1
00:00:23,089 --> 00:00:20,990
I'm Lori Meggs and welcome to focus on

2
00:00:25,249 --> 00:00:23,099
Marshall my co-host bill hubscher is a

3
00:00:27,019 --> 00:00:25,259
proud new Papa so while he's at home

4
00:00:29,210 --> 00:00:27,029
with his new baby boy I'll be flying

5
00:00:30,560 --> 00:00:29,220
solo this month on this edition we'll

6
00:00:32,720 --> 00:00:30,570
take you inside the facility that

7
00:00:34,400 --> 00:00:32,730
actually puts together this program but

8
00:00:36,229 --> 00:00:34,410
first let's head out to the east test

9
00:00:39,290 --> 00:00:36,239
area where one group is ensuring that

10
00:00:40,729 --> 00:00:39,300
shuttles continue to fly safely we're

11
00:00:42,200 --> 00:00:40,739
here in the materials environment test

12
00:00:43,580 --> 00:00:42,210
complex with scooter Clifton a test

13
00:00:45,380 --> 00:00:43,590

conductor let's good or what do you do

14
00:00:46,730 --> 00:00:45,390
here this facility has different test

15
00:00:48,530 --> 00:00:46,740
positions where we actually do thermal

16
00:00:50,240 --> 00:00:48,540
conditioning tests on different parts of

17
00:00:52,430 --> 00:00:50,250
the space shuttle systems right here you

18
00:00:53,750 --> 00:00:52,440
see test articles from the ET and SRV we

19
00:00:55,610 --> 00:00:53,760
actually take these samples and place

20
00:00:57,470 --> 00:00:55,620
them in the Test section and we run

21
00:00:59,420 --> 00:00:57,480
simulate arrow heat and conditions to

22
00:01:00,800 --> 00:00:59,430
see how they respond and you have one of

23
00:01:01,910 --> 00:01:00,810
those samples here that we can look at

24
00:01:03,410 --> 00:01:01,920
we're going to you're about to do a test

25
00:01:04,969 --> 00:01:03,420
right yes we sure are this this

26
00:01:06,590 --> 00:01:04,979
particular test all right here is from

27
00:01:07,819 --> 00:01:06,600
the eto blader and we're actually going

28
00:01:10,010 --> 00:01:07,829
to testing this program starting today

29
00:01:11,690 --> 00:01:10,020
and you start with a clean surface and

30
00:01:13,340 --> 00:01:11,700
then what happens we take this family we

31
00:01:15,170 --> 00:01:13,350
put it in the Test section we run the

32
00:01:16,730 --> 00:01:15,180
conditions we pull a sample out and we

33
00:01:18,770 --> 00:01:16,740
see what kind of effects that the

34
00:01:20,060 --> 00:01:18,780
conditions had on this test article all

35
00:01:46,289 --> 00:01:20,070
right can we can see the test sure we

36
00:01:50,649 --> 00:01:48,490
scooter now what is this it just looks

37
00:01:52,780 --> 00:01:50,659
like a giant box with foam all over it

38
00:01:54,520 --> 00:01:52,790

to me what we use is the expired et

39
00:01:55,870 --> 00:01:54,530
phone we spray this on here to give us

40
00:01:57,430 --> 00:01:55,880
insulating properties for the chamber

41
00:01:59,109 --> 00:01:57,440
what we call this our 12 foot cube

42
00:02:00,430 --> 00:01:59,119
thermal chamber we used to simulate

43
00:02:01,600 --> 00:02:00,440
different temperatures and community

44
00:02:03,430 --> 00:02:01,610
conditions for the test article

45
00:02:04,719 --> 00:02:03,440
requirements for that particular test

46
00:02:06,070 --> 00:02:04,729
and you're testing something right now

47
00:02:09,729 --> 00:02:06,080
that we can look real come on I'll show

48
00:02:11,979 --> 00:02:09,739
you well Lori what we have here is a

49
00:02:13,059 --> 00:02:11,989
mock-up of the redesign ostrov shrimp

50
00:02:15,040 --> 00:02:13,069
for the external tank of the space

51
00:02:17,050 --> 00:02:15,050
shuttle program this particular test

52
00:02:19,270 --> 00:02:17,060
we're testing the different size collars

53
00:02:20,590 --> 00:02:19,280
here the gap sizes and see what kind of

54
00:02:22,570 --> 00:02:20,600
formation of ice were having with the

55
00:02:24,880 --> 00:02:22,580
different gap sizes how do you test that

56
00:02:26,530 --> 00:02:24,890
in here we do is we take liquid helium

57
00:02:28,420 --> 00:02:26,540
to simulate the temperature hydrogen

58
00:02:29,830 --> 00:02:28,430
temperatures of the external tank so we

59
00:02:31,509 --> 00:02:29,840
take liquid helium and condition this

60
00:02:33,520 --> 00:02:31,519
chamber until we get down to minus 400

61
00:02:34,990 --> 00:02:33,530
degrees Fahrenheit or colder and after

62
00:02:36,309 --> 00:02:35,000
that we come in as I every two hours we

63
00:02:38,170 --> 00:02:36,319

inspect around the collar to see what

64
00:02:40,420 --> 00:02:38,180
kind of ice formation we're having and

65
00:02:41,559 --> 00:02:40,430
then you report out your results yes all

66
00:02:43,570 --> 00:02:41,569
right what else can you do in this

67
00:02:45,280 --> 00:02:43,580
facility I mean how you do hot and cold

68
00:02:46,900 --> 00:02:45,290
in here right that's correct we can take

69
00:02:49,060 --> 00:02:46,910
his temperature down to say minus 30 I

70
00:02:51,100 --> 00:02:49,070
mean 33 degrees Fahrenheit up to say 98

71
00:02:52,990 --> 00:02:51,110
degrees Fahrenheit temperature and

72
00:02:54,850 --> 00:02:53,000
different humidity conditions we can

73
00:02:56,770 --> 00:02:54,860
simulate the only in here just whatever

74
00:02:57,850 --> 00:02:56,780
test requirements may need very