SPACE TO GROUND

1
00:00:00,606 --> 00:00:02,896
"HOUSTON, STATION
ON SPACE TO GROUND."

2
00:00:02,896 --> 00:00:05,196
WELCOME TO SPACE TO
GROUND, I'M DAN HUOT.

3
00:00:05,376 --> 00:00:08,946
IT WAS ANOTHER SCIENCE-FILLED WEEK
ABOARD THE ORBITING LABORATORY.

4
00:00:09,756 --> 00:00:12,066
INTERNATIONAL SPACE
STATION CREW MEMBERS SET

5
00:00:12,066 --> 00:00:13,806
UP THE FLUIDICS EXPERIMENT.

6
00:00:14,116 --> 00:00:16,486
FLUIDICS IS A FLUID
MECHANICS EXPERIMENT

7
00:00:16,486 --> 00:00:19,626
WITH TWO MAIN OBJECTIVES:
PERFORM A SLOSH STUDY

8
00:00:19,626 --> 00:00:21,546
TO INVESTIGATE HOW FLUIDS MOVE

9
00:00:21,546 --> 00:00:23,926
IN MICROGRAVITY DURING
SATELLITE MANEUVERS,

10
00:00:24,196 --> 00:00:27,986
AND A WAVE TURBULENCE STUDY
THAT ISOLATES SURFACE TENSION

11
00:00:27,986 --> 00:00:30,716

FROM GRAVITY WHEN LOOKING
AT RESTORING FORCES.

12
00:00:30,926 --> 00:00:34,336
THE STUDY COULD ALSO HELP US
UNDERSTAND HOW OCEANS WORK HERE

13
00:00:34,336 --> 00:00:37,616
ON EARTH, INCLUDING THE
PHENOMENON OF ROGUE WAVES.

14
00:00:38,456 --> 00:00:41,356
FLUID MECHANICS WASN'T THE
ONLY THING ON THE CREWS MIND.

15
00:00:41,426 --> 00:00:43,346
THEY ALSO SPENT SOME
TIME STUDYING...

16
00:00:43,346 --> 00:00:44,596
WELL... THEIR MINDS.

17
00:00:45,556 --> 00:00:48,566
EXPEDITION 55 FLIGHT
ENGINEERS SCOTT TINGLE

18
00:00:48,566 --> 00:00:50,716
AND NORISHIGE KANAI
SET UP HARDWARE

19
00:00:50,756 --> 00:00:52,356
FOR THE NEUROMAPPING EXPERIMENT,

20
00:00:52,516 --> 00:00:55,606
PERFORMING THE TEST BOTH
STRAPPED IN AND FLOATING FREE.

21
00:00:55,606 --> 00:00:59,246
THE NEUROMAPPING
INVESTIGATION USES BRAIN SCANS

22
00:00:59,316 --> 00:01:02,336
TO ASSESS ANY CHANGES
IN STRUCTURE OR FUNCTION

23
00:01:02,336 --> 00:01:03,756
OF THR BRAIN THAT OCCUR

24
00:01:03,756 --> 00:01:06,036
AFTER SPENDING MONTHS
ON THE SPACE STATION.

25
00:01:06,626 --> 00:01:09,506
THE INVESTIGATION MEASURES HOW
LONG IT TAKES FOR THE BRAIN

26
00:01:09,506 --> 00:01:11,796
AND BODY TO RECOVER
FROM POSSIBLE CHANGES.

27
00:01:12,196 --> 00:01:14,416
PREVIOUS RESEARCH AND ACCOUNTS

28
00:01:14,456 --> 00:01:16,886
FROM ASTRONAUTS SUGGESTS
MOVEMENT CONTROL

29
00:01:16,886 --> 00:01:20,036
AND COGNITION CAN BE
AFFECTED IN MICROGRAVITY.

30
00:01:20,976 --> 00:01:23,826
THIS WEEK'S QUESTION COMES
FROM STUDENT COOPER DEL FOSSE

31
00:01:23,926 --> 00:01:26,616
OF SUNRISE ELEMENTARY IN
STURGEON BAY, WISCONSIN.

32

00:01:26,996 --> 00:01:28,806
HE WANTS TO KNOW IF YOU
CAN SEE THE GREAT WALL

33
00:01:28,806 --> 00:01:29,996
OF CHINA FROM SPACE.

34
00:01:30,686 --> 00:01:33,236
WELL COOPER, ALTHOUGH THE
GREAT WALL IS FREQUENTLY BILLED

35
00:01:33,236 --> 00:01:35,596
AS THE ONLY MAN-MADE
OBJECT VISIBLE FROM SPACE,

36
00:01:35,886 --> 00:01:38,856
IT GENERALLY IS NOT, AT
LEAST TO THE UNAIDED EYE.

37
00:01:39,736 --> 00:01:43,006
THE GREAT WALL IS PRETTY HARD
TO SEE AND HARD TO PHOTOGRAPH

38
00:01:43,046 --> 00:01:46,486
BECAUSE THE MATERIAL IT IS
MADE IS ABOUT THE SAME COLOR

39
00:01:46,486 --> 00:01:48,586
AND TEXTURE AS THE
AREA SURROUNDING IT.

40
00:01:49,146 --> 00:01:51,866
THE SHAPE, THE AGE OF THE
STRUCTURE, THE RESOLUTION

41
00:01:51,866 --> 00:01:54,086
OF THE CAMERA, THE
CONDITION OF THE ATMOSPHERE --

42
00:01:54,476 --> 00:01:56,606

ALL THESE FACTORS
AFFECT THE ABILITY

43
00:01:56,656 --> 00:01:58,866
TO DETECT AN OBJECT
FROM LOW EARTH ORBIT.

44
00:01:59,426 --> 00:02:03,146
HOWEVER, YOU CAN SEE THE WALL IN
RADAR IMAGES TAKEN FROM SPACE.

45
00:02:03,906 --> 00:02:06,416
STATION CREW MEMBERS
TAKE THOUSANDS OF IMAGES

46
00:02:06,416 --> 00:02:09,276
OF PLANET EARTH DURING THEIR
TIME ON BOARD THE SPACE STATION.

47
00:02:09,546 --> 00:02:13,146
HEAD ON OVER TO EOL.NASA.GOV
TO CHECK OUT THE GATEWAY

48
00:02:13,146 --> 00:02:15,046
TO ALL ASTRONAUT PHOTOGRAPHY.