



# Space**to**Ground

1  
00:00:07,030 --> 00:00:05,030  
houston station on space to ground

2  
00:00:09,990 --> 00:00:07,040  
welcome to space to ground i'm sandra

3  
00:00:11,990 --> 00:00:10,000  
jones this week four humans successfully

4  
00:00:13,990 --> 00:00:12,000  
splashed down in the gulf of mexico

5  
00:00:16,150 --> 00:00:14,000  
after a nearly six month mission in

6  
00:00:18,390 --> 00:00:16,160  
space and science abounds on the

7  
00:00:20,390 --> 00:00:18,400  
international space station

8  
00:00:22,950 --> 00:00:20,400  
dragon spacex on the big loop all hooks

9  
00:00:25,589 --> 00:00:22,960  
open and nominal

10  
00:00:28,870 --> 00:00:25,599  
and happens we see separation

11  
00:00:31,349 --> 00:00:28,880  
on sunday may 2nd spacex's crew dragon

12  
00:00:33,430 --> 00:00:31,359  
carrying nasa astronauts michael hopkins

13  
00:00:36,470 --> 00:00:33,440

victor glover and shannon walker and

14

00:00:38,950 --> 00:00:36,480

japan aerospace exploration agency

15

00:00:41,030 --> 00:00:38,960

astronaut suici naguchi returned to

16

00:00:43,910 --> 00:00:41,040

earth completing a successful splashdown

17

00:00:45,750 --> 00:00:43,920

at 2 56 a.m eastern time off the coast

18

00:00:47,670 --> 00:00:45,760

of panama city florida

19

00:00:49,990 --> 00:00:47,680

crew 1 is the first night splashdown of

20

00:00:51,510 --> 00:00:50,000

the u.s spacecraft since apollo 8 in

21

00:00:53,510 --> 00:00:51,520

1968.

22

00:00:55,830 --> 00:00:53,520

this also marks the longest duration

23

00:00:57,189 --> 00:00:55,840

mission of a crude american spacecraft

24

00:00:59,510 --> 00:00:57,199

to date

25

00:01:02,069 --> 00:00:59,520

back in space the crew is keeping busy

26  
00:01:04,229 --> 00:01:02,079  
with science investigations and studies

27  
00:01:06,310 --> 00:01:04,239  
aboard the space station

28  
00:01:09,030 --> 00:01:06,320  
one important investigation includes the

29  
00:01:11,190 --> 00:01:09,040  
continuing tissue chips in space studies

30  
00:01:13,350 --> 00:01:11,200  
tissue chips are small models of human

31  
00:01:15,510 --> 00:01:13,360  
organs containing multiple cell types

32  
00:01:17,749 --> 00:01:15,520  
which behave similarly as they do in the

33  
00:01:19,990 --> 00:01:17,759  
body these chips make it possible to

34  
00:01:22,550 --> 00:01:20,000  
identify safe and effective therapies

35  
00:01:24,710 --> 00:01:22,560  
like drugs or vaccines much more quickly

36  
00:01:26,630 --> 00:01:24,720  
than on earth the changes that occur in

37  
00:01:28,870 --> 00:01:26,640  
the human body during space flight

38  
00:01:31,190 --> 00:01:28,880

resemble the onset and progression of

39

00:01:33,749 --> 00:01:31,200

aging and diseases on earth but happen

40

00:01:35,910 --> 00:01:33,759

more quickly in microgravity scientists

41

00:01:38,390 --> 00:01:35,920

can study tissue chips in space to model

42

00:01:41,109 --> 00:01:38,400

diseases that may take months or years

43

00:01:43,590 --> 00:01:41,119

to develop on earth but the science

44

00:01:45,670 --> 00:01:43,600

doesn't stop there this week nasa

45

00:01:48,469 --> 00:01:45,680

astronaut shane kimbrough utilized

46

00:01:50,950 --> 00:01:48,479

astrobee robotics to conduct research

47

00:01:53,670 --> 00:01:50,960

related to space debris

48

00:01:56,069 --> 00:01:53,680

the experiment named relative operations

49

00:01:58,149 --> 00:01:56,079

for autonomous maneuvers or rome

50

00:02:01,030 --> 00:01:58,159

demonstrates processes for a robotic

51  
00:02:02,950 --> 00:02:01,040  
craft to rendezvous with debris in space

52  
00:02:04,789 --> 00:02:02,960  
space debris can include objects like

53  
00:02:07,190 --> 00:02:04,799  
satellites that could be repaired or

54  
00:02:09,190 --> 00:02:07,200  
taken out of orbit however because many

55  
00:02:11,510 --> 00:02:09,200  
of these objects are tumbling it makes

56  
00:02:13,990 --> 00:02:11,520  
rendezvous and docking challenging

57  
00:02:16,070 --> 00:02:14,000  
uses the space station's astro b robots

58  
00:02:18,309 --> 00:02:16,080  
to observe and understand how targets

59  
00:02:20,710 --> 00:02:18,319  
tumble and uses this information to plan

60  
00:02:22,550 --> 00:02:20,720  
ways to safely reach them this research

61  
00:02:24,470 --> 00:02:22,560  
could help address how space debris

62  
00:02:26,790 --> 00:02:24,480  
decreases the availability of safe

63  
00:02:29,030 --> 00:02:26,800

orbits for satellites including those

64

00:02:32,070 --> 00:02:29,040

critical for weather observation climate

65

00:02:34,470 --> 00:02:32,080

monitoring and communications on earth

66

00:02:36,150 --> 00:02:34,480

and that's space to ground for this week

67

00:02:37,400 --> 00:02:36,160

thanks for watching we'll see you next