SPACE TO GROUND

1
00:00:05,349 --> 00:00:03,350
houston station on space to ground

2
00:00:08,150 --> 00:00:05,359
the work continues with the first human

3
00:00:09,750 --> 00:00:08,160
rated expandable space module

4
00:00:11,830 --> 00:00:09,760
welcome to space to ground i'm gary

5
00:00:13,830 --> 00:00:11,840
jordan expansion of the bigelow

6
00:00:15,270 --> 00:00:13,840
expandable activity module or beam is

7
00:00:16,790 --> 00:00:15,280
going to take a little longer than

8
00:00:18,710 --> 00:00:16,800
originally planned

9
00:00:21,029 --> 00:00:18,720
during about two hours of expansion on

10
00:00:22,870 --> 00:00:21,039
thursday beam's length and diameter did

11
00:00:25,029 --> 00:00:22,880
not increase as expected with the

12
00:00:27,109 --> 00:00:25,039
increased internal pressure and teams

13
00:00:28,230 --> 00:00:27,119

decided to stand down from operations

14
00:00:30,470 --> 00:00:28,240
for the day

15
00:00:32,389 --> 00:00:30,480
nasa and bigelow aerospace engineers are

16
00:00:34,549 --> 00:00:32,399
analyzing a number of reasons why things

17
00:00:36,150 --> 00:00:34,559
didn't go exactly as planned but

18
00:00:37,990 --> 00:00:36,160
remember this is a test so what we

19
00:00:40,069 --> 00:00:38,000
learned today will be a tremendous help

20
00:00:41,910 --> 00:00:40,079
for expandables in the future

21
00:00:44,229 --> 00:00:41,920
for now teams are figuring out when to

22
00:00:45,990 --> 00:00:44,239
resume beam expansion in the meantime

23
00:00:48,069 --> 00:00:46,000
bean and the international space station

24
00:00:50,389 --> 00:00:48,079
remain in a stable configuration and the

25
00:00:52,470 --> 00:00:50,399
crew members on board are safe

26
00:00:54,229 --> 00:00:52,480
when expanded beam is expected to reach

27
00:00:56,470 --> 00:00:54,239
four to four and a half times it's

28
00:00:58,310 --> 00:00:56,480
packed size astronauts on board the

29
00:01:00,470 --> 00:00:58,320
orbiting laboratory will then be able to

30
00:01:02,869 --> 00:01:00,480
enter the module periodically to collect

31
00:01:04,869 --> 00:01:02,879
data from sensors looking at radiation

32
00:01:06,870 --> 00:01:04,879
impacts and temperature over its two

33
00:01:09,109 --> 00:01:06,880
year long stay

34
00:01:11,109 --> 00:01:09,119
the alpha magnetic spectrometer ams

35
00:01:12,950 --> 00:01:11,119
celebrated its fifth anniversary on the

36
00:01:15,429 --> 00:01:12,960
international space station last week

37
00:01:17,190 --> 00:01:15,439
surpassing 81 billion cosmic ray

38
00:01:18,789 --> 00:01:17,200

particles analyzed

39
00:01:20,390 --> 00:01:18,799
it's searching for the origins of the

40
00:01:22,950 --> 00:01:20,400
universe specifically the role that

41
00:01:25,190 --> 00:01:22,960
antimatter and dark matter have to play

42
00:01:27,190 --> 00:01:25,200
ams has detected antimatter particles

43
00:01:29,910 --> 00:01:27,200
called positrons that are active in the

44
00:01:31,830 --> 00:01:29,920
galaxy introducing new hypotheses about

45
00:01:34,149 --> 00:01:31,840
dark matter which is believed to make up

46
00:01:35,190 --> 00:01:34,159
about 24 of the total mass of the

47
00:01:36,789 --> 00:01:35,200
universe

48
00:01:39,670 --> 00:01:36,799
known matter is only believed to make up

49
00:01:42,069 --> 00:01:39,680
about 5 with the remaining 71 percent

50
00:01:43,590 --> 00:01:42,079
being the mysterious dark energy

51
00:01:45,670 --> 00:01:43,600
there's still a lot of unknowns and much

52
00:01:47,350 --> 00:01:45,680
to explore and the ams will continue to

53
00:01:48,950 --> 00:01:47,360
help us unlock the secrets of the

54
00:01:50,550 --> 00:01:48,960
universe

55
00:01:52,389 --> 00:01:50,560
this week's question comes from elsie

56
00:01:54,469 --> 00:01:52,399
who wants to know if the soyuz can be

57
00:01:56,950 --> 00:01:54,479
used again after bringing astronauts and

58
00:01:59,429 --> 00:01:56,960
cosmonauts safely back to earth

59
00:02:01,590 --> 00:01:59,439
well not the spacecraft in its entirety

60
00:02:03,590 --> 00:02:01,600
just before re-entry the soyuz separates

61
00:02:04,870 --> 00:02:03,600
into three pieces the service and

62
00:02:06,709 --> 00:02:04,880
orbital modules burn up in the

63
00:02:08,710 --> 00:02:06,719

atmosphere while the crew module brings

64
00:02:11,110 --> 00:02:08,720
the astronauts and cosmonauts safely to

65
00:02:12,790 --> 00:02:11,120
the ground once it lands in kazakhstan

66
00:02:14,390 --> 00:02:12,800
and the crew members are taken out

67
00:02:16,229 --> 00:02:14,400
search and recovery forces bring the

68
00:02:18,390 --> 00:02:16,239
capsule to facilities in moscow and

69
00:02:20,150 --> 00:02:18,400
examine all of the systems then hand it

70
00:02:21,990 --> 00:02:20,160
over to roscosmos where parts are

71
00:02:23,510 --> 00:02:22,000
extracted from the capsule to use on

72
00:02:25,510 --> 00:02:23,520
other soyuz vehicles in the

73
00:02:26,790 --> 00:02:25,520
manufacturing process

74
00:02:28,550 --> 00:02:26,800
keep sending us your questions and