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 NASA TELEVISION SCHEDULE  
 STS-129  
 ISS UTILIZATION LOGISTICS FLIGHT 3  
 REV D  
 11/19/09  
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Standard-Definition NASA TV satellite coordinates are available at: <http://www1.nasa.gov/multimedia/nasatv/digital.html>. High -Definition NASA TV Channel #105 is broadcast at 720p @ 59.94 fps, carried on an MPEG-2 digital signal on satellite AMC-6, Transponder 17C, at 72 degrees west longitude, 4040 MHz, vertical polarization. A Digital Video Broadcast (DVB) - compliant Integrated Receiver Decoder (IRD) with modulation of QPSK/DBV, data rate of 36.86, symbol 26.665 and FEC 3/4 will be needed for reception. Mission Audio can be accessed at: <http://www.nasa.gov/ntv>. Clients actively participating in Standard-Definition on-orbit interviews, interactive press briefings and satellite interviews must use the LIMO Channel, accessed via satellite AMC-6, 72 degrees west longitude, transponder 5C, 3785.5 MHz, vertical polarization. A Digital Video Broadcast (DVB) - compliant Integrated Receiver Decoder (IRD) with modulation of QPSK/DBV, data rate of 6.00 and FEC 3/4 will be needed for reception.

**ALL TIMES SUBJECT TO CHANGE**

This TV schedule is available via the Internet. The address is: <http://www.nasa.gov/shuttletv>  
 Launch occurred at 1:28pm CT (2:28pm ET) on Monday, November 16th, 2009.  
 An asterisk (\*) denotes changes made to the previous revision to the television schedule.

ORBIT	SUBJECT	SITE	MET	CST	EST	GMT
<b>THURSDAY, NOVEMBER 19</b>						
<b>FD 4</b>						
43	VIDEO FILE	HQ	02/ 15:32	05:00 AM	06:00 AM	11:00
43	* EVA # 1 PREPARATIONS RESUME		02/ 15:35	05:03 AM	06:03 AM	11:03
45	EVA # 1 BEGINS (Foreman and Satcher)		02/ 18:50	08:18 AM	09:18 AM	14:18
46	* SPARE SASA INSTALLATION ON Z1 TRUSS		02/ 19:15	08:43 AM	09:43 AM	14:43
47	MBS POA LUBRICATION		02/ 22:05	11:33 AM	12:33 PM	17:33
47	SGANT CABLE ROUTING		02/ 22:05	11:33 AM	12:33 PM	17:33
48	SLIDE WIRE REMOVAL & NH3 BRACKET INSTALLATION AT NODE 1		02/ 23:00	12:28 PM	01:28 PM	18:28
48	* JEM RMS EE LUBRICATION		02/ 23:30	12:58 PM	01:58 PM	18:58
49	SSRMS BASE CHANGE		03/ 00:35	02:03 PM	03:03 PM	20:03
50	EVA # 1 ENDS		03/ 01:20	02:48 PM	03:48 PM	20:48

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51	MISSION STATUS / POST-MMT BRIEFING	JSC		03/ 03:02	04:30 PM	05:30 PM	22:30
52	ISS CREW SLEEP BEGINS			03/ 05:00	06:28 PM	07:28 PM	00:28
52	ATLANTIS CREW SLEEP BEGINS			03/ 05:30	06:58 PM	07:58 PM	00:58
52	FLIGHT DAY 4 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC		03/ 05:32	07:00 PM	08:00 PM	01:00
54	HIGH DEFINITION FLIGHT DAY 4 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 20)	JSC		03/ 08:32	10:00 PM	11:00 PM	04:00
<b>FRIDAY, NOVEMBER 20</b>							
<b>FD 5</b>							
56	ISS FLIGHT DIRECTOR UPDATE	JSC		03/ 11:02	12:30 AM	01:30 AM	06:30
57	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC		03/ 13:02	02:30 AM	03:30 AM	08:30
58	ATLANTIS / ISS CREW WAKE UP (begins FD 5)			03/ 13:30	02:58 AM	03:58 AM	08:58
59	U.S. PAO EVENT WITH CBS NEWS / WTVF-TV / FOX NEWS RADIO	ISS Ku		03/ 15:40	05:08 AM	06:08 AM	11:08
59	VIDEO FILE	HQ		03/ 16:32	06:00 AM	07:00 AM	12:00
60	U.S. PAO EVENT WITH THE TOM JOYNER MORNING SHOW	ISS Ku		03/ 17:00	06:28 AM	07:28 AM	12:28
60	SSRMS GRAPPLE & UNBERTH OBSS			03/ 17:15	06:43 AM	07:43 AM	12:43
61	SSRMS HANDFF OBSS TO SRMS			03/ 18:50	08:18 AM	09:18 AM	14:18
64	SRMS HANDOFF TO SSRMS; SSRMS BERTHS OBSS IN ATLANTIS' PAYLOAD BAY			03/ 23:05	12:33 PM	01:33 PM	18:33
65	* SRMS GRAPPLE OF ELC 2 IN ATLANTIS' PAYLOAD BAY			04/ 00:10	01:38 PM	02:38 PM	19:38
65	EVA # 2 PROCEDURE REVIEW			04/ 00:55	02:23 PM	03:23 PM	20:23

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66	* U.S. PAO EVENT WITH ESPN "SportsCenter" / BET NEWS / WRIC-TV	ISS Ku	04/ 02:05	03:33 PM	04:33 PM	21:33
66	MISSION STATUS BRIEFING	JSC	04/ 02:47	04:15 PM	05:15 PM	22:15
67	EVA # 2 CAMPOUT BEGINS (Foreman and Bresnik)		04/ 03:25	04:53 PM	05:53 PM	22:53
67	ISS CREW SLEEP BEGINS		04/ 04:30	05:58 PM	06:58 PM	23:58
68	ATLANTIS CREW SLEEP BEGINS		04/ 05:00	06:28 PM	07:28 PM	00:28
68	FLIGHT DAY 5 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	04/ 05:32	07:00 PM	08:00 PM	01:00
69	HIGH DEFINITION FLIGHT DAY 5 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 21)	JSC	04/ 07:32	09:00 PM	10:00 PM	03:00
<b>SATURDAY, NOVEMBER 21</b>						
<b>FD 6</b>						
71	ISS FLIGHT DIRECTOR UPDATE	JSC	04/ 10:32	12:00 AM	01:00 AM	06:00
72	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	04/ 12:02	01:30 AM	02:30 AM	07:30
73	ATLANTIS / ISS CREW WAKE UP (begins FD 6)		04/ 13:00	02:28 AM	03:28 AM	08:28
73	EVA # 2 PREPARATIONS RESUME		04/ 13:30	02:58 AM	03:58 AM	08:58
75	SRMS UNBERTH ELC2 FROM ATLANTIS' PAYLOAD BAY		04/ 15:45	05:13 AM	06:13 AM	11:13
75	SRMS HANDOFF ELC2 TO SSRMS		04/ 16:40	06:08 AM	07:08 AM	12:08
76	EVA # 2 BEGINS (Foreman and Bresnik)		04/ 17:50	07:18 AM	08:18 AM	13:18
76	GATOR HAM RADIO BRACKET INSTALLATION ON COLUMBUS		04/ 18:20	07:48 AM	08:48 AM	13:48
77	SSRMS INSTALLATION OF ELC2 ON S3 UPPER OUTBOARD PAS		04/ 18:40	08:08 AM	09:08 AM	14:08
77	SSRMS BASE CHANGE		04/ 19:25	08:53 AM	09:53 AM	14:53

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77	FPMU RELOCATION FROM S1 TO P1 TRUSS		04/ 19:35	09:03 AM	10:03 AM	15:03
78	S3 NADIR PAS DEPLOY		04/ 21:05	10:33 AM	11:33 AM	16:33
79	CAMERA POSITION 1 WETA INSTALL ON S3 TRUSS		04/ 22:35	12:03 PM	01:03 PM	18:03
80	EVA # 2 ENDS		05/ 00:20	01:48 PM	02:48 PM	19:48
82	MISSION STATUS BRIEFING	JSC	05/ 02:02	03:30 PM	04:30 PM	21:30
83	ISS CREW SLEEP BEGINS		05/ 04:00	05:28 PM	06:28 PM	23:28
83	ATLANTIS CREW SLEEP BEGINS		05/ 04:30	05:58 PM	06:58 PM	23:58
83	FLIGHT DAY 6 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	05/ 04:32	06:00 PM	07:00 PM	00:00
85	HIGH DEFINITION FLIGHT DAY 6 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 22)	JSC	05/ 07:32	09:00 PM	10:00 PM	03:00
87	ISS FLIGHT DIRECTOR UPDATE	JSC	05/ 10:02	11:30 PM	12:30 AM	05:30
<b>SUNDAY, NOVEMBER 22</b>						
<b>FD 7</b>						
88	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	05/ 12:02	01:30 AM	02:30 AM	07:30
88	ATLANTIS / ISS CREW WAKE UP (begins FD 7)		05/ 12:30	01:58 AM	02:58 AM	07:58
91	ATLANTIS OFF-DUTY PERIOD BEGINS		05/ 15:40	05:08 AM	06:08 AM	11:08
93	U.S. PAO EVENT WITH WTTG-TV / BAY NEWS 9 / WBBM RADIO	ISS Ku	05/ 20:10	09:38 AM	10:38 AM	15:38
94	U.S. PAO EDUCATIONAL EVENT WITH TENNESSEE TECH UNIVERSITY	ISS Ku	05/ 21:40	11:08 AM	12:08 PM	17:08
95	EVA # 3 PROCEDURE REVIEW		05/ 23:55	01:23 PM	02:23 PM	19:23
97	MISSION STATUS BRIEFING	JSC	06/ 01:32	03:00 PM	04:00 PM	21:00

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98	EVA # 3 CAMPOUT BEGINS (Satcher and Bresnik)		06/ 02:25	03:53 PM	04:53 PM	21:53
98	ISS CREW SLEEP BEGINS		06/ 03:30	04:58 PM	05:58 PM	22:58
99	ATLANTIS CREW SLEEP BEGINS		06/ 04:00	05:28 PM	06:28 PM	23:28
99	FLIGHT DAY 7 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	06/ 04:32	06:00 PM	07:00 PM	00:00
101	HIGH DEFINITION FLIGHT DAY 8 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 23)	JSC	06/ 07:32	09:00 PM	10:00 PM	03:00
102	ISS FLIGHT DIRECTOR UPDATE	JSC	06/ 09:32	11:00 PM	12:00 AM	05:00
<b>MONDAY, NOVEMBER 23</b>						
<b>FD 8</b>						
103	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	06/ 11:02	12:30 AM	01:30 AM	06:30
104	ATLANTIS / ISS CREW WAKE UP (begins FD 8)		06/ 12:00	01:28 AM	02:28 AM	07:28
104	EVA #3 PREPARATIONS RESUME		06/ 12:35	02:03 AM	03:03 AM	08:03
107	EVA #3 BEGINS (Satcher and Bresnik)		06/ 16:50	06:18 AM	07:18 AM	12:18
107	HPGT & MISSE-7 TRANSFER FROM ELC2 TO QUEST AIRLOCK		06/ 17:20	06:48 AM	07:48 AM	12:48
109	S3 INBOARD UPPER PAS DEPLOYMENT		06/ 20:20	09:48 AM	10:48 AM	15:48
110	QUEST AIRLOCK DEBRIS SHIELD REMOVAL		06/ 21:50	11:18 AM	12:18 PM	17:18
111	EVA #3 ENDS		06/ 23:20	12:48 PM	01:48 PM	18:48
112	MISSION STATUS BRIEFING	JSC	07/ 01:02	02:30 PM	03:30 PM	20:30
113	VIDEO FILE	HQ	07/ 02:32	04:00 PM	05:00 PM	22:00
114	ISS CREW SLEEP BEGINS		07/ 03:00	04:28 PM	05:28 PM	22:28
114	ATLANTIS CREW SLEEP BEGINS		07/ 03:30	04:58 PM	05:58 PM	22:58

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114	FLIGHT DAY 8 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	07/ 03:32	05:00 PM	06:00 PM	23:00
116	HIGH DEFINITION FLIGHT DAY 8 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 24)	JSC	07/ 06:32	08:00 PM	09:00 PM	02:00
118	ISS FLIGHT DIRECTOR UPDATE	JSC	07/ 09:02	10:30 PM	11:30 PM	04:30
<b>TUESDAY, NOVEMBER 24</b>						
<b>FD 9</b>						
119	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	07/ 11:02	12:30 AM	01:30 AM	06:30
119	ATLANTIS / ISS CREW WAKE UP (begins FD 9)		07/ 11:30	12:58 AM	01:58 AM	06:58
122	ISS REBOOST (If required)		07/ 15:20	04:48 AM	05:48 AM	10:48
123	JOINT CREW NEWS CONFERENCE	ISS Ku	07/ 17:45	07:13 AM	08:13 AM	13:13
125	EXPEDITION 21 / 22 CHANGE OF COMMAND CEREMONY	ISS Ku	07/ 19:32	09:00 AM	10:00 AM	15:00
125	ATLANTIS CREW OFF DUTY PERIOD		07/ 19:45	09:13 AM	10:13 AM	15:13
125	MISSION STATUS BRIEFING	JSC	07/ 20:32	10:00 AM	11:00 AM	16:00
126	ATLANTIS / ISS FAREWELL AND HATCH CLOSURE		07/ 22:00	11:28 AM	12:28 PM	17:28
127	RENDEZVOUS TOOLS CHECKOUT		07/ 22:45	12:13 PM	01:13 PM	18:13
127	CENTERLINE CAMERA INSTALLATION		07/ 22:45	12:13 PM	01:13 PM	18:13
128	VIDEO FILE	HQ	08/ 00:32	02:00 PM	03:00 PM	20:00
130	ATLANTIS / ISS CREW SLEEP BEGINS		08/ 03:00	04:28 PM	05:28 PM	22:28
130	FLIGHT DAY 9 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	08/ 03:32	05:00 PM	06:00 PM	23:00

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131	HIGH DEFINITION FLIGHT DAY 9 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 25)	JSC	08/ 05:32	07:00 PM	08:00 PM	01:00
133	ISS FLIGHT DIRECTOR UPDATE	JSC	08/ 09:02	10:30 PM	11:30 PM	04:30
134	ISS FLIGHT DIRECTOR UPDATE REPLAY	JSC	08/ 10:02	11:30 PM	12:30 AM	05:30
<b>WEDNESDAY, NOVEMBER 25</b>						
<b>FD 10</b>						
135	ATLANTIS CREW WAKE UP (begins FD 10)		08/ 11:00	12:28 AM	01:28 AM	06:28
135	ISS CREW WAKE UP		08/ 11:30	12:58 AM	01:58 AM	06:58
137	ATLANTIS UNDOCKS FROM ISS		08/ 14:26	03:54 AM	04:54 AM	09:54
138	ATLANTIS FLYAROUND OF ISS BEGINS		08/ 14:51	04:19 AM	05:19 AM	10:19
138	ATLANTIS FINAL SEPARATION FROM ISS		08/ 16:09	05:37 AM	06:37 AM	11:37
138	SHUTTLE VTR PLAYBACK OF UNDOCKING		08/ 16:35	06:03 AM	07:03 AM	12:03
139	OBSS UNBERTH		08/ 17:50	07:18 AM	08:18 AM	13:18
140	RMS / OBSS LATE INSPECTION OF ATLANTIS' TPS BEGINS		08/ 18:55	08:23 AM	09:23 AM	14:23
141	MISSION STATUS BRIEFING	JSC	08/ 21:02	10:30 AM	11:30 AM	16:30
143	OBSS BERTH		08/ 23:10	12:38 PM	01:38 PM	18:38
143	VIDEO FILE	HQ	08/ 23:32	01:00 PM	02:00 PM	19:00
144	POST-MMT BRIEFING	JSC	09/ 01:02	02:30 PM	03:30 PM	20:30
145	ATLANTIS CREW SLEEP BEGINS		09/ 03:00	04:28 PM	05:28 PM	22:28
146	FLIGHT DAY 10 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	09/ 03:32	05:00 PM	06:00 PM	23:00

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147	HIGH DEFINITION FLIGHT DAY 10 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 26)	JSC	09/ 05:32	07:00 PM	08:00 PM	01:00
<b>THURSDAY, NOVEMBER 26</b>						
<b>FD 11</b>						
151	ATLANTIS CREW WAKE UP (begins FD 11)		09/ 11:00	12:28 AM	01:28 AM	06:28
153	CABIN STOWAGE BEGINS		09/ 14:55	04:23 AM	05:23 AM	10:23
153	FCS CHECKOUT		09/ 15:10	04:38 AM	05:38 AM	10:38
154	RCS HOT-FIRE TEST		09/ 16:20	05:48 AM	06:48 AM	11:48
155	U.S. PAO EVENT WITH ABC NEWS / WKYC-TV / KCBS-TV	TDRE	09/ 18:05	07:33 AM	08:33 AM	13:33
157	MISSION STATUS BRIEFING	JSC	09/ 21:02	10:30 AM	11:30 AM	16:30
158	STOTT'S RECUMBENT SEAT SET UP		09/ 23:00	12:28 PM	01:28 PM	18:28
159	KU-BAND ANTENNA STOWAGE		10/ 00:00	01:28 PM	02:28 PM	19:28
161	ATLANTIS CREW SLEEP BEGINS		10/ 03:00	04:28 PM	05:28 PM	22:28
161	FLIGHT DAY 11 HIGHLIGHTS (replayed on the hour during crew sleep)	JSC	10/ 03:32	05:00 PM	06:00 PM	23:00
163	HIGH DEFINITION FLIGHT DAY 11 CREW HIGHLIGHTS (if available; on the NASA-TV HDTV Channel; replays from 5:00am CT - 4:00pm CT on Nov. 26)	JSC	10/ 05:32	07:00 PM	08:00 PM	01:00



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<b>FRIDAY, NOVEMBER 27</b>						
<b>FD 12</b>						
166	ATLANTIS CREW WAKE UP (begins FD 12)		10/ 11:00	12:28 AM	01:28 AM	06:28
168	ATLANTIS DEORBIT PREPARATIONS BEGIN		10/ 14:10	03:38 AM	04:38 AM	09:38
169	PAYLOAD BAY DOOR CLOSING		10/ 15:30	04:58 AM	05:58 AM	10:58
171	ATLANTIS DEORBIT BURN		10/ 18:10	07:38 AM	08:38 AM	13:38
172	MILA C-BAND RADAR ACQUISITION OF ATLANTIS		10/ 19:00	08:28 AM	09:28 AM	14:28
172	KSC LANDING	KSC	10/ 19:13	08:41 AM	09:41 AM	14:41
	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-129 MISSION HIGHLIGHTS VIDEO REPLAY (replayed after Entry Flight Control Team Video)	JSC		~ L+3.5 HRS.		
	STS-129 CREW NEWS CONFERENCE (may be postponed or cancelled)	KSC		NET L+4.5 HRS.		
	VIDEO B-ROLL OF STOTT IN CREW QUARTERS (pending availability)	KSC		NET L+6.5 HRS.		



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SASA:	S-Band Antenna Sub-Assembly					
SGANT:	Space-to-Ground Antenna					
SSRMS:	Space Station Remote Manipulator System (Canadarm2 ISS Robotic Arm)					
STS:	Space Transportation System					
TI:	Terminal Initiation Rendezvous Maneuver					
TDRE, W:	Tracking and Data Relay Satellite, East and West Longitudes					
TPS:	Thermal Protection System					
UCCAS:	Unpressurized Cargo Carriers Attachment System					
Unity:	Connecting Node 1 on International Space Station					
VTR:	Videotape Recorder					
WISE:	Wide-field Infrared Survey Explorer					
WLE:	Wing Leading Edge					
Zvezda:	Russian Service Module of ISS					