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 NASA TELEVISION SCHEDULE  
 STS-135  
 ISS UTILIZATION LOGISTICS FLIGHT 7 / MPLM "RAFFAELLO"  
 REV E  
 07/12/11  
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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
<b>TUESDAY, JULY 12</b>						
<b>FD 5</b>						
62	EVA BEGINS (Fossum and Garan)		03/ 21:15	07:44 AM	08:44 AM	12:44
62	FAILED PUMP MODULE RETRIEVAL FROM ESP-2		03/ 22:15	08:44 AM	09:44 AM	13:44
63	* HOUSE COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY FULL COMMITTEE HEARING - A REVIEW OF NASA'S SPACE LAUNCH SYSTEM (Education Channel Only)	HQ	03/ 22:31	09:00 AM	10:00 AM	14:00
63	FAILED PUMP MODULE TRANSFER TO LMC IN ATLANTIS' PAYLOAD BAY		03/ 22:45	09:14 AM	10:14 AM	14:14
64	RRM REMOVAL FROM ATLANTIS' PAYLOAD BAY		03/ 23:45	10:14 AM	11:14 AM	15:14
64	RRM TRANSFER TO ENHANCED DEXTRE ORU TEMPORARY PLATFORM		04/ 00:05	10:34 AM	11:34 AM	15:34
64	MISSE INSTALLATION ON ELC-2		04/ 00:55	11:24 AM	12:24 PM	16:24
65	ZARYA PDGF TROUBLESHOOTING		04/ 01:40	12:09 PM	01:09 PM	17:09

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65	PMA 3 COVER INSTALLATION		04/ 02:15	12:44 PM	01:44 PM	17:44
66	EVA ENDS		04/ 03:45	02:14 PM	03:14 PM	19:14
67	MISSION STATUS BRIEFING	JSC	04/ 05:01	03:30 PM	04:30 PM	20:30
68	ISS CREW SLEEP BEGINS		04/ 06:30	04:59 PM	05:59 PM	21:59
68	ATLANTIS CREW SLEEP BEGINS		04/ 07:00	05:29 PM	06:29 PM	22:29
69	VIDEO FILE	HQ	04/ 07:31	06:00 PM	07:00 PM	23:00
69	FLIGHT DAY 5 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	04/ 08:31	07:00 PM	08:00 PM	00:00
71	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	04/ 10:31	09:00 PM	10:00 PM	02:00
72	ISS FLIGHT DIRECTOR UPDATE	JSC	04/ 13:16	11:45 PM	12:45 AM	04:45
<b>WEDNESDAY, JULY 13</b>						
<b>FD 6</b>						
73	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	04/ 14:16	12:45 AM	01:45 AM	05:45
73	ATLANTIS / ISS CREW WAKE UP (begins FD 6)		04/ 15:00	01:29 AM	02:29 AM	06:29
75	ATLANTIS / ISS TRANSFERS RESUME		04/ 17:00	03:29 AM	04:29 AM	08:29
80	* WBNG-TV, Binghamton, NY / WICZ-TV, Binghamton, NY / KGO-TV, San Francisco, CA LIVE INTERVIEWS	ISS Ku	05/ 01:25	11:54 AM	12:54 PM	16:54
81	* CREW DOWNLINK OF "FACE IN SPACE" TRIBUTE	ISS Ku	05/ 01:45	12:14 PM	01:14 PM	17:14
82	VIDEO FILE	HQ	05/ 03:31	02:00 PM	03:00 PM	19:00
83	ISS CREW SLEEP BEGINS		05/ 05:30	03:59 PM	04:59 PM	20:59
83	MISSION STATUS BRIEFING	JSC	05/ 05:31	04:00 PM	05:00 PM	21:00
83	ATLANTIS CREW SLEEP BEGINS		05/ 06:00	04:29 PM	05:29 PM	21:29

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84	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC	05/ 06:31	05:00 PM	06:00 PM	22:00
84	FLIGHT DAY 6 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	05/ 07:31	06:00 PM	07:00 PM	23:00
86	* "THE SPACE SHUTTLE" NARRATED BY WILLIAM SHATNER	JSC	05/ 10:31	09:00 PM	10:00 PM	02:00
88	ISS FLIGHT DIRECTOR UPDATE	JSC	05/ 13:16	11:45 PM	12:45 AM	04:45
<b>THURSDAY, JULY 14</b>						
<b>FD 7/ FD 8</b>						
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	WBBM-TV, Chicago, IL / 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	* FOX News Radio / 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	VIDEO FILE	HQ	06/ 00:31	11:00 AM	12:00 PM	16:00
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	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

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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
<b>FRIDAY, JULY 15</b>						
<b>FD 8 / FD 9</b>						
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 / ABC Radio / 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	INTERPRETED REPLAY OF JOINT CREW NEWS CONFERENCE	JSC	06/ 23:31	10:00 AM	11:00 AM	15:00
111	VIDEO FILE	HQ	07/ 00:31	11:00 AM	12:00 PM	16:00
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

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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
<b>SATURDAY, JULY 16</b>							
<b>FD 9 / FD 10</b>							
120	MPLM TRANSFERS RESUME			07/ 14:20	12:49 AM	01:49 AM	05:49
124	* NASA EXPLORER SCHOOLS EDUCATIONAL EVENT	ISS Ku		07/ 20:10	06:39 AM	07:39 AM	11:39
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
<b>SUNDAY, JULY 17</b>							
<b>FD 10 / FD 11</b>							
136	* MPLM TRANSFERS RESUME			08/ 14:20	12:49 AM	01:49 AM	05:49
141	* ATLANTIS / ISS CREW OFF DUTY PERIOD			08/ 21:45	08:14 AM	09:14 AM	13:14
143	* ISS CREW SLEEP BEGINS			09/ 02:30	12:59 PM	01:59 PM	17:59
143	* ATLANTIS CREW SLEEP BEGINS			09/ 03:00	01:29 PM	02:29 PM	18:29
144	* MISSION STATUS BRIEFING	JSC		09/ 04:01	02:30 PM	03:30 PM	19:30

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146	* FLIGHT DAY 10 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	09/ 05:31	04:00 PM	05:00 PM	21:00
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/ 10:31	09:00 PM	10:00 PM	02:00
149	* ATLANTIS / ISS CREW WAKE UP (begins FD 11)		09/ 11:00	09:29 PM	10:29 PM	02:29
150	* ISS FLIGHT DIRECTOR UPDATE	JSC	09/ 12:01	10:30 PM	11:30 PM	03:30

**MONDAY, JULY 18**

**FD 11 / FD 12**

150	* MPLM EGRESS		09/ 13:50	12:19 AM	01:19 AM	05:19
151	* MPLM VESTIBULE DEMATING		09/ 14:25	12:54 AM	01:54 AM	05:54
152	* MPLM VESTIBULE DEPRESSURIZATION		09/ 15:55	02:24 AM	03:24 AM	07:24
154	* SSRMS GRAPPLES MPLM		09/ 18:35	05:04 AM	06:04 AM	10:04
154	* SSRMS UNBERTHS MPLM FROM ISS & INSTALLS IN ATLANTIS' PAYLOAD BAY		09/ 19:50	06:19 AM	07:19 AM	11:19
156	MISSION STATUS BRIEFING	JSC	09/ 20:31	07:00 AM	08:00 AM	12:00
157	* ATLANTIS / ISS FAREWELL AND HATCH CLOSURE		09/ 22:20	08:49 AM	09:49 AM	13:49
157	* CENTERLINE CAMERA INSTALLATION		09/ 23:10	09:39 AM	10:39 AM	14:39
157	* RENDEZVOUS TOOLS CHECKOUT		09/ 23:50	10:19 AM	11:19 AM	15:19
158	* 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

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160	* FLIGHT DAY 11 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	10/ 04:31	03:00 PM	04:00 PM	20:00
165	* ATLANTIS / ISS CREW WAKE UP (begins FD 12)		10/ 10:30	08:59 PM	09:59 PM	01:59
<b>TUESDAY, JULY 19</b>						
<b>FD 12 / FD 13</b>						
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
169	* RMS / OBSS LATE INSPECTION OF ATLANTIS' TPS		10/ 18:30	04:59 AM	05:59 AM	09:59
170	* MISSION STATUS BRIEFING	JSC	10/ 20:01	06:30 AM	07:30 AM	11:30
172	* OBSS BERTH		10/ 22:45	09:14 AM	10:14 AM	14:14
173	* SHUTTLE VTR PLAYBACK OF UNDOCKING		11/ 00:13	10:42 AM	11:42 AM	15:42
173	* MMT BRIEFING	JSC	11/ 01:31	12:00 PM	01:00 PM	17:00
173	* ATLANTIS CREW SLEEP BEGINS		11/ 02:30	12:59 PM	01:59 PM	17:59
173	* VIDEO FILE	HQ	11/ 02:31	01:00 PM	02:00 PM	18:00
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
<b>WEDNESDAY, JULY 20</b>						
<b>FD 13</b>						
183	* FCS CHECKOUT		11/ 13:30	11:59 PM	12:59 AM	04:59
183	* PICOSAT DEPLOYMENT		11/ 14:45	01:14 AM	02:14 AM	06:14

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183	*	RCS HOT-FIRE TEST			11/ 15:00	01:29 AM	02:29 AM	06:29
183	*	CABIN STOWAGE BEGINS			11/ 16:00	02:29 AM	03:29 AM	07:29
185	*	ABC News / CBS News / CNN / FOX News / NBC News LIVE INTERVIEWS	TDRE		11/ 18:25	04:54 AM	05:54 AM	09:54
186	*	MISSION STATUS BRIEFING	JSC		11/ 20:31	07:00 AM	08:00 AM	12:00
187	*	VIDEO FILE	HQ		12/ 00:31	11:00 AM	12:00 PM	16:00
187	*	KU-BAND ANTENNA STOWAGE			12/ 00:40	11:09 AM	12:09 PM	16:09
188	*	ATLANTIS CREW SLEEP BEGINS			12/ 02:30	12:59 PM	01:59 PM	17:59
189	*	"LAUNCHING OUR DREAMS" VIDEO FEATURE PLAYBACK	JSC		12/ 03:31	02:00 PM	03:00 PM	19:00
190	*	FLIGHT DAY 13 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC		12/ 04:31	03:00 PM	04:00 PM	20:00
194	*	ATLANTIS CREW WAKE UP (begins FD 14)			12/ 10:30	08:59 PM	09:59 PM	01:59
196	*	ATLANTIS DEORBIT PREPARATIONS BEGIN			12/ 13:25	11:54 PM	12:54 AM	04:54

**THURSDAY, JULY 21**

**FD 14**

196	*	PAYLOAD BAY DOOR CLOSING			12/ 14:45	01:14 AM	02:14 AM	06:14
198	*	ATLANTIS DEORBIT BURN			12/ 17:25	03:54 AM	04:54 AM	08:54
198	*	MILA C-BAND RADAR ACQUISITION OF ATLANTIS			12/ 18:16	04:45 AM	05:45 AM	09:45
198	*	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.		

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	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+5.5 HRS.		



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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					