



1
00:00:01,930 --> 00:00:05,780
GOOD DAY AND WELCOME TO MISSION
CONTROL HOUSTON, WHERE THE TEAM

2
00:00:05,780 --> 00:00:08,040
OF FLIGHT CONTROLLERS
IS WATCHING

3
00:00:08,040 --> 00:00:11,850
OVER THE ACTIVITIES ABOARD THE
INTERNATIONAL SPACE STATION

4
00:00:11,850 --> 00:00:15,240
AS THE EXPEDITION 33
CREW CONTINUES ITS WORK.

5
00:00:15,240 --> 00:00:17,420
COMMANDER SUNI WILLIAMS ALONG

6
00:00:17,420 --> 00:00:20,160
WITH FLIGHT ENGINEERS
AKI HOSHIDE

7
00:00:20,160 --> 00:00:24,090
OF THE JAPAN AEROSPACE
EXPLORATION AGENCY

8
00:00:24,090 --> 00:00:26,220
AND YURI MALENCHENKO

9
00:00:26,220 --> 00:00:29,520
OF THE RUSSIAN FEDERAL SPACE
AGENCY CONTINUE THEIR STAY

10
00:00:29,520 --> 00:00:33,820
ON ORBIT AS A THREE-PERSON CREW,
KEEPING THE SPACE STATION GOING

11
00:00:33,820 --> 00:00:37,540

AND CONTINUING ALL OF THE
RESEARCH THAT IS GOING

12

00:00:37,540 --> 00:00:39,480
ON ABOARD THE INTERNATIONAL
SPACE STATION.

13

00:00:39,480 --> 00:00:44,140
THE BIG BOARD TODAY SHOWS THE
AUTOMATED TRANSFER VEHICLE THREE

14

00:00:44,140 --> 00:00:47,770
AS IT IS PREPARING TO
BE DEORBITED TONIGHT.

15

00:00:47,770 --> 00:00:50,450
OTHERWISE THE CREW ON BOARD
TODAY HAS BEEN DOING A LOT

16

00:00:50,450 --> 00:00:51,710
OF WORK AS PLUMBERS.

17

00:00:51,710 --> 00:00:54,710
THEY HAVE SUCCESSFULLY
RESTORED THE WASTE

18

00:00:54,710 --> 00:00:57,560
AND HYGIENE COMPARTMENT
TOILET SYSTEM

19

00:00:57,560 --> 00:01:01,400
AND TO A GOOD WORKING
FUNCTIONALITY.

20

00:01:01,400 --> 00:01:04,360
THEY HAD SOME PROBLEMS
WITH FLUSHING OF THE TOILET

21

00:01:04,360 --> 00:01:06,750
AND AFTER TRACKING

IT DOWN WITH THE HELP

22

00:01:06,750 --> 00:01:09,490
OF MISSION CONTROL DETERMINED
THAT IT WAS A DOSE PUMP,

23

00:01:09,490 --> 00:01:12,020
WHICH MEASURES OUT AN
AMOUNT OF TREATMENT FLUID

24

00:01:12,020 --> 00:01:18,440
THAT STARTS OFF THE PROCESS OF
TREATING THE WASTE IN THE TOILET

25

00:01:18,440 --> 00:01:21,250
AND GETTING IT READY
FOR DISPOSITION.

26

00:01:21,250 --> 00:01:24,490
THEY WERE ABLE TO
PLACE THAT DOSE PUMP

27

00:01:24,490 --> 00:01:27,920
SO THAT THE PROPER AMOUNT OF
PRETREATMENT FLUID IS INJECTED

28

00:01:27,920 --> 00:01:29,870
INTO THE SYSTEM TO
HANDLE THE WASTE,

29

00:01:29,870 --> 00:01:31,180
AND GOT THAT ALL SQUARED AWAY.

30

00:01:31,180 --> 00:01:34,320
AND NOW THE TOILET IS
BACK UP AND RUNNING FINE,

31

00:01:34,320 --> 00:01:38,200
SO THE CREW ABOARD THE SPACE
STATION DOING A LITTLE DUTY

32

00:01:38,200 --> 00:01:42,020
AS PLUMBERS TODAY TO KEEP
THEIR ORBITAL OUTPOST WORKING.

33

00:01:42,020 --> 00:01:44,610
JUST LIKE LABORATORIES HERE

34

00:01:44,610 --> 00:01:47,020
ON EARTH YOU GOTTA KEEP THE
FACILITIES IN GOOD SHAPE

35

00:01:47,020 --> 00:01:49,810
SO YOU CAN FOCUS
ON YOUR RESEARCH.

36

00:01:49,810 --> 00:01:51,330
SOME ADDITIONAL WORK GOING

37

00:01:51,330 --> 00:01:54,850
ON WITH THE OXYGEN
GENERATION SYSTEM TODAY

38

00:01:54,850 --> 00:01:57,840
WHICH DOES USE WATER TO
HELP GENERATE OXYGEN.

39

00:01:57,840 --> 00:02:02,860
THEY WERE GATHERING SOME ITEMS
FOR A PRE-FLUSH OF THE SYSTEM

40

00:02:02,860 --> 00:02:06,750
SO IT CAN BE MAINTAINED
AND WORK PROPERLY.

41

00:02:06,750 --> 00:02:09,730
THE OXYGEN GENERATION SYSTEM
ONE OF TWO DIFFERENT SYSTEMS

42

00:02:09,730 --> 00:02:13,110
THAT CREATE THE AIR ON THE
INTERNATIONAL SPACE STATION

43
00:02:13,110 --> 00:02:18,030
BY SPLITTING THE HYDROGEN
AND OXYGEN COMPONENTS

44
00:02:18,030 --> 00:02:21,980
FROM A WATER MOLECULES,
VENTING THE HYDROGEN OVERBOARD

45
00:02:21,980 --> 00:02:24,890
AND KEEPING THE OXYGEN
ONBOARD FOR REUSE.

46
00:02:24,890 --> 00:02:26,680
THE CREW IS GOING TO BE WORKING

47
00:02:26,680 --> 00:02:28,170
WITH SEVERAL DIFFERENT
EXPERIMENTS TODAY.

48
00:02:28,170 --> 00:02:31,430
PRIMARILY THROUGH THE INTEGRATED
CARDIOVASCULAR EXPERIMENT

49
00:02:31,430 --> 00:02:35,210
AND THE EQUIPMENT THAT'S
RELATED TO THAT, AN ULTRASOUND

50
00:02:35,210 --> 00:02:41,440
AND THE STATIONARY BICYCLE AND
A MICROGRAVITY MEASUREMENT UNIT.

51
00:02:41,440 --> 00:02:45,930
THE INTEGRATED CARDIOVASCULAR
EXPERIMENT TO LOOKS

52
00:02:45,930 --> 00:02:50,270

AT HOW THE HEART FUNCTIONS
LONG-TERM IN SPACE.

53

00:02:50,270 --> 00:02:52,690

IT'S OFFICIAL KNOWN
AS THE CARDIAC ATROPHY

54

00:02:52,690 --> 00:02:54,570

AND DIASTOLIC DYSFUNCTION DURING

55

00:02:54,570 --> 00:02:57,360

AND AFTER LONG-DURATION
SPACEFLIGHT FUNCTION

56

00:02:57,360 --> 00:03:00,980

CONSEQUENCES FOR ORTHOSTATIC
INTOLERANCE EXERCISE CAPABILITY

57

00:03:00,980 --> 00:03:03,290

AND RISK FOR CARDIAC
ARRHYTHMIAS.

58

00:03:03,290 --> 00:03:06,370

ALL THAT SPELLED OUT
MEANS THAT WE'RE LOOKING

59

00:03:06,370 --> 00:03:09,990

TO QUANTIFY THE EXACT TIME,
COURSE AND SIGNIFICANCE

60

00:03:09,990 --> 00:03:13,520

OF ANY SHRINKING OF THE HEART
THAT WOULD BE ASSOCIATED

61

00:03:13,520 --> 00:03:14,960

WITH LONG-DURATION SPACEFLIGHT.

62

00:03:14,960 --> 00:03:17,190

AND SO THE CREW MEMBERS HAVE
BEEN WORKING WITH SETTING UP ALL

63

00:03:17,190 --> 00:03:19,740

THAT EQUIPMENT, CONDUCTING
ANOTHER SESSION

64

00:03:19,740 --> 00:03:23,260

WITH THE EXPERIMENT IN WHICH
THEY DO A THOROUGH WORKOUT

65

00:03:23,260 --> 00:03:25,820

ON THE STATIONARY BICYCLE
WHILE DOING ULTRASOUND,

66

00:03:25,820 --> 00:03:29,610

RECORDING ECHOCARDIOGRAPH
INFORMATION.

67

00:03:29,610 --> 00:03:33,550

IN ADDITION THE CREW PREPARING
FOR A SMALL SATELLITE DEPLOYMENT

68

00:03:33,550 --> 00:03:36,440

FOR SOME JAPANESE
SATELLITES ON THURSDAY.

69

00:03:36,440 --> 00:03:40,580

THAT IS CALLED THE SMALL
SAT DEPLOY DEMONSTRATION

70

00:03:40,580 --> 00:03:43,850

AND IT'S GOING TO BE LAUNCHING
SEVERAL DIFFERENT EXPERIMENTS

71

00:03:43,850 --> 00:03:49,810

INCLUDING AN EDUCATIONAL
PLATFORM FROM THE FRONT PORCH

72

00:03:49,810 --> 00:03:52,110

OF THE INTERNATIONAL
SPACE STATION.

73
00:03:52,110 --> 00:03:56,630
ALSO THE CREW IS LOOKING FORWARD
TO TOMORROW FOR A INTERVIEW

74
00:03:56,630 --> 00:04:00,820
WITH THE BOTH DR.
SANJAY GUPTA OF CNN

75
00:04:00,820 --> 00:04:04,890
AND WITH NEW YORK TIMES
SCIENCE REPORTER KENNETH CHANG.

76
00:04:04,890 --> 00:04:09,180
THAT INTERVIEW SCHEDULED
FOR 10:05 AM CENTRAL TIME

77
00:04:09,180 --> 00:04:11,300
WITH SUNI WILLIAMS WHO IS
THE COMMANDER ABOARD THE

78
00:04:11,300 --> 00:04:13,230
INTERNATIONAL SPACE
STATION RIGHT NOW.

79
00:04:13,230 --> 00:04:17,700
AND THEY'RE ALSO LOOKING
AT THE UPCOMING REENTRY

80
00:04:17,700 --> 00:04:19,920
OF THE AUTOMATED
TRANSFER VEHICLE.

81
00:04:19,920 --> 00:04:22,890
THE EDOARDO AMALDI WHICH IS
SCHEDULED TO BE COMMANDED

82
00:04:22,890 --> 00:04:26,670
TO DEORBIT THROUGH TWO
DEORBIT BURNS TONIGHT.

83

00:04:26,670 --> 00:04:32,050

ONE AT 4:42 PM AND ANOTHER
AT 7:44 PM THAT WILL RESULT

84

00:04:32,050 --> 00:04:36,340

IN THE VERY USEFUL CARGO
VEHICLE BURNING UP IN

85

00:04:36,340 --> 00:04:40,440

OVER THE SOUTHERN PACIFIC OCEAN
AROUND 8:15 PM CENTRAL TIME.

86

00:04:40,440 --> 00:04:42,500

YOU SAW THAT THERE
IN THAT ANIMATION.

87

00:04:42,500 --> 00:04:44,860

OTHERWISE ALL SYSTEMS ABOARD
THE INTERNATIONAL SPACE STATION

88

00:04:44,860 --> 00:04:48,540

WORKING VERY WELL AS THE CREW ON
BOARD CONTINUES THEIR RESEARCH