0	1.00	0.25		9	10	9	4
MGS Map/Beta Sup	DSS-15,34,65	12.0	4.0	1.00	0.25	9				
NOZO	DSS-24,54	8.0	2.0	0.75	0.25			3	2	2
NOZO	DSS-24	8.0	2.0	0.75	0.25	2	3			
NOZO DDOR	DSS-24\65	3.0	1.0	0.75	0.25				2	2
WIND	DSS-24,34	5.0	4.5	1.00	0.25	3	3	3		
WIND	34B1	5.0	4.5	1.00	0.25				3	3
WIND TCM	DSS-34	3.0	2.0	0.50	0.25			1		

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



EVENTS

Cassini Conjunction beginning in Week 25

GBRA RA500 SOC-M4 quarterly epoch in Week 24

Genesis Maneuver in Week 24, continuous on DOY 162 and 163

GSSR Asteroid 1998FH12 in Week 26, DOY 177-179

Mars Exploration Rover-A continuous Launch and TCM support

Mars Exploration Rover-B Launch in Week 26, DOY 176 and continuous Launch support

Mars Express Launch support in Weeks 23 and 24

Mars Odyssey THEMIS II beginning in Week 25

MUSES-C TCM in Weeks 23 and 24

Nozomi TCM in Week 24, DOY 163, Earth and Lunar Swingby in Week 25, DOY 170-171

SOHO TSO continuous support in Week 25

Stardust Deep Space Maneuver 3 and TCM beginning in Week 23

Voyager 2 MAGROL in Week 25, DOY 171

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

ANALYSIS

1. (70M) Contention in Week 25 is moderate for DSS bearing maintenance due to viewperiod overlap in the daylight view with Mars Odyssey Delta DOR, Nozomi, SOHO TSO, and Voyager 2 MAGROL. Severe contention for Mars Exploration Rover-A Cruise and VLBI support, with DSS routine maintenance, GSSR Asteroid 1998FH12, Stardust, Ulysses, and Voyager 2 support caused by over subscription of the Subnet in the Mars viewperiod.

2. (34HEF) Moderate contention in Weeks 25 and 26 on the 34HEF Subnet is caused by viewperiod overlap in the Mars view with Mars Exploration Rover-A Cruise support, Mars Exploration Rover-B launch support, and Nozomi Delta DOR support in conjunction with the Reference Frame Calibration Cat M&E 24-hour support.

3. (34BWG1) Genesis Station Keeping maneuver continuous support in Week 24 causes moderate contention for Ulysses and Wind. Mars Exploration Rover-B Launch support in Week 26 causes moderate contention for Mars Odyssey Mapping and MSPA support with Mars Global Surveyor, Nozomi, and Wind routine support.

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

ANALYSIS (continued)

4. (34BWG2) Moderate contention in Week 25 and 26 on the 34BWG2 Subnet for DSS Maintenance, Cassini Conjunction support, Mars Odyssey Mapping and MSPA support with Mars Global Surveyor is caused by viewperiod overlap with DSS Maintenance (daylight viewperiod), and Mars Odyssey.

   The contention levels on the 34HSB and 26M Subnet are workable and should resolve during mid-range planning and negotiations.

RECOMMENDATION

« Galileo » requested support in Week 25 using DSS-14. (1)

« GSSR » Orbital Debris Radar move support from Week 23 to Week 20. (1, 2)

« Mars Exploration Rover-A » move 3 of 18 Cruise supports in Week 25 from the 34HEF to the 34BWG1. Change 13 Cruise supports in Week 26 on the 70M to two 8-hour passes at DSS-14 and eleven 8-hour supports at DSS-43,63. (1, 2)

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

RECOMMENDATION (continued)

« Mars Odyssey » change Delta DOR support in Week 25, from DSS-43,63 to DSS-63 only. Reduce 7 standalone supports in Week 26 to 5 supports at DSS-26,34,54 and change 2 supports to split passes of 4-hours each at DSS-24 and DSS-54. (1, 3, 4)

« MEGA » reduce support in Week 25 from 8 hours to 4 hours. (1)

« Nozomi » reduce Delta DOR supports in Week 25 from 3 hrs to 2 hrs and reduce supports in Week 26 on the 34BWG1 from 9 passes to 7. (1, 2, 3)

« Reference Frame Calibration » Cat M&E move support from Week 26 to Week 23. (2)

« Ulysses » move Week 25 6-hr supports from DSS-65,54 to DSS-63. (2, 3)

« Voyager 2 » in Week 26 reduce DSS-43 supports from 7 passes to 4 passes and schedule 3 split passes of 4 hours each at DSS-43 and DSS-45,34. (1)

« Wind » change supports in Weeks 25 and 26 from the 34BWG1 antenna to DSS-24,54 and reduce support from 5 hours to 4 hours. (3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
CAS	DSS-45,25	9.0	4.0	1.00	0.25	2	2		
CAS Conjunction	DSS-65	5.0	5.0	1.00	0.25				7
CAS Conjunction	DSS-45	8.0	5.0	1.00	0.25				
CAS Conjunction	DSS-45	4.0	4.0	1.00	0.25			7	7
CAS Conjunction	DSS-65	8.0	5.0	1.00	0.25			7	
CAS Conjunction	DSS-54	3.0	3.0	1.00	0.25				7
CAS Conjunction	DSS-25	12.0	8.0	1.00	0.25			6	6
CAS Conjunction	DSS-26	12.0	8.0	1.00	0.25			1	1
DSN Antenna Cal	70M	8.0	4.5			1	1		
DSN Antenna Cal	DSS-14,63	8.0	4.5					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			1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	
DSS Maintenance	DSS-54	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-27	8.0	6.0			1	1	1	1
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-24	8.0	6.0			1	1	1	
DSS Maintenance	DSS-24	6.0	6.0						1
DSS Maintenance	DSS-65	4.0	4.0			1	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-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0			1	1		1
DSS Maintenance	DSS-16	4.0	4.0					1	
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
DSS Maintenance	DSS-34	4.0	4.0						1
DSS Maintenance	DSS-63	10.5	8.0				1		
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-63	8.0	4.0					1	
DSS Maintenance	DSS-14	8.0	8.0			2	2	1	1
DSS Maintenance	DSS-14	6.0	6.0					1	1
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3		
GBRA M-Wave Spect	70M	4.0	4.0	0.50	0.50			3	3
GBRA Planet R/Ast	DSS-14	9.0	4.0	0.75	0.50	1	1		
GBRA Planet R/Ast	DSS-14	4.0	4.0	0.75	0.50			1	1
GBRA RA500 SOC-M4	DSS-14\63	24.0	24.0	1.50	0.50		1		
GLLO	70M	8.0	4.0	1.00	0.25	1	1		1
GLLO	DSS-14,63	8.0	4.0	1.00	0.25			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		
GSSR Ast 1998FH12	DSS-14	8.0	5.0	1.50	0.50				3
GSSR GODR	DSS-14/15	8.0	4.0	1.50	0.50	1			
GSSR GODR	DSS-14/15	6.0	4.0	1.50	0.50			1	
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	2.00	0.25	10	9	9	7
M01O Mapping	DSS-25,34,54	7.0	4.0	1.00	0.25	2	5	3	7
MEGA	70M	8.0	4.0	1.50	0.50	1	1	1	
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	

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
MERB Launch	34H	8.0	4.0	1.00	0.25				9
MERB Launch	34H	8.0	4.0	3.00	0.25				3
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-26,63	12.0	6.0	1.00	0.25	2	2		
MEX Launch	DSS-24,63	12.0	6.0	1.00	0.25	5			
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		6	6	7
NOZO	DSS-34	8.0	4.0	0.75	0.25				2
NOZO DDOR	DSS-15\34	3.0	1.0	0.75	0.25			1	
NOZO DDOR	DSS-24\65	3.0	1.0	0.75	0.25	2	1	1	
NOZO TCM	DSS-24,54	8.0	2.0	0.75	0.25	3			
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50				1
RFC CAT M&E D-M4	15\45,14\63	24.0	12.0	1.50	0.50				
SDU TCM	70M	4.0	4.0	1.00	0.25			10	
SDU TCM	34H	4.0	4.0	1.00	0.25	2	2		
SDU TCM	DSS-25	4.0	4.0	1.00	0.25			4	
SDU TCM	DSS-26,34,54	4.0	4.0	1.00	0.25				14
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	6	14
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	26M	8.0	4.0	0.70	0.20			10	
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20			5	
ULYS	DSS-63,54	10.0	4.0	1.00	0.25	1	1	1	1
ULYS	DSS-14,24	10.0	4.0	1.00	0.25	4	4	4	4
ULYS	DSS-43,34	5.0	4.0	1.00	0.25	2	2	2	1
ULYS	DSS-43,34	7.0	4.0	1.00	0.25				1
ULYS	DSS-65,54	6.0	4.0	0.75	0.25	2	2	2	1

Resource Allocation Review Analysis and Recommendations

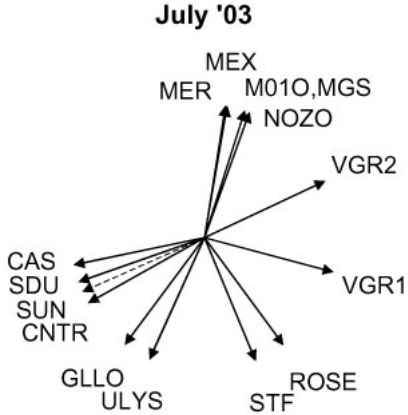
2003 – June (Weeks 23 - 26) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
VGR2	DSS-43,34	8.0	4.0	0.50	0.25			7	
VGR2	DSS-43	8.0	4.0	0.50	0.25	7	7		7
VGR2 MAGROL	DSS-43	7.0	4.0	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	1.00	0.25	3	3	3	3

Resource Allocation Review Analysis and Recommendations

2003 – July (Weeks 27 - 31)



EVENTS

DSS-16 Proposed Downtime (Servo Drive Retrofit) in Weeks 29-31

DSS-54 Downtime (X-band 20 kW transmitter installation) beginning in Week 30

Cassini Conjunction in Weeks 27-29

CONTOUR EGA beginning in Week 28

Genesis Maneuver in Week 31, continuous on DOY 211-212

GSSR Mars Radar Observation in Weeks 30 and 31

Mars Exploration Rover-A Checkout in Week 29, TCM in Week 31, DOY 210

Mars Exploration Rover-B Launch support, TCM in Week 28, DOY 190, Checkout and Early Cruise

Mars Express TCM in Week 28, DOY 193-194

Mars Odyssey Mapping

Nozomi TCM in Week 27, DOY 185

Stardust TCM in Week 28, DOY 190

Wind TCM in Week 30, DOY 205

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

ANALYSIS

1. (70M) Moderate to severe contention on the 70M Subnet for DSS Bearing Maintenance, GBRA Host Country 24-hour support in Weeks 28 and 29, Mars Exploration Rover-B TCM in Week 28 and Checkout/VLBI support in Week 31, and GSSR Mars Observation in Weeks 30 and 31 due to viewperiod overlap in the Mars and maintenance daylight view.

2. (34HEF) Moderate contention in Weeks 27-29 for Cassini, CONTOUR in Week 28, Mars Exploration Rover-B VLBI in Week 30, and Nozomi Delta DOR in Weeks 28 and 31 is due to the combined mission support request and overlapping viewperiods compounded by DSS-54 downtime in Week 30.

3. (34BWG1) Contention is moderate in Week 27 for DSS Maintenance, Wind, and Ulysses. Contention for Genesis maneuver in Week 31 is moderate due to viewperiod overlap with DSS maintenance, Wind and Ulysses. The contention in Week 31 is compounded by moving DSS-16 users to DSS-24 for the proposed downtime in Weeks 29-31 and by the approved DSS-54 downtime in Week 30.

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

ANALYSIS (continued)

4. (34BWG2) Contention in Weeks 30 and 31 is severe for GSSR Mars Radar Observation at DSS-25 and moderate for Mars Express TCM in Week 30 due to viewperiod overlap in the Mars and maintenance daylight view.

5. (34HSB) Moderate contention for DSS Maintenance, Geotail, Polar, and SOHO due to moving DSS-16 users to DSS-27 for the proposed downtime in Weeks 29-31.

6. (26M) 26M users in contention with proposed DSS-16 downtime in Weeks 29-31 are Advanced Composition Explorer, Cluster SSO, DSS maintenance, Geotail, INTEGRAL, Polar, and SOHO.

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

RECOMMENDATION

« Advanced Composition Explorer » in Weeks 28-31 move 1 support from DSS-27 to DSS-66 to accommodate DSS maintenance. (5, 6)

« Cassini » Conjunction in Weeks 27 and 28 reduce DSS-45 supports to 5 hours and increase DSS-25 8-hour supports to 12 hours. In Week 28 move DSS-25 4-hour support to DSS-26 and increase to 12 hours to accommodate DSS maintenance. (2, 4)

« Cluster » SSO support delete DSS-16 requirement in Weeks 29-31. (6)

« DSS » requested downtime for DSS-16 Servo Drive Retrofit, delete DSS-16 routine maintenance supports in Weeks 29-31, and reduce DSS-24 maintenance support in Weeks 30 and 31 from 8 hours to 6 hours during the DSS-16 downtime. (3, 6)

« Geotail » move all supports in Weeks 29-31 from 26M to DSS-27,46,66. (6)

« GBRA » Host Country move support from Week 29 to Week 30. (1)

GSSR Mars Radar Observation move support from Weeks 30 and 31 to Weeks 28 and 29 and reduce supports from 7 hours to 4 hours. (1, 4)

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

RECOMMENDATION (continued)

« INTEGRAL » move support from DSS-16 to DSS-24 to accommodate DSS-16 downtime. (6)

« Mars Odyssey » change standalone Mapping support in Week 31 from DSS-25,34 to DSS-25,26,34. Change Mars Odyssey/Mars Global Surveyor MSPA supports in Week 31 from DSS-25,34,63 to DSS-25,34,63,65. (1, 2, 3, 4)

« Nozomi » move Delta DOR supports from Weeks 28 and 31 to Week 29. (2)

« Polar » move all supports in Weeks 29-31 from 26M to DSS-27,46,66. (6)

« SOHO » move all supports in Weeks 29-31 from 26M to DSS-27,46,66. (6)

« Ulysses » requested support in Week 31 using two 10-hour supports at DSS-14,63 and using split passes of 5-hour duration at DSS-63, DSS-43, and DSS-14 (5 passes at DSS-63, 4 passes at DSS-43, and 1 pass at DSS-14). (1, 2, 3)

Resource Allocation Review Analysis and Recommendations

2003 – July (Weeks 27 - 31) (continued)

RESOURCE REQUEST

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
ACE	DSS-27	3.5	3.5	0.40	0.20	5	7	7	7	7
ACE	DSS-16	3.5	3.5	0.70	0.20	2				
CAS	DSS-45,25	9.0	4.0	1.00	0.25				2	2
CAS Conjunction	DSS-65	5.0	5.0	1.00	0.25	7	7	2		
CAS Conjunction	DSS-45	8.0	5.0	1.00	0.25	7	7	2		
CAS Conjunction	DSS-54	3.0	3.0	1.00	0.25	7	7	2		
CAS Conjunction	DSS-25	8.0	5.0	1.00	0.25	7	6	2		
CAS Conjunction	DSS-25	4.0	4.0	1.00	0.25		1			
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
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		
DSN Antenna Cal	70M	8.0	4.5			1	1	1		
DSS Bearing Mntc	DSS-14	8.0	8.0			1			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-54	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-27	8.0	6.0			1	1	1		
DSS Maintenance	DSS-27	6.0	6.0						1	1
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-24	8.0	6.0						1	1
DSS Maintenance	DSS-24	6.0	6.0			1	1	1		
DSS Maintenance	DSS-65	6.0	6.0						1	1
DSS Maintenance	DSS-65	4.0	4.0			1	1	1		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
DSS Maintenance	DSS-26	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			
DSS Maintenance	DSS-66	6.0	6.0						1	1
DSS Maintenance	DSS-66	4.0	4.0					1		
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-16	8.0	6.0			1	1			
DSS Maintenance	DSS-16	6.0	6.0						1	1
DSS Maintenance	DSS-16	4.0	4.0					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-63	6.0	4.0			1	1		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-14	6.0	6.0			1	1	1	1	1
GBRA Host Country	DSS-63	8.0	8.0				3			
GBRA Host Country	DSS-43	8.0	8.0	0.75	0.25			3		
GBRA Host Country	DSS-45	8.0	8.0	0.75	0.25				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
GTL	26M	1.1	1.1	0.40	0.20	21	21	21	21	21
INTG	DSS-16	5.3	0.5	0.70	0.20	7	7	7	7	7
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	2.00	0.25		9	10	9	9
M01O Map/MGS Map	DSS-25,34,54	7.0	4.0	2.00	0.25	9				
M01O Mapping	DSS-25,34,54	7.0	4.0	1.00	0.25	3	5	2		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
M01O Mapping	DSS-25,34	7.0	4.0	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		
NOZO	DSS-24	6.9	2.0	0.75	0.25				2	2
NOZO	DSS-43,34	8.0	4.0	0.75	0.25				1	
NOZO	DSS-24,54	8.0	2.0	0.75	0.25	2	1	2		
NOZO	DSS-34	8.0	4.0	0.75	0.25	2				
NOZO DDOR	DSS-15\34	3.0	1.0	0.75	0.25		1			1
NOZO DDOR	DSS-24\65	2.0	1.0	0.75	0.25			1		
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 TCM	70M	4.0	4.0	1.00	0.25				6	

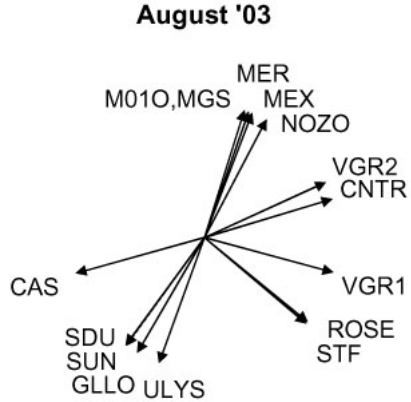
Resource Allocation Review
Analysis and Recommendations
2003 – July (Weeks 27 - 31) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
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		
SOHO	DSS-27	4.0	4.0	0.40	0.20			2		
SOHO	26M	9.6	6.0	0.70	0.20	7	7			
SOHO	26M	1.6	1.6	0.70	0.20	14	14	6	14	14
SOHO	26M	4.0	4.0	0.70	0.20			2		
SOHO	26M	6.0	6.0	0.70	0.20				7	7
SOHO TSO	DSS-14	4.0	4.0	0.45	0.25			5		
SOHO TSO	26M	8.0	4.0	0.70	0.20			10		
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20			5		
ULYS	DSS-63,54	10.0	4.0	1.00	0.25	1	1	1		
ULYS	DSS-14,24	10.0	4.0	1.00	0.25	4	4	4	2	
ULYS	DSS-43,34	5.0	4.0	1.00	0.25	2	2	2	2	1
ULYS	DSS-43,34	8.0	4.0	1.00	0.25					1
ULYS	DSS-63	10.0	4.0	1.00	0.25				4	3
ULYS	DSS-14	10.0	4.0	1.00	0.25					2
ULYS	DSS-63,65	10.0	4.0	1.00	0.25				1	1
ULYS	DSS-65,54	6.0	4.0	0.75	0.25	2	2	2		
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	

Resource Allocation Review Analysis and Recommendations

2003 – August (Weeks 32 - 35)



EVENTS

DSS-25 Proposed Downtime (X-band 20 kW transmitter installation)

DSS-54 Downtime (X-band 20 kW transmitter installation)

CONTOUR EGA

GSSR Asteroid 1994PM in Week 33, DOY 225-227 and in Week 34, DOY 231-232 and Mars Radar Observation in Weeks 33-35

Lunar-A Launch in Week 33, DOY 224

Mars Exploration Rover-A EDL Test Pre-Dress Rehearsal in Week 32, DOY 216 and TCM in Week 33, continuous on DOY 223

Mars Exploration Rover-B Checkout in Week 32

Mars Express Navigation Campaign in Weeks 32 and 33

Nozomi TCM in Week 33

Stardust TCM in Week 32

Voyager 1 MAGROL in Week 32, DOY 221

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

ANALYSIS

1. (70M) The loading on the 70M in the Mars viewperiod in Week 33 is severe. GSSR Mars Radar Observation at DSS-14 is in conflict on DOY 225 with Asteroid 1994PM observation and with Mars Exploration Rover-A. The contention level is workable in Weeks 32, 34 and 35 and should resolve during mid-range planning and negotiations.

2. (34HEF) The contention level is moderate to severe. The contention in Weeks 32 and 33 for Mars Exploration Rover-A TCM, Mars Exploration Rover-B Cruise/VLBI, Nozomi Delta DOR is due to viewperiod overlap in the Mars viewperiod. The contention on the 34HEF is compounded by moving DSS-25 users to the 34HEF to accommodate the proposed DSS-25 downtime.

3. (34BWG1) Contention on the 34BWG1 Subnet in Week 33 is moderate for Nozomi Delta DOR support, Voyager 2 negotiated support, and Wind routine support due to viewperiod overlap. The contention is compounded by moving DSS-25 user supports to the 34BWG1 Subnet to accommodate the proposed downtime for DSS-25.

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

ANALYSIS (continued)

4. (34BWG2) DSS-25 users are in contention with the proposed downtime for DSS-25.

   The contention levels on the 34HSB and 26M Subnet are workable and should resolve during mid-range planning and negotiations.

RECOMMENDATION

« Cassini » move all support from DSS-25,45 to DSS-15,26,45. (4)

« DSS » requested downtime for DSS-25 X-band 20 kW transmitter installation. Delete DSS-25 maintenance in Weeks 32-35. (4)

« Galileo » requested support in Week 33 using DSS-43,63. (1)

GSSR Mars observation in Weeks 33-35 move all DSS-14/25 supports to DSS-14/15, reduce support from 7 hours to 4 hours, and move Week 33 support to Week 35. (1, 4)

« Mars Exploration Rover-A » in Week 32 move 3 TCM supports from 34HEF to the 70M. Move DSS-25 cruise support in Week 32 to DSS-26. (2, 4)

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

RECOMMENDATION (continued)

« Mars Exploration Rover-B » in Week 32 move Cruise supports from the 34HEF to the 70M and move Week 33 Cruise/VLBI support from DSS-14,15,24,25 to DSS-14,15,26. (2, 3, 4)

« Mars Global Surveyor » move all MSPA supports with Mars Odyssey in Weeks 32-34 from DSS-25,24,34 to DSS-26,24,34 and move Week 35 supports from DSS-25 to DSS-26. (4)

« Mars Odyssey » in Weeks 32-34 move mapping supports from DSS-25,34 to DSS-26,34 and move MSPA supports with Mars Global Surveyor from DSS-25,24,34 to DSS-26,24,34. (4)

« SIRTF » change support from 34HEF,DSS-25 to 34HEF. (4)

« Voyager 1 » move support in Weeks 32 and 33 from DSS-14,25,26 to DSS-14,26. (4)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	32	33	34	35
CAS	DSS-45,25	9.0	4.0	1.00	0.25	2	2	2	2
CNTR EGA	34H	8.0	6.0	1.00	0.25	7	7	7	3
DSN Antenna Cal	70M	8.0	4.5			1	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-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-27	6.0	6.0			1	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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	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
GLLO	70M	8.0	4.0	1.00	0.25	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-63	7.0	4.0	2.00	0.25				3
M01O Map/MGS Map	DSS-25,34,63	7.0	4.0	2.00	0.25			9	

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	32	33	34	35
M01O Map/MGS Map	DSS-25,24,34	7.0	4.0	2.00	0.25	10	9		
M01O Mapping	DSS-43,63	8.5	4.0	1.00	0.25				9
M01O Mapping	DSS-25,34	7.0	4.0	1.00	0.25	1	3	3	
MERA Cruise	34H	8.0	4.0	1.00	0.25		2	3	3
MERA Cruise	DSS-25,43	8.0	4.0	1.00	0.25	4			
MERA EDL Rehearsal	DSS-15/26,25\45	4.0	4.0	1.00	0.25	1			
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	1
MERB Checkout	34H	8.0	4.0	1.00	0.25	8			
MERB Cruise	34H	8.0	4.0	1.00	0.25	3		3	2
MERB Cruise	DSS-24,25,34	8.0	4.0	1.00	0.25		3		
MERB Cruise/VLBI	DSS-14,15,24,25	9.0	4.0	1.00	0.25		5		
MERB Cruise/VLBI	DSS-45,43,65,63	8.0	4.0	1.00	0.25	1	5		
MERB Cruise/VLBI	DSS-15	9.0	4.0	1.00	0.25	1			
MERB VLBI	DSS-15\45,15\65	1.0	1.0	1.00	0.25			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	12.0	4.0	1.00	0.25				7
NOZO	DSS-24	6.9	2.0	0.75	0.25	3		1	2
NOZO	DSS-43,34	8.0	4.0	0.75	0.25	1	2		
NOZO	DSS-43	8.0	4.0	0.75	0.25			1	
NOZO DDOR	DSS-15\34	3.0	1.0	0.75	0.25		1		
NOZO DDOR	DSS-24\65	2.0	1.0	0.75	0.25			1	
SDU	34H	6.0	4.0	1.00	0.25		1	1	1
SDU TCM	34H	4.0	4.0	1.00	0.25	2			
STF	34H,25	1.0	1.0	0.75	0.25	14	14	14	14
VGR1	DSS-14,25,26	8.0	4.0	0.50	0.25	7	7		
VGR1	DSS-65	8.0	4.0	0.50	0.25				3
VGR1	DSS-34	4.0	4.0	0.50	0.25				7

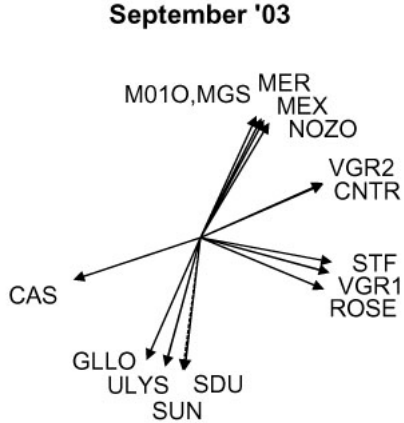
Resource Allocation Review
Analysis and Recommendations
2003 – August (Weeks 32 - 35) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	32	33	34	35
VGR1	DSS-24	4.0	4.0	0.50	0.25				4
VGR1	DSS-26	8.0	4.0	0.50	0.25			7	
VGR1 MAGROL	DSS-14	7.0	4.0	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	8.0	4.0	0.50	0.25				7
VGR2	DSS-43	4.0	4.0	0.50	0.25		7		
VGR2	DSS-45,34	4.0	4.0	0.50	0.25		7		
VGR2	DSS-34	8.0	4.0	0.50	0.25	7			
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1
WIND	DSS-24,34	5.0	4.5	1.00	0.25	3	3	3	3

Resource Allocation Review Analysis and Recommendations

2003 – September (Weeks 36 - 39)



EVENTS

DSS-25 proposed downtime (X-band 20 kW transmitter installation) in Weeks 36 and 37

DSS-54 proposed extension for X-band 20 kW transmitter installation in Week 36

DSS-66 proposed downtime (Servo Drive Replacement) in Weeks 38 and 39

CONTOUR EGA in Week 36 and Encke Encounter Phase beginning in Week 37

Galileo Jupiter Impact/EOM in Week 38, DOY 264

Genesis Maneuver in Week 39, DOY 267-268

Gravity Probe B quarterly epoch in Week 36

GSSR Asteroid 1999CU3 in Weeks 38 and 39

Mars Odyssey THEMIS Mapping on the 70M

Mars Exploration Rover-B EDL Test, Pre-Dress Rehearsal, in Week 36, DOY 245 and TCM in Week 37, continuous on DOY 251

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

EVENTS (continued)

Polar Maneuvers in Week 36, DOY 244 and 246

SOHO TSO support in Weeks 36 and 37, and HSO starting in Week 39

Voyager 2 DTR P/B in Week 37, DOY 252, ASCAL in Week 38, DOY 259 and MAGROL in Week 38, DOY 262

ANALYSIS

1. (70M) Contention in Weeks 36-38 is moderate to severe for DSS bearing maintenance in Week 36, Mars Exploration Rover-A VLBI, Mars Exploration Rover-B Cruise and VLBI support in Week 38, Mars Odyssey mapping, Mars Express, and Voyager 2 routine, ASCAL, DTR playback, and MAGROL support in Weeks 37 and 38 due to viewperiod overlap in the Mars and maintenance daylight view.

2. (34HEF) Contention is moderate to severe for Nozomi Delta DOR in Week 36 and Mars Exploration Rover-B TCM/VLBI support in Week 37 due to viewperiod overlap and the proposed DSS-54 downtime extension.

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

ANALYSIS (continued)

3. (34BWG1) All DSS-54 Users are in contention with the proposed downtime extension in Week 36. Contention on the 34BWG1 Subnet in Weeks 36 and 38 for Voyager 2 negotiated support is moderate. Genesis maneuver, Nozomi Delta DOR, Ulysses, and Wind routine and TCM support has moderate to severe contention in Week 39 due to overlap in viewperiod.

4. (34BWG2) All DSS-25 Users in Weeks 36 and 37 are in contention with the proposed Downtime for DSS-25.

5. (34HSB) DSS maintenance in Weeks 36 and 37, has moderate contention with Advanced Composition Explorer and SOHO 5-day TSO continuous support.

6. (26M) All DSS-66 Users in Weeks 38 and 39 are in contention with the proposed downtime for DSS-66 Servo Drive Replacement.

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

RECOMMENDATION

« Advanced Composition Explorer » move 1 supports in Weeks 36 and 38 from DSS-27 to DSS-66 to accommodate DSS-maintenance and move 4 of 7 supports in Week 39 from DSS-16 to DSS-27,46. (5, 6)

« Cassini » move DSS-65,25 support to DSS-15,26 in Weeks 36 and 37. (2, 4)

Chandra move all Week 36 support from 34BWG1 to DSS-24,34,66. (3)

« DSS » maintenance delete DSS-25 maintenance support in Weeks 36 and 37, DSS-54 maintenance support in Week 36, and DSS-66 maintenance support in Weeks 38 and 39. Requested support for DSS-25 downtime in Weeks 36 and 37, DSS-54 downtime extension in Week 36, and for DSS-66 downtime in Weeks 38 and 39. (3, 4, 6)

Genesis move Week 36 support from 34BWG1 to DSS-24,34. (3)

« Geotail » move support in Weeks 38-39 from 26M to DSS-16,46,54,65. (6)

IMAGE move all Week 36 support from 34BWG1 to DSS-24,34 and move all Week 39 support from 34BWG1 to DSS-24,54. (3)

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

RECOMMENDATION (continued)

« Lunar-A » requested support using DSS-16 only. (6)

« Mars Exploration Rover-A » move Week 36 Cruise support from 34BWG1 to DSS-24,34,65. (3)

« Mars Express » Delta DOR in Weeks 36-37 move support from DSS-15,25\54,55 to DSS-15,26\55. (3, 4)

« Mars Global Surveyor » move Week 36 support from DSS-24,34,54 to DSS-24,34,65. (3)

« MEGA » reduce supports in Week 37 from 8 hours to 4 hours. (1)

« Nozomi » Delta DOR move support in Week 36 from DSS-15\34 to DSS-24\45 and move Week 36 routine support from DSS-43,34 to DSS-34 and from DSS-24,54 to DSS-24 only. (1, 3)

« Polar » move all 26M Playback and Realtime supports in Weeks 38 and 39 to DSS-27,46,54. (6)

« SIRTF » change Week 36 support from 34BWG1 to DSS-24,34,65. (3)

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

RECOMMENDATION (continued)

« SOHO » move supports in Weeks 36 and 37 from DSS-14 to DSS-16 and in Weeks 38 and 39 move 26M supports to DSS-16,46,54 (1, 6)

« Ulysses » change all routine supports to use split passes of 5-hour durations each at DSS-63,65 and DSS-14,24 daily in Weeks 37 and 38. In Weeks 36, 39 use split passes of 5-hour durations each at DSS-63,65 and DSS-43,45 daily. (1, 2, 3)

« Voyager 2 » use DSS-43,45,34 for routine support in Weeks 36 and 38. (3)

« Wind » requested support in Week 36 using DSS-24,34. (3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		September			
		Ave	Min	Pre	Post	36	37	38	39
ACE	DSS-27	3.5	3.5	0.40	0.20	7	7	7	
ACE	DSS-16	3.5	3.5	0.70	0.20				7
CAS	DSS-45,25	9.0	4.0	0.50	0.25	2			
CAS	DSS-25	9.0	8.5	0.50	0.25		2	2	2
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21
CNTR EGA	34H	8.0	6.0	0.50	0.25	4			
CNTR Encke	34H	8.0	6.0	0.50	0.25			4	3
CNTR Encke	34H	7.5	6.0	0.50	0.25		3		
DSN Antenna Cal	70M	8.0	4.5			1	1		
DSN Antenna Cal	70M	4.5	4.5					1	
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-54	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-54	4.0	4.0						
DSS Maintenance	DSS-25	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	
DSS Maintenance	DSS-27	6.0	6.0						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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	
DSS Maintenance	DSS-66	8.0	6.0			1		1	
DSS Maintenance	DSS-66	4.0	4.0				1		1
DSS Maintenance	DSS-46	4.0	4.0						1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1		1	
DSS Maintenance	DSS-16	4.0	4.0				1		1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		September			
		Ave	Min	Pre	Post	36	37	38	39
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
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
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50	1			
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50	1			
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50	1			
GSSR Ast 1999CU3	DSS-14	12.0	8.0	1.50	0.50			3	3
GTL	26M	1.1	1.1	0.40	0.20	21	21	21	21
IMAG	34B1	0.8	0.8	0.50	0.25	13	13	13	13
IMAG	34B1	1.5	1.5	0.50	0.25	1	1	1	1
LUNA	DSS-16,66	6.0	6.0	0.70	0.20				7
M01O DDOR	DSS-43,63	8.0	4.0	0.50	0.25		2		1
M01O DDOR	DSS-14	8.0	4.0	0.50	0.25				1
M01O Map/MGS Map	DSS-43,63	7.0	4.0	2.00	0.25	9	9	9	9
M01O Mapping	DSS-43,63	7.0	4.0	0.50	0.25	5	3	5	3
MEGA	70M	8.0	4.0	1.50	0.50		1		
MEGA	70M	4.0	4.0	1.50	1.50		1	1	1
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	DSS-15,65	8.0	4.0	0.50	0.25				3
MERA Cruise	DSS-24,34,54	8.0	4.0	1.00	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	34H	8.0	4.0	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			

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		September			
		Ave	Min	Pre	Post	36	37	38	39
MERB Cruise/VLBI	DSS-15	9.0	4.0	0.50	0.25	1			
MERB EDL Rehearsal	DSS-15/26,25\45	8.0	4.0	0.50	0.25	1			
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-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
MEX DDOR	15,25\54,55	3.0	3.0	0.50	0.25	1	1	1	1
MEX DDOR	15,24\45,34	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	DSS-24,34,54	4.0	4.0	0.50	0.25	9	9	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-24,54	8.0	2.0	0.50	0.25	1	1	1	1
NOZO	DSS-43,34	8.0	4.0	0.50	0.25	1			
NOZO	DSS-34	8.0	4.0	0.50	0.25			1	
NOZO DDOR	DSS-15\34	3.0	1.0	0.50	0.25	1		1	
NOZO DDOR	DSS-24\65	2.0	1.0	0.50	0.25				1
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
POLR TCM	DSS-46/34	5.0	4.0	1.00	0.20	1		1	
SOHO	DSS-27	4.0	4.0	0.40	0.20	2	2		
SOHO	26M	9.6	6.0	0.70	0.20			7	
SOHO	26M	1.6	1.6	0.70	0.20	6	6	14	
SOHO	26M	4.0	4.0	0.70	0.20	2	2		
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20				6
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				14
SOHO HSO	DSS-16	4.0	4.0	0.70	0.20				1
SOHO TSO	DSS-14	4.0	4.0	0.50	0.25	3	3		
SOHO TSO	DSS-27	4.1	4.0	0.40	0.20	2	2		
SOHO TSO	26M	8.0	4.0	0.70	0.20	10	10		
SOHO TSO	DSS-16	4.0	4.0	0.70	0.20	2	2		

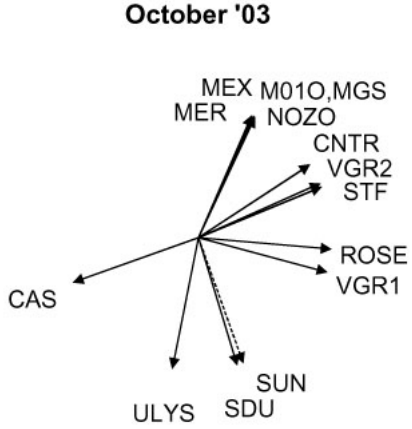
Resource Allocation Review
Analysis and Recommendations
2003 – September (Weeks 36 - 39) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		September			
		Ave	Min	Pre	Post	36	37	38	39
STF	34H	1.0	1.0	0.50	0.25				7
STF	34B1	1.0	1.0	0.50	0.25	14	14		
STF	DSS-25,34,54	1.0	1.0	0.50	0.25			14	7
ULYS	DSS-63,54	10.0	4.0	0.50	0.25	1	1	1	1
ULYS	DSS-14,24	10.0	4.0	0.50	0.25	3	4	4	4
ULYS	DSS-43,34	5.0	4.0	0.50	0.25	1	2	2	2
ULYS	DSS-43,34	8.0	4.0	0.50	0.25	1			
ULYS	DSS-65,54	5.0	4.0	0.50	0.25	1	2	2	2
ULYS Datation TST	DSS-14,24	12.0	4.0	2.00	0.25	1			
VGR2	DSS-34	8.0	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	4.0	0.75	0.25		1		
VGR2 MAGROL	DSS-43	7.0	4.0	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-34	3.0	2.0	0.50	0.25	1			

Resource Allocation Review Analysis and Recommendations

2003 – October (Weeks 40 - 44)



EVENTS

DSS-55 is Operational in Week 44, DOY 305 (Saturday November 1, 2003)

DSS-66 proposed downtime (Servo Drive Replacement) in Weeks 40-43

Cassini Gravitational Wave Experiment beginning in Week 43

CONTOUR Encke Encounter Phase

Lunar-A Swingby in Week 40, DOY 278

Mars Exploration Rover-A EDL Test, Dress Rehearsal, in Week 42, DOY 286

Mars Express Capture beginning in Week 44

Mars Global Surveyor Maneuver in Week 40, DOY 272-278

Nozomi TCM in Week 42

SOHO HSO continuous support

Voyager 1 DTR Array P/B in Week 44, DOY 302

Wind Maneuver in Week 41, DOY 282

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

ANALYSIS

1. (70M) Contention in Week 44 is low for Voyager 1 DTR Array P/B at DSS-14 due to viewperiod overlap with the Mars Odyssey mapping and Mars Odyssey mapping MSPA with Mars Global Surveyor.

2. (34HEF) Moderate contention in Week 43 for Ulysses 10-hour routine support and Space Geodesy 24-hour support due to Cassini Gravitational Wave Experiment (GWE) support at DSS-65 and DSS-45. Contention is moderate for DSS maintenance and severe for Mars Exploration Rover-A Cruise/VLBI and Nozomi Delta DOR support in Week 44 due to Mars viewperiod overlap. The contention in Week 44 is compounded by Cassini GWE support and Reference Frame Calibration Cat M&E 24-hour simultaneous support and Clock Sync 5-hour simultaneous support.

3. (34BWG1) Contention on the 34BWG1 Subnet is moderate for Wind TCM in Weeks 41 and 43 due to viewperiod overlap with DSS maintenance, Genesis, Ulysses, and Voyager 1 and 2.

4. (26M) Contention is moderate on the 26M Subnet for Advanced Composition Explorer and Lunar-A in Weeks 43 and 44 due to viewperiod overlap in the Sun view and SOHO HSO continuous support.

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

RECOMMENDATION

« Advanced Composition Explorer » in Weeks 43 and 44 move 4 of 7 supports from DSS-16 to DSS-27,66. (4)

Lunar-A requested support in Weeks 40 and 41 using DSS-16 only. (4)

« Mars Exploration Rover-A » change 1 DSS-15 cruise support to Cruise/VLBI and increase from 8 hours to 9 hours and change VLBI support at DSS-15\65,15\45 to DSS-45,65 to overlap Cruise/VLBI in Week 44. (2)

« Mars Exploration Rover-B » Cruise support move two cruise supports from the 34HEF to the 70M in Week 44. (2)

« Mars Odyssey » reduce 1 support from 7 hours to 4 hours to accommodate Voyager 1 DTR playback at DSS-14 in Week 44. (1)

« Nozomi » move Delta DOR support from DSS-15\34 to DSS-24\45. (2)

« Reference Frame Calibration » move Cat M&E 24-hr support from Wk 44 to Wk 42. Move Clock Sync M-4 5-hr support from Wk 44 to Wk 41. (2)

Space Geodesy Program delete 24-hour support in Week 43. (2)

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

RECOMMENDATION (continued)

« Ulysses » move Week 43 support from DSS-65,54 to DSS-54,63. (2, 3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		October				
		Ave	Min	Pre	Post	40	41	42	43	44
ACE	DSS-16	3.5	3.5	0.70	0.20	7	7	7	7	7
CAS	DSS-25	9.0	8.5	0.50	0.25	2	2	2		
CAS Gravitnl Wave	DSS-45	5.0	5.0	0.50	0.25				7	7
CAS Gravitnl Wave	DSS-65	8.0	4.0	0.50	0.25				7	7
CAS Gravitnl Wave	DSS-25	12.0	8.0	0.50	0.25				7	7
CNTR Encke	34H	8.0	6.0	0.50	0.25	4	3	7	7	7
DSN Antenna Cal	70M	4.5	4.5			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 Bearing Mntc	DSS-63	8.0	8.0				1			1
DSS Maintenance	DSS-54	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-27	6.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-66	4.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-46	4.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-43	8.0	8.0				1	1		1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-63	10.5	8.0						1	
DSS Maintenance	DSS-63	6.0	4.0						1	1
DSS Maintenance	DSS-63	8.0	4.0			1	1	1		
DSS Maintenance	DSS-14	8.0	8.0			1	1	1	2	2
GNS	34B1	4.0	4.0	0.50	0.25	3	3	3	3	3
LUNA	DSS-16,66	6.0	6.0	0.70	0.20	7	7	7	7	7
M01O DDOR	DSS-43,63	8.0	4.0	0.50	0.25				1	
M01O DDOR	DSS-43,34	8.0	4.0	0.50	0.25		1			

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		October				
		Ave	Min	Pre	Post	40	41	42	43	44
M01O DDOR	DSS-14,43	8.0	4.0	0.50	0.25				1	
M01O Map/MGS Map	70M	7.0	4.0	2.00	0.25					9
M01O Map/MGS Map	DSS-14,63	7.0	4.0	2.00	0.25		9	9	10	
M01O Mapping	70M	8.0	4.0	0.50	0.25					5
M01O Mapping	DSS-14,63	7.0	4.0	0.50	0.25	14	3	5	2	
MERA Cruise	DSS-15,43,65	8.0	4.0	0.50	0.25		3	3	3	
MERA Cruise	DSS-15,65	8.0	4.0	0.50	0.25	3				5
MERA EDL Rehearsal	DSS-43/45/34	4.0	4.0	1.00	0.25			2		
MERA EDL Rehearsal	DSS-15/24/25/26	4.0	4.0	1.00	0.25			2		
MERA VLBI	DSS-15\65,15\43	1.0	1.0	0.50	0.25	5	1	1	1	
MERA VLBI	DSS-15\45,15\65	1.0	1.0	0.50	0.25					1
MEX DDOR	15,25\54,55	3.0	3.0	0.50	0.25	1	1	1	1	1
MEX DDOR	15,24\45,34	3.0	3.0	0.50	0.25	1	1	1	1	1
MGS Mapping	DSS-25,26,54	4.0	4.0	0.50	0.25		9			
MGS Mapping	DSS-25,26,55	4.0	4.0	0.50	0.25					9
MGS TCM	DSS-26,34,55	8.0	4.0	0.50	0.25	10				
NOZO	DSS-24,54	8.0	2.0	0.50	0.25	2		2	2	1
NOZO	DSS-43,34	8.0	4.0	0.50	0.25			1	1	1
NOZO DDOR	DSS-15\34	3.0	1.0	0.50	0.25		1		1	
NOZO DDOR	DSS-24\65	2.0	1.0	0.50	0.25					1
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25		3			
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50					1
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50	1		1		1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50	1	1	1	1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50	1	1	1	1	
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	6	6	6	6	6
SOHO HSO	DSS-27	4.0	4.0	0.40	0.20	1	1	1	1	1
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	14	14	14	14	14
SOHO HSO	DSS-16	4.0	4.0	0.70	0.20	1	1	1	1	1
ULYS	DSS-63,54	10.0	4.0	0.50	0.25	1	1	1	1	1
ULYS	DSS-14,24	10.0	4.0	0.50	0.25	4	4	4	4	4

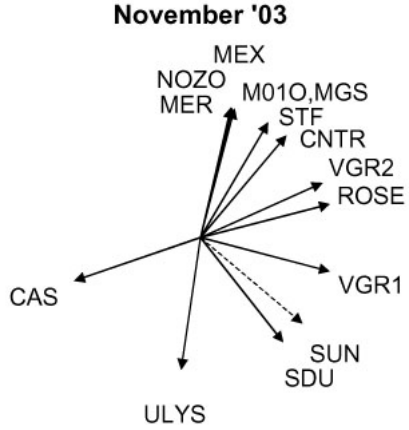
Resource Allocation Review
Analysis and Recommendations
2003 – October (Weeks 40 - 44) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		October				
		Ave	Min	Pre	Post	40	41	42	43	44
ULYS	DSS-43,34	5.0	4.0	0.50	0.25	1	2	2	2	1
ULYS	DSS-43,34	8.0	4.0	0.50	0.25	1				1
ULYS	DSS-65,54	5.0	4.0	0.50	0.25	1	2	2	2	1
VGR1	DSS-26,65	4.0	4.0	0.50	0.25	7	7	7		
VGR1	DSS-26	8.0	4.0	0.50	0.25					7
VGR1	DSS-26,55	4.0	4.0	0.50	0.25				7	
VGR1	DSS-55	4.0	4.0	0.50	0.25					7
VGR1 DTR Array	DSS-14/26	7.4	4.0	1.25	0.25					1
VGR1 Routine U/L	70M	2.5	2.5	0.50	0.25	1	1	1	1	1
VGR2	DSS-43,34	8.0	4.0	0.50	0.25		7			
VGR2	DSS-43	8.0	4.0	0.50	0.25				2	
VGR2	DSS-34	8.0	4.0	0.50	0.25	7		7	5	7
VGR2 MAGROL	DSS-43	7.0	4.0	0.75	0.25					1
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3
WIND TCM	DSS-54	3.0	2.0	1.00	0.25		1			
WIND TCM	DSS-34	3.0	2.0	0.50	0.25				1	

Resource Allocation Review Analysis and Recommendations

2003 – November (Weeks 45 - 48)



EVENTS

DSS-49 Parkes Radiotelescope 64-meter available

Cassini gravity wave experiment (ends Week 48, DOY 333)

CONTOUR Encke encounter (Week 46, DOY 316) and playback

Genesis maneuver (Week 47, DOY 323 and 324)

GSSR Asteroid 1990OS (Week 45, DOY 313-318) and 1996GT (Week 47, DOY 321 and 322)

Mars Exploration Rover-A TCM (Week 45, DOY 311) approach (start Week 46, DOY 314) checkout (Week 47, DOY 321-324)

Mars Exploration Rover-B EDL rehearsals (Week 45, DOY 307-310) and TCM (Week 47, DOY 325)

Mars Express capture (approach/MOI, Weeks 47-48)

Mars Global Surveyor mapping

Mars Odyssey mapping

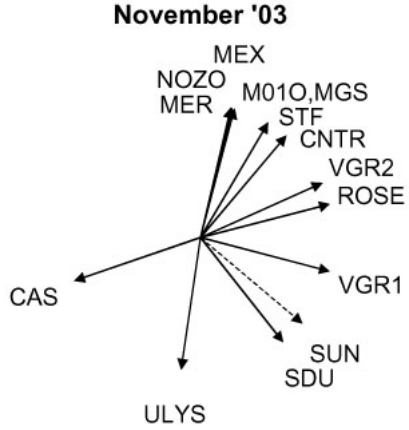
Nozomi TCM (Weeks 45 and 47) and approach (Weeks 47 and 48)

SOHO HSO (continuous support through Week 47)

Stardust P/Wild 2 encounter approach and TCM

Resource Allocation Review Analysis and Recommendations

2003 – November (Weeks 45 - 48)



EVENTS

Voyager 1 ASCAL (Week 45, DOY 308) and
MAGROL (Week 45, DOY 311)

ANALYSIS

1. Moderate user contention is forecast on the 70M Subnet in Week 45. Contention is due to Mars Odyssey mapping and mapping MSPA with Mars Global Surveyor, Nozomi cruise, and Mars Exploration Rover-B EDL rehearsal requests for support at DSS-43. The Voyager 1 ASCAL also conflicts with DSS-14 bearing maintenance on DOY 308.

2. Moderate contention on the 34HEF Subnet is forecast in Weeks 45 and 47. The Mars and CONTOUR viewperiods overlap 100% causing contention between Mars Exploration Rover-A TCM and approach/VLBI, Mars Exploration Rover-B EDL rehearsals, Mars Express Delta DOR, and CONTOUR Encke encounter. The missions rise within 1 hour of each other at Canberra causing a conflict with the simultaneous support requested for the 2 EDL rehearsals and Delta DOR activities. The Reference Frame Calibration 24-hour CAT M&E in Week 45 causes contention with Cassini GWE support at DSS-45 and 65.

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

ANALYSIS (continued)

3. 34BWG1 contention levels in Week 47 are moderate to severe. DSS-34 and 54 are oversubscribed due to Mars Exploration Rover-A, Mars Express, Mars Global Surveyor mapping, and Nozomi requests for support. The Mars and Genesis viewperiods overlap ~50% at DSS-34 adding to the contention when Genesis requests near continuous support for maneuver on DOY 323 and 324.

4. In Week 48 DSS-34, 54 and 55 are oversubscribed. Contention is due to Mars Exploration Rover-A approach, Mars Express capture, Nozomi approach, Mars Global Surveyor mapping and Voyager 2 support requests. About 60% of the Voyager 2 viewperiod overlaps the viewperiods of the noted Mars missions.

RECOMMENDATION

« DSS » Maintenance reduce 1 DSS-14 support in Week 45 to 6 hours to accommodate Voyager 1 ASCAL on DOY 308. (1)

« Mars Exploration Rover-A » in Wk 45 move 6 TCM passes from the 34HEF to DSS-24,34,55. In Week 47 change 2 approach/VLBI passes currently allocated using DSS-15,14 and DSS-65,63, to use DSS-14,63. (2)

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

RECOMMENDATION (continued)

« Mars Express » move 2 capture passes in Week 48 currently allocated at DSS-54,55 to DSS-63. (4)

« Mars Global Surveyor » in Weeks 47 and 48 move 6 passes currently allocated at DSS-26,34,55 to DSS-26 and 3-4 passes to DSS-49. (3, 4)

« Mars Odyssey » reduce 2 standalone passes in Week 45 to 6 hours (to be scheduled at DSS-43 on DOY 307 and 310 to avoid MERB EDL rehearsals) and use DSS-14,63 for the remaining 3 passes. (1)

« Nozomi » in Week 45 change 1 routine pass allocated at DSS-43,34 to use DSS-34 only. In Week 47 change 1 approach pass allocated at DSS-34,43 to use DSS-43 only, change 1 routine pass allocated at DSS-34 to use DSS-43 and change three TCM passes allocated at DSS-24,54 to use DSS-24,63. (1, 3)

« Reference Frame Calibration » move Week 45 CAT M&E to Week 48 and use DSS-14\63. (2)

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

RECOMMENDATION (continued)

« Voyager 2 » in Week 45 reduce 3 DSS-34 8-hour passes to 5 hours. In Week 48 reduce 3 DSS-34 8-hour passes to 5 hours and move 4 passes to DSS-43. (2, 4)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	45	46	47	48
CAS Gravitnl Wave	DSS-45	5.0	5.0	0.50	0.25	7	7	7	6
CAS Gravitnl Wave	DSS-65	8.0	4.0	0.50	0.25	7	7	7	6
CAS Gravitnl Wave	DSS-25	12.0	8.0	0.50	0.25	7	7	7	6
CNTR	70M	8.0	6.0	0.50	0.25		5		
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	14	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
DSN Antenna Cal	70M	4.5	4.5			1	1	1	
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-54	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-27	8.0	6.0						1
DSS Maintenance	DSS-27	6.0	6.0			1	1	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-24	8.0	6.0			1	1		1
DSS Maintenance	DSS-65	6.0	6.0			1		1	
DSS Maintenance	DSS-65	4.0	4.0				1		1
DSS Maintenance	DSS-26	8.0	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-66	4.0	4.0			1	1	1	
DSS Maintenance	DSS-46	4.0	4.0			1	1	1	

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	45	46	47	48
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0						1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	
DSS Maintenance	DSS-34	6.0	6.0			1	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		
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			1	
M01O Map/MGS Map	70M	7.0	4.0	2.00	0.25	9	10		
M01O Map/MGS Map	70M	8.0	4.0	2.00	0.25			6	6
M01O Mapping	70M	8.0	4.0	0.50	0.25	5	4	2	2
M01O Mapping	70M	6.0	4.0	0.50	0.25			1	1
MERA Approach	DSS-45,65	8.0	4.0	0.50	0.25		1		
MERA Approach	DSS-15	8.0	4.0	0.50	0.25		1		
MERA Approach	DSS-34,54,55	8.0	4.0	0.50	0.25			7	10
MERA Approach	DSS-25	8.0	8.0	0.50	0.25			6	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			2	
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	1			
MERA TCM/VLBI	DSS-45,65	8.0	4.0	0.50	0.25	1			
MERA VLBI	DSS-15\45,15\65	1.0	1.0	1.00	0.25		1		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	45	46	47	48
MERB Cruise	34H	8.0	4.0	0.50	0.25			1	2
MERB Cruise	DSS-15,43,65	8.0	4.0	0.50	0.25			4	
MERB Cruise	DSS-25,26,55	8.0	4.0	0.50	0.25	4	5		
MERB EDL Rehearsal	DSS-43/45/34	4.0	4.0	1.00	0.25	2			
MERB EDL Rehearsal	DSS-15/24/25/26	4.0	4.0	1.00	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			8	
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-54,55	8.0	5.0	0.50	0.25			7	7
MEX DDOR	DSS-24\55	3.0	3.0	0.50	0.25				1
MEX DDOR	DSS-24\55	2.5	2.5	0.50	0.25	1	1	1	
MEX DDOR	DSS-24\34	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	DSS-26,34,55	8.0	4.0	0.50	0.25			10	8
MGS Mapping	DSS-26,34,55	6.0	4.0	0.50	0.25				1
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-34	8.0	4.0	0.50	0.25			1	
NOZO Approach	DSS-24,54	8.0	2.0	0.50	0.25		1		5
NOZO Approach	DSS-43,34	8.0	4.0	0.50	0.25			1	
NOZO DDOR	DSS-15\34	3.0	1.0	0.50	0.25		1		
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25	3		3	
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50	1			
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50		1		1
SDU P/Wild 2	34H	8.0	4.0	0.50	0.25	1	2	2	2
SDU TCM	34H	4.0	4.0	0.50	0.25	2	2	10	14
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	

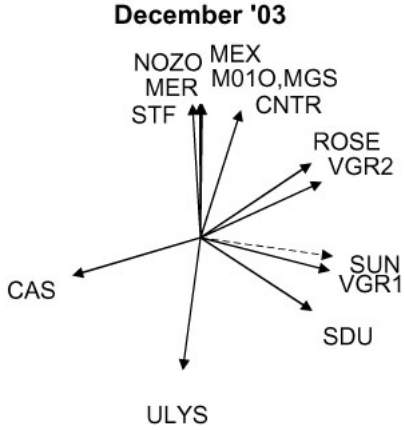
Resource Allocation Review
Analysis and Recommendations
2003 – November (Weeks 45 - 48) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	45	46	47	48
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-54,55	4.0	4.0	0.50	0.25	7	7		
VGR1	DSS-26	8.0	4.0	0.50	0.25	7	7	7	7
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	4.0	4.0	0.50	0.25			7	
VGR2	DSS-45	8.0	4.0	0.50	0.25		2		
VGR2	DSS-45	4.0	4.0	0.50	0.25			4	
VGR2	DSS-34	8.0	4.0	0.50	0.25	7	5		7
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-34	3.0	2.0	0.50	0.25			1	

Resource Allocation Review Analysis and Recommendations

2003 – December (Week 49)



EVENTS

(DOY 335-341)

CONTOUR Encke encounter (end DOY 337) playback and hibernation setup

GOES-N launch DOY 337 (December 3rd)

Gravity Probe-B BR080n SOC-M4 quarterly epoch

Mars Exploration Rover-A approach

Mars Exploration Rover-B approach and checkout

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping

Mars Odyssey mapping

Microwave Anisotropy Probe maneuver

Nozomi approach

Stardust P/Wild 2 approach, encounter, and TCM (DOY 337)

Resource Allocation Review
Analysis and Recommendations
2003 – December (Week 49) (continued)

ANALYSIS

1. Moderate contention is forecast on the 34BWG1 Subnet. Contention is due to Mars Exploration Rover-A approach, Mars Express capture, Mars Global Surveyor mapping, and Nozomi approach requests for support at DSS-34, 54.

2. Severe contention is forecast on the 34BWG2 Subnet. Contention is due to Mars Exploration Rover-A approach, Mars Express capture and Delta DOR, and Mars Global Surveyor mapping requests for support at DSS-55.

3. Low contention is currently forecast on the 34HSB and 26M Subnets. The GOES-N launch however is planned for December 3rd. Continuous support is requested on the 26M Subnet at visible periods for the first 2 days of the launch phase, then about 16 hours/day is requested through L+20 days, and full view at DSS-16 is requested from L+21 to L+24 days. Support for the launch was not included in the RARB analysis; however, an impact study for a November 20, 2003 launch forecast severe to extreme contention for Chandra, DSS Maintenance, INTEGRAL, and SOHO.

Resource Allocation Review
Analysis and Recommendations
2003 – December (Week 49) (continued)

RECOMMENDATION

GOES-N move launch after March 2004. (3)

« Mars Exploration Rover-A » change 10 passes currently allocated at DSS-34,54,55 to use DSS-34,54,63. (2)

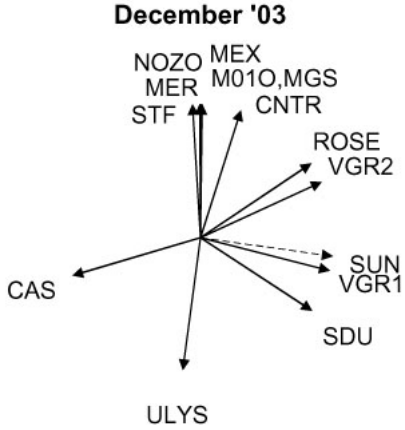
« Mars Global Surveyor » change 10 passes currently allocated at DSS-26,34,55 to use 5 passes at DSS-25,26 and 4 passes at DSS-34,55 and MSPA 1 additional pass with Mars Odyssey at DSS-43,63 (1, 2)

« Mars Odyssey » MSPA 1 additional pass at DSS-43,63 with Mars Global Surveyor. (1)

« Nozomi » change 1 pass currently allocated at DSS-43,34 to use DSS-43 only for support. (1)

Resource Allocation Review Analysis and Recommendations

2003 – December (Week 50)



EVENTS

(DOY 342-348)

Mars Exploration Rover-A approach

Mars Exploration Rover-B approach and checkout

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping

Mars Odyssey mapping

Nozomi approach

Stardust P/Wild 2 approach, encounter, and TCM support

ANALYSIS

1. Severe user contention is forecast on the 34HEF Subnet. The Mars viewperiod is oversubscribed with a total of 26 passes requested to support Mars Exploration Rover-A approach, Mars Exploration Rover-B cruise, approach, and checkout, and Nozomi Delta DOR. Support for the noted Mars missions is also in contention with a Reference Frame Calibration 24-hour CAT M&E.

Resource Allocation Review
Analysis and Recommendations
2003 – December (Week 50) (continued)

ANALYSIS (continued)

2. Low contention is forecast at the 70M, 34BWG1 and 34BWG2 Subnets, however, excess capacity is low at the Canberra and Madrid Complexes in the Mars viewperiod. Some changes to users support are needed to remedy conflicts on the 34HEF.

RECOMMENDATION

« Mars Exploration Rover-B » change the 5 cruise passes currently allocated at DSS-15,43,65 to using 1 pass at DSS-43, 2 passes at DSS-25, and 2 passes at DSS-34,55. (1)

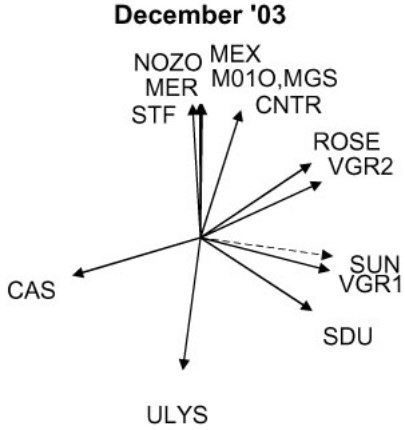
« Mars Global Surveyor » change the 9 passes currently allocated at DSS-26,34,55 to using 5 passes at DSS-26 and 4 passes at DSS-34,55. (1, 2)

« Nozomi » use DSS-24\34 for Delta DOR support. (1)

« Reference Frame Calibration » delete CAT M&E. (1)

Resource Allocation Review Analysis and Recommendations

2003 – December (Week 51)



EVENTS

(DOY 349-355)

Mars Exploration Rover-A approach

Mars Exploration Rover-B approach

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping and TCM (Week 51)

Mars Odyssey mapping

Nozomi approach

Stardust P/Wild 2 approach, encounter, and TCM support

Voyager 2 MAGROL (DOY 353)

Resource Allocation Review
Analysis and Recommendations
2003 – December (Week 51) (continued)

ANALYSIS

1. Moderate user contention is forecast on the 70M Subnet. Mars Odyssey mapping and mapping MSPA with Mars Global Surveyor, Mars Exploration Rover-B approach, and Nozomi approach combined requests total 24 passes of about 8 hours each. Support for Microwave Anisotropy Probe and the Voyager 2 MAGROL (DOY 353) add to the contention. Viewperiods for the noted missions overlap from 50-100%.

2. Moderate user contention is forecast on the 34HEF Subnet. A Reference Frame Calibration 24-hour CAT M&E is in contention with Mars Exploration Rover-A request for continuous support on the 34HEF.

RECOMMENDATION

Mars Exploration Rover-B move 2 passes from the 70M to DSS-25,34,55. (1)

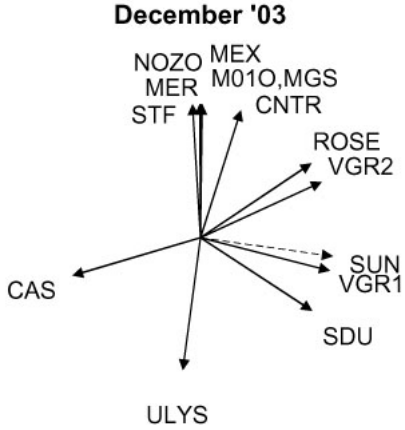
Mars Odyssey move one 8-hour standalone DSS-43 pass to DSS-34. (1)

« Nozomi » change request for 1 pass at DSS-43,34 and use DSS-34 for support. (1)

« Reference Frame Calibration » delete the CAT M&E support. (2)

Resource Allocation Review Analysis and Recommendations

2003 – December (Week 52)



EVENTS

(DOY 356-362)

Mars Exploration Rover-A approach and TCM (DOY 361)

Mars Exploration Rover-B approach

Mars Express capture (approach/MOI DOY 358)

Mars Global Surveyor mapping

Mars Odyssey mapping

Nozomi approach

Stardust P/Wild 2 approach, encounter, and TCM (DOY 357)

Wind TCM (DOY 356)

Resource Allocation Review
Analysis and Recommendations
2003 – December (Week 52) (continued)

ANALYSIS

1. Moderate contention is forecast on the 34HEF Subnet. Contention is due to Mars Exploration Rover-A and Mars Exploration Rover-B requests that total 9 passes at DSS-15.

2. Moderate contention is forecast on the 34BWG1 Subnet. DSS-24 and 54 are oversubscribed in the Mars viewperiod. Contention is due to support requests for Mars Exploration Rover-B approach, Mars Express capture and Delta DOR, Mars Global Surveyor mapping, and Nozomi approach.

   Note: Canberra is fully subscribed in the Mars viewperiod.

RECOMMENDATION

« Mars Exploration Rover-B » move 2 DSS-15 approach passes and 2 DSS-24 approach/VLBI passes to DSS-25,26. Move 2 DSS-54 approach/VLBI passes to DSS-55 (1, 2)

« Mars Global Surveyor » change the 9 passes currently allocated at DSS-26,34,55 to use 5 passes at DSS-26 and 4 passes at DSS-34, 55 (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		December			
		Ave	Min	Pre	Post	49	50	51	52
CHDR	34B1	1.0	1.0	0.50	0.25	21	7	7	7
CHDR	26M	2.0	2.0	0.70	0.20		14	14	14
CNTR	70M	8.0	6.0	0.50	0.25	1			
CNTR Encke	34H	8.0	6.0	0.50	0.25	1			
CNTR Encke	DSS-45	4.0	4.0	0.50	0.25	2			
CNTR Encke	DSS-65	4.0	4.0	0.50	0.25	2			
DSN Antenna Cal	70M	4.5	4.5			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 Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	4.0	4.0			1	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	6.0	6.0				1		
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-16	8.0	6.0			1		1	1
DSS Maintenance	DSS-16	6.0	6.0				1		
DSS Maintenance	DSS-34	6.0	6.0			1	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	1
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50	1			
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50	1			

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		December			
		Ave	Min	Pre	Post	49	50	51	52
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50	1			
INTG	DSS-24	7.0	0.5	0.50	0.25	3			
INTG	DSS-16	5.3	0.5	0.70	0.20	4	7	7	7
M01O Map/MGS Map	70M	8.0	4.0	2.00	0.25	6	6	6	5
M01O Map/MGS Map	70M	6.0	4.0	2.00	0.25				1
M01O Mapping	70M	8.0	4.0	0.50	0.25	2	2	2	3
M01O Mapping	70M	6.0	4.0	0.50	0.25	1	1	1	
MAP.	70M	0.7	0.6	1.00	0.25	4	7	7	7
MAP. Mnvr.	70M	5.0	5.0	1.25	0.25	1			
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25	2			
MERA Approach	70M	8.0	4.0	0.50	0.25				6
MERA Approach	DSS-45,65	8.0	4.0	0.50	0.25		8	10	
MERA Approach	DSS-15	8.0	4.0	0.50	0.25		3	3	
MERA Approach	34H	8.0	4.0	0.50	0.25		2		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-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		3	4	5
MERA Approach/VLBI	DSS-45	8.0	8.0	0.50	0.25		1	2	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			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			3	4
MERB Approach/VLBI	DSS-25	9.0	4.0	0.50	0.25		2		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		December			
		Ave	Min	Pre	Post	49	50	51	52
MERB Checkout	70M	8.0	4.0	0.50	0.25		2		
MERB Checkout	34H	8.0	4.0	0.50	0.25	12	1		
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-25	9.0	4.0	0.50	0.25		1		
MERB Cruise	DSS-15,43,65	8.0	4.0	0.50	0.25		5		
MEX Capture	DSS-63	8.0	4.0	0.50	0.25				1
MEX Capture	DSS-54,55	8.0	5.0	0.50	0.25	7	7	7	6
MEX DDOR	DSS-24\55	3.0	3.0	0.50	0.25	1	1	1	1
MEX DDOR	DSS-24\34	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	DSS-26,34,55	8.0	4.0	0.50	0.25	10	8	3	9
MGS Mapping	DSS-26,34,55	6.0	4.0	0.50	0.25		1		
MGS TCM	DSS-26,34,55	8.0	4.0	0.50	0.25			3	
NOZO Approach	DSS-24,54	8.0	2.0	0.50	0.25	4	7	7	7
NOZO Approach	DSS-43,34	8.0	4.0	0.50	0.25	1	1	1	1
NOZO DDOR	DSS-15\34	3.0	1.0	0.50	0.25		1		
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50		1	1	
SDU P/Wild 2	34H	8.0	4.0	0.50	0.25	2	2	2	2
SDU TCM	34H	8.0	4.0	0.50	0.25	2			2
SDU TCM	34H	4.0	4.0	0.50	0.25	12	14	14	12
SOHO	26M	9.6	6.0	0.70	0.20	7	4	4	4
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	14
SOHO	26M	6.0	6.0	0.70	0.20		3	3	3
VGR2	DSS-43	8.0	4.0	0.50	0.25	5	1		
VGR2	DSS-45	5.0	4.0	0.50	0.25	2			
VGR2	DSS-34	8.0	4.0	0.50	0.25		6	5	7
VGR2	DSS-34	5.0	4.0	0.50	0.25			2	
VGR2 MAGROL	DSS-43	7.0	4.0	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

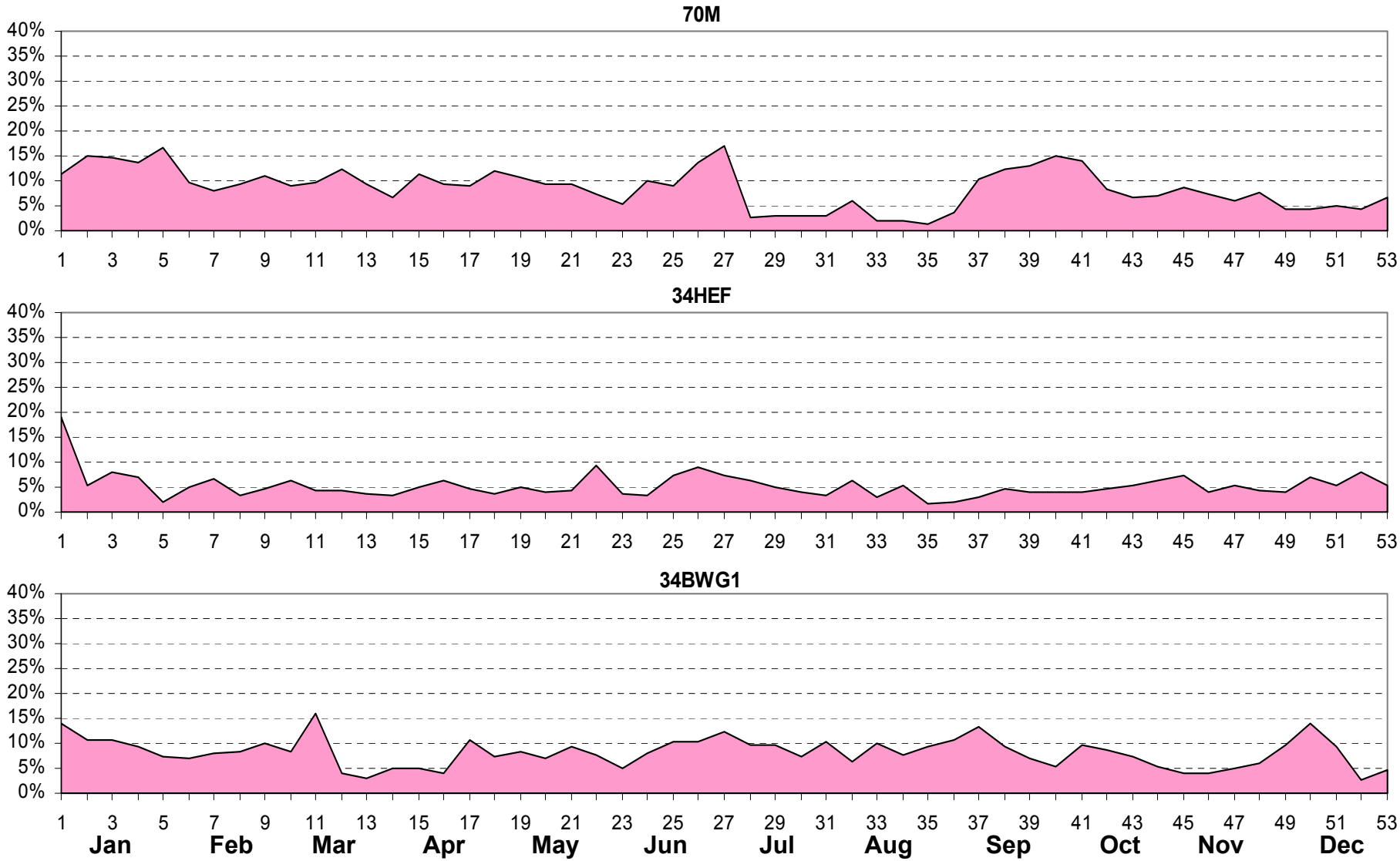
Resource Allocation Review
Analysis and Recommendations
2003 – December (Weeks 49 - 52) (continued)

RESOURCE REQUEST (continued)

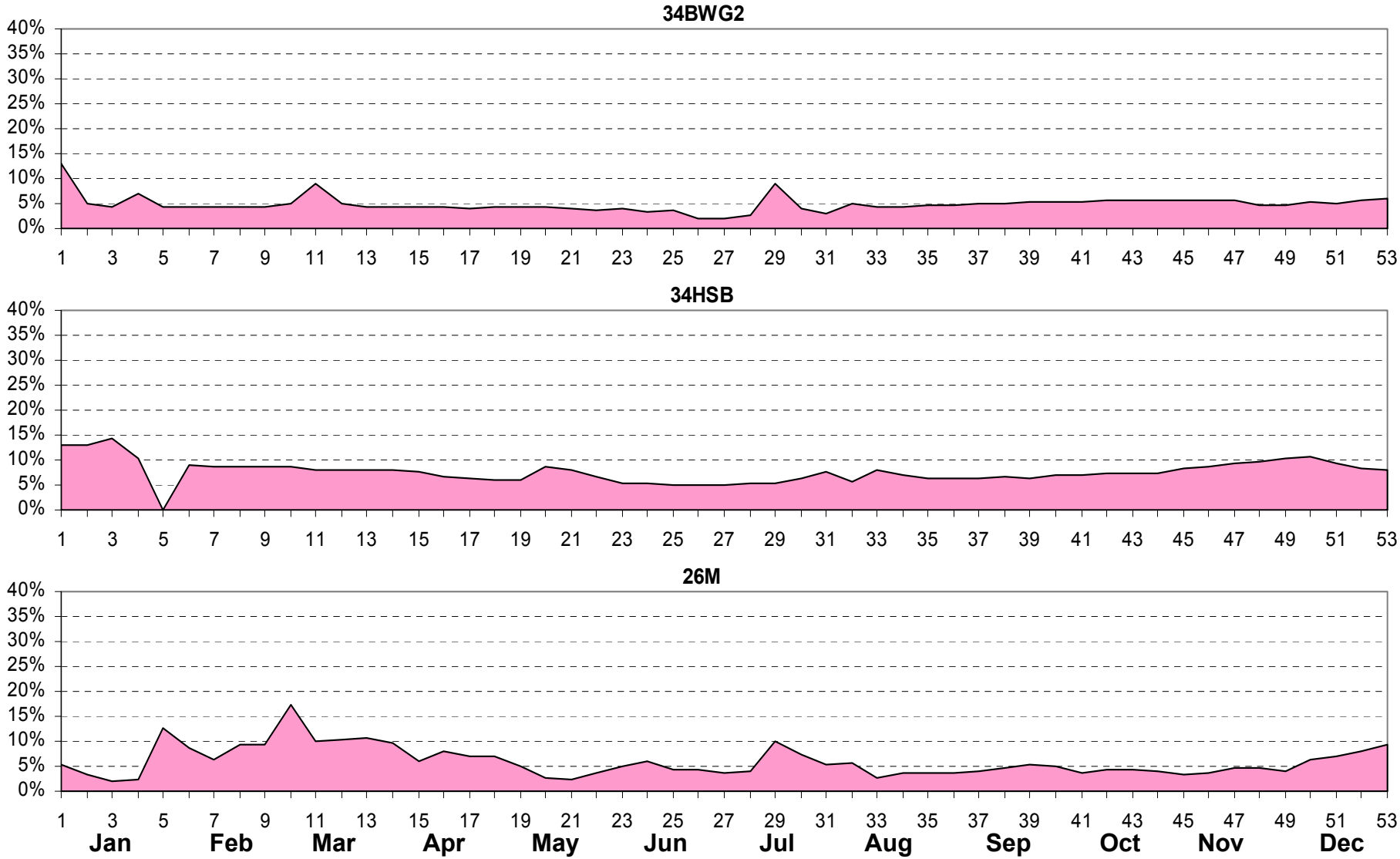
User	Resource	Durations		Calibration		December			
		Ave	Min	Pre	Post	49	50	51	52
WIND TCM	DSS-54	3.0	2.0	1.00	0.25				1

2004 Events, Analysis and Recommendations

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

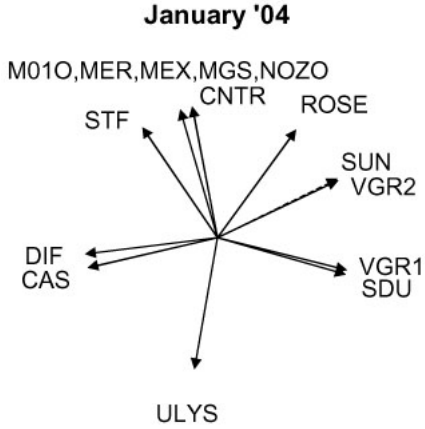


Resource Allocation Review
Analysis and Recommendations
2004 Weekly Average User Unsupportable Time (continued)



Resource Allocation Review Analysis and Recommendations

2004 – January (Week 01)



EVENTS

(DOY 363-004)

Cassini approach

Deep Impact launch (DOY 002)

Mars Exploration Rover-A approach and EDL DOY 004 (Gusev)

Mars Exploration Rover-B approach

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping

Mars Odyssey mapping

Nozomi MOI and TCM (DOY 001 and 002)

Stardust P/Wild 2 encounter (DOY 002)

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 01) (continued)

ANALYSIS

1. Extreme contention is forecast on the 34HEF Subnet. DSS-45 and 65 requests in the Mars viewperiod total 25 passes, supporting Mars Exploration Rover-A approach and EDL on DOY 004, Mars Exploration Rover-B approach, and Mars Global Surveyor mapping. The Deep Impact initial acquisition request on DOY 002 adds contention at DSS-15 and 45. The Deep Impact and Mars viewperiod overlap is ~50%.

2. Moderate contention is forecast on the 34BWG1 Subnet. Deep Impact launches on DOY 002 and continuous support is requested using DSS-34 and 54. The Deep Impact support is in contention with Mars Exploration Rover-A EDL on DOY 004, Mars Exploration Rover-B approach, Mars Odyssey mapping and MSPA mapping with Mars Global Surveyor, and Nozomi TCM support. Viewperiods for the missions noted overlap 50-100%.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 01) (continued)

ANALYSIS (continued)

3. Contention on the 34BWG2 Subnet is moderate with unsupportable time forecast at DSS-26. The Mars Exploration Rover-B approach and Mars Global Surveyor mapping requests for support total 9-10 passes. The two missions viewperiods overlap 100%.

   Note: The 70M Subnet is fully subscribed in the Mars viewperiod (20 passes requested).

RECOMMENDATION

Deep Impact on DOY 004 reduce one pass at DSS-15 and one at DSS-34 to 5 hours each and increase pass duration at DSS-54 to 10-11 hours. (1, 2)

« Mars Exploration Rover-B » on DOY 004 reduce 1 DSS-45 pass to 4 hours. (1)

Mars Express reduce 1 pass at DSS-55 to 5 hours. (1, 2, 3)

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 01) (continued)

RECOMMENDATION (continued)

Mars Global Surveyor change current requests to (8-hour passes assumed except as noted): (1, 2, 3)

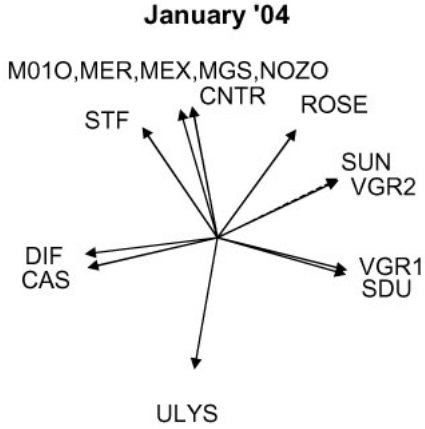
- MSPA 4 passes with Mars Odyssey using DSS-25
- MSPA 1 DSS-25 pass (4 hours) on DOY 004 with Mars Odyssey
- MSPA 2 passes with Mars Odyssey using DSS-63
- MSPA 1 pass with Mars Odyssey using DSS-43
- Plan 1 pass using DSS-43
- Plan 2 passes at DSS-15 prior to DOY 002
- Plan 1 pass on DOY 004 of 5-6 hours using DSS-34
- Plan 3 passes using DSS-49
- Reduce 1 pass to 5 hours and use DSS-55

Mars Odyssey change current requests to (8-hour passes assumed except as noted): (1, 2, 3)

- MSPA 4 passes with Mars Global Surveyor at DSS-25
- MSPA 1 DSS-25 pass (4 hours) on DOY 004 with Mars Global Surveyor
- MSPA 2 passes with Mars Global Surveyor using DSS-63
- MSPA 1 pass with Mars Global Surveyor using DSS-43
- Plan 2 passes using DSS-24
- Plan 4 passes using DSS-49

Resource Allocation Review Analysis and Recommendations

2004 – January (Week 02)



EVENTS

(DOY 005-011)

Cassini approach

Deep Impact launch support, continuous

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B approach, continuous

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping and TCM (DOY 005-011)

Mars Odyssey mapping/relay, continuous

Stardust P/Wild 2 encounter

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 02) (continued)

ANALYSIS

1. Contention on the 70M Subnet is moderate. Requests supporting Mars Odyssey standalone mapping and MSPA mapping with Mars Exploration Rover-A surface operations are in contention with Mars Express capture at DSS-63. Stardust P/Wild encounter and Voyager 2 cruise are in contention at DSS-43.

2. Contention on the 34BWG1 Subnet is moderate to severe. The Deep Impact request for continuous coverage using DSS-34 and 54 is in contention with Mars Express capture and Mars Global Surveyor TCM. Voyager 2 and Ulysses are in contention for support at DSS-34.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 02) (continued)

RECOMMENDATION

« Deep Impact » maintain continuous tracking by changing support requested on 4 days; increase 4 DSS-15 and 4 DSS-54 passes to 10 hours and reduce 4 DSS-34 passes to 4 hours. (2)

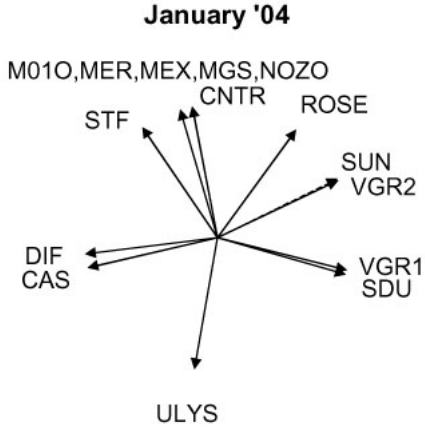
Mars Global Surveyor receive requested TCM support. Delete 4 mapping passes at DSS-34,55 and MSPA 3 passes with Mars Odyssey at DSS-55 (recommendation adds 1 pass at Madrid). Use DSS-49 for 2 passes, reducing to about 6.5 hours/pass. (2)

Mars Odyssey move 3 standalone 70M passes and MSPA with Mars Global Surveyor using DSS-55. Reduce 1 standalone pass to about 6.5 hours and move to DSS-49. (1)

« Voyager 2 » reduce 4 passes currently allocated at DSS-34,43,45 to 4 hours and use DSS-34,45 only for the remaining 3 passes. (1, 2)

Resource Allocation Review Analysis and Recommendations

2004 – January (Week 03)



EVENTS

(DOY 012-018)

Cassini approach

Deep Impact launch support, continuous

Genesis maneuver (continuous DOY 014 and 015)

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B approach, TCM (DOY 017)

Mars Express capture (approach/MOI)

Mars Global Surveyor mapping and TCM (DOY 012-018)

Mars Odyssey mapping

Stardust P/Wild 2 encounter

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 03) (continued)

ANALYSIS

1. User contention on the 70M is moderate to severe. DSS-43 and 63 are oversubscribed in the Mars viewperiod with a total of 18 passes requested to support Mars Odyssey mapping and mapping MSPA with Mars Exploration Rover-A surface operations, Mars Exploration Rover-B approach and TCM, and Mars Express capture.

2. User contention is low on the 34HEF however a Reference Frame Calibration CAT M&E conflicts at DSS-15 with Deep Impact continuous launch support.

3. Contention on the 34BWG1 Subnet is severe. The Deep Impact request for continuous coverage using DSS-34,54 is in contention with Mars Express capture, Mars Odyssey mapping, and Mars Global Surveyor TCM. Contention increases on DOY 014-015 when Genesis maneuver support is continuous. Deep Impact and Genesis viewperiods do not overlap but they each have >50% overlap with the Mars viewperiod.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 03) (continued)

RECOMMENDATION

« Deep Impact » change continuous request on 4 days; increase 4 DSS-15 and 4 DSS-54 passes to 10 hours and reduce 4 DSS-34 passes to 4 hours. (3)

Mars Odyssey move 2 standalone 70M passes to DSS-45 and move a third pass to DSS-65. Change the request for five 34BWG passes to 2 passes using DSS-25 and 3 split passes using 4 hours at DSS-34 and 4 hours at DSS-49 for 7-8 hours of contiguous tracking per split pass. (1, 3)

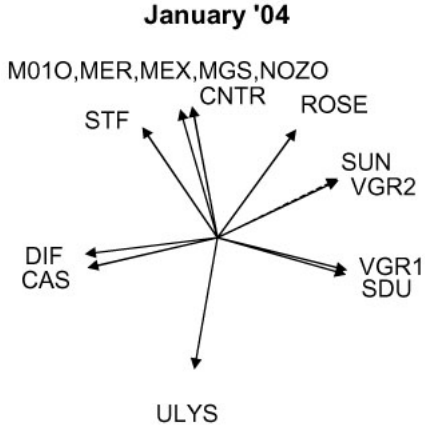
Mars Express change capture support request to 2 passes at DSS-63, 1 pass at DSS-54, and 3 passes at DSS-55. (1, 3)

« Reference Frame Calibration » move Week 03 24-hour CAT M&E to Week 06. (2)

« Voyager 2 » reduce seven DSS-45 passes to 6 hours. (1, 3)

Resource Allocation Review Analysis and Recommendations

2004 – January (Week 04)



EVENTS

(DOY 019-025)

Cassini approach

Deep Impact launch support

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B approach and EDL DOY 025 (Hematite) continuous support requested plus 4-hour simultaneous Goldstone/ Canberra EDL array

Mars Express capture (approach/MOI) and orbital science

Mars Global Surveyor mapping

Mars Odyssey mapping

Stardust TCM

Ulysses Jupiter encounter

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 04) (continued)

ANALYSIS

1. Contention on the 70M Subnet is moderate. Contention is due to 8-9 passes requested at DSS-63 supporting Mars Express capture, Mars Odyssey MSPA with Mars Exploration Rover-A surface operations, and Mars Exploration Rover-B approach and EDL array support. The Mars viewperiod is fully subscribed at Goldstone and Canberra. Voyager 2 is in contention with maintenance at DSS-43.

2. Contention on the 34HEF Subnet is moderate. Contention is due to requests for Deep Impact launch support, Mars Exploration Rover-B approach and EDL, Mars Global Surveyor mapping, Stardust TCM, and Reference Frame Calibration 24-hour CAT M&E.

3. Contention on the 34BWG1 Subnet is moderate. Contention is due to support requests for Mars Odyssey mapping and Deep Impact launch support at DSS-34 and 54.

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 04) (continued)

RECOMMENDATION

Mars Express move 2 passes from DSS-63 to DSS-55. (1)

Mars Global Surveyor on DOY 025 reduce 1 DSS-45 pass to 4 hours and use DSS-49 for 4 hours to equal 8 hours of contiguous tracking. Move 1 DSS-45 pass to DSS-49, reducing pass duration to 5.5 hours. MSPA 1 DSS-65 pass with Mars Odyssey. (2)

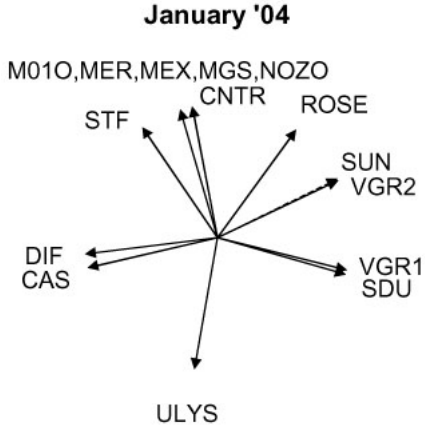
Mars Odyssey move 1 pass from DSS-34 to DSS-49, reducing pass duration to 5.5 hours. Delete 1 DSS-54 pass and MSPA 1 pass with Mars Global Surveyor at DSS-65. Move 1 DSS-54 pass to DSS-55. (3)

« Reference Frame Calibration » move Week 04 CAT M&E to Week 07. (2)

« Voyager 2 » reduce 1 DSS-43 pass to 4 hours. (1)

Resource Allocation Review Analysis and Recommendations

2004 – January (Week 05)



EVENTS

(DOY 026-032)

Cassini approach

Deep Impact launch support

GSSR Asteroid 6239 Minos (DOY 030-032)

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B surface operations

Mars Express orbital science and Bi-Static radar

Mars Global Surveyor mapping

Mars Odyssey mapping

Stardust TCM

Ulysses Jupiter encounter, continuous

Resource Allocation Review
Analysis and Recommendations
2004 – January (Week 05) (continued)

ANALYSIS

Contention on the 70M Subnet is moderate due to a total of 23 passes requested to support Mars Odyssey standalone mapping, mapping MSPA with Mars Exploration Rovers -A and -B surface operations, Mars Exploration Rover-B standalone surface operations and Mars Express Bi-Static radar. The noted missions are also in contention with the daylight hours requested for DSS maintenance. Voyager 2 is in contention with Maintenance at DSS-43 and with GBRA Host Country support.

RECOMMENDATION

Mars Exploration Rover-B delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Odyssey.

Mars Odyssey delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Exploration Rover-B. Move 2 standalone passes/Week from the 70M to DSS-26,34,55.

« Voyager 2 » reduce 4 DSS-43 passes to 4 hours.

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		January				
		Ave	Min	Pre	Post	1	2	3	4	5
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	3	3	3	3	3
DIF Launch	DSS-34/45/46	8.0	8.0	4.00	0.25	1				
DIF Launch Phase	DSS-15,34,54	8.0	4.0	0.50	0.25	8	21	21		
DIF Launch Phase	DSS-15,34	8.0	4.0	0.50	0.25				9	
DIF Launch Phase	34H	8.0	4.0	0.50	0.25					7
DIF Launch Phase	DSS-54	6.0	4.0	0.50	0.25				4	
DIF Launch Phase	DSS-26	8.0	4.0	0.50	0.25				4	
DSN Antenna Cal	70M	4.5	4.5				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 Bearing Mntc	DSS-63	8.0	8.0							1
DSS Maintenance	DSS-54	6.0	6.0			1	1	1	1	
DSS Maintenance	DSS-25	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-15	8.0	6.0					1		1
DSS Maintenance	DSS-15	6.0	6.0			1	1			
DSS Maintenance	DSS-15	4.0	4.0						1	
DSS Maintenance	DSS-43	8.0	8.0					1		
DSS Maintenance	DSS-45	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0			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-24	8.0	6.0					1		
DSS Maintenance	DSS-26	8.0	6.0			1	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-43	8.0	8.0							1
DSS Maintenance	DSS-16	8.0	6.0							1

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		January				
		Ave	Min	Pre	Post	1	2	3	4	5
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	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-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			
GBRA Host Country	DSS-43	8.0	8.0	0.75	0.25					3
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	5.0	5.0	1.50	0.50					3
M01O Map/MERA D/L	70M	8.0	4.0	1.50	0.25		7	7	7	7
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25					5
M01O Map/MGS Map	DSS-25,34,54	8.0	4.0	2.00	0.25	2				
M01O Mapping	70M	8.0	4.0	0.50	0.25	3	14	6		8
M01O Mapping	70M	6.0	4.0	0.50	0.25	1				
M01O Mapping	DSS-25,34,54	8.0	4.0	0.50	0.25	8		4	12	
M01O Mapping	DSS-25,34,54	6.0	4.0	0.50	0.25			1		
M01O Mapping	DSS-25,34,54	2.0	2.0	0.50	0.25				1	
MERA Approach	DSS-45,65	8.0	4.0	0.50	0.25	6				
MERA Approach/VLBI	DSS-14	10.0	9.0	0.50	0.25	6				
MERA Approach/VLBI	DSS-43,63	7.0	7.0	0.50	0.25	8				
MERA EDL Array	DSS-43/45/34	4.0	4.0	0.50	0.25	1				
MERA EDL Array	DSS-15/24/25/26	4.0	4.0	0.50	0.25	1				
MERA EDL U/L	DSS-14	9.0	4.0	0.50	0.25	1				
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		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		January				
		Ave	Min	Pre	Post	1	2	3	4	5
MERB Approach	DSS-63,65	8.0	4.0	0.50	0.25			2		
MERB Approach	DSS-15,26	8.0	4.0	0.50	0.25		3			
MERB Approach	DSS-45,65	8.0	4.0	0.50	0.25	5	10		2	
MERB Approach	DSS-26,34,54	8.0	4.0	0.50	0.25	6				
MERB Approach	DSS-26	8.0	4.0	0.50	0.25	1				
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				2	
MERB Approach/VLBI	DSS-15	9.0	9.0	0.50	0.25				3	
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	1	
MERB Approach/VLBI	DSS-15,26	9.0	9.0	0.50	0.25		4	3		
MERB Approach/VLBI	DSS-26	9.0	9.0	0.50	0.25	3				
MERB EDL Array	DSS-43/45/34	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 Surface.	70M	8.0	4.0	1.50	0.25					2
MERB TCM	70M	8.0	4.0	0.50	0.25			3		
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 Capture	DSS-63	8.0	5.0	0.50	0.25				1	
MEX Capture	DSS-63	4.0	4.0	0.50	0.25				1	
MEX Capture	DSS-55	8.0	5.0	0.50	0.25	7			4	
MEX Orbital Sci	DSS-24,54	8.0	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	DSS-34,55	8.0	4.0	0.50	0.25		4			
MGS Mapping	DSS-25	8.0	4.0	0.50	0.25			2		
MGS Mapping	DSS-25,26,45,65	8.0	4.0	0.50	0.25	14				
MGS Mapping	DSS-25,26,45,55	8.0	4.0	0.50	0.25					16

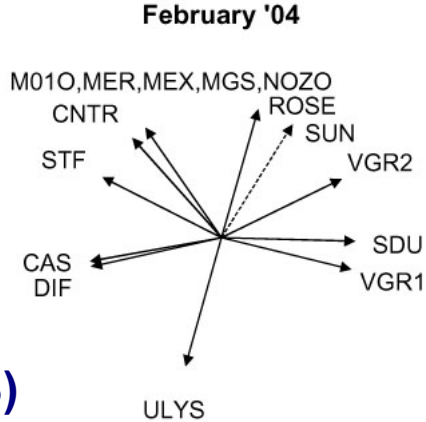
Resource Allocation Review
Analysis and Recommendations
2004 – January (Weeks 01 - 05) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		January				
		Ave	Min	Pre	Post	1	2	3	4	5
MGS Mapping	DSS-25,26	8.0	4.0	0.50	0.25		2			
MGS Mapping	DSS-26,45,65	8.0	4.0	0.50	0.25				14	
MGS Mapping	DSS-26,45,65	6.0	4.0	0.50	0.25				1	
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			
MGS TCM	DSS-25,45,65	8.0	4.0	0.50	0.25			6		
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25					
NOZO TCM	DSS-24,54	8.0	2.0	0.50	0.25	4				
RFC CAT M&E D-M4	15\45,15\65	24.0	24.0	1.50	0.50			1	1	
SDU P/Wild 2	70M	4.0	4.0	0.50	0.25	3				
SDU P/Wild 2	DSS-14	8.0	4.0	0.50	0.25	1				
SDU P/Wild 2	DSS-43	9.0	4.0	0.50	0.25	6				
SDU P/Wild 2	DSS-14,63	6.0	4.0	0.50	0.25	6				
SDU P/Wild 2	DSS-43	12.0	4.0	0.50	0.25		5	2		
SDU P/Wild 2	DSS-14,63	7.0	4.0	0.50	0.25		10	4		
SDU P/Wild 2	DSS-15,65	4.0	4.0	0.50	0.25		2			
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		
ULYS	DSS-15,24,34	14.0	4.0	0.50	0.25	5				
ULYS	DSS-24	5.0	4.0	0.50	0.25		1	1		
ULYS	DSS-24,34	10.0	4.0	0.50	0.25				3	
ULYS	DSS-54	5.0	4.0	0.50	0.25		1	1		
ULYS	DSS-24	10.0	4.0	0.50	0.25		6	6		
ULYS Jupiter ENC	34B1	8.0	4.0	0.50	0.25				12	21
VGR2	DSS-43	8.0	4.0	0.50	0.25				7	7
VGR2	DSS-45	8.0	4.0	0.50	0.25			7		
VGR2	DSS-34,43,45	4.0	4.0	0.50	0.25	14				
VGR2	DSS-34,43,45	8.0	4.0	0.50	0.25		7			
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	
WIND	34B1	4.0	4.0	0.50	0.25					3

Resource Allocation Review Analysis and Recommendations

2004 – February (Weeks 06 - 09)



EVENTS

Cassini approach

European VLBI Network E500 J-M4 quarterly epoch (Week 08)

GSSR Asteroid 6239 Minos (Week 06, DOY 033-036)

Gravity Probe-B BR080n SOC-M4 quarterly epoch (Week 06)

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B surface operations

Mars Express orbital science

Mars Global Surveyor mapping

Mars Odyssey mapping

Stardust TCM (Week 06, DOY 033)

SOHO TSO (Week 7)

Ulysses Jupiter encounter, continuous

Voyager 1 MAGROL (Week 06, DOY 037)

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

ANALYSIS

Moderate to severe contention is forecast on the 70M Subnet in Weeks 06 through 09. Contention is due to a total of 23 passes requested to support Mars Odyssey standalone mapping, mapping MSPA with Mars Exploration Rovers -A and -B surface operations, Mars Exploration Rover-A standalone surface operations and Mars Express Bi-Static radar. The noted missions are also in contention with the daylight hours requested for DSS maintenance.

RECOMMENDATION

Mars Exploration Rover-A delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Odyssey.

Mars Odyssey delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Exploration Rover-A. Move 2 standalone 70M passes/Week to DSS-26,34,55.

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		February			
		Ave	Min	Pre	Post	6	7	8	9
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	3	3	3	3
DSN Antenna Cal	70M	8.0	4.5			1	1		1
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-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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
DSS Maintenance	DSS-66	8.0	6.0			1		1	1
DSS Maintenance	DSS-46	4.0	4.0				1		
DSS Maintenance	DSS-66	6.0	6.0				1		
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1		1	1
DSS Maintenance	DSS-16	6.0	6.0				1		
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	4.0	4.0						
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-63	8.0	8.0						
DSS Maintenance	DSS-14	8.0	8.0			1	2	2	1
DSS Maintenance	DSS-14	4.0	4.0						
DSS Maintenance	DSS-14	6.0	6.0						1
DSS Maintenance	DSS-43	8.0	8.0						
DSS Maintenance	DSS-63	8.0	8.0						

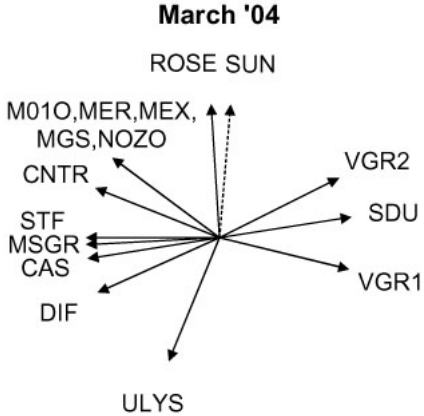
Resource Allocation Review
Analysis and Recommendations
2004 – February (Weeks 06 - 09) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		February			
		Ave	Min	Pre	Post	6	7	8	9
DSS Maintenance	DSS-14	8.0	8.0						
EVN E500 J-M4	DSS-14\63	8.0	8.0	1.50	0.50			3	
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50	1			
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50	1			
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50	1			
GSSR Ast 6239 Mino	DSS-14	5.0	5.0	1.50	0.50	1			
M01O Map/MERA D/L	70M	8.0	4.0	1.50	0.25	5	5	5	5
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	8	8	8	8
MERA Surface.	70M	8.0	4.0	1.50	0.25	2	2	2	2
MEX Orbital Sci	DSS-24,54	8.0	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-25,26,45,55	8.0	4.0	0.50	0.25	16	16	16	16
SDU TCM	34H	4.0	4.0	0.50	0.25	14	14	2	2
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	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		
ULYS Jupiter ENC	34B1	8.0	4.0	0.50	0.25	15	15	15	15
ULYS Jupiter ENC	DSS-24,43,54	8.0	4.0	0.50	0.25	6	6	6	6
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-15	7.0	4.0	0.75	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2004 – March (Weeks 10 - 13)



EVENTS

Cassini approach

Genesis maneuver (Week 11, DOY 070-071)

Microwave Anisotropy Probe maneuver (Week 13, DOY 082-088)

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B surface operations

Mars Express orbital science and Bi-Static radar

Mars Global Surveyor mapping

Mars Odyssey mapping

MESSENGER launch (Week 11, DOY 070)

SOHO TSO (Week 10)

Ulysses Jupiter encounter (Week 10-11, ending DOY 071)

Voyager 2 DTR PB (Week 11, DOY 070) ASCAL (Week 12, DOY 075) and MAGROL (Week 12, DOY 078)

Wind TCM in Week 10

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

ANALYSIS

1. Contention on the 70M Subnet is severe due to a total of 23 passes requested to support Mars Odyssey standalone mapping, mapping MSPA with Mars Exploration Rovers -A and -B surface operations, Mars Exploration Rover-A standalone surface operations and Mars Express Bi-Static radar. The noted missions are also in contention with the daylight hours requested for DSS maintenance.

2. Moderate contention is forecast on the 34BWG1 Subnet in Week 11. MESSENGER launches on DOY 070. Continuous support is requested using DSS-34 and 54 for the first 5 days of launch. The launch support is in contention with the last two days of Ulysses Jupiter encounter support and with Mars Express orbital science support at DSS-54. There is greater than 60% overlap between the mission viewperiods.

3. Contention is moderate to severe on the 26M Subnet in Week 10 due to requests for SOHO routine and 5-day continuous TSO, Polar Realtime and Playback, and DSS maintenance support.

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

RECOMMENDATION

Mars Exploration Rover-A delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Odyssey. (1)

Mars Odyssey delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Exploration Rover-A. Move 3 standalone passes/Week to the 34HEF. (1)

« MESSENGER » use DSS-55 for Madrid support on DOY 070 and 071. (2)

« Polar » move 12 playback and 3 real-time passes to the 34BWG1 Subnet. (3)

« SOHO » move 2 routine passes to the 34BWG1 Subnet. (3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		March			
		Ave	Min	Pre	Post	10	11	12	13
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	3	3	3	3
DSN Antenna Cal	70M	8.0	4.5			1	1		
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-54	6.0	6.0			1		1	1
DSS Maintenance	DSS-54	4.0	4.0				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-27	8.0	6.0			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-24	8.0	6.0			1		1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0				1		
DSS Maintenance	DSS-26	8.0	6.0			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
DSS Maintenance	DSS-46	4.0	4.0				1		
DSS Maintenance	DSS-66	6.0	6.0				1		
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-16	8.0	6.0			1		1	1
DSS Maintenance	DSS-16	6.0	6.0				1		
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
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		

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		March			
		Ave	Min	Pre	Post	10	11	12	13
GNS Maneuver	DSS-24,34	8.0	4.0	0.50	0.25		4		
M01O Map/MERA D/L	70M	8.0	4.0	1.50	0.25	5	5	5	5
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	8	8	8	8
MAP.	70M	0.7	0.6	1.25	0.25	7	7	7	4
MAP. Mnvr.	70M	5.0	5.0	1.25	0.25				1
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25				2
MERA Surface.	70M	8.0	4.0	1.50	0.25	2	2	2	2
MEX Orbital Sci	DSS-24,54	8.0	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-25,26,45,55	8.0	4.0	0.50	0.25	16	16	16	16
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25			7	5
MSGR Launch	DSS-26,34,54	8.0	7.0	1.00	0.25		12		
MSGR Launch	DSS-26,34,54	8.0	7.0	3.00	0.25		3		
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
SOHO	26M	9.6	6.0	0.70	0.20		7	7	7
SOHO	26M	8.0	6.0	0.70	0.20	2			
SOHO	26M	1.6	1.6	0.70	0.20	6	14	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			
ULYS	DSS-45,65	5.0	4.0	0.50	0.25		3		
ULYS	DSS-24	5.0	4.0	0.50	0.25		3		
ULYS	DSS-24,34	10.0	4.0	0.50	0.25			5	6
ULYS Datation TST	DSS-24,54	12.0	4.0	2.00	0.25			1	
ULYS Jupiter ENC	34B1	8.0	4.0	0.50	0.25	15	9		
ULYS Jupiter ENC	DSS-24,43,54	8.0	4.0	0.50	0.25	6	3		
VGR2	DSS-43	8.0	4.0	0.50	0.25		2		
VGR2	DSS-45	8.0	4.0	0.50	0.25	7	5	7	7
VGR2	DSS-34	8.0	4.0	0.50	0.25			1	
VGR2	DSS-34	4.0	4.0	0.50	0.25			6	

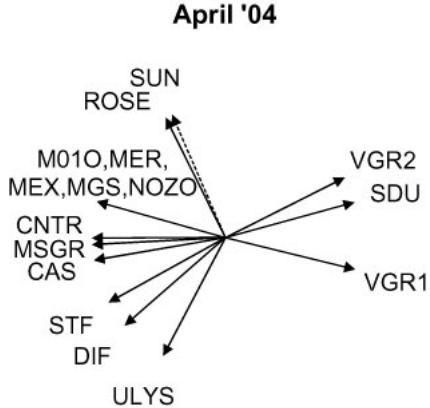
Resource Allocation Review
Analysis and Recommendations
2004 – March (Weeks 10 - 13) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		March			
		Ave	Min	Pre	Post	10	11	12	13
VGR2 ASCAL	DSS-43	2.0	2.0	0.75	0.25			1	
VGR2 DTR P/B	DSS-43	7.4	4.0	0.75	0.25		1		
VGR2 MAGROL	DSS-43	7.0	4.0	0.75	0.25			1	
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2004 – April (Weeks 14 - 18)



EVENTS

DSS-15 proposed downtime (antenna controller replacement, starts Week 16)

DSS-46 proposed downtime (servo drive replacement, starts Week 16)

Cassini approach

Genesis maneuver (continuous Week 17, DOY 113-114)

Mars Exploration Rover-A surface operations

Mars Exploration Rover-B surface operations

Mars Express orbital science

Mars Global Surveyor mapping

Mars Odyssey mapping

MUSES-C TCM (Week 18, DOY 120-123)

SOHO TSO (Week 15)

Voyager 1 DTR array (Week 18, DOY 120)

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

ANALYSIS

1. Contention on the 70M Subnet is moderate to severe due to a total of 23 passes requested to support Mars Odyssey standalone mapping, mapping MSPA with Mars Exploration Rovers-A and -B surface operations, Mars Exploration Rover-A standalone surface operations and Mars Express Bi-Static radar. The noted missions are also in contention with the daylight hours requested for DSS maintenance.

2. Low contention levels are forecast on the 34 meter and 26-meter Subnets but some changes to users' requests in Weeks 16-18 are needed to approve the antenna controller replacement downtime at DSS-15 and the servo drive replacement at DSS-46.

RECOMMENDATION

« Advanced Composition Explorer » change current support request in Weeks 16-18 and use 6 passes at DSS-27 and 1 pass at DSS-16,66. (2)

« Cluster » remove DSS-15 and DSS-46 from SSO simultaneous tracking requests in Weeks 16-18. On a best efforts (no impact to 70M users) basis, DSS-14 may replace DSS-15 during mid-range planning process. (2)

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

RECOMMENDATION

« Deep Impact » change cruise requests in Weeks 16-18 to use DSS-26 instead of DSS-15. (2)

« DSS » Maintenance downtime approved at DSS-15 and 46. Delete preventative maintenance at DSS-15 and DSS-46 in Weeks 16-18. (2)

« Geotail » use DSS-16,27,66 for support in Weeks 16-18. (2)

« GSSR » move Week 18 GODR support to Week 11. (2)

Mars Exploration Rover-A delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Odyssey. (1)

Mars Odyssey delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Exploration Rover-A. In Weeks 14-15 move 3 standalone passes/Week to the 34HEF and in Weeks 16-18 move 3 passes/Week to DSS-26,45,65. (1, 2)

« Polar » in Weeks 16-18 change current support request and use DSS-16,27,66 for 16 playback and 4 real-time passes and use the 34BWG1 for 12 playback and 3 real-time passes. (2)

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

RECOMMENDATION (continued)

Reference Frame Calibration move Weeks 16 and 17 CAT M&E supports to Weeks 13 and 14. Move Weeks 16 and 18 Clock Sync supports to Weeks 09 and 11. (2)

Space Geodesy Program move Week 17 Crustal Dynamics H-M4 support to Week 09. (2)

« SOHO » in Weeks 16-18 remove DSS-46 from the resource request and use DSS-16,34,66 for 9.5-hour passes and DSS-16,27,34,66 for 1.6-hour passes. (2)

« Stardust » remove DSS-15 from cruise request in Week 16-18 and use DSS-45 or 65 for support. (2)

« Voyager 1 » change Week 18 DSS-14/15 DTR array request to DSS-14/26. (2)

Resource Allocation Review Analysis and Recommendations

2004 – April (Weeks 14 - 18) (continued)

RESOURCE REQUEST

User	Resource	Durations		Calibration		April				
		Ave	Min	Pre	Post	14	15	16	17	18
ACE	DSS-27	3.5	3.5	0.40	0.20	7	7	7	7	7
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	4	7	7	7	7
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-16/27/24/15	1.5	1.0	0.50	0.25		1			
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1		1		1
DIF Cruise	34H	8.0	4.0	0.50	0.25				1	
DIF Cruise	DSS-15	8.0	4.0	0.50	0.25		1			
DSN Antenna Cal	70M	8.0	4.5			1	1	1		1
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-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			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-24	8.0	6.0			1	1	1		1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-24	8.0	6.0						1	
DSS Maintenance	DSS-26	8.0	6.0			1	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-46	4.0	4.0				1			
DSS Maintenance	DSS-66	6.0	6.0				1			
DSS Maintenance	DSS-43	8.0	8.0			1	1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1		1	1	1
DSS Maintenance	DSS-16	6.0	6.0				1			
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-63	10.5	8.0				1	1		1

Resource Allocation Review Analysis and Recommendations

2004 – April (Weeks 14 - 18) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		April				
		Ave	Min	Pre	Post	14	15	16	17	18
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1	1
DSS Maintenance	DSS-14	8.0	8.0			1	2	2	2	2
GNS	34B1	4.0	4.0	0.50	0.25	4	7	7		6
GNS	34B1	8.0	4.0	0.50	0.25	3			3	1
GNS	34B1	6.0	4.0	0.50	0.25				2	
GNS Maneuver	34B1	8.0	4.0	0.50	0.25				6	
GSSR GODR	DSS-14/15	8.0	4.0	1.50	0.50					1
GTL	26M	1.1	1.1	0.40	0.20	21	21	21	21	21
M01O Map/MERA D/L	70M	8.0	4.0	1.50	0.25	5	5	5	5	5
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25	7	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	8	8	8	8	8
MERA Surface.	70M	8.0	4.0	1.50	0.25	2	2	2	2	2
MEX Orb Sci/MGS	DSS-24,54	8.0	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
MGS Mapping	DSS-25,26,45,65	8.0	4.0	0.50	0.25	9	9	9	9	9
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25	3	2	3	2	3
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25					4
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	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	7
RFC CAT M&E D-M4	15\45,15\65	24.0	24.0	1.50	0.50			1	1	
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50	1		1		1
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1	1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50			1		1
SGP Crust Dyn H-M4	DSS-15	24.0	24.0	1.50	0.50				1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50		1	1		
SOHO	34B1	8.0	6.0	0.50	0.25		2			
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	6	14	14	14
SOHO TSO	34B1	8.0	4.0	0.50	0.25		1			

Resource Allocation Review Analysis and Recommendations

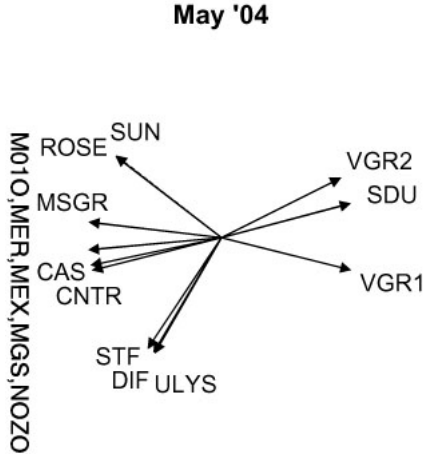
2004 – April (Weeks 14 - 18) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		April				
		Ave	Min	Pre	Post	14	15	16	17	18
SOHO TSO	26M	8.0	4.0	0.70	0.20		14			
VGR1	DSS-65	4.0	4.0	0.50	0.25				7	7
VGR1	DSS-26,65	8.0	4.0	0.50	0.25	14	14	14		
VGR1	DSS-25,26	8.0	4.0	0.50	0.25				7	7
VGR1	DSS-55	4.0	4.0	0.50	0.25				7	7
VGR1 DTR Array	DSS-14/15	7.4	4.0	0.75	0.25					1
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2004 – May (Weeks 19 - 22)



EVENTS

DSS-15 proposed downtime (antenna controller replacement)

DSS-46 proposed downtime (servo drive replacement, ends Week 21)

Cassini approach and TCM (Week 22, DOY 147)

Deep Impact TCM (Week 22)

European VLBI Network E500 J-M4 quarterly epoch (Week 22)

Genesis maneuver (continuous Week 22, DOY 146-147)

Gravity Probe-B BR080n SOC-M4 quarterly epoch (Week 21)

Mars Exploration Rover-A surface operations

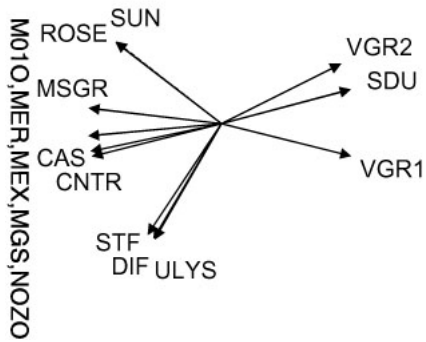
Mars Exploration Rover-B surface operations

Mars Express orbital science

Mars Global Surveyor mapping

Mars Odyssey mapping/relay

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



EVENTS (continued)

MUSES-C TCM (Week 19-21, DOY 124-144) and Earth Swingby (start Week 22, DOY 145)

SOHO TSO (Week 19) and HSO (continuous Week 20-22)

Voyager 1 ASCAL (Week 19, DOY 125) and MAGROL (Week 19, DOY 128)

Wind TCM in Week 20

ANALYSIS

1. Severe contention levels are forecast on the 70M Subnet in Week 19. Contention is due to a total of 26 passes requested to support Mars Odyssey standalone mapping, mapping MSPA with Mars Exploration Rovers -A and -B, Mars Exploration Rover-A standalone surface operations, Mars Express Bi-Static radar, and Nozomi radio science. The noted missions are also in contention with the daylight hours requested for DSS maintenance.

2. Low contention levels are forecast on the 34-meter and 26-meter Subnets but some changes to users requests are needed to approve the antenna controller replacement downtime at DSS-15 and the servo drive replacement at DSS-46.

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

RECOMMENDATION

« Advanced Composition Explorer » change current support request in Weeks 19-21 and use 6 passes at DSS-27 and 1 pass at DSS-16,66. (2)

« Cluster » remove DSS-15 from SSO and MSO simultaneous tracking requests in Weeks 19-22 and DSS-46 in Weeks 19-21. On a best efforts (no impact to 70M users) basis, DSS-14 may replace DSS-15 during mid-range planning process. (2)

« DSS » Maintenance downtime approved. Schedule antenna controller replacement at DSS-15 in Weeks 19-22 and servo drive replacement at DSS-46 in Weeks 19-21. Delete preventative maintenance at the respective antennas during the downtime. (2)

« Deep Impact » change cruise and TCM requests to use DSS-26 instead of DSS-15. (2)

« Geotail » use DSS-16,27,66 for support in Weeks 19-21. (2)

« GSSR » move Weeks 20 and 22 GODR supports to Weeks 13 and 15. (2)

Mars Exploration Rover-A in Week 19 delete 2 standalone passes/Week and MSPA 2 additional passes/Week with Mars Odyssey. (1)

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

RECOMMENDATION (continued)

Mars Odyssey in Week 19 delete 2 standalone passes and MSPA 2 additional passes with Mars Exploration Rover-A. Move 3 standalone passes to DSS-26,45,65. (1)

« Polar » in Weeks 19-21 change 26M support request and use DSS-16,27,66 for 16 playback and 4 real-time passes. (2)

« Reference Frame Calibration » use DSS-14\45 or DSS-14\65 to support Week 22 CAT M&E and use DSS-14\63 to support Week 20 and 22 Clock Syncs. (2)

« SOHO » delete Week 20-22 HSO support and move Week 19 TSO, as currently allocated, to Week 22. In Weeks 19-21 use DSS-16,34,66 for seven 9.5-hour passes and DSS-16,27,34,66 for fourteen 1.6-hour passes. (2)

« Stardust » remove DSS-15 from request and use DSS-45,65 for support. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		May			
		Ave	Min	Pre	Post	19	20	21	22
ACE	DSS-27	3.5	3.5	0.40	0.20	7	6	6	6
ACE	26M	3.5	3.5	0.70	0.20		1	1	1
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	7	7	7	6
CAS TCM Day	DSS-45,65,25	8.0	4.0	0.50	0.25				3
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	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	1	1
CLU4 1/2/3/4 MSO	DSS-16/27/24/15	1.5	1.0	0.50	0.25				1
CLU4 1/2/3/4 MSO	DSS-46/34/45/43	1.5	1.0	0.50	0.25	1			
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	
DIF TCM	DSS-15,45,55	8.0	4.0	0.50	0.25				7
DSN Antenna Cal	70M	8.0	4.5			1	1		
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-54	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-27	8.0	6.0			1			
DSS Maintenance	DSS-27	6.0	6.0				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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-46	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-66	4.0	4.0				1	1	1
DSS Maintenance	DSS-66	6.0	6.0			1			
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-16	4.0	4.0				1	1	1
DSS Maintenance	DSS-16	6.0	6.0			1			
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		May			
		Ave	Min	Pre	Post	19	20	21	22
DSS Maintenance	DSS-63	10.5	8.0			1			
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1
DSS Maintenance	DSS-63	8.0	8.0					1	1
DSS Maintenance	DSS-14	8.0	8.0			2	2	1	1
DSS Maintenance	DSS-14	6.0	6.0					1	1
EVN E500 J-M4	DSS-14\63	8.0	8.0	1.50	0.50				2
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
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50			1	
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50			1	
GPB BR080n SOC-M4	DSS-14	8.0	8.0	1.50	0.50			1	
GSSR GODR	DSS-14/15	8.0	4.0	1.50	0.50		1		1
GTL	26M	1.1	1.1	0.40	0.20	21	21	21	21
M01O Map/MERA D/L	70M	8.0	4.0	1.50	0.25	5	2		
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25	7	7	7	7
M01O Mapping	70M	8.0	4.0	0.50	0.25	8	9	7	7
MERA Surface.	70M	8.0	4.0	1.50	0.25	2			
MEX Orb Sci/MGS	DSS-24,54	8.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-63	3.0	3.0	0.50	0.25	1	1	1	1
MGS Mapping	DSS-25,26,45,65	8.0	4.0	0.50	0.25	9	7	7	7
MGS Mapping	DSS-25,26,45,65	6.0	4.0	0.50	0.25		2		
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	4	4	
NOZO RS	DSS-14	3.0	2.0	0.50	0.25	1	1	1	1
NOZO RS	DSS-63	3.0	2.0	0.50	0.25	2	2	2	2
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
RFC CAT M&E D-M4	15\45,15\65	24.0	24.0	1.50	0.50				1

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

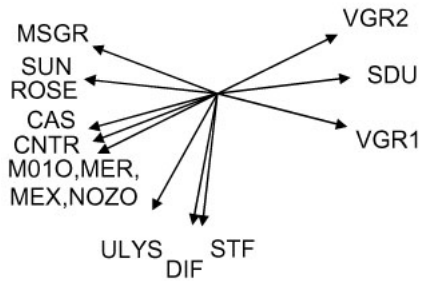
RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		May			
		Ave	Min	Pre	Post	19	20	21	22
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50		1		1
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50	1			
SGP Crust Dyn W-M4	DSS-45	8.0	8.0	1.50	0.50			3	3
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			
VGR1	DSS-65	4.0	4.0	0.50	0.25	7			
VGR1	DSS-26,65	8.0	4.0	0.50	0.25		14	14	14
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			
VGR1 ASCAL	DSS-14	2.0	2.0	0.75	0.25	1			
VGR1 MAGROL	DSS-14	7.0	4.0	0.75	0.25	1			
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2004 – June (Weeks 23 - 26)

June '04



EVENTS

Proposed DSS-15 Downtime (Antenna Controller Replacement) in Weeks 23 and 24

Cassini Saturn Approach and TCM in Week 25, DOY 168

Deep Impact TCM in Weeks 23-25

GBRA RA500 SOC-M4 in Week 24

GSSR Asteroid 1998SF36 in Weeks 25 and 26

Lunar-A Lunar Orbit Insertion in Week 25

Mars Exploration Rover-B Surface Operations

Mars Express Bi-Static Radar, Orbital Science, and Occultation

Mars Odyssey THEMIS Mapping 70M and MSPA support with Mars Exploration Rover-B in Weeks 23-25

MESSENGER Venus Flyby 1 in Week 26, DOY 176

MUSES-C Earth Swingby in Week 23, DOY 155

Nozomi Radio Science

SOHO HSO continuous

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

ANALYSIS

1. (70M) Moderate contention on the 70M Subnet for DSS Bearing and Routine maintenance support in Week 24 due to viewperiod overlap with Mars Express Bi-Static Radar, Mars Odyssey Mapping, Mars Odyssey MSPA with Mars Exploration Rover-B, Nozomi R/S and GBRA RA500 24-hour simultaneous support at DSS-14\63. Severe contention for GSSR Asteroid 1998SF36 in Week 26 due to extreme viewperiod overlap with Mars and maintenance daylight view.

2. (34HEF) Contention on the 34HEF Subnet in Weeks 25 and 26 is moderate to severe for DSS maintenance due to Cassini TCM and Critical Sequence activities, Reference Frame Calibration Clock Sync simultaneous support, Space Geodesy Program 24-hour support, and Voyager 1 routine support.

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

ANALYSIS (continued)

3. (34BWG1) Contention on the 34BWG1 Subnet is moderate to severe caused by extreme viewperiod overlap with DSS maintenance, Deep Impact TCM and Cruise support, Mars Express Orbital Science and Occultation in Weeks 25 and 26, MESSENGER routine and Venus Flyby 1 support in Weeks 25 and 26, Ulysses routine support, Wind routine support, SOHO HSO continuous, and the proposed downtime for DSS-15 in Weeks 23 and 24.

   The contention levels are workable for the 34BWG2, 34HSB, and the 26M Subnets and should resolve during mid-range planning and negotiations.

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

RECOMMENDATION

« Cassini » Critical Sequence support in Week 26 move 6 of 17 supports to DSS-34,55. TCM Day support in Week 25 change support at DSS-54,55 to DSS-65,55. (2)

« Deep Impact » requested support using DSS-25,34,55 to accommodate DSS-15 Downtime in Weeks 23 and 24 and DSS-54 maintenance in Week 26. (2)

« GBRA » M-Wave Spect and Planet R/Ast reduce supports in Weeks 24-26 from 9 hours to 4 hours. GBRA Host Country at DSS-45 move two 8-hour supports from Week 25 to Week 23. (1, 2)

« GSSR » Asteroid 1998SF36 move two 8-hour supports from Week 26 to Week 25 to accommodate DSS-14 maintenance. GSSR Orbital Debris delete supports in Weeks 24 and 26. (1, 2)

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

RECOMMENDATION (continued)

« Mars Odyssey » Mapping change standalone support in Week 24 from the 70M to five 7-hour supports at DSS-43,63 and two split passes of 4-hours each at DSS-14,43. In Week 26, change 8-hour standalone support from the 70M to DSS-43,63. (1)

« Polar » move 2-hour Realtime supports in Weeks 24-26 from the 34BWG1 to DSS-27. (3)

« SOHO » HSO move 8-hour supports in Weeks 24-26 from DSS-34,54 to DSS-46,66. (3)

Space Geodesy Program move support from Week 26 to Week 23. (2)

« Ulysses » change support in Weeks 24-26 to seven 5-hour split passes at DSS-24,34,43 and seven 5-hour split passes at DSS-54,63. (3)

« Voyager 2 » in Weeks 25 and 26 change seven 8-hour supports at DSS-45 to seven split passes of 4 hours each at DSS-43 and DSS-34, and reduce seven 4-hour supports at DSS-45 to six supports. (2, 3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
CAS Approach	DSS-45,25	9.0	8.5	0.50	0.25	7	7	6	
CAS Critical Seq	DSS-15,45,65	8.0	4.0	1.00	0.25				17
CAS TCM Day	DSS-45	4.0	4.0	0.50	0.25			1	
CAS TCM Day	DSS-54,55	8.0	4.0	0.50	0.25			1	
CAS TCM Day	DSS-25	13.0	4.0	0.50	0.25			1	
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25				1
DIF TCM	DSS-15,34,45	8.0	4.0	0.50	0.25	9	13	7	
DSN Antenna Cal	70M	8.0	4.5			1	1	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			1
DSS Maintenance	DSS-54	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-27	6.0	6.0			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	
DSS Maintenance	DSS-45	5.0	5.0			1			1
DSS Maintenance	DSS-24	8.0	6.0			1	1		
DSS Maintenance	DSS-24	6.0	6.0					1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	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-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	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	
DSS Maintenance	DSS-14	6.0	6.0			1			1

Resource Allocation Review Analysis and Recommendations

2004 – June (Weeks 23 - 26) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
GBRA Host Country	DSS-45	8.0	8.0	0.75	0.25			2	
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3
GBRA Planet R/Ast	DSS-14	9.0	4.0	0.75	0.50	1	1	1	1
GBRA RA500 SOC-M4	DSS-14\63	8.0	6.0	1.50	0.50	3			
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
GSSR GODR	DSS-14/15	8.0	4.0	1.50	0.50		1		1
M01O Map/MERB D/L	70M	8.0	4.0	1.50	0.25	7	7	2	
M01O Mapping	70M	7.0	4.0	0.50	0.25				11
M01O Mapping	70M	4.0	4.0	0.50	0.25				3
M01O Mapping	70M	8.0	4.0	0.50	0.25	7	7	7	
MEX Orb Sci/Occ	DSS-24,54	14.6	4.0	0.50	0.25			7	7
MEX Orbital Sci	DSS-24,54	8.0	6.0	0.50	0.25	7	7		
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25			1	
MEX R/S Bi Static	DSS-63	3.0	3.0	0.50	0.25		1		1
MEX R/S Bi Static	DSS-14	3.0	3.0	0.50	0.25	1			
MGS Mapping	DSS-25,26,45,65	6.0	4.0	0.50	0.25	4			
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25	3			
MSGR Venus FB1	DSS-26,34,54	8.0	7.0	1.00	0.25		5	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	
NOZO RS	DSS-14	3.0	2.0	0.50	0.25	2	1		1
NOZO RS	DSS-63	3.0	2.0	0.50	0.25	1	2		2
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
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50		1		1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1
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

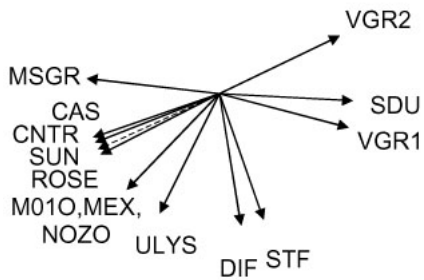
Resource Allocation Review
Analysis and Recommendations
2004 – June (Weeks 23 - 26) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June			
		Ave	Min	Pre	Post	23	24	25	26
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	12	12	12	12
ULYS	DSS-24,34	10.0	4.0	0.50	0.25	6	6	6	5
ULYS	DSS-34,54	10.0	4.0	0.50	0.25				1
VGR1	DSS-26,65	8.0	4.0	0.50	0.25	14	14	14	14
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1
VGR2	DSS-45	8.0	4.0	0.50	0.25			7	7
VGR2	DSS-45	4.0	4.0	0.50	0.25	7	7	7	7
VGR2	DSS-34,43,45	8.0	4.0	0.50	0.25	7	7		
VGR2 MAGROL	DSS-43	7.0	4.0	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

Resource Allocation Review Analysis and Recommendations

2004 – July (Weeks 27 - 31)



EVENTS

DSS-14 Downtime (Antenna Controller Replacement) beginning in Week 28, DOY 189 (Wednesday)

Cassini Saturn Orbit Insertion in Week 27, DOY 183 and 184

CONTOUR EGA in Weeks 28-31

Genesis Maneuver in Week 27, continuous on DOY 182 and 183

Gravity Probe B quarterly epoch in Week 28

Lunar-A Lunar Orbit Insertion and Operations

Mars Express Bi-Static Radar, Orbital Science, and Occultation

Mars Odyssey THEMIS Mapping on 70M

MESSENGER Venus Post Flyby 1 in Weeks 27-28

MUSES-C TCM in Weeks 27-28

Nozomi Radio Science

SOHO HSO continuous

Space Technology 5 Launch and Launch support beginning in Week 29.

Wind Maneuver in Week 30, DOY 205

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

ANALYSIS

1. (70M) Severe contention in Week 27 during the Cassini Saturn Orbit Insertion continuous support impacting DSS maintenance. Moderate contention at DSS-43, and 63 in Week 28-31 for DSS bearing maintenance due to viewperiod overlap with Cassini, CONTOUR in Week 28, GBRA Host Country 24-hour support in Week 28, Mars Express Bi-Static Radar, Nozomi R/S and Mars Odyssey Mapping compounded by DSS-14 downtime for Antenna Controller Replacement.

2. (34HEF) Moderate contention on the 34HEF in Week 27 with Cassini, Deep Impact, and Space Geodesy Program 24-hour support.

3. (34BWG1) Moderate to severe contention on the 34BWG1 Subnet for DSS maintenance, SOHO HSO, Ulysses due to viewperiod overlap with Chandra, Deep Impact Cruise support, MESSENGER Post Venus Flyby 1, Mars Express Orbital Science and Occultation, MUSES-C TCM, routine support for Polar Realtime and Playback, Voyager 2, and Wind routine and TCM support.

4. (34BWG2) Moderate contention on the 34BWG2 Subnet in Week 29 for Space Technology 5 Launch and Launch support.

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

ANALYSIS (continued)

5. (26M) Moderate to severe contention on the 26M Subnet in Week 29 for Space Technology 5 Launch and Launch support.

RECOMMENDATION

« Advanced Composition Explorer » change 26M support in Week 29 to DSS-66 only. (5)

« DSS » reduce routine maintenance to one 9.5-hour support at DSS-63 and delete Bearing and one routine Maintenance at DSS-14 in Week 27. (1)

« GBRA » M-Wave Spect reduce supports from 9 hours to 4 hours in Weeks 27, 28, and 31. Planet R/Ast reduce supports from 9 hours to 4 hours in Weeks 27 and 28. (1)

« Lunar-A » support in Week 29, requested support using DSS-16. (5)

« Mars Odyssey » Mapping in Weeks 27 and 28, move 2 supports from the 70M to the 34HEF. (1)

« Mars Express » change Bi-Static support from DSS-14,63 to DSS-14 in Weeks 27 and 28. (1)

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

RECOMMENDATION (continued)

« MESSENGER » move supports from DSS-26,34,54 to DSS-26,34 in Weeks 29-31. (3)

« Polar » move Playback and Realtime supports in Weeks 27 and 29 from 34BWG1 to DSS-27,26M and move 8 playback passes in Week 29 from 26M to DSS-27. (3, 5)

« SOHO » HSO supports in Weeks 27 and 29 at DSS-34,54 change 8-hour supports to split passes of 4 hours each and use DSS-34,45 and DSS-54,65 (two 4-hour passes at DSS-34,45 and two 4-hour passes at DSS-54,65). In Week 29, change 6 passes at DSS-46,66 to DSS-66 and the remaining 6 passes to split passes of 4 hours each at DSS-63,54 and DSS-65,45. (3, 5)

Space Geodesy Program 24-hour support at DSS-45 move from Week 27 to Week 28. (2)

Space Technology 5 move Week 29 supports from DSS-24,25 to DSS-24,26. (4)

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

RECOMMENDATION (continued)

« Ulysses » requested support in Weeks 27-31 using 6 split passes of 5 hours each on the 34BWG1 and 6 split passes of 5 hours each on the 70M,34HEF. (3)

« Voyager 1 » move Week 27 support from DSS-65 to DSS-25,55. (2)

« Voyager 2 » delete DSS-34 support in Week 27. Reduce routine support at DSS-34,45 from 16 hours to 8 hours and use DSS-43 in Weeks 28, 30 and 31. (2, 3)

« Wind » requested support using DSS-24,54 in Weeks 27-29 and Week 31. Add one 2-hour pre-maneuver pass per Week at DSS-34 in Weeks 28 and 29.

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
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 Critical Seq	DSS-15,45,65	8.0	4.0	1.00	0.25	9				
CAS SOI	70M	8.0	4.0	0.50	0.25	6				
CAS Tour	DSS-65,25	9.0	4.0	0.50	0.25	2	7	7	7	7
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21	21
CNTR	DSS-43,63	4.0	4.0	0.50	0.25		2			
CNTR EGA	34H	8.0	6.0	0.50	0.25		3	4	3	4
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	1	1
DSN Antenna Cal	70M	4.5	4.5			1				
DSN Antenna Cal	DSS-43,63	4.5	4.5				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-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	6.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-46	6.0	6.0						1	1
DSS Maintenance	DSS-66	8.0	6.0						1	1
DSS Maintenance	DSS-46	4.0	4.0			1	1	1		
DSS Maintenance	DSS-66	4.0	4.0			1	1	1		
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-16	8.0	6.0						1	1
DSS Maintenance	DSS-16	4.0	4.0			1	1	1		
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-63	10.5	8.0			1				

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
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
GBRA Host Country	DSS-63	8.0	8.0				3			
GBRA Host Country	DSS-43	8.0	8.0	0.75	0.25			3		
GBRA Host Country	DSS-45	12.0	12.0	0.75	0.25			1		
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3			
GBRA M-Wave Spect	DSS-43,63	9.0	4.0	0.50	0.50			2	2	2
GBRA Planet R/Ast	DSS-14	9.0	4.0	0.75	0.50	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				
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50		1			
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50		1			
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50		1			
LUNA	DSS-16,66	8.0	6.0	0.70	0.20	7	7	7		
M01O Map/MEX R/S	DSS-63	7.0	4.0	2.00	0.25			1	1	1
M01O Mapping	70M	7.0	4.0	0.50	0.25	11	2			
M01O Mapping	70M	4.0	4.0	0.50	0.25	3				
M01O Mapping	DSS-43,63	7.0	4.0	0.50	0.25		9			
M01O Mapping	DSS-43,63	8.0	4.0	0.50	0.25			7	10	10
M01O Mapping	DSS-43,63	5.0	4.0	0.50	0.25		1	2	1	1
M01O Mapping	DSS-45,65	7.0	4.0	0.50	0.25		2	2	2	2
MEX Orb Sci/Occ	DSS-24,54	14.6	4.0	0.50	0.25	7	7			
MEX Orbital Sci	DSS-24,54	8.0	6.0	0.50	0.25			7	7	7
MEX R/S Bi Static	DSS-14,63	3.0	3.0	0.50	0.25	1	1			
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25			3	2	3
MSGR Venus FB1	DSS-26,34,54	8.0	7.0	1.00	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

Resource Allocation Review Analysis and Recommendations

2004 – July (Weeks 27 - 31) (continued)

RESOURCE REQUEST (continued)

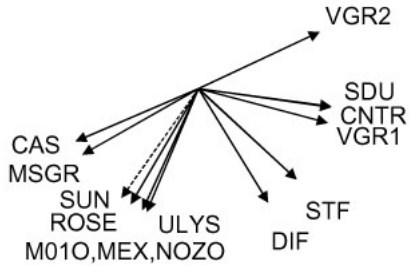
User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
POLR PB	34B1	1.0	0.8	0.50	0.25	12	12	12		
POLR PB	26M	1.0	0.8	0.70	0.20	16	16	16	28	28
POLR RT	34B1	2.0	2.0	0.50	0.25	3	3	3		
POLR RT	26M	2.0	2.0	0.70	0.20	4	4	4	7	7
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50	1	1			
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
ST5	DSS-24,25	1.5	1.5	0.50	0.25					4
ST5	DSS-34	1.5	1.5	0.50	0.25					6
ST5	DSS-54,55	1.5	1.5	0.50	0.25					6
ST5 launch	DSS-24,25	10.0	10.0	3.00	0.25			1		
ST5 launch	DSS-16	10.0	10.0	3.00	0.25			1		
ST5 launch	DSS-34	7.0	7.0	0.50	0.25			1		
ST5 launch	DSS-46	7.0	7.0	0.50	0.25			1		
ST5 Phase A	DSS-24,25	1.5	1.5	0.50	0.25			11	11	
ST5 Phase A	DSS-34	1.5	1.5	0.50	0.25			5	5	
ST5 Phase A	DSS-16	1.5	1.5	0.50	0.25			11	11	
ST5 Phase A	DSS-46	1.5	1.5	0.50	0.25			5	5	
ST5 Phase B	DSS-24,25	1.0	1.0	0.50	0.25			6	6	
ST5 Phase B	DSS-34	1.0	1.0	0.50	0.25			2	2	
ST5 Phase B	DSS-16	1.0	1.0	0.50	0.25			6	6	
ST5 Phase B	DSS-46	1.0	1.0	0.50	0.25			2	2	
ULYS	DSS-24,34	10.0	4.0	0.50	0.25	6	6			
ULYS	DSS-34,54	10.0	4.0	0.50	0.25			6	6	6
VGR2	DSS-45	8.0	4.0	0.50	0.25	7	1	7	1	1
VGR2	DSS-45	4.0	4.0	0.50	0.25		1		1	1
VGR2	DSS-34,45	16.0	4.0	0.50	0.25		6		6	6
VGR2	DSS-34	8.0	4.0	0.50	0.25	1				
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July				
		Ave	Min	Pre	Post	27	28	29	30	31
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3
WIND TCM	DSS-24	3.0	2.0	0.50	0.25				1	

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



EVENTS

DSS-14 Downtime (Antenna Controller Replacement)

Cassini Tour

CONTOUR EGA

Genesis Maneuver in Week 33, DOY 322 and 323 and Earth Return beginning in Week 33

Lunar-A Lunar Orbit Insertion and Operations

Mars Express Bi-Static Radar and Orbital Science

Mars Odyssey Relay

Nozomi Radio Science

SOHO HSO proposed extension in Weeks 33-35

Voyager 1 MAGROL in Week 32, DOY 220

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

ANALYSIS

1. (34BWG1) Contention on the 34BWG1 Subnet is moderate to severe for DSS maintenance due to viewperiod overlap in the Sun view with Chandra, Deep Impact, Genesis maneuver and Earth return, Mars Express Orbital Science, MESSENGER, Ulysses, SOHO and Wind.

2. (34HSB, 26M) Contention levels on the 34HSB and 26M are low, however, changes to user requirements are needed to accommodate proposed SOHO HSO continuous support in Weeks 33-35.

   The contention levels for 70M, 34HEF and 34BWG2 are workable and should resolve during mid-range planning and negotiations.

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

RECOMMENDATION

« Deep Impact » move support from DSS-15,34,54 to DSS-15,45. (1)

« DSS » reduce DSS-46 and DSS-66 Maintenance to 4 hours in Weeks 33-35. (2)

« MESSENGER » move support from DSS-26,34,54 to DSS-26,34 only. (1)

« Polar » move Week 33 playback support from 34BWG1 to DSS-27,26M. (1)

« SOHO » change all support in Weeks 33-35 to HSO continuous at 26M and DSS-27. (2)

« Ulysses » change five to six 10-hour supports to split passes of 5 hours each using DSS-24, 54 and DSS-45, 65. (1)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	32	33	34	35
CAS Tour	DSS-65,25	9.0	4.0	0.50	0.25	7	7	7	7
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21
CNTR EGA	34H	8.0	6.0	0.50	0.25	6	7	7	4
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	1
DSN Antenna Cal	DSS-43,63	8.0	4.5			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-54	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-27	8.0	6.0				1	1	1
DSS Maintenance	DSS-27	6.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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
DSS Maintenance	DSS-66	8.0	6.0			1		1	1
DSS Maintenance	DSS-46	4.0	4.0				1		
DSS Maintenance	DSS-66	6.0	6.0				1		
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0			1		1	1
DSS Maintenance	DSS-16	6.0	6.0				1		
DSS Maintenance	DSS-34	6.0	6.0			1	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
GNS	34B1	4.0	4.0	0.50	0.25	2			
GNS	34B1	8.0	4.0	0.50	0.25	3			
GNS Earth Return	34B1	7.5	4.0	0.50	0.25		5	7	6
GNS Maneuver	34B1	7.0	4.0	0.50	0.25		6		3

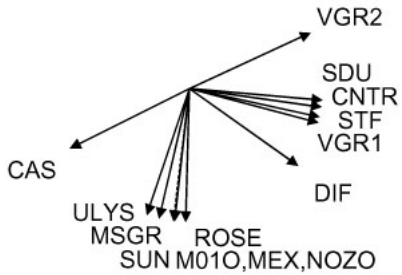
Resource Allocation Review
Analysis and Recommendations
2004 – August (Weeks 32 - 35)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	32	33	34	35
M01O Mapping	DSS-43,63	7.0	4.0	0.50	0.25	4			
M01O Relay	DSS-25,55	8.0	4.0	0.50	0.25	3	7	7	7
MEX Orbital Sci	DSS-24,54	8.0	6.0	0.50	0.25	7	7	7	7
MEX R/S Bi Static	DSS-63	3.0	3.0	0.50	0.25	1	1	1	1
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25	2	3	2	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		
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
SOHO	26M	1.6	1.6	0.70	0.20		6	14	14
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7			
SOHO HSO	DSS-46,66	8.0	6.0	0.70	0.20	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		
ULYS	DSS-34,54	10.0	4.0	0.50	0.25	5	5	6	6
VGR1	DSS-43,63	4.0	4.0	0.50	0.25	7	7	7	7
VGR1	DSS-65	4.0	4.0	0.50	0.25			7	
VGR1	DSS-26	8.0	4.0	0.50	0.25	7	7	7	7
VGR1 MAGROL	DSS-63	7.0	4.0	0.75	0.25	1			
VGR1 Routine U/L	DSS-43,63	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

Resource Allocation Review Analysis and Recommendations

2004 – September (Weeks 36 - 40)



EVENTS

DSS-14 Downtime (Antenna Controller Replacement)

Cassini Tour

CONTOUR EGA in Weeks 36 and 37

European VLBI Network E500 J-M4 quarterly epoch in Week 37

Genesis Maneuver in Week 35, DOY 343 and Earth Return in Weeks 36 and 37

GBRA RA500 SOC-M4 quarterly epoch in Week 37

Mars Express Bi-Static Radar and Orbital Science

Mars Odyssey Relay

Nozomi Radio Science

SOHO HSO proposed extension in Week 36, TSO continuous in Week 37

Voyager 2 ASCAL in Week 38, DOY 257, DTR P/B Array in Week 37, DOY 252, and MAGROL in Week 38, DOY 260

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

ANALYSIS

1. (70M) Contention on the 70M Subnet in Weeks 37-40 is moderate to severe for DSS bearing and routine maintenance due to viewperiod overlap with Mars Express, European VLBI Network support, and GBRA RA500 24-hour simultaneous support.

2. (34BWG1) Contention in Weeks 36-38 is moderate for DSS maintenance, Chandra, Deep Impact cruise support, Genesis maneuver and Earth return support, Mars Express Orbital Science, MESSENGER, SOHO TSO continuous support, Ulysses routine support, and Wind routine support due to viewperiod overlap in the Sun view.

3. (34HSB, 26M) Contention levels on the 34HSB and 26M are low, however, changes to user requirements are needed to accommodate proposed SOHO HSO continuous support in Week 36.

   The contention levels are workable for the 34HEF and 34BWG2 Subnets and should resolve during mid-range planning and negotiations.

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

RECOMMENDATION

« Deep Impact » move Weeks 37 and 38 supports from DSS-15,34,54 to DSS-15,45. (2)

« DSS » reduce DSS-46 and DSS-66 Maintenance to 4 hours in Week 36. (3)

« GBRA » M-Wave Spect in Weeks 37-40 reduce supports from 9 hours to 4 hours. Move RA500 SOC-M4 from Week 37 to Week 36 and delete VLBA SOC-M4 support in Week 36. (1)

« MESSENGER » requested support using DSS-26,34 only. (2)

« SOHO » change all support in Week 36 to HSO continuous and move Week 37 TSO support from the 34BWG1 to 26M. (2, 3)

« Ulysses » change six 10-hour supports in Week 37 at DSS-43,63 to 6 split passes of 5 hours each using DSS-43,63 and DSS-65,45 (5 passes at DSS-43,63 and 5 passes at DSS-65,45). In Weeks 36, 38, and 39 change six 10-hour supports at DSS-34,54 to split passes of 5 hours each using DSS-24,54 and DSS-65,45 (5 passes at DSS-24,54 and 5 passes at DSS-65,45). (1, 2)

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

RECOMMENDATION

« Voyager 1 » move Week 37 routine support from DSS-43,63 to DSS-25,55. (1)

« Wind » move routine support in Weeks 36-38 from 34BWG1 to DSS-24,54 only. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		September				
		Ave	Min	Pre	Post	36	37	38	39	40
CAS Tour	DSS-65,25	9.0	4.0	0.50	0.25	7	7	7	7	7
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21	21
CNTR EGA	34H	8.0	6.0	0.50	0.25	3	4			
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	1	1
DSN Antenna Cal	DSS-43,63	8.0	4.5			1	1			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-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	8.0	6.0			1	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-46	4.0	4.0				1			
DSS Maintenance	DSS-66	6.0	6.0				1			
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-16	8.0	6.0			1		1	1	1
DSS Maintenance	DSS-16	6.0	6.0				1			
DSS Maintenance	DSS-34	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-63	10.5	8.0			1	1		1	1
DSS Maintenance	DSS-63	6.0	4.0			1	1	1	1	1
EVN E500 J-M4	DSS-63	8.0	8.0	1.50	0.50		2			
GBRA M-Wave Spect	DSS-43,63	9.0	4.0	0.50	0.50	2	2	2	2	2
GBRA RA500 SOC-M4	DSS-63	8.0	6.0	1.50	0.50		1			
GBRA VLBA SOC-M4	DSS-63	8.0	8.0	1.50	0.50	1				1
GNS Backup Orbit	34B1	8.0	4.0	0.50	0.25					3

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

RESOURCE REQUEST (continued)

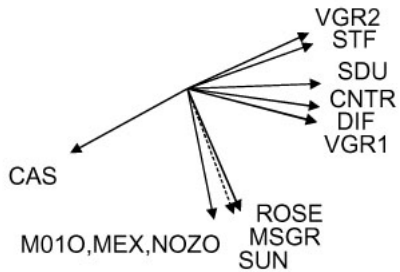
User	Resource	Durations		Calibration		September				
		Ave	Min	Pre	Post	36	37	38	39	40
GNS Backup Orbit	DSS-34	15.0	4.0	0.50	0.25		4			
GNS Backup Orbit	DSS-34	13.0	4.0	0.50	0.25			7		
GNS Backup Orbit	DSS-24,54	4.0	4.0	0.50	0.25			14	14	12
GNS Backup Orbit	DSS-34	10.0	4.0	0.50	0.25				7	6
GNS Earth Return	DSS-24,54	4.0	4.0	0.50	0.25		2			
GNS Earth Return	34B1	7.5	4.0	0.50	0.25	18	3			
GNS Earth Return	DSS-34	11.0	4.0	0.50	0.25		1			
GNS Earth Return	DSS-54	6.0	4.0	0.50	0.25		1			
GNS Earth Return	DSS-24	7.0	4.0	0.50	0.25		1			
GNS Maneuver	34B1	7.0	4.0	0.50	0.25	3	3			
M01O Relay	DSS-25,55	8.0	4.0	0.50	0.25	7	7	7	7	7
MEX Orbital Sci	DSS-24,54	8.0	6.0	0.50	0.25	7	7			
MEX Orbital Sci	DSS-24	6.0	6.0	0.50	0.25			7	7	7
MEX R/S Bi Static	DSS-63	3.0	3.0	0.50	0.25	1	1	1	1	1
MEX R/S Solar Cor	DSS-63	7.9	4.0	0.50	0.25			7	7	7
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25	2	3	2	3	
NOZO RS	DSS-25,65	3.0	2.0	0.50	0.25	3	3	3	3	3
SOHO	34B1	8.0	6.0	0.50	0.25		2			
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	6	14	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			
ULYS	DSS-43,63	10.0	4.0	0.50	0.25		6			
ULYS	DSS-34,54	10.0	4.0	0.50	0.25	6		6	6	
ULYS Datation TST	DSS-24,54	12.0	4.0	2.00	0.25		1			
VGR1	DSS-43,63	8.0	4.0	0.50	0.25	7	5			
VGR1	DSS-43,63	4.0	4.0	0.50	0.25		2			
VGR1	DSS-65	4.0	4.0	0.50	0.25			7	7	7
VGR1	DSS-26	8.0	4.0	0.50	0.25	7	7	7	7	7
VGR1 MAGROL	DSS-63	7.0	4.0	0.75	0.25			1		
VGR1 Routine U/L	DSS-43,63	2.5	2.5	0.75	0.25	1	1	1	1	1

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		September				
		Ave	Min	Pre	Post	36	37	38	39	40
VGR2	DSS-43	8.0	4.0	0.50	0.25	4	3	4	3	4
VGR2	DSS-45	8.0	4.0	0.50	0.25	3	4	3	4	3
VGR2 ASCAL	DSS-43	2.0	2.0	0.75	0.25			1		
VGR2 DTR P/B	DSS-43	7.4	4.0	0.75	0.25		1			
VGR2 MAGROL	DSS-43	7.0	4.0	0.75	0.25			1		
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1	1
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3

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



EVENTS

DSS-34 Proposed X/X Ka-Band Downtime starting in Week 42

Cassini Tour

Gravity Probe B epoch in Week 43

GSSR Asteroid Toutatis B in Week 41

Mars Express Bi-Static Radar and Solar Corona

Mars Odyssey Relay

Nozomi Radio Science

SOHO TSO 5-day continuous in Week 41

Voyager 1 DTR P/B Array in Week 44, DOY 301

Wind Maneuver in Week 43, DOY 295

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

ANALYSIS

1. (70M) Moderate contention in Week 41 for GSSR Asteroid Toutatis B and Mars Express R/S. The contention level is workable for Weeks 42-44 and should resolve during final schedule preparations and negotiations.

2. (34BWG1) Contention on the 34BWG1 Subnet is moderate to severe in Weeks 41-43 for Chandra, DSS maintenance, Mars Express, MESSENGER, and SOHO TSO due to viewperiod overlap in the Mars and sun view. Proposed DSS-34 Downtime causes extreme contention and impacts Genesis Backup Orbit.

   The contention levels for the 34HEF, 34HSB, and the 26M Subnet are workable and should resolve during mid-range planning and negotiations.

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

RECOMMENDATION

DSS move proposed DSS-34 downtime to Week 46, 2004 - Week 52, 2004. (2)

« Deep Impact » move Weeks 41-43 support from DSS-15,34,54 to DSS-15,45,65. (2)

« GBRA » Host Country change 24-hour support in Week 42 at DSS-43 to three 8-hour supports. Reduce M-wave Spect and Planet R/Ast support in Week 41and 42 from 9 hours to 4 hours. (1)

« Mars Express » Orbital Science move 3 of 7 supports in Week 42 from the 34BWG1 to DSS-26. Requested support in Weeks 41 and 42 for R/S Solar Corona 7.9-hour passes using DSS-63. Change 5-hour supports in Week 41 from DSS-14,63 to DSS-14,54 to accommodate DSS-63 maintenance. (1, 2)

« SOHO » TSO move Week 41 support from the 34BWG1 to DSS-27,26M. (2)

« Polar » move 6 of 12 playback supports in Week 41 from 34BWG1 to DSS-27,26M. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		October			
		Ave	Min	Pre	Post	41	42	43	44
CAS Tour	DSS-65,25	9.0	4.0	0.50	0.25	7	7	7	7
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	1
DSN Antenna Cal	70M	8.0	4.5			1		1	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			1
DSS Maintenance	DSS-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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
DSS Maintenance	DSS-66	8.0	6.0				1	1	1
DSS Maintenance	DSS-46	4.0	4.0			1			
DSS Maintenance	DSS-66	6.0	6.0			1			
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0				1	1	1
DSS Maintenance	DSS-16	6.0	6.0			1			
DSS Maintenance	DSS-34	6.0	6.0			1	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				1	1	1
DSS Maintenance	DSS-14	4.0	4.0				1	1	1
DSS Maintenance	DSS-14	8.0	8.0			2			
GBRA Host Country	DSS-43	24.0	8.0	0.75	0.25		1		
GBRA Host Country	DSS-63	8.0	8.0			3			

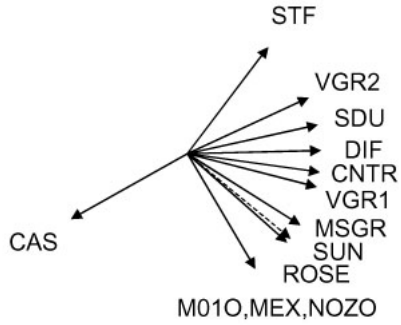
Resource Allocation Review
Analysis and Recommendations
2004 – October (Weeks 41 - 44) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		October			
		Ave	Min	Pre	Post	41	42	43	44
GBRA Host Country	DSS-45	12.0	12.0	0.75	0.25			1	
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3
GBRA Planet R/Ast	DSS-14	9.0	4.0	0.75	0.50	1	1	1	1
GPB BR080n SOC-M4	DSS-14	12.0	12.0	1.50	0.50			1	
GPB BR080n SOC-M4	DSS-63	8.0	8.0	1.50	0.50			1	
GPB BR080n SOC-M4	DSS-43	6.5	6.5	1.50	0.50			1	
GSSR Ast ToutatisB	DSS-14	8.0	8.0	1.50	0.50	5			
GSSR Ast ToutatisB	DSS-14	5.0	5.0	1.50	0.50	2			
M01O Relay	DSS-25,45,55	8.0	4.0	0.50	0.25			7	7
M01O Relay	DSS-25,55	8.0	4.0	0.50	0.25	7	7		
MEX Orbital Sci	DSS-24,54	8.0	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
MEX R/S Solar Cor	DSS-14,63	7.9	4.0	0.50	0.25	5	5	5	5
MEX R/S Solar Cor	DSS-14,63	5.0	4.0	0.50	0.25	2	2	2	2
MSGR	DSS-26,34,54	8.0	7.0	0.50	0.25	1	3	2	3
NOZO RS	DSS-15,65	3.0	2.0	0.50	0.25	3	3	3	3
POLR PB	34B1	1.0	0.8	0.50	0.25	12			
POLR PB	26M	1.0	0.8	0.70	0.20	16	28	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	4	7	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	1.6	1.6	0.70	0.20	6	14	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			
VGR1	DSS-65	4.0	4.0	0.50	0.25	7	7		
VGR1	DSS-26,65	8.0	4.0	0.50	0.25			14	14
VGR1	DSS-26	8.0	4.0	0.50	0.25	7	7		
VGR1 DTR Array	DSS-14/15	7.4	4.0	0.75	0.25				1
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1

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

November '04



EVENTS

Cassini Tour

Gravity Probe B EPOC in Week 43

MAP Maneuver in Week 45

Mars Odyssey Relay

Mars Express Bi-Static Radar and Solar Corona

Nozomi Radio Science

SOHO TSO 5-day continuous in Week 41

Voyager ASCAL and MAGROL in Week 45, DOY 307 and 310

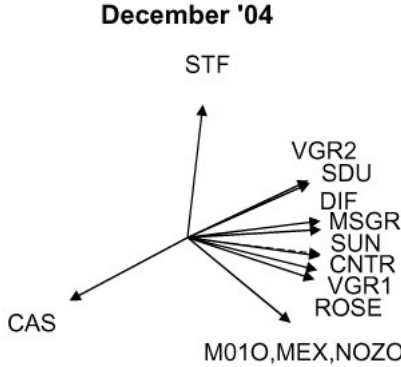
ANALYSIS

The contention level is workable and should resolve during mid-range planning and negotiations.

RECOMMENDATION

None.

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



EVENTS

Cassini Tour and Probe checkout/Release

Deep Impact TCM in Week 49 DOY 334-340 and Earth Flyby

Mars Odyssey Relay

Mars Express Bi-Static Radar, Orbital Science, and Occultation

Nozomi Radio Science

SOHO TSO 5-day continuous in Week 49

Voyager 2 MAGROL in Week 51 DOY 351

ANALYSIS

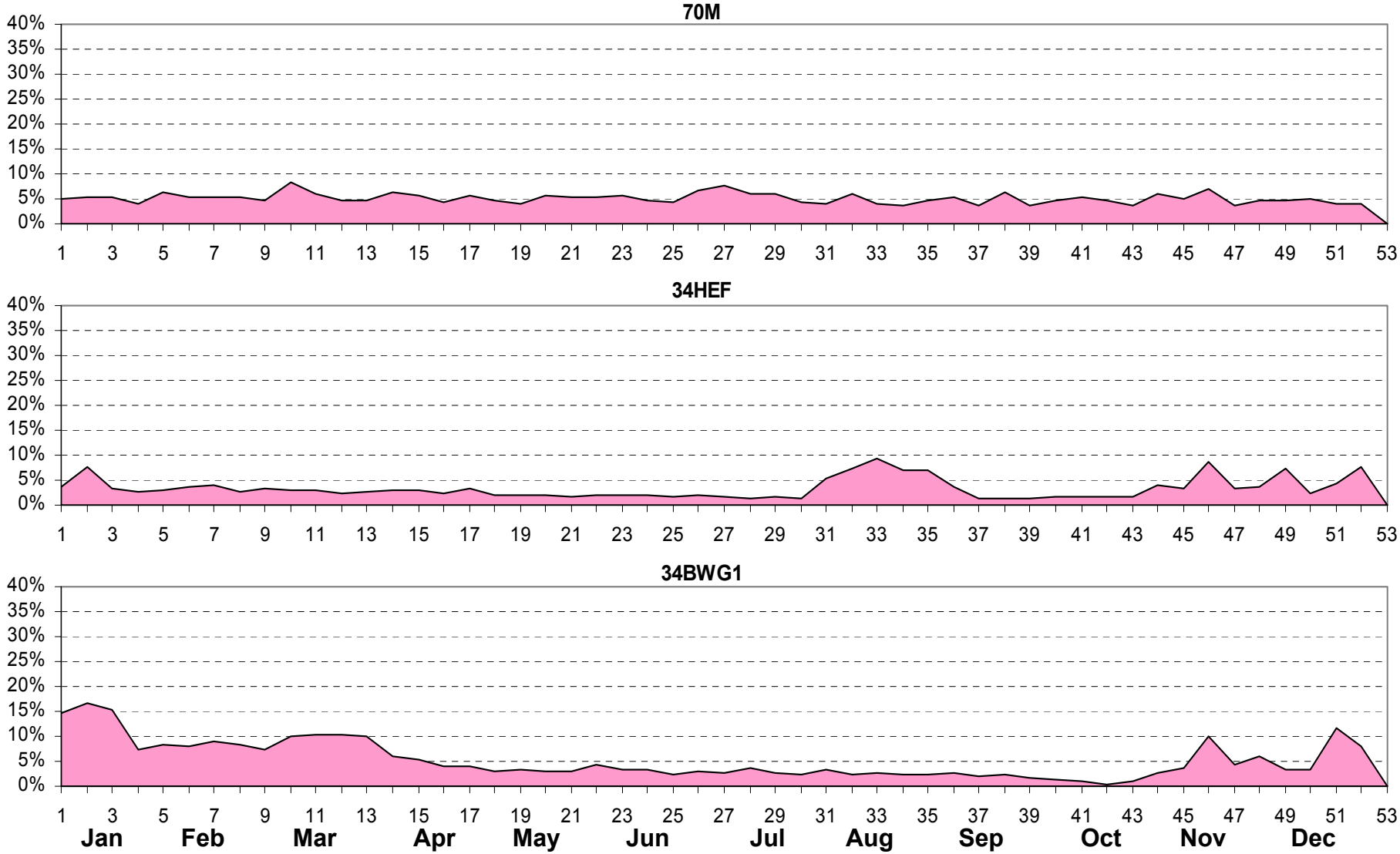
The contention level is workable and should resolve during mid-range planning and negotiations.

RECOMMENDATION

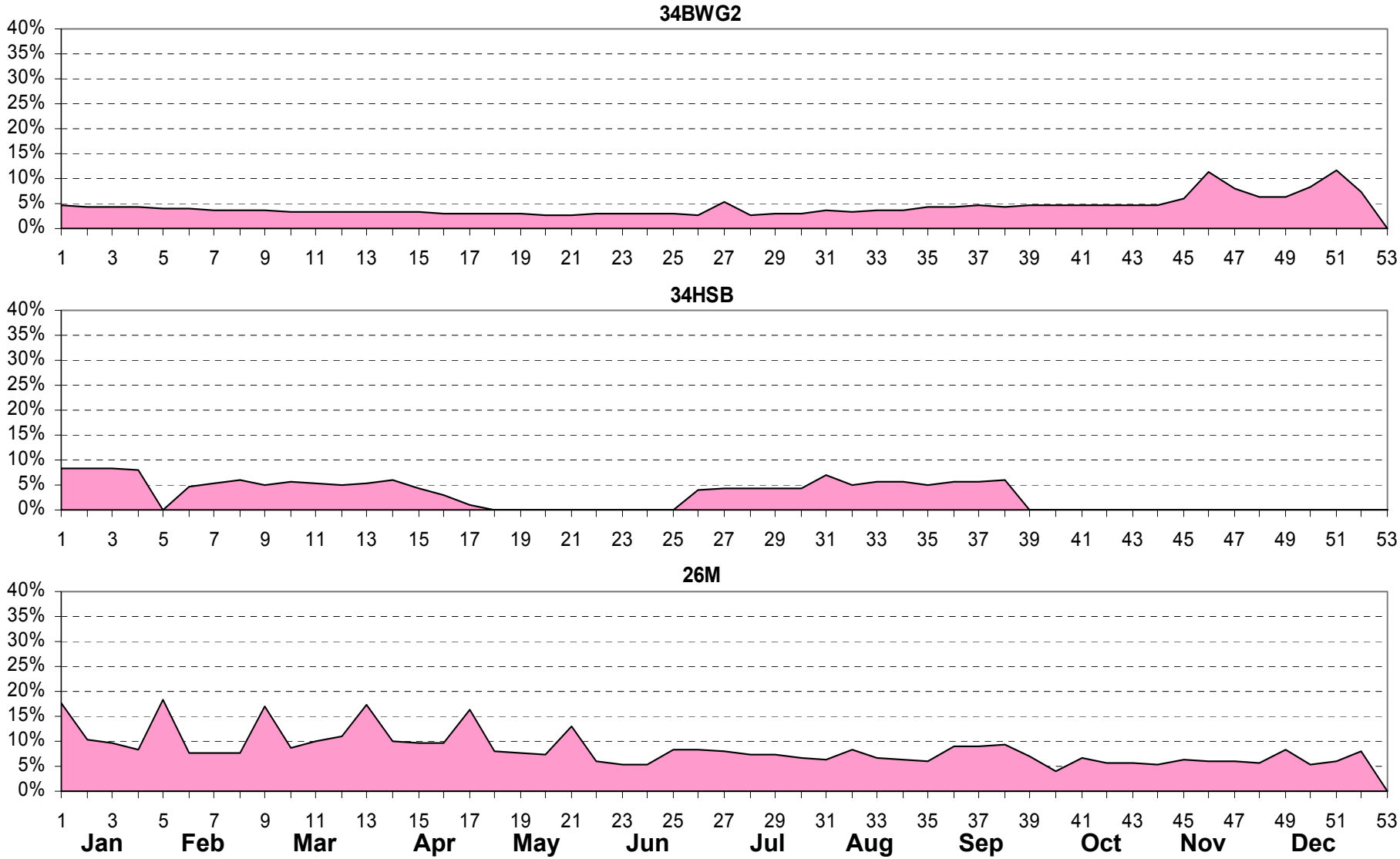
None.

2005 Events, Analysis and Recommendations

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

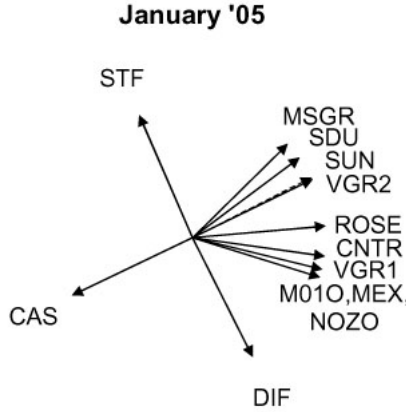


Resource Allocation Review
Analysis and Recommendations
2005 Weekly Average User Unsupportable Time (continued)



Resource Allocation Review Analysis and Recommendations

2005 – January (Weeks 01 - 04)



EVENTS

Cassini Probe Entry in Week 02

CONTOUR Earth Gravity Assist

Deep Impact Earth Flyby in Weeks 01-03

Mars Express Orbital Science/Occultation in Weeks 01-03

Wind TCM Maneuver in Week 02

SOHO TSO Week 01

ANALYSIS

1. Contention on the 34BWG1 Subnet is moderate with Wind, Chandra, Mars Odyssey Relay, and Mars Express Orbital Science/Occultation in Weeks 01-03.
2. Contention at DSS-24 is moderate with Wind TCM and Mars Express Orbital Science/Occultation in Week 02.
3. Contention is moderate with Polar and SOHO TSO on the 26M Subnet in Week 01.

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

RECOMMENDATION

Chandra move 7 of 21 passes from the 34BWG1 to the 26M and increase support to 2 hours in Weeks 01-03. (1)

« Mars Express » move 3 passes from DSS-24,54 to DSS-26,54 to accommodate Wind TCM in Week 02. (2)

« Mars Odyssey » move support from DSS-25,34,54 to DSS-25,34,65 in Weeks 01-03. (1)

« Polar » change support from the 26M to DSS-27,46,66 in Week 01. (3)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		January			
		Ave	Min	Pre	Post	1	2	3	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
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21
CNTR	70M	8.0	6.0	0.50	0.25	1			
CNTR EGA	34H	8.0	6.0	0.50	0.25	3	4	3	5
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25				2
DIF Earth FB	DSS-15,45,65	8.0	4.0	0.50	0.25	11	11	7	
DSN Antenna Cal	70M	8.0	4.5			1	1	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			1
DSS Maintenance	DSS-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	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
M01O Relay	DSS-25,34,54	8.0	4.0	0.50	0.25	7	7	7	7

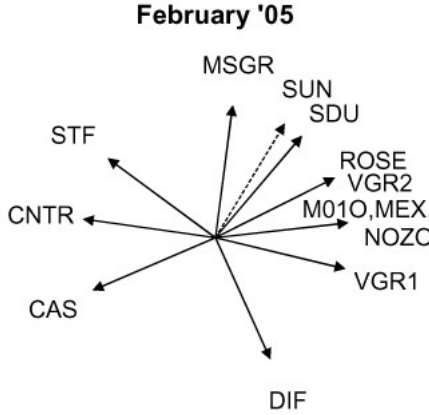
Resource Allocation Review
Analysis and Recommendations
2005 – January (Weeks 01 - 04) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		January			
		Ave	Min	Pre	Post	1	2	3	4
MEX Orb Sci/Occ	DSS-24,54	10.9	5.0	0.50	0.25	7	7	7	
MEX Orbital Sci	DSS-24,54	6.0	6.0	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
MSGR	DSS-26,34,54	8.0	7.0	1.00	0.25	2	2	2	2
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
SOHO	26M	9.6	4.0	0.70	0.20		7	7	7
SOHO	26M	8.0	4.0	0.70	0.20	2			
SOHO	26M	1.6	1.6	0.70	0.20	6	14	14	14
SOHO TSO	26M	8.0	4.0	0.70	0.20	15			
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3
WIND TCM	DSS-24	3.0	2.0	0.50	0.25		1		

Resource Allocation Review Analysis and Recommendations

2005 – February (Weeks 05 – 08)



EVENTS

DSS-65 Downtime Proposal For Antenna Controller Replacement (ACR) beginning in Week 08

CONTOUR Earth Gravity Assist (EGA) in Week 08

Voyager 1 MAGROL in Week 05, DOY 035

ANALYSIS

DSS-65 ACR proposed downtime is in contention with Cassini Tour, CONTOUR EGA, Stardust, and Space Geodesy Program Crustal Dynamics support in Week 08.

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

RECOMMENDATION

« Cassini » change Tour support from DSS-14/25,63/65 to DSS-14/25,63/55 in Week 08.

« CONTOUR » change EGA support from the 34HEF to DSS-15,45,55 in Week 08.

« DSS » requested DSS-65 downtime. Delete Maintenance on DSS-65 in Week 08. (2)

« Stardust » change routine support from the 34HEF to DSS-15,45 in Week 08.

Space Geodesy Program move Crustal Dynamics support from Week 08 to Week 07

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		February			
		Ave	Min	Pre	Post	5	6	7	8
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	1	2	1	2
CAS Tour	DSS-14/25,63/55	9.0	4.0	0.50	0.25				1
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	4	5	4
CNTR EGA	34H	8.0	6.0	0.50	0.25	7	7	7	4
DSN Antenna Cal	70M	8.0	4.5			1	1	1	
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-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1
SGP Crust Dyn H-M4	DSS-15	24.0	24.0	1.50	0.50		1		
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			

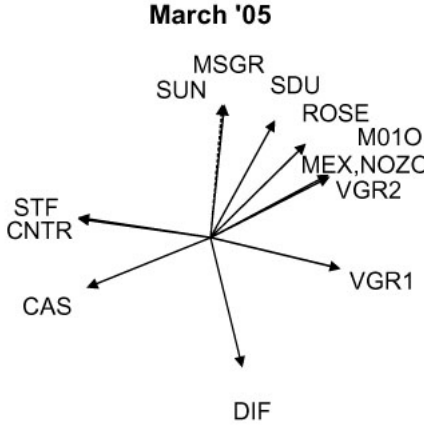
Resource Allocation Review
Analysis and Recommendations
2005 – February (Weeks 05 – 08) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		February			
		Ave	Min	Pre	Post	5	6	7	8
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2005 – March (Weeks 09 - 13)



EVENTS

DSS-65 Downtime Proposal for Antenna Controller Replacement (ACR)

CONTOUR EGA in Week 09

GSSR Asteroid 1998WT in Weeks 09 and 10

Microwave Anisotropy Probe Maneuver in Week 11

MUSES-C TCM in Weeks 09 and 10

Rosetta Earth Swingby Weeks 10-13

Voyager 2 DTR Playback in Week 10, DOY 068

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

ANALYSIS

1. GSSR Asteroid 1998WT has moderate contention at DSS-14 with GBRA M-Wave Spect, GBRA Planet R/Ast, and DSN Antenna Cal in Week 10.

2. DSS-65 proposed ACR downtime causes contention with Cassini Tour Array support at DSS-14/25,63/65 and CONTOUR EGA in Week 09, Rosetta Earth Swingby in Weeks 10-13, Stardust and Space Geodesy Program Crustal Dynamics support in Week 12, and Reference Frame Calibration Clock Sync support in Weeks 09, 11, and 13.

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

RECOMMENDATION

« Cassini » change Tour support from DSS-14/25,63/65 to DSS-14/25,63/55 in Weeks 09-13. (1)

« CONTOUR » change EGA support from the 34HEF to DSS-15,45,55 in Week 09. (2)

« DSS » requested DSS-65 downtime. Delete Maintenance on DSS-65. (2)

« GBRA » reduce DSS-14 M-Wave Spect and Planet R/Ast in Week 10 from 9 hours to 4 hours. (1)

« Reference Frame Calibration » change DSS-15\65 Clock Sync support to DSS-14\63. (2)

« Rosetta » change Swingby support from DSS-15,24,65 to DSS-15,24,54 in Weeks 10-13. (2)

« Stardust » change routine support from the 34HEF to DSS-15,45. (2)

Space Geodesy Program move DSS-65 Crustal Dynamics support from Week 12 to Week 15. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		March				
		Ave	Min	Pre	Post	9	10	11	12	13
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	1	2	1	2	1
CAS Tour	DSS-14/25,63/55	9.0	4.0	0.50	0.25	1	1	1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	5	4	5	4	5
CNTR EGA	34H	8.0	6.0	0.50	0.25	3				
DIF Comet Enc	70M	8.0	4.0	0.50	0.25				1	
DIF Comet Enc	DSS-14\43	4.0	4.0	0.50	0.25				1	
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1	1	1	1
DSN Antenna Cal	70M	8.0	4.5			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 Bearing Mntc	DSS-63	8.0	8.0				1			1
DSS Maintenance	DSS-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	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	1	1
DSS Maintenance	DSS-43	8.0	8.0				1	1		1
DSS Maintenance	DSS-16	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-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
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3	3
GBRA Planet R/Ast	DSS-14	9.0	4.0	0.75	0.50	1	1	1	1	1
GSSR Ast 1998WT	DSS-14	10.0	5.0	1.50	0.50	1	3			

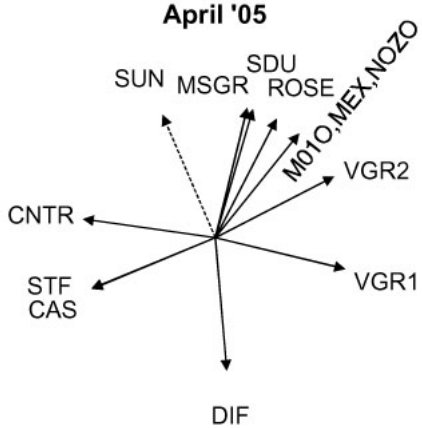
Resource Allocation Review
Analysis and Recommendations
2005 – March (Weeks 09 - 13) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		March				
		Ave	Min	Pre	Post	9	10	11	12	13
MAP.	70M	0.7	0.6	1.25	0.25	7	7	4	7	7
MAP. Mnvr.	70M	5.0	5.0	1.25	0.25			1		
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25			2		
MUSC TCM	DSS-25,34,54	3.0	3.0	0.50	0.25	4	2			
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50	1		1		1
ROSE Swingby	DSS-15,65,24	4.0	4.0	0.50	0.25		6	7	7	7
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1	1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50	1	1			
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	6	6	6	6	6
VGR2	DSS-43,45	8.0	8.0	0.50	0.25	1	1	1	1	1
VGR2 DTR P/B	DSS-43	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

Resource Allocation Review Analysis and Recommendations

2005 – April (Weeks 14 - 17)



EVENTS

DSS-63 Downtime Proposal for ACR beginning in Week 16

DSS-65 Downtime Proposal for ACR Week 14

Deep Impact TCM in Weeks 15-17

Voyager 1 DTR array in Week 17, DOY 118

Wind TCM Maneuver in Week 15

ANALYSIS

1. DSS-63 proposed ACR downtime causes contention with Cassini Tour, Microwave Anisotropy Probe, Mars Express R/S Bi-Static, Nozomi Radio Science, SIRTF, and Voyager 1 routine Uplink supports in Weeks 16 and 17.
2. DSS-65 proposed ACR downtime causes contention with Cassini Tour, Rosetta Earth Swingby, and Stardust supports in Week 14.
3. The 34HEF Subnet has moderate contention with Voyager 1 DTR Array, Deep Impact TCM at DSS-15, and Reference Frame Calibration CAT M&E 24-hour supports in Week 17.

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

RECOMMENDATION

Cassini change Tour support in Week 14 from DSS-14/25,63/65 to DSS-14/25,63/55 and in Weeks 16 and 17 from DSS-14,63 to DSS-14 and DSS-14/25,63/65 to DSS-14/25. (1, 2)

DSS requested DSS-65 downtime and delete DSS-65 Maintenance in Week 14. Requested DSS-63 downtime and delete Bearing and Routine Maintenance on DSS-63 in Weeks 16 and 17. (1, 2)

« Microwave Anisotropy Probe » change routine support from the 70M to DSS-14,43 in Weeks 16 and 17. (1)

« Mars Express » change R/S Bi-Static support from DSS-14,63 to DSS-14 in Weeks 16 and 17. (1)

« Nozomi » change R/S support from DSS-14,63 to DSS-14 in Weeks 16 and 17. (1)

« Reference Frame Calibration » move DSS-15\45,15\65 CAT M&E 24-hour support from Week 17 to Week 18. (2)

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

RECOMMENDATION (continued)

« Rosetta » change Swingby support from DSS-15,24,65 to DSS-15,24,54 in Week 14. (2)

« Stardust » change routine support from the 34HEF to DSS-15,45 in Week 14. (2)

« SIRTF » change routine support from the 70M to DSS-14,43,65 in Weeks 16 and 17. (1)

« Voyager 1 » change routine Uplink support from the 70M to DSS-14,43 in Weeks 16 and 17. (1)

Resource Allocation Review Analysis and Recommendations

2005 – April (Weeks 14 - 17) (continued)

RESOURCE REQUEST

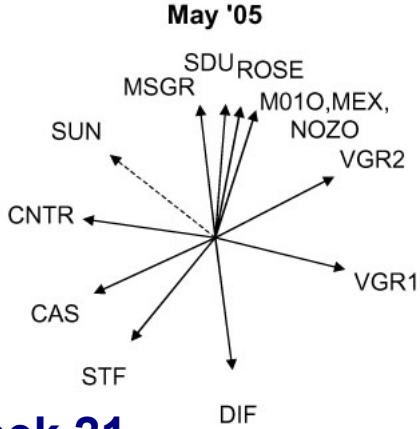
User	Resource	Durations		Calibration		April			
		Ave	Min	Pre	Post	14	15	16	17
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	2	1
CAS Tour	DSS-14/25,63/55	9.0	4.0	0.50	0.25	1			
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25		1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	4	5	4	5
DIF Cruise	DSS-15,34,54	8.0	4.0	0.50	0.25	1	1		
DIF TCM	DSS-15,34,54	8.0	4.0	0.50	0.25		1	4	7
DSN Antenna Cal	70M	8.0	4.5			1	1	1	
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-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
MAP.	70M	0.7	0.6	1.25	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
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		April			
		Ave	Min	Pre	Post	14	15	16	17
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50				1
ROSE Swingby	DSS-15,65,24	4.0	4.0	0.50	0.25	7	7	7	7
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1
STF	70M	1.0	1.0	0.50	0.25	14	14	14	14
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

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



EVENTS

DSS-63 Downtime Proposal for ACR

Deep Impact TCM in Weeks 18-20 and Comet Approach in Week 21

Voyager 1 ASCAL in Week 18, DOY 123 and MAGROL in Week 18, DOY 126

ANALYSIS

DSS-63 proposed ACR downtime is in contention with Microwave Anisotropy Probe, Mars Express R/S Bi-Static, Nozomi RS, SIRTF, Voyager 1 routine Uplink support, GBRA VLBA SOC-M4, Cassini Tour support, and GBRA M-Wave Spect.

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

RECOMMENDATION

Cassini change Tour support from DSS-14,63 to DSS-14 and change DSS-14/25,63/65 to DSS-14/25.

DSS requested DSS-63 downtime. Delete DSS-63 Bearing and Routine Maintenance.

« GBRA » change M-Wave Spect support from the 70M to DSS-14,43 and change DSS-14\63 VLBA SOC-M4 support to only DSS-14 in Week 19.

« Microwave Anisotropy Probe » change routine support from the 70M to DSS-14,43.

« Mars Express » change R/S Bi-Static support from DSS-14,63 to DSS-14 only.

« Nozomi » change R/S support from DSS-14,63 to DSS-14 only.

« SIRTF » change routine support from the 70M to DSS-14,43,65.

« Voyager 1 » change routine Uplink support from the 70M to DSS-14,43.

Resource Allocation Review Analysis and Recommendations

2005 – May (Weeks 18 - 21) (continued)

RESOURCE REQUEST

User	Resource	Durations		Calibration		May			
		Ave	Min	Pre	Post	18	19	20	21
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	2	1
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	4	5	4	5
DIF Comet App	DSS-15,34,54	8.0	4.0	0.50	0.25				4
DIF TCM	DSS-15,34,54	8.0	4.0	0.50	0.25	15	7	4	
DSN Antenna Cal	70M	8.0	4.5			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 Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3
GBRA VLBA SOC-M4	DSS-14\63	8.0	8.0	1.50	0.50		1		
MAP.	70M	0.7	0.6	1.25	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

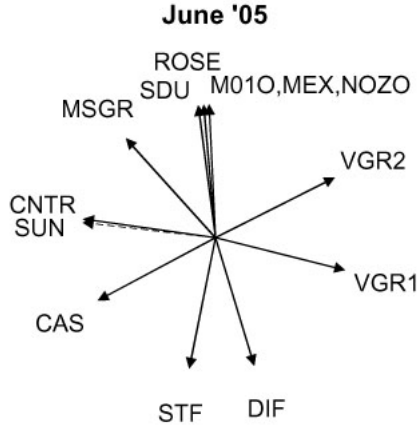
Resource Allocation Review
Analysis and Recommendations
2005 – May (Weeks 18 - 21) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		May			
		Ave	Min	Pre	Post	18	19	20	21
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3
STF	70M	1.0	1.0	0.50	0.25	14	14	14	14
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

Resource Allocation Review Analysis and Recommendations

2005 – June (Weeks 22 - 26)



EVENTS

DSS-63 Downtime Proposal For ACR in Week 22

Deep Impact Comet Approach in Weeks 22-25
and Comet Encounter support in Week 26

MUSES-C Rendezvous in Weeks 22-24

SOHO HSO continuous support beginning in Week 26

ANALYSIS

DSS-63 proposed ACR downtime is in contention with Cassini Tour support and Array support, GBRA M-Wave Spect, Microwave Anisotropy Probe, Mars Express R/S Bi-Static, Nozomi RS, SIRTF, and Voyager 1 routine Uplink support in Week 22

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

RECOMMENDATION

To approve the DSS-63 Downtime, in Week 22:

Cassini change allocated Tour support from DSS-14,63 to DSS-14 and from DSS-14/25,63/65 to DSS-14/25.

DSS requested DSS-63 downtime. Delete DSS-63 Bearing and Routine Maintenance.

« GBRA » change M-Wave Spect from the 70M to DSS-14,43.

« Microwave Anisotropy Probe » change routine support from the 70M to DSS-14,43.

« Mars Express » change R/S Bi-Static support from DSS-14,63 to DSS-14 only.

« Nozomi » change RS support from DSS-14,63 to DSS-14 only.

« SIRTF » change routine support from the 70M to DSS-14,43,65.

« Voyager 1 » change routine Uplink support from the 70M to DSS-14,43.

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		June				
		Ave	Min	Pre	Post	22	23	24	25	26
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	2	1	2
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25	1	1	1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	4	5	4	5	4
DIF Comet App	DSS-15,34,54	8.0	4.0	0.50	0.25	5	7	7	7	
DIF Comet Enc	70M	8.0	4.0	0.50	0.25					7
DIF Comet Enc	DSS-14\43	4.0	4.0	0.50	0.25					1
DIF Comet Enc	DSS-15,34,54	8.0	4.0	0.50	0.25					15
DSN Antenna Cal	70M	8.0	4.5				1	1	1	
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-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			1	1	1	1	
DSS Maintenance	DSS-27	6.0	6.0							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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	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	1	1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1	1
DSS Maintenance	DSS-16	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-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
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3	3
MAP.	70M	0.7	0.6	1.25	0.25	7	7	7	7	7

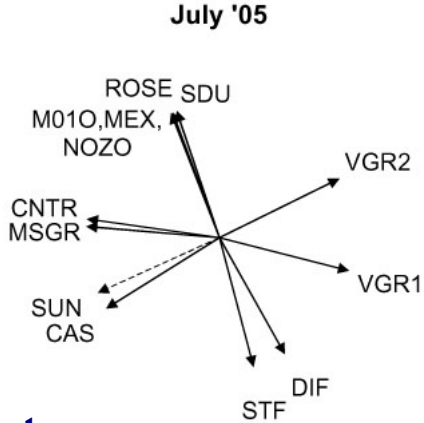
Resource Allocation Review
Analysis and Recommendations
2005 – June (Weeks 22 - 26) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		June				
		Ave	Min	Pre	Post	22	23	24	25	26
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
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	4		
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3	3
SOHO	26M	9.6	4.0	0.70	0.20	7	7	7		
SOHO	26M	8.0	4.0	0.70	0.20				2	
SOHO	26M	1.6	1.6	0.70	0.20	14	14	14	6	
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20					7
SOHO HSO	DSS-46,66	8.0	4.0	0.70	0.20					14
SOHO TSO	26M	8.0	4.0	0.70	0.20				15	
STF	70M	1.0	1.0	0.50	0.25	14	14	14	14	14
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	14	14	14
VGR1 Routine U/L	70M	2.5	2.5	0.75	0.25	1	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2005 – July (Weeks 27 - 30)



EVENTS

DSS-43 Downtime Proposal for ACR beginning in Week 28

Deep Impact Comet Encounter 70M support and Comet Impact in Week 27, DOY 185

Microwave Anisotropy Probe Maneuver Week 27

SOHO HSO continuous support

Rosetta Swingby

Wind TCM Maneuver in Week 28

ANALYSIS

DSS-43 proposed ACR downtime is in contention with Cluster SSO support in Weeks 28-30 and MSO support in Week 28, GBRA Host Country in Week 29, GBRA M-Wave Spect, Microwave Anisotropy Probe, SIRTF, Voyager 1 Uplink, and Voyager 2 Uplink and routine support in Weeks 28-30.

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

RECOMMENDATION

« Cluster » exclude DSS-43 from the SSO support at DSS-46/34/45/43 in Weeks 28-30 and exclude DSS-43 from the MSO support at DSS-46/34/45/43 in Week 28.

DSS requested DSS-43 downtime. Delete DSS-43 Bearing and Routine Maintenance in Weeks 28-30.

« GBRA » delete DSS-43 Host Country support in Week 29 and change M-Wave Spect support from the 70M to DSS-14,63 in Weeks 28-30.

« Microwave Anisotropy Probe » change routine support from the 70M to DSS-14,63 in Weeks 28-30.

« SIRTF » change routine support from the 70M to DSS-14,45,63 in Weeks 28-30.

« Voyager 1 » change routine Uplink support from the 70M to DSS-14,63 in Weeks 28-30.

« Voyager 2 » change routine Uplink support from DSS-43 to DSS-34 and change routine support from DSS-43,45 to DSS-34,45 in Weeks 28-30.

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

RESOURCE REQUEST

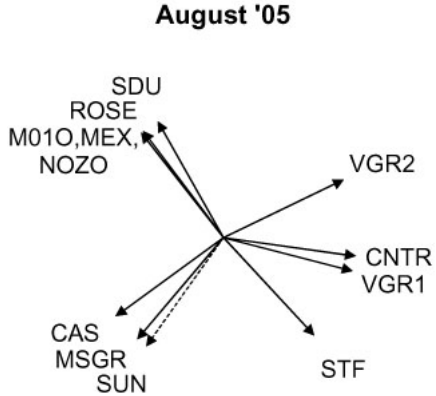
User	Resource	Durations		Calibration		July			
		Ave	Min	Pre	Post	27	28	29	30
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	1	2	1	2
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25	1	1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	5	4	5	4
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	2.0	2.0	0.50	0.25	2			
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	2.0	2.0	0.50	0.25		2	2	2
CLU2 1/2/3/4 SSO	DSS-46/34/45/43	2.0	2.0	0.50	0.25	1	1	1	1
CLU4 1/2/3/4 MSO	DSS-46/34/45/43	1.5	1.0	0.50	0.25		1		
DIF Comet Enc	70M	8.0	4.0	0.50	0.25	3			
DIF Impact	DSS-15/24/25/26	8.0	4.0	0.50	0.25	1			
DIF Playback	DSS-15,34,54	8.0	4.0	0.50	0.25	2	1	1	1
DSN Antenna Cal	70M	8.0	4.5			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 Bearing Mntc	DSS-63	8.0	8.0				1		
DSS Maintenance	DSS-54	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-27	6.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0				1	1	
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		July			
		Ave	Min	Pre	Post	27	28	29	30
GBRA Host Country	DSS-63	24.0	8.0				1		
GBRA Host Country	DSS-43	24.0	8.0	0.75	0.25			1	
GBRA Host Country	DSS-45	12.0	12.0	0.75	0.25			1	
GBRA M-Wave Spect	70M	9.0	4.0	0.50	0.50	3	3	3	3
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	1			
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25	2			
ROSE Swingby	DSS-15,65,24	4.0	4.0	0.50	0.25	7	7	7	7
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7
SOHO HSO	DSS-46,66	8.0	4.0	0.70	0.20	14	14	14	14
STF	70M	1.0	1.0	0.50	0.25	14	14	14	14
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	14	14
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	6	6	6	6
VGR2	DSS-43,45	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
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3
WIND TCM	DSS-24	3.0	2.0	0.50	0.25		1		

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



EVENTS

DSS-43 Downtime Proposal for ACR

GSSR Asteroid 1992UY4 in Week 31

Mars Reconnaissance Orbiter Launch (August 8) support in Weeks 32-34 and TCM in Week 34

SOHO HSO continuous

Voyager 1 MAGROL support in Week 31, DOY 218

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

ANALYSIS

1. DSS-43 proposed ACR downtime is in contention with Cluster SSO support, Microwave Anisotropy Probe, SIRTF, Voyager 1 Uplink, and Voyager 2 Uplink and routine support.
2. Severe contention at DSS-14 between GSSR Asteroid 1992UY4 and Voyager 1 MAGROL in Week 31
3. Moderate contention on the 34HEF with GBRA Host Country DSS-45, Mars Reconnaissance Orbiter Launch, Voyager 2 routine in Week 32, Cassini Tour support, Mars Reconnaissance Orbiter Launch, Reference Frame Calibration Clock Sync, Stardust, Voyager 2 in Week 33, Mars Reconnaissance Orbiter Launch and Voyager 2 in Week 34

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

RECOMMENDATION

« Cluster » exclude DSS-43 from the SSO DSS-46/34/45/43 support. (1)

DSS requested DSS-43 downtime. Delete DSS-43 Bearing and Routine Maintenance.

« GBRA » move Host Country DSS-45 support from Week 32 to Week 31. (3)

« GSSR » Asteroid 1992UY4 at DSS-14 reduce one pass to 4 hours on DOY 218. (2)

« Microwave Anisotropy Probe » change routine support from the 70M to DSS-14,63. (1)

« Reference Frame Calibration » move Clock Sync support from Week 33 to Week 34. (3)

« SIRTF » change routine support from 70M to DSS-14,45,63. (1)

« Voyager 1 » change routine Uplink support from the 70M to DSS-14,63. (1)

« Voyager 2 » change routine Uplink support from DSS-43 to DSS-34, change routine support from DSS-43,45 to DSS-34,45, and in Weeks 32-34 reduce 16-hour supports to 8 hours. (1)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	31	32	33	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
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	2.0	2.0	0.50	0.25	2	2	2	2
CLU2 1/2/3/4 SSO	DSS-46/34/45/43	2.0	2.0	0.50	0.25	1	1	1	1
CLU4 1/2/3/4 MSO	DSS-16/27/24/15	1.5	1.0	0.50	0.25		1		
DSN Antenna Cal	70M	8.0	4.5			1	1	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			1
DSS Maintenance	DSS-54	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-27	8.0	6.0			1			
DSS Maintenance	DSS-27	6.0	6.0				1	1	1
DSS Maintenance	DSS-15	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	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
GBRA Host Country	DSS-45	12.0	12.0	0.75	0.25		1		
GSSR Ast 1992UY4	DSS-14	6.0	6.0	1.50	0.50	5			

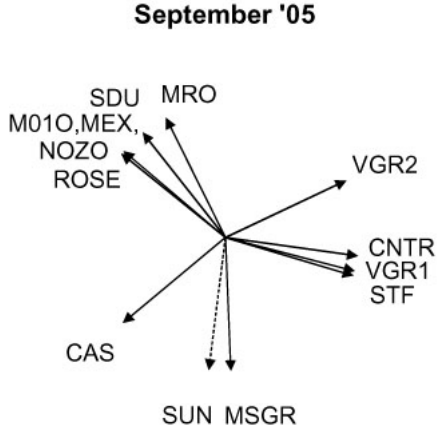
Resource Allocation Review
Analysis and Recommendations
2005 – August (Weeks 31 - 34) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		August			
		Ave	Min	Pre	Post	31	32	33	34
MAP.	70M	0.7	0.6	1.25	0.25	7	7	7	7
MRO Launch	34H	8.0	4.0	0.50	0.25			15	18
MRO Launch	34H	8.0	4.0	3.00	0.25		3		
MRO Launch	34H	8.0	4.0	0.50	0.25		18	6	
MRO Launch	DSS-46	8.0	4.0	3.00	0.25		1		
MRO TCM	34H	8.0	4.0	0.50	0.25				3
NOZO RS	DSS-14,63	3.0	2.0	0.50	0.25	3	3	3	3
RFC Clock Syn D-M4	DSS-15\65	4.0	4.0	1.50	0.50	1		1	
ROSE Swingby	DSS-15,65,24	4.0	4.0	0.50	0.25	7	7	7	7
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7
SOHO HSO	DSS-46,66	8.0	4.0	0.70	0.20	14	14	14	14
STF	70M	1.0	1.0	0.50	0.25	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
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	6	6	6	6
VGR2	DSS-43,45	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
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3

Resource Allocation Review Analysis and Recommendations

2005 – September (Weeks 35 - 39)



EVENTS

DSS-24 Downtime Proposal for X/X Ka-Band

DSS-45 Downtime Proposal for Antenna Controller Replacement (ACR) beginning in Week 36

Mars Reconnaissance Orbiter Post Launch support in Weeks 35 and 36

MUSES-C TCM support in Weeks 36 and 37

SOHO HSO in Weeks 35-38

Voyager 2 DTR Playback in Week 36

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

ANALYSIS

1. DSS-45 proposed ACR downtime is in contention with Cluster MSO in Week 36, GBRA Host Country in Week 37, Space Geodesy Program Crustal Dynamics support in Week 39, SIRTF and Voyager 2 in Weeks 36-39, and Reference Frame Calibration CAT M&E 24-hour support in Week 36.

2. DSS-24 proposed X/X Ka-Band downtime is in contention with Rosetta Swingby, Wind, and Chandra; Cluster SSO in Week 35, and Mars Express Orbital Science support.

3. 26M user contention is moderate with Polar support in Weeks 36-38.

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

RECOMMENDATION

« Cluster » exclude DSS-45 from the MSO support at DSS-46/34/45/43 in Week 36, and exclude DSS-24 from the SSO support at DSS-16/27/24/15 in Week 35. (1, 2)

« DSS » requested DSS-24 and DSS-45 downtimes. Delete DSS-24 Maintenance. Delete DSS-45 Maintenance in Weeks 36-39. (1, 2)

Chandra move 14 of 21 passes from 34BWG1 to DSS-34,54 and move remaining 7 passes to DSS-16 and increase support to 2 hours. (2)

« GBRA » move DSS-45 Host Country support from Week 37 to Week 35. (1)

« Mars Express » change Orbital Science support from DSS-24,54 to DSS-26,54 in Weeks 36-39. (2)

« Polar » move 5 R/T passes from DSS-16 to DSS-27 in Weeks 36-38. (3)

« Rosetta » change Swingby support from DSS-15,65,24 to DSS-15,65,26 in Weeks 36-39. (2)

« Reference Frame Calibration » change CAT M&E support from DSS-15\45,15\65 to DSS-14\43,15\65 in Week 36. (2)

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

RECOMMENDATION (continued)

Space Geodesy Program delete DSS-45 Crustal Dynamics support in Week 39. (2)

« SIRTF » change routine support from the 34HEF to DSS-15,43,65 in Weeks 36-39. (2)

« Voyager 2 » change routine support from DSS-43,45 to DSS-43,34 in Weeks 36-39. (2)

« Wind » change routine support from the 34BWG1 to DSS-34,54. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		September				
		Ave	Min	Pre	Post	35	36	37	38	39
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21	21
CLU2 1/2/3/4 SSO	DSS-16/27/24/15	2.0	2.0	0.50	0.25	2				
CLU2 1/2/3/4 SSO	DSS-46/34/45/43	2.0	2.0	0.50	0.25	1				
CLU4 1/2/3/4 MSO	DSS-46/34/45/43	1.5	1.0	0.50	0.25		1			
DSN Antenna Cal	70M	8.0	4.5				1	1	1	
DSS Bearing Mntc	DSS-14	8.0	8.0			1			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-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0							1
DSS Maintenance	DSS-27	6.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	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	1	1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1	
DSS Maintenance	DSS-16	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-63	10.5	8.0			1	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
GBRA Host Country	DSS-45	12.0	12.0	0.75	0.25			1		
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		4	6	6	6
MRO Cruise Ka	DSS-26,34,55	8.0	4.0	0.50	0.25		1	1	1	1

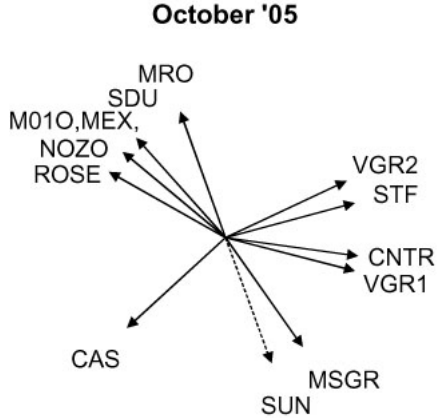
Resource Allocation Review
Analysis and Recommendations
2005 – September (Weeks 35 - 39) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		September				
		Ave	Min	Pre	Post	35	36	37	38	39
MRO Launch	34H	8.0	4.0	0.50	0.25	21	6			
MUSC Mission Phase	DSS-25,34,54	8.0	8.0	0.50	0.25	1	1	1	1	1
MUSC TCM	DSS-25,34,54	8.0	8.0	0.50	0.25		3	3		
POLR PB	26M	1.0	0.8	0.70	0.20		28	28	28	20
POLR PB	26M	1.0	0.8	0.70	0.20	28				
POLR RT	26M	2.0	2.0	0.70	0.20		7	7	7	5
POLR RT	26M	2.0	2.0	0.70	0.20	7				
RFC CAT M&E D-M4	15\45,15\65	24.0	12.0	1.50	0.50	1	1			
ROSE Swingby	DSS-15,65,24	4.0	4.0	0.50	0.25	7	7	7	7	1
SDU	34H	6.0	4.0	0.50	0.25	1	1	1	1	1
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50					1
SOHO	26M	1.6	1.6	0.70	0.20					14
SOHO	26M	9.6	4.0	0.70	0.20					7
SOHO HSO	DSS-27	8.0	6.0	0.40	0.20	7	7	7	7	
SOHO HSO	DSS-46,66	8.0	4.0	0.70	0.20	14	14	14	14	
STF	70M	1.0	1.0	0.50	0.25	11	7	7	7	7
STF	34H	1.0	1.0	0.50	0.25	3	7	7	7	7
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	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	1
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	6	6	6	6	6
VGR2	DSS-43,45	8.0	8.0	0.50	0.25	1		1	1	1
VGR2 DTR P/B	DSS-43	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
WIND	34B1	5.0	4.5	0.50	0.25	3	3	3	3	3

Resource Allocation Review Analysis and Recommendations

2005 – October (Weeks 40 - 43)



EVENTS

DSS-24 Downtime Proposal for X/X Ka-Band in Weeks 40 and 41

DSS-45 Downtime Proposal for ACR in Weeks 40-42

Microwave Anisotropy Probe Maneuver in Week 43

Stardust TCM support in Weeks 42 and 43

Voyager 1 DTR Array Playback in Week 43, DOY 299

ANALYSIS

1. DSS-24 proposed X/X Ka-Band downtime is in contention with Mars Express Orbital Science, and Chandra in Weeks 40 and 41.
2. DSS-45 proposed ACR downtime is in contention with Space Geodesy Program Crustal Dynamics support in Week 40, SIRTF and Voyager 2 routine support in Weeks 40-42

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

RECOMMENDATION

Chandra move 14 of 21 passes from 34BWG1 to DSS-34,54 and move remaining 7 passes to DSS-16 and increase support to 2 hours. (2)

« DSS » requested DSS-24 and DSS-45 downtimes. Delete DSS-24 Maintenance in Weeks 40 and 41. Delete DSS-45 Maintenance in Weeks 40-42. (1, 2)

« Mars Express » change Orbital Science support from DSS-24,54 to DSS-26,54. (1)

Space Geodesy Program move DSS-45 Crustal Dynamics support from Week 40 to Week 43. (2)

« SIRTF » change routine support from the 34HEF to DSS-15,43,65. (2)

« Voyager 2 » change support from DSS-43,45 to DSS-43,34. (2)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		October			
		Ave	Min	Pre	Post	40	41	42	43
CHDR	34B1	1.0	1.0	0.50	0.25	21	21	21	21
DSN Antenna Cal	70M	8.0	4.5			1	1	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			1
DSS Maintenance	DSS-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1	1		1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			1	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
MAP.	70M	0.7	0.6	1.25	0.25	7	7	7	4
MAP. Mnvr.	70M	5.0	5.0	1.25	0.25				1
MAP. Mnvr.	70M	3.0	3.0	1.25	0.25				2
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	6	6	6	6
MRO Cruise Ka	DSS-26,34,55	8.0	4.0	0.50	0.25	1	1	1	1
SDU	34H	6.0	4.0	0.50	0.25	1	1		
SDU TCM	DSS-25,34,54	4.0	4.0	0.50	0.25			2	2

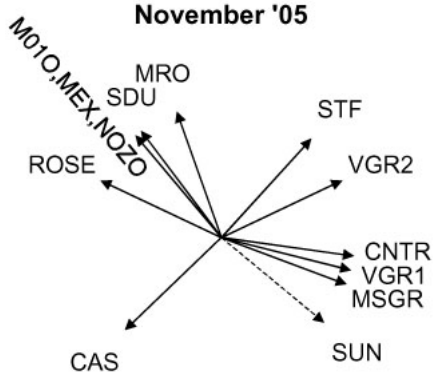
Resource Allocation Review
Analysis and Recommendations
2005 – October (Weeks 40 - 43) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		October			
		Ave	Min	Pre	Post	40	41	42	43
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50			1	
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50	1			
STF	70M	1.0	1.0	0.50	0.25	7	7	7	7
STF	34H	1.0	1.0	0.50	0.25	7	7	7	7
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
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	6	6	6	6
VGR2	DSS-43,45	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

Resource Allocation Review Analysis and Recommendations

2005 – November (Weeks 44 - 47)



EVENTS

Mars Reconnaissance Orbiter TCM in Weeks 44 and 45

MUSES-C Asteroid Departure in Week 46, DOY 319

Stardust TCM support

Stereo Ahead Launch in Week 46, DOY 319, Launch support in Weeks 46 and 47, and Maneuver in Week 47

Stereo Behind Launch in Week 46, DOY 319, Launch support in Weeks 46 and 47, and Maneuver in Week 47

Voyager 1 ASCAL in Week 44, DOY 305 and MAGROL in Week 44, DOY 308

ANALYSIS

1. Moderate user contention is forecast in Week 44 on the 34HEF due to Mars Reconnaissance Orbiter, SIRTF, and Voyager 2 and in Week 46 contention is due to SIRTF, Space Geodesy Program Crustal Dynamics 24-hour support, Stardust, Stereo Behind Launch, and Voyager 2.

2. Moderate contention on the 34BWG1 with Stardust TCM, Stereo Ahead and Behind Launch, Mars Reconnaissance Orbiter Cruise Ka-band support, and Mars Express Orbital Science support in Week 46.

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

ANALYSIS (continued)

3. Cassini Tour support has moderate contention on the 34BWG2 with Stereo Ahead Launch and Stardust TCM in Week 46.

RECOMMENDATION

« Mars Express » change Orbital Science support from DSS-24,63 to DSS-14,63 in Week 46. (2)

« Stardust » change TCM support from DSS-25,34,54 to DSS-15,34,65 in Week 46. (2, 3)

Space Geodesy Program Crustal Dynamics move 24-hour support from Week 46 to Week 44. (1)

« Stereo Ahead » change Launch support from DSS-25,34,55 to DSS-24,34,55 in Week 46. (3)

« Voyager 2 » reduce DSS-45 routine support from 16 hours to 8 hours in Week 44 and 46. (1)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	44	45	46	47
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	2	1
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	4	5	4	5
DSN Antenna Cal	70M	8.0	4.5				1	1	1
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-54	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-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	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	1
DSS Maintenance	DSS-43	8.0	8.0			1		1	1
DSS Maintenance	DSS-16	8.0	6.0			1	1	1	1
DSS Maintenance	DSS-34	6.0	6.0			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
DSS Maintenance	DSS-14	8.0	8.0			2	2	2	2
MEX Orbital Sci	DSS-24,54	6.0	6.0	0.50	0.25	7	7		
MEX Orbital Sci	DSS-24,63	6.0	6.0	0.50	0.25			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	2	4	6	6
MRO Cruise Ka	DSS-26,34,55	8.0	4.0	0.50	0.25	1	1	1	1
MRO DDOR Test	DSS-15\45,15\65	1.0	1.0	0.50	0.25		1	1	1
MRO TCM	34H	8.0	4.0	0.50	0.25	12	6		

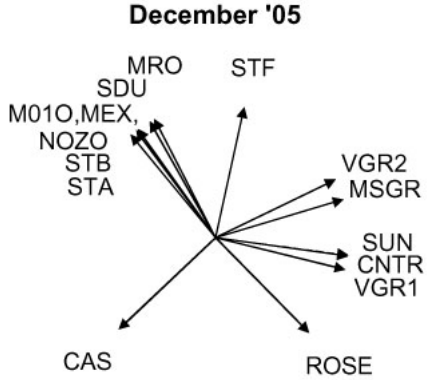
Resource Allocation Review
Analysis and Recommendations
2005 – November (Weeks 44 - 47) (continued)

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		November			
		Ave	Min	Pre	Post	44	45	46	47
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-15,65	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
SGP Crust Dyn B-M4	DSS-65	24.0	24.0	1.50	0.50				1
SGP Crust Dyn H-M4	DSS-15	24.0	24.0	1.50	0.50		1		
SGP Crust Dyn W-M4	DSS-45	24.0	24.0	1.50	0.50		1	1	
STA. Launch	DSS-25,34,55	8.0	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	8.0	4.0	0.50	0.25				3
STA. Phasing	DSS-25,34,55	1.0	1.0	0.50	0.25				15
STB Launch	DSS-26,45,54	8.0	4.0	3.00	0.25			3	3
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	1.0	1.0	0.50	0.25				15
STF	70M	1.0	1.0	0.50	0.25	7	7	7	7
STF	34H	1.0	1.0	0.50	0.25	7	7	7	7
VGR1	DSS-15,65	8.0	4.0	0.50	0.25			2	
VGR1	DSS-26,55	8.0	4.0	0.50	0.25	14	14	12	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	6	6		6
VGR2	DSS-43,45	8.0	8.0	0.50	0.25	1	1	7	1
VGR2 Routine U/L	DSS-43	2.5	2.5	0.75	0.25	1	1	1	1

Resource Allocation Review Analysis and Recommendations

2005 – December (Weeks 48 - 52)



EVENTS

Mars Express Occultation in Weeks 48-51

Mars Reconnaissance Orbiter TCM in Weeks 48 and 49

Rosetta Earth Swingby

Stardust TCM Weeks 51 and 52, Earth Entry support beginning in Week 52

Stereo Ahead Maneuver and Phasing support

Stereo Behind Maneuver and Phasing support

ANALYSIS

1. Mars Reconnaissance Orbiter has moderate contention on the 34HEF with Mars Odyssey, and Voyager 2 in Week 49. Stereo Behind Maneuver support has moderate contention with Mars Reconnaissance Orbiter, Mars Odyssey and Voyager 2 in Week 52.

2. Severe contention on the 34BWG1 Subnet with Mars Reconnaissance Orbiter Cruise Ka-band support, Stereo Ahead and Stereo Behind Maneuver support, Mars Express Orbital Science/Occultation, and Mars Odyssey Relay.

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

ANALYSIS (continued)

3. Severe contention on the 34BWG2 with Cassini Tour, Stardust TCM, Stereo Ahead and Stereo Behind Maneuver, and Mars Odyssey in Weeks 48 and 52.

RECOMMENDATION

« Mars Express » move Orbital Science/Occultation support from the 34BWG1 to DSS-14,63 in Weeks 48-51. (2)

« Mars Odyssey » change requested Relay support to DSS-25,43,55 in Weeks 48 and 51, change to DSS-25,45,65 in Week 49, and change to DSS-24,45,63 in Week 52. (2, 3)

« Stardust » change TCM support from DSS-25,34,54 to DSS-25,45,65 in Weeks 48 and 52. (1)

« Voyager 2 » reduce 16-hour supports to 8 hours in Weeks 49 and 52. (1)

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

RESOURCE REQUEST

User	Resource	Durations		Calibration		December				
		Ave	Min	Pre	Post	48	49	50	51	52
CAS Tour	DSS-14,63	9.0	4.0	0.50	0.25	2	1	2	1	2
CAS Tour	DSS-14/25,63/65	9.0	4.0	0.50	0.25	1	1	1	1	1
CAS Tour	DSS-25	9.0	8.5	0.50	0.25	4	5	4	5	4
DSN Antenna Cal	70M	8.0	4.5				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 Bearing Mntc	DSS-63	8.0	8.0				1			1
DSS Maintenance	DSS-54	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-55	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-27	8.0	6.0			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-24	8.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-65	6.0	6.0			1	1	1	1	1
DSS Maintenance	DSS-26	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	1	1
DSS Maintenance	DSS-43	8.0	8.0				1	1		1
DSS Maintenance	DSS-16	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-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
M01O Relay	DSS-25,34,55	8.0	4.0	0.50	0.25	7		7	7	
M01O Relay	DSS-25,45,55	8.0	4.0	0.50	0.25		7			
M01O Relay	DSS-25,45,54	8.0	4.0	0.50	0.25					7
MEX Orb Sci/Occ	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
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	4	2	7	7	7

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

RESOURCE REQUEST (continued)

User	Resource	Durations		Calibration		December				
		Ave	Min	Pre	Post	48	49	50	51	52
MRO Cruise Ka	DSS-26,34,55	8.0	4.0	0.50	0.25	1	1	1	1	1
MRO DDOR Test	DSS-15\45,15\65	1.0	1.0	0.50	0.25	1				
MRO TCM	34H	8.0	4.0	0.50	0.25	6	12			
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-15,34,55	7.9	4.0	0.50	0.25	3				3
STA. Maneuver	DSS-25,34,55	8.0	4.0	0.50	0.25		2	3	9	
STA. Maneuver	DSS-25,34,55	7.0	4.0	0.50	0.25		1			
STA. Phasing	DSS-25,34,55	1.0	1.0	0.50	0.25	18	18	18	12	18
STB Maneuver	DSS-26,45,54	8.0	6.0	0.50	0.25	2		3	9	3
STB Maneuver	DSS-26,45,54	7.9	6.0	0.50	0.25	1				
STB Maneuver	DSS-26,43,54	8.0	6.0	0.50	0.25		3			
STB Phasing	DSS-26,34,54	1.0	1.0	0.50	0.25	18	18	18	12	18
VGR2	DSS-43,45	16.0	8.0	0.50	0.25	6	6	6	6	5
VGR2	DSS-43,45	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	1

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