
NASA TELEVISION SCHEDULE
STS-133
ISS UTILIZATION LOGISTICS FLIGHT 5 / PERMANENT MULTI-PURPOSE MODULE (PMM)
REV B
2/24/11

NASA TV (Public, Education, Media Channels and HD programming) Digital Satellite C-Band Downlink coordinates for continental North America, Alaska and Hawaii: Satellite = AMC 3 / Transponder = 15C / 87 Degrees West / DVB-S, 4:2:0 / Downlink Frequency = 4000 Mhz / Downlink Polarity = Horizontal / FEC = 3/4 / Data Rate = 38.860 MHz / Symbol Rate = 28.1115. Clients actively participating in Standard-Definition on-orbit interviews, interactive press briefings and satellite interviews must use the LIMO Channel: Satellite = AMC 3 / Transponder = 9C / 87 degrees West / DVB-S, 4:2:0 / Downlink Frequency = 3865.5 Mhz / Downlink Polarity = Horizontal / FEC = 3/4 / Data Rate = 6.0 Mbps / Symbol rate = 4.3404 Msps. A Digital Video Broadcast compliant Integrated Receiver Decoder is required for reception. Mission Audio is available at: <http://www.nasa.gov/ntv>.

ALL TIMES SUBJECT TO CHANGE

This TV schedule is available via the Internet. The address is: <http://www.nasa.gov/shuttle/tv>
 Launch occurred at 3:53pm CT (4:53pm ET) on Thursday, February 24th, 2011.
 An asterisk (*) denotes changes made to the previous revision to the television schedule.

<u>ORBIT</u>	<u>SUBJECT</u>	<u>SITE</u>	<u>MET</u>	<u>CST</u>	<u>EST</u>	<u>GMT</u>
THURSDAY, FEBRUARY 24						
FD 1						
3	ASCENT FLIGHT CONTROL TEAM VIDEO REPLAY	JSC	00/ 03:07	07:00 PM	08:00 PM	01:00
3	RMS CHECKOUT		00/ 04:10	08:03 PM	09:03 PM	02:03
4	EXTERNAL TANK HANDHELD VIDEO DOWNLINK		00/ 04:30	08:23 PM	09:23 PM	02:23
5	DISCOVERY CREW SLEEP BEGINS		00/ 06:00	09:53 PM	10:53 PM	03:53
5	FLIGHT DAY 1 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	00/ 06:07	10:00 PM	11:00 PM	04:00
FRIDAY, FEBRUARY 25						
FD 2						
10	DISCOVERY CREW WAKE UP (begins FD 2)		00/ 14:00	05:53 AM	06:53 AM	11:53
12	VIDEO FILE	HQ	00/ 16:07	08:00 AM	09:00 AM	14:00
12	OBSS UNBERTH		00/ 17:00	08:53 AM	09:53 AM	14:53

13	RMS/OBSS SURVEY OF DISCOVERY'S TPS BEGINS		00/ 18:15	10:08 AM	11:08 AM	16:08
16	EMU CHECKOUT		00/ 22:25	02:18 PM	03:18 PM	20:18
17	MISSION STATUS / MMT BRIEFING	JSC	00/ 23:37	03:30 PM	04:30 PM	21:30
17	OBSS BERTH		01/ 00:00	03:53 PM	04:53 PM	21:53
18	CENTERLINE CAMERA INSTALLATION		01/ 01:05	04:58 PM	05:58 PM	22:58
18	ODS RING EXTENSION		01/ 01:35	05:28 PM	06:28 PM	23:28
18	RENDEZVOUS TOOLS CHECKOUT		01/ 01:50	05:43 PM	06:43 PM	23:43
21	DISCOVERY CREW SLEEP BEGINS		01/ 06:00	09:53 PM	10:53 PM	03:53
21	FLIGHT DAY 2 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	01/ 06:07	10:00 PM	11:00 PM	04:00

SATURDAY, FEBRUARY 26

FD 3

26	DISCOVERY CREW WAKE UP (begins FD 3)		01/ 14:00	05:53 AM	06:53 AM	11:53
27	RENDEZVOUS OPERATIONS BEGIN		01/ 15:40	07:33 AM	08:33 AM	13:33
29	TI BURN		01/ 18:39	10:32 AM	11:32 AM	16:32
30	DISCOVERY RPM / ISS CREW VIDEO DOCUMENTATION BEGINS		01/ 20:13	12:06 PM	01:06 PM	18:06
31	DISCOVERY / ISS DOCKING (may not be televised live)		01/ 21:26	01:19 PM	02:19 PM	19:19
32	SHUTTLE VTR PLAYBACK OF DOCKING		01/ 22:25	02:18 PM	03:18 PM	20:18
32	DISCOVERY / ISS CREW HATCH OPENING AND WELCOME CEREMONY		01/ 23:25	03:18 PM	04:18 PM	21:18
33	MISSION STATUS / MMT BRIEFING	JSC	01/ 23:37	03:30 PM	04:30 PM	21:30
33	SSRMS GRAPPLE & UNBERTH ELC-4 FROM		02/ 00:00	03:53 PM	04:53 PM	21:53
34	SSRMS HANDOFF ELC-4 TO SRMS		02/ 01:00	04:53 PM	05:53 PM	22:53
34	SSRMS BASE CHANGE		02/ 01:45	05:38 PM	06:38 PM	23:38

34	SRMS HANDOFF ELC-4 TO SSRMS		02/	02:15	06:08 PM	07:08 PM	00:08
35	SSRMS INSTALLS ELC-4 ON S3 TRUSS		02/	02:55	06:48 PM	07:48 PM	00:48
36	ISS CREW SLEEP BEGINS		02/	05:30	09:23 PM	10:23 PM	03:23
37	DISCOVERY CREW SLEEP BEGINS		02/	06:00	09:53 PM	10:53 PM	03:53
37	FLIGHT DAY 3 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	02/	06:07	10:00 PM	11:00 PM	04:00
SUNDAY, FEBRUARY 27							
FD 3 / FD 4							
40	ISS FLIGHT DIRECTOR UPDATE	JSC	02/	11:47	03:40 AM	04:40 AM	09:40
41	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	02/	12:52	04:45 AM	05:45 AM	10:45
42	DISCOVERY / ISS CREW WAKE UP (begins FD 4)		02/	14:00	05:53 AM	06:53 AM	11:53
44	SSRMS GRAPPLES OBSS		02/	17:00	08:53 AM	09:53 AM	14:53
44	DISCOVERY / ISS TRANSFERS BEGIN		02/	17:00	08:53 AM	09:53 AM	14:53
45	SSRMS HANDOFF OF OBSS TO SRMS		02/	18:05	09:58 AM	10:58 AM	15:58
45	MISSION STATUS BRIEFING	JSC	02/	19:37	11:30 AM	12:30 PM	17:30
47	U.S. PAO EVENT	ISS Ku	02/	21:50	01:43 PM	02:43 PM	19:43
48	MMT BRIEFING	JSC	02/	23:07	03:00 PM	04:00 PM	21:00
49	EVA # 1 PROCEDURE REVIEW		03/	01:20	05:13 PM	06:13 PM	23:13
51	EVA # 1 CAMPOUT BEGINS (Bowen and Drew)		03/	03:55	07:48 PM	08:48 PM	01:48
52	ISS CREW SLEEP BEGINS		03/	05:00	08:53 PM	09:53 PM	02:53
52	DISCOVERY CREW SLEEP BEGINS		03/	05:30	09:23 PM	10:23 PM	03:23
53	FLIGHT DAY 4 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	03/	06:07	10:00 PM	11:00 PM	04:00

MONDAY, FEBRUARY 28

FD 4 / FD 5

55	ISS FLIGHT DIRECTOR UPDATE	JSC	03/	11:07	03:00 AM	04:00 AM	09:00
57	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	03/	12:52	04:45 AM	05:45 AM	10:45
57	DISCOVERY / ISS CREW WAKE UP (begins FD 5)		03/	13:30	05:23 AM	06:23 AM	11:23
58	EVA # 1 PREPARATIONS RESUME		03/	14:10	06:03 AM	07:03 AM	12:03
61	EVA # 1 BEGINS (Bowen and Drew)		03/	18:25	10:18 AM	11:18 AM	16:18
61	J612 CABLE INSTALLATION ON NODE 1		03/	18:55	10:48 AM	11:48 AM	16:48
62	FAILED PUMP MODULE TRANSFER FROM MBS POA TO ESP-2		03/	20:20	12:13 PM	01:13 PM	18:13
63	CP 3 CAMERA WEDGE INSTALLATION		03/	22:25	02:18 PM	03:18 PM	20:18
64	STARBOARD CETA RAIL BOARD INSTALLATION		03/	23:25	03:18 PM	04:18 PM	21:18
65	JAXA "MESSAGE IN A BOTTLE" SPACE SAMPLE CAPTURE		04/	00:10	04:03 PM	05:03 PM	22:03
65	EVA #1 ENDS		04/	00:55	04:48 PM	05:48 PM	22:48
65	MISSION STATUS BRIEFING	JSC	04/	03:07	07:00 PM	08:00 PM	01:00
66	VIDEO FILE	HQ	04/	04:07	08:00 PM	09:00 PM	02:00
67	ISS CREW SLEEP BEGINS		04/	04:30	08:23 PM	09:23 PM	02:23
68	DISCOVERY CREW SLEEP BEGINS		04/	05:00	08:53 PM	09:53 PM	02:53
68	FLIGHT DAY 5 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	04/	05:07	09:00 PM	10:00 PM	03:00

TUESDAY, MARCH 1

FD 5 / FD 6

71	ISS FLIGHT DIRECTOR UPDATE	JSC	04/	10:47	02:40 AM	03:40 AM	08:40
72	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	04/	11:52	03:45 AM	04:45 AM	09:45

73	DISCOVERY / ISS CREW WAKE UP (begins FD 6)		04/ 13:00	04:53 AM	05:53 AM	10:53
74	SSRMS GRAPPLE OF PMM		04/ 15:15	07:08 AM	08:08 AM	13:08
75	PMM UNBERTH		04/ 15:50	07:43 AM	08:43 AM	13:43
75	PMM INSTALLATION BEGINS ON UNITY NADIR PORT		04/ 16:55	08:48 AM	09:48 AM	14:48
76	PMM INSTALLATION COMPLETE		04/ 17:45	09:38 AM	10:38 AM	15:38
76	MISSION STATUS BRIEFING	JSC	04/ 18:37	10:30 AM	11:30 AM	16:30
77	VIDEO FILE	HQ	04/ 19:37	11:30 AM	12:30 PM	17:30
78	OBSS FOCUSED INSPECTION OF DISCOVERY'S TPS (If required)		04/ 20:15	12:08 PM	01:08 PM	18:08
80	U.S. PAO EVENT	ISS Ku	04/ 23:25	03:18 PM	04:18 PM	21:18
80	EVA # 2 PROCEDURE REVIEW		05/ 00:25	04:18 PM	05:18 PM	22:18
82	EVA # 2 CAMPOUT BEGINS (Bowen and Drew)		05/ 02:55	06:48 PM	07:48 PM	00:48
83	ISS CREW SLEEP BEGINS		05/ 04:00	07:53 PM	08:53 PM	01:53
83	DISCOVERY CREW SLEEP BEGINS		05/ 04:30	08:23 PM	09:23 PM	02:23
83	FLIGHT DAY 6 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	05/ 05:07	09:00 PM	10:00 PM	03:00

WEDNESDAY, MARCH 2

FD 6 / FD 7

87	ISS FLIGHT DIRECTOR UPDATE	JSC	05/ 10:47	02:40 AM	03:40 AM	08:40
88	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	05/ 11:52	03:45 AM	04:45 AM	09:45
88	DISCOVERY / ISS CREW WAKE UP (begins FD 7)		05/ 12:30	04:23 AM	05:23 AM	10:23
89	EVA # 2 PREPARATIONS RESUME		05/ 13:10	05:03 AM	06:03 AM	11:03
90	PMM VESTIBULE PREPARATION FOR INGRESS		05/ 14:55	06:48 AM	07:48 AM	12:48
91	EVA # 2 BEGINS (Bowen and Drew)		05/ 17:25	09:18 AM	10:18 AM	15:18

92	LWAPA RETRIEVAL AND REPLACEMENT		05/	18:55	10:48 AM	11:48 AM	16:48
92	ELC-4 THERMAL INSULATION REMOVAL		05/	18:55	10:48 AM	11:48 AM	16:48
93	P3 CETA LIGHT INSTALLATION		05/	19:45	11:38 AM	12:38 PM	17:38
93	DEXTRE CAMERA LIGHT PAN AND TILT ASSEMBLY INSTALLATION		05/	19:55	11:48 AM	12:48 PM	17:48
93	PMM INGRESS		05/	20:00	11:53 AM	12:53 PM	17:53
94	P1 RADIATOR TROUBLESHOOTING		05/	21:05	12:58 PM	01:58 PM	18:58
95	TRANQUILITY THERMAL INSULATION REMOVAL		05/	22:15	02:08 PM	03:08 PM	20:08
95	DEXTRE CAMERA COVER INSTALLATION		05/	22:50	02:43 PM	03:43 PM	20:43
96	EVA# 2 ENDS		05/	23:55	03:48 PM	04:48 PM	21:48
97	MISSION STATUS BRIEFING	JSC	06/	02:07	06:00 PM	07:00 PM	00:00
98	VIDEO FILE	HQ	06/	03:07	07:00 PM	08:00 PM	01:00
98	ISS CREW SLEEP BEGINS		06/	03:30	07:23 PM	08:23 PM	01:23
98	DISCOVERY CREW SLEEP BEGINS		06/	04:00	07:53 PM	08:53 PM	01:53
99	FLIGHT DAY 7 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	06/	04:07	08:00 PM	09:00 PM	02:00

THURSDAY, MARCH 3

FD 7 / FD 8

102	ISS FLIGHT DIRECTOR UPDATE	JSC	06/	09:52	01:45 AM	02:45 AM	07:45
103	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	06/	10:52	02:45 AM	03:45 AM	08:45
104	DISCOVERY / ISS CREW WAKE UP (begins FD 8)		06/	12:00	03:53 AM	04:53 AM	09:53
106	U.S. PAO EVENT	ISS Ku	06/	15:20	07:13 AM	08:13 AM	13:13
106	DISCOVERY / ISS TRANSFERS RESUME		06/	15:45	07:38 AM	08:38 AM	13:38
107	U.S. PAO EVENT	ISS Ku	06/	17:40	09:33 AM	10:33 AM	15:33

108	VIDEO FILE	HQ	06/	19:07	11:00 AM	12:00 PM	17:00
109	DISCOVERY CREW OFF DUTY PERIOD		06/	19:40	11:33 AM	12:33 PM	17:33
112	MISSION STATUS BRIEFING	JSC	07/	01:07	05:00 PM	06:00 PM	23:00
114	ISS CREW SLEEP BEGINS		07/	03:00	06:53 PM	07:53 PM	00:53
114	DISCOVERY CREW SLEEP BEGINS		07/	03:30	07:23 PM	08:23 PM	01:23
114	FLIGHT DAY 8 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	07/	04:07	08:00 PM	09:00 PM	02:00
FRIDAY, MARCH 4							
FD 8 / FD 9							
117	ISS FLIGHT DIRECTOR UPDATE	JSC	07/	08:52	12:45 AM	01:45 AM	06:45
119	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	07/	10:52	02:45 AM	03:45 AM	08:45
119	DISCOVERY / ISS CREW WAKE UP (begins FD 9)		07/	11:30	03:23 AM	04:23 AM	09:23
121	U.S. PAO EDUCATIONAL EVENT	ISS Ku	07/	14:25	06:18 AM	07:18 AM	12:18
123	JOINT CREW NEWS CONFERENCE	ISS Ku	07/	17:30	09:23 AM	10:23 AM	15:23
124	INTERPRETED REPLAY OF JOINT CREW NEWS CONFERENCE	JSC	07/	18:37	10:30 AM	11:30 AM	16:30
124	DISCOVERY CREW OFF DUTY PERIOD		07/	19:35	11:28 AM	12:28 PM	17:28
125	VIDEO FILE	HQ	07/	19:37	11:30 AM	12:30 PM	17:30
125	MISSION STATUS BRIEFING	JSC	07/	20:37	12:30 PM	01:30 PM	18:30
126	RENDEZVOUS TOOL CHECKOUT		07/	21:35	01:28 PM	02:28 PM	19:28
127	FAREWELL AND HATCH CLOSURE		07/	23:05	02:58 PM	03:58 PM	20:58
127	CENTERLINE CAMERA INSTALLATION		08/	00:05	03:58 PM	04:58 PM	21:58
129	ISS CREW SLEEP BEGINS		08/	02:30	06:23 PM	07:23 PM	00:23
129	DISCOVERY CREW SLEEP BEGINS		08/	03:00	06:53 PM	07:53 PM	00:53

129	FLIGHT DAY 9 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	08/ 03:07	07:00 PM	08:00 PM	01:00
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SATURDAY, MARCH 5

FD 10

135	DISCOVERY / ISS CREW WAKE UP (begins FD 10)		08/ 11:00	02:53 AM	03:53 AM	08:53
137	DISCOVERY UNDOCKS FROM ISS		08/ 14:54	06:47 AM	07:47 AM	12:47
137	DISCOVERY FLYAROUND OF ISS BEGINS		08/ 15:24	07:17 AM	08:17 AM	13:17
138	DISCOVERY FINAL SEPARATION FROM ISS		08/ 16:37	08:30 AM	09:30 AM	14:30
139	SHUTTLE VTR PLAYBACK OF UNDOCKING		08/ 18:05	09:58 AM	10:58 AM	15:58
140	RMS/OBSS LATE INSPECTION OF DISCOVERY'S TPS		08/ 19:00	10:53 AM	11:53 AM	16:53
142	MISSION STATUS BRIEFING	JSC	08/ 20:37	12:30 PM	01:30 PM	18:30
142	MMT BRIEFING	JSC	08/ 23:07	03:00 PM	04:00 PM	21:00
143	OBSS BERTH		08/ 23:20	03:13 PM	04:13 PM	21:13
145	DISCOVERY CREW SLEEP BEGINS		09/ 03:00	06:53 PM	07:53 PM	00:53
145	FLIGHT DAY 10 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	09/ 03:07	07:00 PM	08:00 PM	01:00

SUNDAY, MARCH 6

FD 11

150	DISCOVERY CREW WAKE UP (begins FD 11)		09/ 11:00	02:53 AM	03:53 AM	08:53
152	FCS CHECKOUT		09/ 14:00	05:53 AM	06:53 AM	11:53
152	CABIN STOWAGE BEGINS		09/ 14:05	05:58 AM	06:58 AM	11:58
153	RCS HOT-FIRE TEST		09/ 15:10	07:03 AM	08:03 AM	13:03
156	DISCOVERY U.S. PAO EVENT	TDRE	09/ 19:00	10:53 AM	11:53 AM	16:53
156	DISCOVERY CREW TRIBUTE EVENT	TDRE	09/ 19:45	11:38 AM	12:38 PM	17:38
157	MISSION STATUS BRIEFING	JSC	09/ 21:07	01:00 PM	02:00 PM	19:00

159	KU-BAND ANTENNA STOWAGE		10/ 00:10	04:03 PM	05:03 PM	22:03
161	DISCOVERY CREW SLEEP BEGINS		10/ 03:00	06:53 PM	07:53 PM	00:53
161	FLIGHT DAY 11 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	10/ 03:07	07:00 PM	08:00 PM	01:00

MONDAY, MARCH 7

FD 12

166	DISCOVERY CREW WAKE UP (begins FD 12)		10/ 11:00	02:53 AM	03:53 AM	08:53
168	DISCOVERY DEORBIT PREPARATIONS BEGIN		10/ 14:40	06:33 AM	07:33 AM	12:33
169	PAYLOAD BAY DOOR CLOSING		10/ 16:11	08:04 AM	09:04 AM	14:04
171	DISCOVERY DEORBIT BURN		10/ 18:51	10:44 AM	11:44 AM	16:44
172	MILA C-BAND RADAR ACQUISITION OF DISCOVERY		10/ 19:41	11:34 AM	12:34 PM	17:34
172	KSC LANDING	KSC	10/ 19:54	11:47 AM	12:47 PM	17:47
	POST-LANDING NEWS CONFERENCE	KSC		NET L+2 HRS.		
	ENTRY FLIGHT CONTROL TEAM VIDEO REPLAY (replayed after Post-Landing News Conference)	JSC		~ L+3 HRS.		
	STS-133 MISSION HIGHLIGHTS VIDEO REPLAY (replayed after Entry Flight Control Team Video)	JSC		~ L+3.5 HRS.		
	STS-133 CREW NEWS CONFERENCE (may be postponed or cancelled)	KSC		NET L+4.5 HRS.		

DEFINITION OF TERMS

AMC: Americom Satellite
CDT: Central Daylight Time
CETA: Crew and Equipment Translation Aid
CLPA: Camera Light Pan Tilt Assembly
Destiny: U.S. Laboratory on ISS
ELC-4: Express Logistics Carrier #4
EMU: Extravehicular Mobility Unit
EOTP: Enhanced ORU Temporary Platform
EDT: Eastern Daylight Time
EVA: Extravehicular Activity
FCS: Flight Control System
FD: Flight Day
GMT: Greenwich Mean Time
Harmony: Node 2
HD: High Definition Television
HQ: NASA Headquarters
ISS: International Space Station
JAXA: Japan Aerospace Exploration Agency
JSC: Johnson Space Center
KSC: Kennedy Space Center
L: Launch or Landing time
LIMO: Live Interview Media Outlet channel
LWAPA: Lightweight Adaptor Plate Assembly
MECO: Main Engine Cut-Off
MET: Mission Elapsed Time, which begins at the moment of launch and is read: DAYS/HOURS:MINUTES. LAUNCH=00/00:00
MILA: Merritt Island, Florida Tracking Station
MMT: Mission Management Team
MS: Mission Specialist
NET: No Earlier Than
OBSS: Orbiter Boom Sensor System
ODS: Orbiter Docking System
OMS: Orbital Maneuvering System
PAO: Public Affairs office
PMM: Permanent Multipurpose Module
RCS: Reaction Control System
R&R: Return and Replace
RPM: Rendezvous Pitch Maneuver
RSS: Rotate Servicing Structure
S1: Starboard One truss segment on ISS
SPDM: Special Purpose Dexterous Manipulator
SRMS: Shuttle Remote Manipulator System on Discovery
SSRMS: Space Station Remote Manipulator System (Canadarm2 ISS Robotic Arm)
STBD: Starboard
STS: Space Transportation System

TI: Terminal Initiation Rendezvous Maneuver
TDRE, W: Tracking and Data Relay Satellite, East and West Longitudes
TPS: Thermal Protection System
Unity: Connecting Node 1 on International Space Station
VAFB: Vandenberg Air Force Base
VTR: Videotape Recorder