

ASTRONAUT MOMENTS



JESSICA MEIR

1
00:00:05,349 --> 00:00:03,909

[Music]

2
00:00:07,909 --> 00:00:05,359

the thing that's always driven and

3
00:00:09,589 --> 00:00:07,919

excited me is exploration in general so

4
00:00:11,509 --> 00:00:09,599

i think i've always been attracted to

5
00:00:14,230 --> 00:00:11,519

these extreme environments

6
00:00:16,150 --> 00:00:14,240

places where fewer people have been

7
00:00:18,470 --> 00:00:16,160

where conditions are a little bit more

8
00:00:20,470 --> 00:00:18,480

harsh a little bit more rare and really

9
00:00:22,790 --> 00:00:20,480

extreme in general

10
00:00:25,990 --> 00:00:22,800

i went to the antarctic five times four

11
00:00:27,670 --> 00:00:26,000

times was for my phd research

12
00:00:29,509 --> 00:00:27,680

and the work that we were pursuing then

13
00:00:33,190 --> 00:00:29,519

in the antarctic was looking at the

14

00:00:35,510 --> 00:00:33,200

diving physiology of emperor penguins

15

00:00:37,430 --> 00:00:35,520

they used this really big drill to

16

00:00:39,190 --> 00:00:37,440

create a hole in the ice and so you

17

00:00:40,389 --> 00:00:39,200

enter the water through that hole in the

18

00:00:43,030 --> 00:00:40,399

ice

19

00:00:45,350 --> 00:00:43,040

the first time you go diving through the

20

00:00:47,590 --> 00:00:45,360

sea ice hole you really never forget the

21

00:00:50,229 --> 00:00:47,600

feeling the water down there is a

22

00:00:53,029 --> 00:00:50,239

constant negative two celsius so 28

23

00:00:56,069 --> 00:00:53,039

degrees fahrenheit and you can see

24

00:00:58,709 --> 00:00:56,079

rays of light coming in from any crack

25

00:01:01,029 --> 00:00:58,719

or hole anywhere around the area

26
00:01:02,630 --> 00:01:01,039
and that's where you start realizing all

27
00:01:04,869 --> 00:01:02,640
of the color and the beauty in the

28
00:01:06,630 --> 00:01:04,879
antarctic is it's just an extraordinary

29
00:01:08,789 --> 00:01:06,640
experience and the things that i saw

30
00:01:10,870 --> 00:01:08,799
underwater there is definitely the most

31
00:01:13,350 --> 00:01:10,880
remarkable and exceptional diving i've

32
00:01:14,950 --> 00:01:13,360
ever had

33
00:01:16,950 --> 00:01:14,960
one of the things that we use for

34
00:01:19,270 --> 00:01:16,960
training for space flight for astronauts

35
00:01:21,350 --> 00:01:19,280
from all of our partner agencies is

36
00:01:23,109 --> 00:01:21,360
training in analogs so if you try to

37
00:01:25,270 --> 00:01:23,119
think what what are useful training

38
00:01:27,109 --> 00:01:25,280

platforms on the earth how do we

39

00:01:28,550 --> 00:01:27,119

replicate all the characteristics of a

40

00:01:30,550 --> 00:01:28,560

space mission

41

00:01:32,870 --> 00:01:30,560

one of the analogs that the european

42

00:01:35,190 --> 00:01:32,880

space agency developed is called caves

43

00:01:37,830 --> 00:01:35,200

and it's a technical caving mission so

44

00:01:40,310 --> 00:01:37,840

the caves training mission was in this

45

00:01:42,310 --> 00:01:40,320

very extraordinary cave in sardinia so

46

00:01:43,990 --> 00:01:42,320

you would sometimes be crawling through

47

00:01:45,749 --> 00:01:44,000

a hole that when you see it in the

48

00:01:47,190 --> 00:01:45,759

distance you don't think there's no way

49

00:01:48,950 --> 00:01:47,200

that you could even fit through that you

50

00:01:51,190 --> 00:01:48,960

know one at a time we would take off our

51
00:01:53,670 --> 00:01:51,200
packs and sort of shimmy like a snake

52
00:01:55,510 --> 00:01:53,680
through these tiny tiny little holes and

53
00:01:58,950 --> 00:01:55,520
then all of a sudden you would come out

54
00:02:01,510 --> 00:01:58,960
into this room this cathedral with a

55
00:02:03,350 --> 00:02:01,520
hundred meter granite wall i mean it was

56
00:02:05,749 --> 00:02:03,360
really just extraordinary and then we

57
00:02:08,550 --> 00:02:05,759
would go on daily excursions doing

58
00:02:11,029 --> 00:02:08,560
scientific experiments exploring mapping

59
00:02:12,790 --> 00:02:11,039
the cave so all really similar things we

60
00:02:15,510 --> 00:02:12,800
would do when we finally get to the

61
00:02:17,670 --> 00:02:15,520
point of exploring another planet for

62
00:02:19,190 --> 00:02:17,680
example as astronauts and then also

63
00:02:21,910 --> 00:02:19,200

emphasizing all the other skills that we

64

00:02:23,350 --> 00:02:21,920

use on the international space station

65

00:02:24,869 --> 00:02:23,360

the other connection that's really

66

00:02:27,589 --> 00:02:24,879

important to me is that all of these

67

00:02:29,430 --> 00:02:27,599

environments involve natural phenomenon

68

00:02:31,670 --> 00:02:29,440

on our planet so it all goes back to my

69

00:02:33,350 --> 00:02:31,680

interest in biology looking at this

70

00:02:35,350 --> 00:02:33,360

remarkable diversity in the animal

71

00:02:37,589 --> 00:02:35,360

kingdom with my previous research

72

00:02:41,030 --> 00:02:37,599

exploring all of these amazing

73

00:02:42,869 --> 00:02:41,040

landscapes and ecosystems on our planet

74

00:02:44,869 --> 00:02:42,879

and then eventually when i'm have the

75

00:02:46,309 --> 00:02:44,879

most extraordinary of any view when i'll

76

00:02:48,790 --> 00:02:46,319

be on the space station in a couple

77

00:02:50,949 --> 00:02:48,800

months looking down and seeing this

78

00:02:53,350 --> 00:02:50,959

magnificent planet earth and seeing the

79

00:02:55,509 --> 00:02:53,360

beauty of our planet and really

80

00:02:57,910 --> 00:02:55,519

understanding how special it is and how

81

00:02:59,830 --> 00:02:57,920

fragile it is and how important it is to

82

00:03:02,149 --> 00:02:59,840

protect it to take good care of our home

83

00:03:04,869 --> 00:03:02,159

planet to protect our oceans to protect

84

00:03:05,830 --> 00:03:04,879

the land and to be really a good steward

85

00:03:13,670 --> 00:03:05,840

in our universe

86

00:03:16,309 --> 00:03:13,680

[Music]

87

00:03:20,990 --> 00:03:16,319

i'm jessica muir i'm a scientist and a

88

00:03:21,000 --> 00:03:33,030

[Music]