
 NASA TELEVISION SCHEDULE
 STS-135
 ISS UTILIZATION LOGISTICS FLIGHT 7 / MPLM "RAFFAELLO"
 REV G
 07/14/11

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/shuttletv>
 Launch occurred at 10:29am CT (11:29am ET) on Friday, July 8th, 2011.
 An asterisk (*) denotes changes made to the previous revision to the television schedule.

ORBIT	SUBJECT	SITE	MET	CDT	EDT	GMT
THURSDAY, JULY 14						
FD 7/ FD 8						
88	ATLANTIS / ISS CREW WAKE UP (begins FD 7)		05/ 14:00	12:29 AM	01:29 AM	05:29
89	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	05/ 14:16	12:45 AM	01:45 AM	05:45
90	MPLM TRANSFERS RESUME		05/ 16:35	03:04 AM	04:04 AM	08:04
92	FOX NEWS RADIO/ KTVI-TV St. Louis, MO / KSDK-TV St. Louis, MO LIVE INTERVIEWS	ISS Ku	05/ 19:30	05:59 AM	06:59 AM	10:59
94	WBBM-TV, Chicago, IL / KTVU-TV, Oakland, CA / WTXF-TV, Philadelphia, PA LIVE INTERVIEWS	ISS Ku	05/ 21:50	08:19 AM	09:19 AM	13:19
94	ATLANTIS / ISS CREW OFF DUTY PERIOD		05/ 22:15	08:44 AM	09:44 AM	13:44
95	* STS-135 SOLID ROCKET BOOSTER VIDEO	JSC	05/ 22:31	09:00 AM	10:00 AM	14:00
95	VIDEO FILE	HQ	06/ 00:31	11:00 AM	12:00 PM	16:00
95	* STS-135 SOLID ROCKET BOOSTER VIDEO REPLAY	JSC	06/ 01:31	12:00 PM	01:00 PM	17:00

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97	* STS-135 SOLID ROCKET BOOSTER VIDEO REPLAY	JSC	06/ 03:31	02:00 PM	03:00 PM	19:00
98	ISS CREW SLEEP BEGINS		06/ 04:30	02:59 PM	03:59 PM	19:59
98	ATLANTIS CREW SLEEP BEGINS		06/ 05:00	03:29 PM	04:29 PM	20:29
99	MISSION STATUS BRIEFING	JSC	06/ 05:31	04:00 PM	05:00 PM	21:00
99	* STS-135 SOLID ROCKET BOOSTER VIDEO REPLAY	JSC	06/ 06:01	04:30 PM	05:30 PM	21:30
99	FLIGHT DAY 7 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	06/ 06:31	05:00 PM	06:00 PM	22:00
101	"THE SPACE SHUTTLE" NARRATED BY WILLIAM SHATNER	JSC	06/ 09:31	08:00 PM	09:00 PM	01:00
102	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	06/ 11:31	10:00 PM	11:00 PM	03:00
103	ATLANTIS / ISS CREW WAKE UP (begins FD 8)		06/ 13:00	11:29 PM	12:29 AM	04:29
104	ISS FLIGHT DIRECTOR UPDATE	JSC	06/ 13:16	11:45 PM	12:45 AM	04:45

FRIDAY, JULY 15

FD 8 / FD 9

105	MPLM TRANSFERS RESUME		06/ 15:10	01:39 AM	02:39 AM	06:39
107	CBS Radio / KYW-TV, Philadelphia, PA / Associated Press LIVE INTERVIEWS	ISS Ku	06/ 19:15	05:44 AM	06:44 AM	10:44
108	* REUTERS / KYW Radio, Philadelphia, PA / WPVI-TV, Philadelphia, PA LIVE INTERVIEWS	ISS Ku	06/ 20:35	07:04 AM	08:04 AM	12:04
109	JOINT CREW NEWS CONFERENCE	ISS Ku	06/ 21:55	08:24 AM	09:24 AM	13:24
110	* VIDEO FILE	HQ	06/ 23:01	09:30 AM	10:30 AM	14:30
110	INTERPRETED REPLAY OF JOINT CREW NEWS CONFERENCE	JSC	06/ 23:31	10:00 AM	11:00 AM	15:00

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113	ISS CREW SLEEP BEGINS		07/	03:30	01:59 PM	02:59 PM	18:59
113	ATLANTIS CREW SLEEP BEGINS		07/	04:00	02:29 PM	03:29 PM	19:29
113	MISSION STATUS BRIEFING	JSC	07/	04:31	03:00 PM	04:00 PM	20:00
114	FLIGHT DAY 8 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	07/	05:31	04:00 PM	05:00 PM	21:00
116	"THE SPACE SHUTTLE" NARRATED BY WILLIAM SHATNER	JSC	07/	08:31	07:00 PM	08:00 PM	00:00
117	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	07/	10:31	09:00 PM	10:00 PM	02:00
118	ATLANTIS / ISS CREW WAKE UP (begins FD 9)		07/	12:00	10:29 PM	11:29 PM	03:29
119	ISS FLIGHT DIRECTOR UPDATE	JSC	07/	12:16	10:45 PM	11:45 PM	03:45

SATURDAY, JULY 16

FD 9 / FD 10

120	MPLM TRANSFERS RESUME		07/	15:05	01:34 AM	02:34 AM	06:34
128	ISS CREW SLEEP BEGINS		08/	03:00	01:29 PM	02:29 PM	18:29
128	ATLANTIS CREW SLEEP BEGINS		08/	03:30	01:59 PM	02:59 PM	18:59
129	MISSION STATUS BRIEFING	JSC	08/	04:01	02:30 PM	03:30 PM	19:30
130	FLIGHT DAY 9 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	08/	05:31	04:00 PM	05:00 PM	21:00
132	"THE SPACE SHUTTLE" NARRATED BY WILLIAM SHATNER	JSC	08/	08:31	07:00 PM	08:00 PM	00:00
133	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	08/	10:31	09:00 PM	10:00 PM	02:00
134	ATLANTIS / ISS CREW WAKE UP (begins FD 10)		08/	11:30	09:59 PM	10:59 PM	02:59
134	ISS FLIGHT DIRECTOR UPDATE	JSC	08/	12:01	10:30 PM	11:30 PM	03:30

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SUNDAY, JULY 17						
FD 10 / FD 11						
135	* MPLM TRANSFERS RESUME		08/ 13:50	12:19 AM	01:19 AM	05:19
138	* NASA EXPLORER SCHOOLS EDUCATIONAL EVENT	ISS Ku	08/ 18:25	04:54 AM	05:54 AM	09:54
140	ATLANTIS / ISS CREW OFF DUTY PERIOD		08/ 21:15	07:44 AM	08:44 AM	12:44
143	ISS CREW SLEEP BEGINS		09/ 02:30	12:59 PM	01:59 PM	17:59
144	ATLANTIS CREW SLEEP BEGINS		09/ 03:00	01:29 PM	02:29 PM	18:29
144	* MISSION STATUS BRIEFING	JSC	09/ 03:01	01:30 PM	02:30 PM	18:30
146	* FLIGHT DAY 10 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	09/ 04:31	03:00 PM	04:00 PM	20:00
148	"THE SPACE SHUTTLE" NARRATED BY WILLIAM SHATNER	JSC	09/ 08:31	07:00 PM	08:00 PM	00:00
149	* "LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	09/ 09:31	08:00 PM	09:00 PM	01:00
149	* ISS FLIGHT DIRECTOR UPDATE	JSC	09/ 10:41	09:10 PM	10:10 PM	02:10
150	ATLANTIS / ISS CREW WAKE UP (begins FD 11)		09/ 11:00	09:29 PM	10:29 PM	02:29
MONDAY, JULY 18						
FD 11 / FD 12						
151	MPLM EGRESS		09/ 13:20	11:49 PM	12:49 AM	04:49
151	MPLM VESTIBULE DEMATING		09/ 13:55	12:24 AM	01:24 AM	05:24
152	MPLM VESTIBULE DEPRESSURIZATION		09/ 15:25	01:54 AM	02:54 AM	06:54
154	SSRMS GRAPPLES MPLM		09/ 18:05	04:34 AM	05:34 AM	09:34
154	* SSRMS UNBERTHS MPLM FROM ISS & INSTALLS IN ATLANTIS' PAYLOAD BAY		09/ 19:20	05:49 AM	06:49 AM	10:49

<u>ORBIT</u>	<u>SUBJECT</u>	<u>SITE</u>		<u>MET</u>	<u>CDT</u>	<u>EDT</u>	<u>GMT</u>
155	MISSION STATUS BRIEFING	JSC		09/ 20:31	07:00 AM	08:00 AM	12:00
156	ATLANTIS / ISS FAREWELL AND HATCH CLOSURE			09/ 21:50	08:19 AM	09:19 AM	13:19
157	CENTERLINE CAMERA INSTALLATION			09/ 22:40	09:09 AM	10:09 AM	14:09
157	RENDEZVOUS TOOLS CHECKOUT			09/ 23:20	09:49 AM	10:49 AM	14:49
159	ISS CREW SLEEP BEGINS			10/ 02:00	12:29 PM	01:29 PM	17:29
159	ATLANTIS CREW SLEEP BEGINS			10/ 02:30	12:59 PM	01:59 PM	17:59
160	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC		10/ 03:31	02:00 PM	03:00 PM	19:00
160	FLIGHT DAY 11 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC		10/ 04:31	03:00 PM	04:00 PM	20:00
164	ATLANTIS / ISS CREW WAKE UP (begins FD 12)			10/ 10:30	08:59 PM	09:59 PM	01:59
TUESDAY, JULY 19							
FD 12 / FD 13							
167	ATLANTIS UNDOCKS FROM ISS			10/ 14:59	01:28 AM	02:28 AM	06:28
168	ATLANTIS FLYAROUND OF ISS BEGINS			10/ 15:58	02:27 AM	03:27 AM	07:27
168	ATLANTIS FINAL SEPARATION FROM ISS			10/ 16:49	03:18 AM	04:18 AM	08:18
170	RMS / OBSS LATE INSPECTION OF ATLANTIS' TPS			10/ 19:05	05:34 AM	06:34 AM	10:34
170	MISSION STATUS BRIEFING	JSC		10/ 20:01	06:30 AM	07:30 AM	11:30
173	OBSS BERTH			10/ 23:20	09:49 AM	10:49 AM	14:49
173	* SHUTTLE VTR PLAYBACK OF UNDOCKING			11/ 00:30	10:59 AM	11:59 AM	15:59
174	MMT BRIEFING	JSC		11/ 01:31	12:00 PM	01:00 PM	17:00
175	ATLANTIS CREW SLEEP BEGINS			11/ 02:30	12:59 PM	01:59 PM	17:59
175	VIDEO FILE	HQ		11/ 02:31	01:00 PM	02:00 PM	18:00

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175	FLIGHT DAY 12 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	11/ 03:31	02:00 PM	03:00 PM	19:00
177	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	11/ 06:31	05:00 PM	06:00 PM	22:00
180	ATLANTIS CREW WAKE UP (begins FD 13)		11/ 10:30	08:59 PM	09:59 PM	01:59
WEDNESDAY, JULY 20						
FD 13						
183	FCS CHECKOUT		11/ 14:55	01:24 AM	02:24 AM	06:24
184	* CABIN STOWAGE BEGINS		11/ 15:15	01:44 AM	02:44 AM	06:44
184	PICOSAT DEPLOYMENT		11/ 16:15	02:44 AM	03:44 AM	07:44
184	RCS HOT-FIRE TEST		11/ 16:50	03:19 AM	04:19 AM	08:19
186	MISSION STATUS BRIEFING	JSC	11/ 20:31	07:00 AM	08:00 AM	12:00
185	ABC News / CBS News / CNN / FOX News / NBC News LIVE INTERVIEWS	TDRE	11/ 18:25	04:54 AM	05:54 AM	09:54
189	VIDEO FILE	HQ	12/ 00:31	11:00 AM	12:00 PM	16:00
189	KU-BAND ANTENNA STOWAGE		12/ 00:40	11:09 AM	12:09 PM	16:09
190	ATLANTIS CREW SLEEP BEGINS		12/ 02:30	12:59 PM	01:59 PM	17:59
191	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	12/ 03:31	02:00 PM	03:00 PM	19:00
192	FLIGHT DAY 13 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	12/ 04:31	03:00 PM	04:00 PM	20:00
195	ATLANTIS CREW WAKE UP (begins FD 14)		12/ 10:30	08:59 PM	09:59 PM	01:59
197	ATLANTIS DEORBIT PREPARATIONS BEGIN		12/ 13:25	11:54 PM	12:54 AM	04:54

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THURSDAY, JULY 21						
FD 14						
198	PAYLOAD BAY DOOR CLOSING		12/ 14:45	01:14 AM	02:14 AM	06:14
200	ATLANTIS DEORBIT BURN		12/ 17:25	03:54 AM	04:54 AM	08:54
200	MILA C-BAND RADAR ACQUISITION OF ATLANTIS		12/ 18:16	04:45 AM	05:45 AM	09:45
200	KSC LANDING	KSC	12/ 18:29	04:58 AM	05:58 AM	09:58
	ENTRY FLIGHT DIRECTOR TONY CECCACCI SIGN-OFF TO FLIGHT CONTROL TEAM	JSC		~ L+45 MIN.		
	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-135 MISSION HIGHLIGHTS VIDEO REPLAY (replayed after Entry Flight Control Team Video)	JSC		~ L+3.5 HRS.		
	STS-135 CREW NEWS CONFERENCE (may be postponed or cancelled)	KSC		NET L+4.5 HRS.		
*	ATLANTIS TOWBACK & EMPLOYEE APPRECIATION EVENT	KSC		NET L+6 HRS.		

ORBIT

SUBJECT

SITE

MET

CDT

EDT

GMT

DEFINITION OF TERMS

AMC: Americom Satellite
CDT: Central Daylight Time
Destiny: U.S. Laboratory on ISS
Dextre: Special Purpose Dextrous Manipulator on ISS
ELC-4: Express Logistics Carrier #4
EMU: Extravehicular Mobility Unit
EOTP: Enhanced ORU Temporary Platform
EDT: Eastern Daylight Time
ESP2: External Stowage Platform #2 on ISS
EVA: Extravehicular Activity
FCS: Flight Control System
FD: Flight Day
GMT: Greenwich Mean Time
Harmony: Node 2
HD: High Definition Television
HQ: NASA Headquarters
ISLE: In-suit Light Exercise
ISS: International Space Station
JSC: Johnson Space Center
KSC: Kennedy Space Center
L: Launch or Landing time
LIMO: Live Interview Media Outlet channel
LMC: Lightweight Multipurpose Carrier
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
MISSE: Materials International Space Station Experiment
MMT: Mission Management Team
MS: Mission Specialist
NET: No Earlier Than
OBSS: Orbiter Boom Sensor System
ODS: Orbiter Docking System
OMS: Orbital Maneuvering System
ORU: Orbital Replacement Unit
PAO: Public Affairs office
PDGF: Power and Data Grapple Fixture
RCS: Reaction Control System
R&R: Return and Replace
RRM: Robotics Refueling Mission
RSS: Rotating Servicing Structure
S1: Starboard One truss segment on ISS
SRMS: Shuttle Remote Manipulator System on ATLANTIS

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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					
VTR:	Videotape Recorder					
ZSR:	Zero-G Stowage Rack					