



SPACE TO GROUND

1
00:00:00,386 --> 00:00:02,776
"HOUSTON, STATION
ON SPACE TO GROUND."

2
00:00:03,406 --> 00:00:04,626
SATELLITES AWAY!

3
00:00:05,496 --> 00:00:07,846
WELCOME TO SPACE TO
GROUND, I'M DAN HUOT.

4
00:00:08,256 --> 00:00:11,396
SIX SMALL SATELLITES SHOT
AWAY FROM STATION ON MONDAY.

5
00:00:12,226 --> 00:00:15,796
THE JAPANESE SMALL SATELLITE
ORBITAL DEPLOYER WAS GRAPPLED

6
00:00:15,796 --> 00:00:19,976
BY THE SMALL ROBOTIC ARM OUTSIDE
THE JAPANESE EXPERIMENT MODULE

7
00:00:19,976 --> 00:00:21,736
AND MOVED INTO POSITION.

8
00:00:22,166 --> 00:00:24,826
SIX DIFFERENT SATELLITES
FLEW INTO LOW-EARTH ORBIT

9
00:00:24,826 --> 00:00:27,016
WITH A RANGE OF MISSIONS,
INCLUDING:

10
00:00:27,116 --> 00:00:30,666
BUILDING A GROUND NETWORK USING
AMATEUR RADIO VIA A SATELLITE,

11
00:00:31,176 --> 00:00:35,256

ESTING FILM-LIKE DEVICES AND AN
AEROSHELL TO DEORBIT SATELLITES,

12
00:00:35,756 --> 00:00:38,866
DEMONSTRATING THE PERFORMANCE
OF A PULSED PLASMA THRUSTER

13
00:00:39,146 --> 00:00:41,086
AND DEPLOYING THE
FIRST TUBESATS.

14
00:00:42,046 --> 00:00:43,796
MEANWHILE INSIDE THE STATION,

15
00:00:43,796 --> 00:00:45,946
A LITTLE FLUID PHYSICS
WAS TAKING PLACE.

16
00:00:46,916 --> 00:00:49,656
EXPEDITION 50 COMMANDER
SHANE KIMBROUGH SET

17
00:00:49,656 --> 00:00:51,976
UP THE CAPILLARY
FLOW-2 EXPERIMENT.

18
00:00:52,726 --> 00:00:55,756
SINCE LIQUIDS BEHAVE VERY
DIFFERENTLY IN MICROGRAVITY,

19
00:00:56,016 --> 00:00:59,436
CONTAINERS THAT HOLD OR MOVE
THEM HAVE TO WORK DIFFERENTLY.

20
00:01:00,096 --> 00:01:02,656
CAPILLARY FLOW IS LOOKING
AT CONTROLLING LIQUIDS

21
00:01:02,756 --> 00:01:04,206
THROUGH SOMETHING

CALLED WETTING,

22

00:01:04,586 --> 00:01:07,206
WHICH IS A LIQUID'S ABILITY
TO SPREAD ACROSS A SURFACE.

23

00:01:07,206 --> 00:01:10,766
LESSONS LEARNED FROM THIS
PROCESS COULD HELP IMPROVE KEY

24

00:01:10,836 --> 00:01:14,696
SPACECRAFT SYSTEMS LIKE WATER
PURIFICATION AND FUEL STORAGE.

25

00:01:15,616 --> 00:01:18,326
THIS WEEK, CHARLENE AND
BOBBY ON TWITTER WANTED

26

00:01:18,386 --> 00:01:21,956
TO KNOW HOW A PHOTO IS TAKEN IN
SPACE AND WHAT CAMERA IS USED.

27

00:01:22,476 --> 00:01:24,676
WELL SINCE WE JUST GOT
A LOT OF GREAT PICTURES

28

00:01:24,676 --> 00:01:27,886
FROM TWO SPACEWALKS, LET'S FIND
OUT MORE ABOUT THAT CAMERA.

29

00:01:28,776 --> 00:01:32,926
SPACEWALKING ASTRONAUTS ACTUALLY
USE AN OFF-THE-SHELF DIGITAL SLR

30

00:01:32,926 --> 00:01:35,186
THAT YOU CAN FIND IN
AN ELECTRONICS STORE.

31

00:01:35,596 --> 00:01:38,076
THEY USE A WIDE ANGLE

LENS AND COVER THE CAMERA

32

00:01:38,076 --> 00:01:39,786

IN WHAT'S CALLED
A THERMAL BLANKET,

33

00:01:40,126 --> 00:01:41,946

WHICH PREVENTS THE
SURFACE OF THE CAMERA

34

00:01:41,976 --> 00:01:45,166

FROM GETTING REALLY HOT OR
REALLY COLD WHILE OUTSIDE

35

00:01:45,166 --> 00:01:46,256

IN THE VACUUM OF SPACE.

36

00:01:46,596 --> 00:01:49,336

EVERYTHING ELSE WORKS JUST
LIKE A CAMERA HERE ON EARTH,

37

00:01:49,526 --> 00:01:51,186

BUT ENABLES THEM TO GET PHOTOS

38

00:01:51,236 --> 00:01:53,086

THAT ARE TRULY OUT
OF THIS WORLD.

39

00:01:54,106 --> 00:01:56,416

KEEP SENDING YOUR
QUESTIONS USING THE HASHTAG