



SPACE TO GROUND

1
00:00:00,606 --> 00:00:02,536
"HOUSTON, STATION
ON SPACE TO GROUND."

2
00:00:03,106 --> 00:00:05,316
WELCOME TO SPACE TO
GROUND, I'M ISIDRO REYNA.

3
00:00:05,586 --> 00:00:07,906
WE'RE CONTINUING OUR SUMMER
ROAD TRIP, SHOWING OFF SOME

4
00:00:07,906 --> 00:00:09,886
OF THE SIGHTS AT NASA'S
JOHNSON SPACE CENTER.

5
00:00:10,240 --> 00:00:12,180
TODAY WE'RE IN MISSION
CONTROL HOUSTON.

6
00:00:13,700 --> 00:00:16,900
SINCE 1965, MISSION
CONTROL HAS BEEN THE HELM

7
00:00:16,906 --> 00:00:18,316
OF AMERICA'S HUMAN SPACEFLIGHTS.

8
00:00:18,876 --> 00:00:21,516
WITH A PERMANENT HUMAN PRESENCE
ABOARD THE INTERNATIONAL SPACE

9
00:00:21,520 --> 00:00:24,520
STATION, FLIGHT CONTROL TEAMS
OF EXPERIENCED ENGINEERS,

10
00:00:24,520 --> 00:00:28,140
MEDICAL OFFICERS AND TECHNICIANS
ARE ON DUTY 7 DAYS A WEEK,

11

00:00:28,140 --> 00:00:31,240
24 HOURS A DAY, 365 DAYS A YEAR.

12
00:00:31,746 --> 00:00:33,716
WORKING WITH COUNTERPARTS
OVERSEAS,

13
00:00:33,716 --> 00:00:35,606
FLIGHT CONTROLLERS
KEEP A CONSTANT WATCH

14
00:00:35,606 --> 00:00:38,280
ON THE CREW'S ACTIVITIES
AND MONITOR SPACE SYSTEMS,

15
00:00:38,280 --> 00:00:39,600
CREW HEALTH AND SAFETY.

16
00:00:40,920 --> 00:00:42,680
THREE NEW CREW MEMBERS
ARE SCHEDULED TO LAUNCH

17
00:00:42,680 --> 00:00:45,820
TO THE INTERNATIONAL SPACE
STATION ON FRIDAY, JULY 28.

18
00:00:46,540 --> 00:00:50,440
NASA ASTRONAUT RANDY BRESNIK,
SERGEY RYAZANSKIY OF ROSCOSMOS

19
00:00:50,440 --> 00:00:51,700
AND PAOLO NESPOLI

20
00:00:51,706 --> 00:00:53,676
OF THE EUROPEAN SPACE
AGENCY WILL LAUNCH

21
00:00:53,676 --> 00:00:55,726
FROM THE BAIKONUR
COSMODROME IN KAZAKHSTAN.

22
00:00:56,076 --> 00:00:58,846
THE EXPEDITION 52/53
CREW WILL SPEND MORE

23
00:00:58,846 --> 00:01:01,726
THAN FOUR MONTHS TOGETHER ABOARD
THE ORBITAL COMPLEX BEFORE

24
00:01:01,726 --> 00:01:03,000
RETURNING TO EARTH IN DECEMBER.

25
00:01:03,640 --> 00:01:05,396
THE ARRIVING CREW WILL
BE WELCOMED ONBOARD

26
00:01:05,400 --> 00:01:09,080
BY EXPEDITION 52 COMMANDER
FYODOR YURCHIKHIN OF ROSCOSMOS

27
00:01:09,080 --> 00:01:10,980
AND FLIGHT ENGINEERS
PEGGY WHITSON

28
00:01:10,986 --> 00:01:12,256
AND JACK FISCHER OF NASA.

29
00:01:12,746 --> 00:01:14,086
THE SOON-TO-BE SIX CREW MEMBERS

30
00:01:14,086 --> 00:01:17,536
OF EXPEDITION 52 WILL CONTINUE
WORK ON HUNDREDS OF EXPERIMENTS

31
00:01:17,536 --> 00:01:20,376
IN BIOLOGY, BIOTECHNOLOGY,
PHYSICAL SCIENCE

32
00:01:20,376 --> 00:01:22,676

AND EARTH SCIENCE ABOARD THE
INTERNATIONAL SPACE STATION.

33

00:01:23,386 --> 00:01:25,416

THIS WEEK ON STATION,
THE CREW WORKED

34

00:01:25,420 --> 00:01:27,340

ON THE CAPILLARY
STRUCTURES EXPERIMENT,

35

00:01:27,340 --> 00:01:28,980

WHICH INVESTIGATES
WATER RECYCLING

36

00:01:28,980 --> 00:01:30,700

AND CARBON DIOXIDE REMOVAL.

37

00:01:31,320 --> 00:01:32,686

CURRENT LIFE-SUPPORT SYSTEMS

38

00:01:32,686 --> 00:01:35,066

ON THE INTERNATIONAL SPACE
STATION REQUIRE SPECIAL

39

00:01:35,066 --> 00:01:38,506

EQUIPMENT TO SEPARATE LIQUIDS
AND GASES, INCLUDING ROTATING

40

00:01:38,506 --> 00:01:40,880

OR MOVING DEVICES THAT
COULD CAUSE CONTAMINATION

41

00:01:40,880 --> 00:01:42,220

IF THEY BREAK OR FAIL.

42

00:01:42,620 --> 00:01:45,156

THE CAPILLARY STRUCTURES
INVESTIGATION STUDIES A NEW

43

00:01:45,160 --> 00:01:47,820

METHOD USING STRUCTURES
OF SPECIFIC SHAPES

44

00:01:47,820 --> 00:01:49,920

TO MANAGE FLUID AND
GAS MIXTURES.

45

00:01:50,176 --> 00:01:52,506

THE INVESTIGATION
STUDIES WATER RECYCLING

46

00:01:52,506 --> 00:01:55,560

AND CARBON DIOXIDE REMOVAL,
BENEFITING FUTURE EFFORTS

47

00:01:55,560 --> 00:01:58,696

TO DESIGN LIGHTWEIGHT, MORE
RELIABLE LIFE SUPPORT SYSTEMS

48

00:01:58,700 --> 00:01:59,940

FOR FUTURE SPACE MISSIONS.

49

00:02:00,840 --> 00:02:02,760

THIS WEEK'S QUESTION
COMES FROM RHOJ.

50

00:02:02,760 --> 00:02:05,720

HE WANTS TO KNOW WHAT SOME
ASTRONAUT PASTIMES ARE ABOARD

51

00:02:05,720 --> 00:02:06,300

THE STATION.

52

00:02:06,926 --> 00:02:09,396

WELL, LIVING IN SPACE
IS NOT JUST ALL WORK.

53

00:02:09,816 --> 00:02:12,686

CREW MEMBERS DO GET A BREAK
FROM THEIR BUSY SCHEDULES.

54

00:02:12,686 --> 00:02:14,856
DAYS OR EVEN MONTHS OF
STRAIGHT WORK ARE CERTAIN

55

00:02:14,856 --> 00:02:15,796
TO CAUSE STRESS.

56

00:02:16,166 --> 00:02:18,916
THAT'S WHY FLIGHT PLANNERS ON
EARTH SCHEDULE TIME FOR THE CREW

57

00:02:18,916 --> 00:02:21,756
TO RELAX, EXERCISE AND HAVE FUN.

58

00:02:22,100 --> 00:02:23,700
LIKE A LOT OF PEOPLE ON EARTH,

59

00:02:23,700 --> 00:02:26,280
ASTRONAUTS USUALLY GET WEEKENDS
OFF WHILE ON THE STATION.

60

00:02:26,700 --> 00:02:30,540
ON ANY GIVEN DAY, CREW MEMBERS
CAN WATCH MOVIES, PLAY MUSIC,

61

00:02:30,540 --> 00:02:33,976
READ BOOKS, PLAY CARDS AND
TALK TO THEIR FAMILIES.

62

00:02:33,976 --> 00:02:36,956
THEY HAVE AN EXERCISE BIKE, A
TREADMILL AND OTHER EQUIPMENT

63

00:02:36,956 --> 00:02:38,346
TO HELP KEEP THEIR
BODIES IN SHAPE.

64

00:02:39,000 --> 00:02:42,260

SOME CREW MEMBERS USE THEIR
FREE TIME TO PHOTOGRAPH EARTH,

65

00:02:42,260 --> 00:02:44,720

TAKING STUNNING IMAGES
ABOVE EARTH'S ATMOSPHERE.

66

00:02:45,860 --> 00:02:48,180

KEEP SENDING YOUR
QUESTIONS USING THE HASHTAG