
PAO

1
00:00:04,390 --> 00:00:02,950
crews assigned to missions on the

2
00:00:06,389 --> 00:00:04,400
international space station spend more

3
00:00:09,270 --> 00:00:06,399
than two years training for six months

4
00:00:10,790 --> 00:00:09,280
on orbit but nasa is always developing

5
00:00:12,310 --> 00:00:10,800
information to prepare for future

6
00:00:14,070 --> 00:00:12,320
missions to the station and future

7
00:00:15,430 --> 00:00:14,080
missions to deep space

8
00:00:16,950 --> 00:00:15,440
one of the ways that we do that is by

9
00:00:19,510 --> 00:00:16,960
sending crews on long missions

10
00:00:21,990 --> 00:00:19,520
underwater on what are known as nemo

11
00:00:24,470 --> 00:00:22,000
missions nemo stands for nasa extreme

12
00:00:26,470 --> 00:00:24,480
environment mission operations

13
00:00:28,070 --> 00:00:26,480

and two more nemo missions are slated

14
00:00:31,189 --> 00:00:28,080
for later this summer

15
00:00:33,030 --> 00:00:31,199
jaxa astronaut aki hoshide a veteran of

16
00:00:36,229 --> 00:00:33,040
one space shuttle mission to the space

17
00:00:38,950 --> 00:00:36,239
station plus 124 day

18
00:00:41,190 --> 00:00:38,960
flight during expeditions 32 and 33 back

19
00:00:44,310 --> 00:00:41,200
in 2012 is going to be the commander of

20
00:00:46,869 --> 00:00:44,320
nemo 18 next month and recently my

21
00:00:48,869 --> 00:00:46,879
colleague amiko kaur talked with hoshide

22
00:00:51,350 --> 00:00:48,879
to find out more about the plans for his

23
00:00:54,549 --> 00:00:51,360
nine-day underwater mission

24
00:00:57,430 --> 00:00:54,559
so nemo 18 is coming up this july

25
00:01:00,389 --> 00:00:57,440
we have a nine-day mission underwater

26
00:01:03,430 --> 00:01:00,399
in an aquarius habitat um there's four

27
00:01:06,550 --> 00:01:03,440
crew members involved myself and then

28
00:01:08,710 --> 00:01:06,560
two nasa astronauts uh jeanette epps and

29
00:01:12,469 --> 00:01:08,720
mark vanderheim and we have one more

30
00:01:13,750 --> 00:01:12,479
issa astronaut thomas piskett okay great

31
00:01:16,469 --> 00:01:13,760
thank you so

32
00:01:19,350 --> 00:01:16,479
um tell me first what inspired you to do

33
00:01:21,109 --> 00:01:19,360
nemo when they came to you and said aki

34
00:01:23,429 --> 00:01:21,119
well i haven't had the opportunity to

35
00:01:24,390 --> 00:01:23,439
actually stay underwater for this long

36
00:01:26,469 --> 00:01:24,400
and

37
00:01:29,429 --> 00:01:26,479
you know it's been around as a training

38
00:01:31,350 --> 00:01:29,439

uh for quite a while now but uh i just

39
00:01:33,749 --> 00:01:31,360
didn't have the opportunity to to stay

40
00:01:35,749 --> 00:01:33,759
down there so when the opportunity came

41
00:01:38,149 --> 00:01:35,759
and i said yeah sign me up

42
00:01:41,109 --> 00:01:38,159
great well we're glad to have you thank

43
00:01:43,030 --> 00:01:41,119
you so um let's talk about also now nemo

44
00:01:44,870 --> 00:01:43,040
18 is going to address some

45
00:01:47,350 --> 00:01:44,880
objectives that we have currently of the

46
00:01:49,030 --> 00:01:47,360
space station and also orion and it's

47
00:01:50,230 --> 00:01:49,040
going to also look at some objectives

48
00:01:53,429 --> 00:01:50,240
for future

49
00:01:57,190 --> 00:01:53,439
space exploration can you tell me

50
00:02:00,310 --> 00:01:57,200
um a little about how your past space

51
00:02:03,429 --> 00:02:00,320
experience is going to fits into this

52
00:02:05,350 --> 00:02:03,439
these objectives for nemo 18. sure so

53
00:02:07,270 --> 00:02:05,360
uh you know we have different

54
00:02:09,589 --> 00:02:07,280
experiments different evaluations

55
00:02:12,470 --> 00:02:09,599
objectives during this nemo mission and

56
00:02:14,949 --> 00:02:12,480
a lot of people are involved but for the

57
00:02:17,510 --> 00:02:14,959
crew it's partly training you know

58
00:02:19,670 --> 00:02:17,520
you're you're in that uh

59
00:02:22,710 --> 00:02:19,680
environment for a long duration it's

60
00:02:24,869 --> 00:02:22,720
nine days only but we consider that a

61
00:02:27,430 --> 00:02:24,879
significant

62
00:02:29,110 --> 00:02:27,440
duration uh underwater in extreme

63
00:02:31,990 --> 00:02:29,120

condition so

64
00:02:33,670 --> 00:02:32,000
to me that's just like an analog to

65
00:02:35,350 --> 00:02:33,680
international space station you're

66
00:02:36,869 --> 00:02:35,360
you're in there together

67
00:02:39,910 --> 00:02:36,879
you're isolated from the rest of the

68
00:02:43,350 --> 00:02:39,920
world you have mcc helping you out

69
00:02:45,110 --> 00:02:43,360
but i can try to see what is similar to

70
00:02:48,790 --> 00:02:45,120
the space station and then tell the the

71
00:02:51,750 --> 00:02:48,800
rest of the crew and try to uh

72
00:02:53,910 --> 00:02:51,760
help them out and understand that

73
00:02:55,430 --> 00:02:53,920
we talked about some of the primary

74
00:02:58,229 --> 00:02:55,440
objectives so one of the primary

75
00:03:00,149 --> 00:02:58,239
objectives of nemo is not only for the

76
00:03:01,990 --> 00:03:00,159
near term and and future term of space

77
00:03:05,190 --> 00:03:02,000
exploration but also the things the

78
00:03:07,430 --> 00:03:05,200
primary focus will be on

79
00:03:08,869 --> 00:03:07,440
human body experiments can you tell me a

80
00:03:11,670 --> 00:03:08,879
little about what you guys will be doing

81
00:03:13,990 --> 00:03:11,680
on nemo 18. sure um there's no blood

82
00:03:16,869 --> 00:03:14,000
draw this time

83
00:03:20,070 --> 00:03:16,879
but there's more like the teamwork

84
00:03:20,869 --> 00:03:20,080
aspect you mentioned international crew

85
00:03:24,070 --> 00:03:20,879
but

86
00:03:26,470 --> 00:03:24,080
in a isolated environment and we'll have

87
00:03:30,470 --> 00:03:26,480
some calm delay as well built in for a

88
00:03:33,509 --> 00:03:30,480

couple of days so uh the teamwork

89
00:03:36,149 --> 00:03:33,519
will be very crucial you know uh so

90
00:03:39,190 --> 00:03:36,159
we'll be looking at how to improve the

91
00:03:41,190 --> 00:03:39,200
uh the teamwork um we have a lot of

92
00:03:43,589 --> 00:03:41,200
questionnaires that we need to fill out

93
00:03:45,830 --> 00:03:43,599
um that kind of thing and uh on a

94
00:03:47,589 --> 00:03:45,840
different subject we're testing out like

95
00:03:50,309 --> 00:03:47,599
the heart rate monitor

96
00:03:52,309 --> 00:03:50,319
um that we can use for the international

97
00:03:53,990 --> 00:03:52,319
space station as well great yeah so i

98
00:03:55,110 --> 00:03:54,000
know they're well lucky you're not being

99
00:03:58,149 --> 00:03:55,120
pricked

100
00:03:59,429 --> 00:03:58,159
so mostly from the psychological aspect

101
00:04:01,350 --> 00:03:59,439
and working with the crew members but

102
00:04:03,509 --> 00:04:01,360
then also doing some work with the heart

103
00:04:04,949 --> 00:04:03,519
rate monitor so another one of those

104
00:04:07,270 --> 00:04:04,959
objectives is also going to be looking

105
00:04:08,789 --> 00:04:07,280
at spacewalk tools and techniques can

106
00:04:11,589 --> 00:04:08,799
you tell me a little about how you guys

107
00:04:13,990 --> 00:04:11,599
will be doing that on nemo 18. sure so

108
00:04:15,670 --> 00:04:14,000
every single day we'll be diving and

109
00:04:19,189 --> 00:04:15,680
going eva

110
00:04:21,430 --> 00:04:19,199
outside the uh the habitat yes spacewalk

111
00:04:23,350 --> 00:04:21,440
uh going out to the water

112
00:04:25,030 --> 00:04:23,360
not to space but uh

113
00:04:26,469 --> 00:04:25,040

uh some of those

114
00:04:28,390 --> 00:04:26,479
days we'll be

115
00:04:31,990 --> 00:04:28,400
using a drill

116
00:04:33,510 --> 00:04:32,000
so the objective is to see if these new

117
00:04:35,430 --> 00:04:33,520
hardwares

118
00:04:36,870 --> 00:04:35,440
will

119
00:04:38,790 --> 00:04:36,880
be used

120
00:04:40,390 --> 00:04:38,800
which we will be using

121
00:04:44,070 --> 00:04:40,400
for future missions like for the

122
00:04:47,030 --> 00:04:44,080
asteroid or mars um how uh

123
00:04:48,550 --> 00:04:47,040
feasible those would be in operation now

124
00:04:50,550 --> 00:04:48,560
are these tools that they are currently

125
00:04:51,749 --> 00:04:50,560
using aboard the space station no that

126
00:04:54,390 --> 00:04:51,759
you guys are trying to so these are

127
00:04:57,189 --> 00:04:54,400
absolutely new yes for future use yes

128
00:04:59,510 --> 00:04:57,199
possibly outside space station or for

129
00:05:01,110 --> 00:04:59,520
other people or yeah for future missions

130
00:05:03,189 --> 00:05:01,120
yes or whatever

131
00:05:04,390 --> 00:05:03,199
um that's really fascinating so that'll

132
00:05:05,590 --> 00:05:04,400
be kind of cool to be able to get your

133
00:05:08,310 --> 00:05:05,600
hands on something different that you

134
00:05:09,990 --> 00:05:08,320
haven't used before right um also can

135
00:05:12,230 --> 00:05:10,000
you tell me a little bit we were talking

136
00:05:15,110 --> 00:05:12,240
about your training again your um your

137
00:05:17,029 --> 00:05:15,120
mission kicks off on what july 21st uh

138
00:05:19,189 --> 00:05:17,039

the training will kick up on july 14th

139
00:05:22,230 --> 00:05:19,199
i'm sorry your mission begins on july

140
00:05:24,870 --> 00:05:22,240
21st adventure training so can you tell

141
00:05:27,350 --> 00:05:24,880
me a little about um just compare some

142
00:05:30,310 --> 00:05:27,360
of the training for um

143
00:05:31,110 --> 00:05:30,320
expedition versus for nemo

144
00:05:33,830 --> 00:05:31,120
so

145
00:05:36,230 --> 00:05:33,840
for uh an iss mission it's you know a

146
00:05:38,710 --> 00:05:36,240
couple years long and you go to

147
00:05:40,550 --> 00:05:38,720
different countries and you go

148
00:05:42,629 --> 00:05:40,560
start with an overview and then go into

149
00:05:43,909 --> 00:05:42,639
the details you use a procedure you have

150
00:05:45,189 --> 00:05:43,919
a hardware to

151
00:05:47,749 --> 00:05:45,199
play around with

152
00:05:50,950 --> 00:05:47,759
now for nemo missions it's very you know

153
00:05:53,350 --> 00:05:50,960
tight in a way we had an overview

154
00:05:56,070 --> 00:05:53,360
training session here at jsc

155
00:05:58,710 --> 00:05:56,080
for the past couple of days but

156
00:06:00,790 --> 00:05:58,720
we'll fly down to florida and then we'll

157
00:06:03,189 --> 00:06:00,800
actually see the hardware see the

158
00:06:04,469 --> 00:06:03,199
habitat see all the equipment that we're

159
00:06:06,309 --> 00:06:04,479
going to use and then we're going to

160
00:06:08,390 --> 00:06:06,319
play around with it use a procedure make

161
00:06:10,469 --> 00:06:08,400
sure that we know exactly what we need

162
00:06:12,790 --> 00:06:10,479
to do and then dive in so it's a very

163
00:06:14,469 --> 00:06:12,800

condensed training process compared to

164
00:06:16,469 --> 00:06:14,479
station

165
00:06:17,909 --> 00:06:16,479
it sounds like it well best of luck to

166
00:06:19,430 --> 00:06:17,919
you that's all the time we have thank

167
00:06:20,710 --> 00:06:19,440
you again for coming out and talking

168
00:06:22,710 --> 00:06:20,720
with us and

169
00:06:24,150 --> 00:06:22,720
we look forward to forwarding following

170
00:06:25,990 --> 00:06:24,160
you guys and uh