



# Space to Ground

1  
00:00:00,550 --> 00:00:05,030

[Music]

2  
00:00:09,830 --> 00:00:06,950

welcome to space to ground i'm nella for

3  
00:00:11,990 --> 00:00:09,840

ramji nasa and spacex are now targeting

4  
00:00:13,749 --> 00:00:12,000

thursday july 14th for the launch of the

5  
00:00:15,589 --> 00:00:13,759

next commercial resupply services

6  
00:00:16,790 --> 00:00:15,599

mission to the international space

7  
00:00:19,830 --> 00:00:16,800

station

8  
00:00:22,150 --> 00:00:19,840

the new target launch date for crs 25

9  
00:00:24,230 --> 00:00:22,160

supports ongoing dragon spacecraft

10  
00:00:26,550 --> 00:00:24,240

inspections as well as repair and

11  
00:00:29,589 --> 00:00:26,560

replacement of any components that could

12  
00:00:31,910 --> 00:00:29,599

have been degraded by exposure to the

13  
00:00:34,709 --> 00:00:31,920

hydrazine vapor found during testing in

14

00:00:36,950 --> 00:00:34,719

early june the new date also allows for

15

00:00:38,709 --> 00:00:36,960

launch of the uncrewed cargo mission for

16

00:00:41,270 --> 00:00:38,719

the earliest possible rendezvous

17

00:00:42,709 --> 00:00:41,280

opportunity with the space station

18

00:00:44,549 --> 00:00:42,719

research has shown that living in

19

00:00:47,190 --> 00:00:44,559

microgravity can cause changes to

20

00:00:49,830 --> 00:00:47,200

astronauts immune systems similarly to

21

00:00:52,950 --> 00:00:49,840

how aging impacts them an experiment

22

00:00:54,790 --> 00:00:52,960

launching on spacex crs 25 seeks to

23

00:00:57,270 --> 00:00:54,800

better understand those changes and if

24

00:00:59,590 --> 00:00:57,280

they reverse upon return to earth

25

00:01:01,670 --> 00:00:59,600

immunosenescence will use tissue chips

26  
00:01:04,149 --> 00:01:01,680  
small devices that contain human cells

27  
00:01:06,390 --> 00:01:04,159  
in a 3d matrix to study these changes

28  
00:01:08,789 --> 00:01:06,400  
and how the immune system recovers after

29  
00:01:10,550 --> 00:01:08,799  
returning to earth what we learn could

30  
00:01:12,550 --> 00:01:10,560  
help us develop treatments to protect

31  
00:01:14,390 --> 00:01:12,560  
astronauts on future long-duration

32  
00:01:16,630 --> 00:01:14,400  
missions it could also lead to

33  
00:01:18,550 --> 00:01:16,640  
development of more effective treatments

34  
00:01:20,550 --> 00:01:18,560  
for immune system aging for patients

35  
00:01:22,390 --> 00:01:20,560  
back on our home planet

36  
00:01:24,230 --> 00:01:22,400  
another investigation launching aboard

37  
00:01:26,390 --> 00:01:24,240  
the cargo dragon will study how soil

38  
00:01:28,550 --> 00:01:26,400

microbes behave in space

39

00:01:30,069 --> 00:01:28,560

soil microbes could be used to help make

40

00:01:32,230 --> 00:01:30,079

conditions on the surface of the moon

41

00:01:34,149 --> 00:01:32,240

and mars more favorable for plant growth

42

00:01:36,069 --> 00:01:34,159

and could also be used to help grow

43

00:01:38,550 --> 00:01:36,079

crops on space stations during long

44

00:01:40,550 --> 00:01:38,560

duration space flight the dynamos

45

00:01:42,710 --> 00:01:40,560

investigation will compare earth impacts

46

00:01:45,510 --> 00:01:42,720

on soil microbes with impacts from the

47

00:01:47,910 --> 00:01:45,520

space environment results could support

48

00:01:50,350 --> 00:01:47,920

design of life support systems using the

49

00:01:52,310 --> 00:01:50,360

natural processes carried out by soil

50

00:01:54,950 --> 00:01:52,320

microorganisms for future space

51  
00:01:56,550 --> 00:01:54,960  
exploration missions for all of the

52  
00:01:58,149 --> 00:01:56,560  
latest on the science taking place

53  
00:02:00,550 --> 00:01:58,159  
aboard the orbiting laboratory don't

54  
00:02:02,789 --> 00:02:00,560  
forget to follow us on twitter at space

55  
00:02:04,069 --> 00:02:02,799  
underscore station that's spacetogram

56  
00:02:08,779 --> 00:02:04,079  
for this week thanks so much for

57  
00:02:08,789 --> 00:02:21,110  
[Music]