SPACE TO GROUND

1
00:00:05,670 --> 00:00:03,429
houston station on space to ground

2
00:00:07,590 --> 00:00:05,680
knock knock who's there

3
00:00:10,230 --> 00:00:07,600
welcome to space to ground i'm dan

4
00:00:12,310 --> 00:00:10,240
hewitt kate rubins got hands on this

5
00:00:15,190 --> 00:00:12,320
week with one of the station's biggest

6
00:00:17,510 --> 00:00:15,200
exploration technology demos

7
00:00:19,910 --> 00:00:17,520
rubens conducted the modal test inside

8
00:00:22,790 --> 00:00:19,920
the bigelow expandable activity module

9
00:00:24,710 --> 00:00:22,800
or beam the large expandable habitat

10
00:00:26,710 --> 00:00:24,720
that is the first human rated of its

11
00:00:29,669 --> 00:00:26,720
kind in history

12
00:00:31,910 --> 00:00:29,679
using her fists rubens actually banged

13
00:00:34,549 --> 00:00:31,920

on the walls of beam while sensors

14
00:00:35,750 --> 00:00:34,559
recorded the sound and vibration inside

15
00:00:37,670 --> 00:00:35,760
the module

16
00:00:40,150 --> 00:00:37,680
this will give engineering teams

17
00:00:42,150 --> 00:00:40,160
important structural data including

18
00:00:44,630 --> 00:00:42,160
beam's interaction to loads while

19
00:00:47,510 --> 00:00:44,640
attached to station as the expandable

20
00:00:49,990 --> 00:00:47,520
continues its two-year test phase

21
00:00:51,830 --> 00:00:50,000
meanwhile takuya onishi had his hands

22
00:00:53,350 --> 00:00:51,840
full with a large new combustion

23
00:00:55,430 --> 00:00:53,360
experiment

24
00:00:57,830 --> 00:00:55,440
he spent the week setting up the group

25
00:01:00,470 --> 00:00:57,840
combustion module for the upcoming group

26
00:01:03,029 --> 00:01:00,480
combustion experiment the japanese

27
00:01:05,990 --> 00:01:03,039
investigation will test a theory on fuel

28
00:01:08,230 --> 00:01:06,000
spray behaviors as flames spread across

29
00:01:10,550 --> 00:01:08,240
a cloud of fuel droplets

30
00:01:13,030 --> 00:01:10,560
a lot of rocket engines use this spray

31
00:01:15,590 --> 00:01:13,040
style combustion but the high speeds of

32
00:01:17,429 --> 00:01:15,600
the fuel and the oxidizer as they move

33
00:01:20,149 --> 00:01:17,439
through a combustion chamber make it

34
00:01:22,550 --> 00:01:20,159
virtually impossible to analyze

35
00:01:24,550 --> 00:01:22,560
group combustion changes that and its

36
00:01:26,950 --> 00:01:24,560
results could help in the development of

37
00:01:29,510 --> 00:01:26,960
advanced rocket engines

38
00:01:31,749 --> 00:01:29,520

this week twitter user la denizen asked

39
00:01:34,149 --> 00:01:31,759
when there will be a us-based manned

40
00:01:35,270 --> 00:01:34,159
mission to station again how about next

41
00:01:37,910 --> 00:01:35,280
year

42
00:01:40,310 --> 00:01:37,920
u.s commercial crew companies spacex and

43
00:01:42,630 --> 00:01:40,320
boeing are counting down milestones to

44
00:01:44,710 --> 00:01:42,640
their first flights to the station

45
00:01:47,670 --> 00:01:44,720
just this week boeing showcased new

46
00:01:49,990 --> 00:01:47,680
simulators for its cst-100 starliner

47
00:01:52,310 --> 00:01:50,000
spacecraft which astronauts will train

48
00:01:54,630 --> 00:01:52,320
on here at the johnson space center

49
00:01:57,109 --> 00:01:54,640
current schedules have spacex aiming for

50
00:01:59,510 --> 00:01:57,119
the second half of 2017 for a first

51
00:02:01,429 --> 00:01:59,520
crewed flight while boeing is targeting

52
00:02:02,870 --> 00:02:01,439
early 2018.

53
00:02:05,030 --> 00:02:02,880
and with the international docking

54
00:02:06,709 --> 00:02:05,040
adapter installed the space station is

55
00:02:08,790 --> 00:02:06,719
ready and waiting

56
00:02:11,029 --> 00:02:08,800
keep sending us your questions using the