



SPACE TO GROUND

1
00:00:00,386 --> 00:00:02,776
Houston, Station
on space to ground.

2
00:00:03,396 --> 00:00:07,416
ONE FINAL LAUNCH TO
THE STATION FOR 2016.

3
00:00:07,966 --> 00:00:10,276
WELCOME TO SPACE TO
GROUND, I'M DAN HUOT.

4
00:00:10,586 --> 00:00:13,586
THE LAST CARGO DELIVERY
OF THE YEAR IS ON ITS WAY

5
00:00:13,626 --> 00:00:15,456
TO THE INTERNATIONAL
SPACE STATION.

6
00:00:15,976 --> 00:00:18,576
THE JAPANESE HTV-6 LIFTED OFF

7
00:00:18,656 --> 00:00:20,336
FROM THE TANEGASHIMA
SPACE CENTER

8
00:00:20,336 --> 00:00:21,946
IN JAPAN ON FRIDAY MORNING.

9
00:00:22,446 --> 00:00:25,856
PACKED WITH MORE THAN 4.5
TONS OF HARDWARE AND SUPPLIES,

10
00:00:26,066 --> 00:00:28,506
THE SPACECRAFT IS NOW
ON A FOUR DAY CHASE

11
00:00:28,506 --> 00:00:29,996

TO CATCH UP TO THE STATION.

12

00:00:30,666 --> 00:00:34,726

ONE PAYLOAD OF NOTE INCLUDES
SIX NEW LITHIUM-ION BATTERIES

13

00:00:34,966 --> 00:00:38,116

WHICH WILL BE INSTALLED DURING
A PAIR OF SPACEWALKS IN JANUARY.

14

00:00:38,896 --> 00:00:43,596

HTV IS SLATED TO ARRIVE ON
DEC 13TH, WHEN SHANE KIMBROUGH

15

00:00:43,596 --> 00:00:46,546

AND THOMAS PESQUET WILL USE
THE STATION'S ROBOTIC ARM

16

00:00:46,786 --> 00:00:49,336

TO CAPTURE THE VEHICLE,
WHICH WILL THEN BE ATTACHED

17

00:00:49,336 --> 00:00:51,956

TO THE STATION BY COMMANDS
SENT TO THE ROBOTIC ARM

18

00:00:51,956 --> 00:00:53,036

BY GROUND CONTROLLERS.

19

00:00:54,036 --> 00:00:57,196

WHILE HTV WILL DELIVER SOME
FRESH FOOD TO THE CREW,

20

00:00:57,196 --> 00:00:58,946

THEY'VE BEEN HARD
AT WORK GROWING SOME

21

00:00:58,946 --> 00:01:00,236

OF THEIR OWN IN SPACE.

22

00:01:01,066 --> 00:01:04,036

COMMANDER SHANE KIMBROUGH
HARVESTED THE LATEST BATCH

23

00:01:04,036 --> 00:01:06,616

OF RED ROMAINE LETTUCE
FROM THE VEGGIE EXPERIMENT,

24

00:01:06,866 --> 00:01:09,006

WHICH HAVE BEEN GROWING
SINCE THE END OF OCTOBER.

25

00:01:09,546 --> 00:01:12,436

THE CREW IS USING A
CUT-AND-COME-AGAIN TECHNIQUE

26

00:01:12,576 --> 00:01:13,796

THAT TAKES A SELECTION

27

00:01:13,796 --> 00:01:16,456

OF LETTUCE LEAVES WHILE
LEAVING OTHERS AND THE CORE

28

00:01:16,456 --> 00:01:18,526

OF THE PLANT INTACT, RESULTING

29

00:01:18,576 --> 00:01:21,516

IN ADDITIONAL HARVESTS
APPROXIMATELY EVERY 10 DAYS.

30

00:01:22,356 --> 00:01:25,046

THIS IS ALL PART OF
VEGGIE'S ONGOING MISSION

31

00:01:25,046 --> 00:01:27,326

TO IMPROVE PLANT GROWTH
TECHNIQUES IN SPACE

32

00:01:27,686 --> 00:01:29,696

SO WE CAN SUPPLEMENT
ASTRONAUT DIETS

33

00:01:29,726 --> 00:01:31,256
WITH FRESH, NUTRITIOUS FOOD.

34

00:01:32,126 --> 00:01:35,006
THIS WEEK TWITTER USER
@SPACEISGREAT1 WHO WANTS

35

00:01:35,006 --> 00:01:37,286
TO KNOW HOW THICK THE
WINDOWS ON STATION ARE

36

00:01:37,576 --> 00:01:39,636
AND WHAT THE ASTRONAUTS
DO IF THEY NOTICE A CRACK.

37

00:01:40,176 --> 00:01:44,036
WELL TO START, EACH WINDOW IS
ACTUALLY SEVERAL WINDOWS IN ONE.

38

00:01:44,656 --> 00:01:47,306
EACH WINDOW ON STATION
HAS FOUR PANES OF GLASS,

39

00:01:47,726 --> 00:01:50,946
RANGING FROM ABOUT 1/3 TO
1 AND 1/4 INCHES THICK,

40

00:01:51,366 --> 00:01:53,316
WITH THE INNER TWO
PANES HOLDING PRESSURE.

41

00:01:53,456 --> 00:01:56,546
THEY COME WITH PROTECTIVE
SHUTTERS THAT CAN CLOSE

42

00:01:56,546 --> 00:01:58,676
WHEN THE WINDOW IS NOT

IN USE TO PROTECT THEM

43

00:01:58,676 --> 00:01:59,706
FROM ANY SPACE DEBRIS.

44

00:02:00,416 --> 00:02:03,276
ASTRONAUTS PERFORM REGULAR
SURVEYS OF THE WINDOWS,

45

00:02:03,456 --> 00:02:05,596
WHICH IS HOW THEY'VE
NOTICED A FEW IMPACT MARKS.

46

00:02:06,376 --> 00:02:09,576
THERE AREN'T ANY REPAIR KITS, SO
IF A THOSE INNER TWO PANES WERE

47

00:02:09,576 --> 00:02:12,756
TO BECOME DAMAGED, THE CREW
WOULD LIKELY ISOLATE THE MODULE

48

00:02:12,756 --> 00:02:14,236
THE WINDOW IS IN.

49

00:02:14,346 --> 00:02:16,276
KEEP SENDING IN YOUR
QUESTIONS USING THE