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 NASA TELEVISION SCHEDULE  
 STS-129  
 ISS UTILIZATION LOGISTICS FLIGHT 3  
 REV F  
 11/20/09  
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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>FRIDAY, NOVEMBER 20</b>						
<b>FD 5</b>						
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	VIDEO FILE	HQ	03/ 17:32	07:00 AM	08:00 AM	13:00
65	* SRMS GRAPPLE OF ELC 2 IN ATLANTIS' PAYLOAD BAY		04/ 00:05	01:33 PM	02:33 PM	19:33
65	EVA # 2 PROCEDURE REVIEW		04/ 00:55	02:23 PM	03:23 PM	20:23
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

<u>ORBIT</u>	<u>SUBJECT</u>	<u>SITE</u>		<u>MET</u>	<u>CST</u>	<u>EST</u>	<u>GMT</u>
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/	14:30	03:58 AM	04:58 AM	09:58
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
77	FPMU RELOCATION FROM S1 TO P1 TRUSS		04/	19:35	09:03 AM	10:03 AM	15:03
78	* S3 ZENITH 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

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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
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

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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
105	* EVA #3 PREPARATIONS RESUME		06/	13:45	03:13 AM	04:13 AM	09:13
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		06/	17:20	06:48 AM	07:48 AM	12:48
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
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/	14:20	03:48 AM	04:48 AM	09:48

<u>ORBIT</u>	<u>SUBJECT</u>	<u>SITE</u>		<u>MET</u>	<u>CST</u>	<u>EST</u>	<u>GMT</u>
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	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
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

**WEDNESDAY, NOVEMBER 25**

**FD 10**

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/	14:28	03:56 AM	04:56 AM	09:56
138	* ATLANTIS FLYAROUND OF ISS BEGINS		08/	15:05	04:33 AM	05:33 AM	10:33
138	* ATLANTIS FINAL SEPARATION FROM ISS		08/	16:14	05:42 AM	06:42 AM	11:42
138	* SHUTTLE VTR PLAYBACK OF UNDOCKING		08/	16:20	05:48 AM	06:48 AM	11:48

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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
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

**THURSDAY, NOVEMBER 26**

**FD 11**

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

<u>ORBIT</u>	<u>SUBJECT</u>	<u>SITE</u>		<u>MET</u>	<u>CST</u>	<u>EST</u>	<u>GMT</u>
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
<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/	15:34	05:02 AM	06:02 AM	11:02
171	ATLANTIS DEORBIT BURN		10/	18:14	07:42 AM	08:42 AM	13:42
172	MILA C-BAND RADAR ACQUISITION OF ATLANTIS		10/	19:04	08:32 AM	09:32 AM	14:32
172	KSC LANDING	KSC	10/	19:17	08:45 AM	09:45 AM	14:45
	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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PMA-3:	Pressurized Mating Adapter 3					
POA:	Payload ORU Accomodation					
RCS:	Reaction Control System					
RMS:	Remote Manipulator System on ATLANTIS					
RPM:	Rendezvous Pitch Maneuver					
SAAGFA:	Solar Array Assembly Grapple Fixture					
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					