
NASA
SPACESTATION
LIVE

1
00:00:10,390 --> 00:00:08,390
as nasa plans future exploration

2
00:00:12,470 --> 00:00:10,400
missions there's much we still have to

3
00:00:13,910 --> 00:00:12,480
learn and the space station is an

4
00:00:16,390 --> 00:00:13,920
excellent test bed for many of the

5
00:00:18,950 --> 00:00:16,400
studies that will help us travel beyond

6
00:00:20,470 --> 00:00:18,960
earth to an asteroid or to mars

7
00:00:22,710 --> 00:00:20,480
lori meigs is at

8
00:00:26,550 --> 00:00:22,720
marshall space flight center with more

9
00:00:28,150 --> 00:00:26,560
about one such investigation lori

10
00:00:29,910 --> 00:00:28,160
well regolith is a term you may have

11
00:00:31,990 --> 00:00:29,920
heard used a lot back in the lunar

12
00:00:34,389 --> 00:00:32,000
landing days to refer to the dust that

13
00:00:36,790 --> 00:00:34,399

really stuck to the spacesuits and the

14
00:00:38,470 --> 00:00:36,800
hardware well to travel to farther

15
00:00:40,470 --> 00:00:38,480
bodies in the solar system we need to

16
00:00:43,270 --> 00:00:40,480
understand how regolith acts in

17
00:00:44,630 --> 00:00:43,280
microgravity and strata 1 is an

18
00:00:46,310 --> 00:00:44,640
experiment that is doing just that on

19
00:00:48,869 --> 00:00:46,320
the space station i spoke with kristin

20
00:00:52,150 --> 00:00:48,879
john she's the co-investigator and i got

21
00:00:53,750 --> 00:00:52,160
the dirt on this pesky soil

22
00:00:55,750 --> 00:00:53,760
it's an experiment to study asteroid

23
00:00:57,670 --> 00:00:55,760
regolith so regolith is basically the

24
00:00:59,830 --> 00:00:57,680
fine dust and powder that you find on

25
00:01:02,150 --> 00:00:59,840
the surface of any atmosphereless body

26
00:01:03,670 --> 00:01:02,160
so on the moon or asteroids or comets

27
00:01:05,189 --> 00:01:03,680
they're covered with this this regolith

28
00:01:10,469 --> 00:01:05,199
material so we're interested in studying

29
00:01:14,469 --> 00:01:13,030
jack schmidt having a few problems

30
00:01:15,990 --> 00:01:14,479
you heard a lot about that when the

31
00:01:17,910 --> 00:01:16,000
astronauts came back from the moon the

32
00:01:19,030 --> 00:01:17,920
regolith that was really stuck to their

33
00:01:20,789 --> 00:01:19,040
spacesuits and stuff so this is

34
00:01:22,789 --> 00:01:20,799
something we're having to learn about

35
00:01:24,149 --> 00:01:22,799
and how to deal with right exactly yeah

36
00:01:25,429 --> 00:01:24,159
so when the apollo astronauts came back

37
00:01:26,870 --> 00:01:25,439
they reported all sorts of issues with

38
00:01:28,710 --> 00:01:26,880

the regolith it would get into their

39
00:01:30,710 --> 00:01:28,720
joints it would interrupt with equipment

40
00:01:31,990 --> 00:01:30,720
and the space space suits spacecraft

41
00:01:33,749 --> 00:01:32,000
everything so it's something we have to

42
00:01:36,069 --> 00:01:33,759
be considerate of

43
00:01:37,510 --> 00:01:36,079
so why study it on the space station um

44
00:01:39,030 --> 00:01:37,520
so basically we want to study in the

45
00:01:41,350 --> 00:01:39,040
same environment that it's exposed to on

46
00:01:43,429 --> 00:01:41,360
these bodies uh so for now we can only

47
00:01:44,950 --> 00:01:43,439
study regolith for 30 seconds at a time

48
00:01:46,230 --> 00:01:44,960
on the vomit comet so by going to the

49
00:01:47,510 --> 00:01:46,240
station we can actually study it for a

50
00:01:48,950 --> 00:01:47,520
longer period of time in the

51
00:01:50,550 --> 00:01:48,960
microgravity environment that this

52
00:01:52,389 --> 00:01:50,560
regulator exists

53
00:01:53,670 --> 00:01:52,399
so when we say study it what are we

54
00:01:55,190 --> 00:01:53,680
doing with it

55
00:01:56,950 --> 00:01:55,200
right so we're actually basically just

56
00:01:58,469 --> 00:01:56,960
watching how it evolves over time so we

57
00:01:59,910 --> 00:01:58,479
basically have four tubes that we're

58
00:02:01,830 --> 00:01:59,920
sending up to space station that are

59
00:02:03,190 --> 00:02:01,840
filled with different regular stimulants

60
00:02:04,389 --> 00:02:03,200
and we're watching each one with a

61
00:02:05,749 --> 00:02:04,399
camera and we're just watching what

62
00:02:07,590 --> 00:02:05,759
happens over time in the microgravity

63
00:02:09,270 --> 00:02:07,600

environment so it's like having

64
00:02:11,110 --> 00:02:09,280
asteroids on the space station right

65
00:02:12,390 --> 00:02:11,120
exactly yep that's what we're going for

66
00:02:14,309 --> 00:02:12,400
we're very excited and there's uh

67
00:02:15,510 --> 00:02:14,319
surprisingly there's a large number of

68
00:02:17,270 --> 00:02:15,520
scientists that are very interested in

69
00:02:18,630 --> 00:02:17,280
regolith from a scientific point of view

70
00:02:20,070 --> 00:02:18,640
and also from an exploration point of

71
00:02:21,990 --> 00:02:20,080
view so there's a lot of people that are

72
00:02:23,430 --> 00:02:22,000
excited about strata 1 and future strata

73
00:02:24,630 --> 00:02:23,440
missions as well

74
00:02:27,750 --> 00:02:24,640
is it just

75
00:02:29,350 --> 00:02:27,760
strictly for future exploration or is

76
00:02:31,509 --> 00:02:29,360
there some other thing we can learn from

77
00:02:32,550 --> 00:02:31,519
this that'll benefit earth yeah so

78
00:02:34,229 --> 00:02:32,560
there's a lot so there's not a lot of

79
00:02:35,830 --> 00:02:34,239
benefits necessarily to earth but

80
00:02:37,350 --> 00:02:35,840
there's a lot of benefits to science to

81
00:02:38,710 --> 00:02:37,360
understanding this regular from a

82
00:02:40,229 --> 00:02:38,720
scientific point of view but also from

83
00:02:41,589 --> 00:02:40,239
an exploration point of view so when we

84
00:02:43,430 --> 00:02:41,599
go to these bodies in the future we have

85
00:02:44,949 --> 00:02:43,440
to know how to interact with them um all

86
00:02:46,550 --> 00:02:44,959
these all these bodies that are covered

87
00:02:47,670 --> 00:02:46,560
with them we need to anchor or attach to

88
00:02:49,830 --> 00:02:47,680

these surfaces because they have very

89
00:02:50,949 --> 00:02:49,840
low gravity so we have to be able to

90
00:02:52,710 --> 00:02:50,959
interact with the regolith and

91
00:02:54,790 --> 00:02:52,720
understand how we'll attach to them or

92
00:02:56,869 --> 00:02:54,800
anchor anchor to the bodies so so that's

93
00:02:58,229 --> 00:02:56,879
an important reason to study regularly

94
00:02:59,750 --> 00:02:58,239
and so then it's a whole nother ballgame

95
00:03:02,790 --> 00:02:59,760
when you find out what it really does

96
00:03:04,390 --> 00:03:02,800
right exactly yep

97
00:03:06,550 --> 00:03:04,400
and for more information on this and

98
00:03:07,990 --> 00:03:06,560
other experiments on the station go to

99
00:03:09,830 --> 00:03:08,000
nasa.gov

100
00:03:12,229 --> 00:03:09,840
station and look under the research and