



1
00:00:05,600 --> 00:00:43,750
oh

2
00:00:43,760 --> 00:01:08,870
foreign

3
00:01:08,880 --> 00:01:54,870
everything is good the flight was good

4
00:02:12,949 --> 00:01:57,510
during our first launch

5
00:02:12,959 --> 00:02:34,150
so

6
00:02:34,160 --> 00:03:23,030
i got a backpack a black bag

7
00:03:27,750 --> 00:03:24,309
okay here's the question if you're in

8
00:03:27,760 --> 00:03:32,149
you've turned on the toggle switch

9
00:03:32,159 --> 00:03:56,149
um

10
00:03:56,159 --> 00:04:08,710
yeah i took a look at it

11
00:04:08,720 --> 00:04:20,150
there are some pictures

12
00:04:41,510 --> 00:04:23,590
so there is a preparation for work

13
00:04:41,520 --> 00:05:15,590

okay let's play

14

00:05:15,600 --> 00:05:24,310

yes we did it

15

00:05:24,320 --> 00:05:43,990

oh

16

00:05:44,000 --> 00:05:55,430

open your eyes

17

00:05:59,270 --> 00:05:57,430

this is um

18

00:06:00,629 --> 00:05:59,280

i did a very similar experiment to this

19

00:06:02,950 --> 00:06:00,639

on my uh

20

00:06:04,390 --> 00:06:02,960

before and after my first first mission

21

00:06:05,590 --> 00:06:04,400

and there's some interesting effects

22

00:06:06,950 --> 00:06:05,600

that go on

23

00:06:09,510 --> 00:06:06,960

in spaceflight

24

00:06:12,469 --> 00:06:09,520

we've got a couple of different balance

25

00:06:15,749 --> 00:06:12,479

organs in our head that help orient us

26

00:06:17,830 --> 00:06:15,759

in the vertical tell us where gravity is

27

00:06:20,469 --> 00:06:17,840

and we have those are called the otola

28

00:06:23,430 --> 00:06:20,479

so if i tilt my head back close my eyes

29

00:06:24,469 --> 00:06:23,440

i can relocate my center of gravity

30

00:06:26,629 --> 00:06:24,479

because

31

00:06:28,150 --> 00:06:26,639

those sensors essentially will detect

32

00:06:30,710 --> 00:06:28,160

the direction of the acceleration of

33

00:06:33,430 --> 00:06:30,720

gravity the other things we have is when

34

00:06:35,110 --> 00:06:33,440

we turn our heads left or right

35

00:06:37,029 --> 00:06:35,120

there's semicircular canals that have

36

00:06:38,390 --> 00:06:37,039

fluid in them and they allow our they

37

00:06:40,550 --> 00:06:38,400

basically give a signal back to our

38

00:06:42,790 --> 00:06:40,560

brain to tell us that we're rotating

39

00:06:45,110 --> 00:06:42,800

in space and interesting things happen

40

00:06:46,870 --> 00:06:45,120

the otoliths don't work at all because

41

00:06:48,790 --> 00:06:46,880

the the

42

00:06:50,950 --> 00:06:48,800

force of gravity is balanced out by the

43

00:06:52,790 --> 00:06:50,960

uh centrifugal force of the vehicle uh

44

00:06:54,629 --> 00:06:52,800

traveling through space so the other

45

00:06:55,990 --> 00:06:54,639

list stops sensing the direction of

46

00:06:58,070 --> 00:06:56,000

gravity

47

00:07:00,550 --> 00:06:58,080

and with the semicircular canals the

48

00:07:02,710 --> 00:07:00,560

ones that tell tell my brain when i look

49

00:07:04,150 --> 00:07:02,720

left or right or up or down those still

50

00:07:06,150 --> 00:07:04,160

continue to work

51
00:07:08,550 --> 00:07:06,160
so an interesting effect happens in

52
00:07:09,830 --> 00:07:08,560
flight as our brains and our bodies

53
00:07:11,110 --> 00:07:09,840
begin to

54
00:07:12,710 --> 00:07:11,120
adapt to the

55
00:07:15,510 --> 00:07:12,720
different signals that you have in space

56
00:07:17,589 --> 00:07:15,520
flight this is a way to basically

57
00:07:18,950 --> 00:07:17,599
scramble those signals a little bit to

58
00:07:20,390 --> 00:07:18,960
learn about it and

59
00:08:00,230 --> 00:07:20,400
just one of the interesting effects that

60
00:08:00,240 --> 00:08:42,709
move

61
00:08:42,719 --> 00:09:03,350
uh

62
00:09:03,360 --> 00:09:19,829
nice fresh wind great weather

63
00:09:19,839 --> 00:09:27,190

everyone takes one of the trees

64

00:09:48,389 --> 00:09:29,030

put it deeper

65

00:10:00,389 --> 00:09:51,030

there you go

66

00:10:04,949 --> 00:10:02,150

i just pour it all out

67

00:10:23,110 --> 00:10:04,959

but it'll freeze

68

00:10:23,120 --> 00:10:44,470

before we put in all the ground

69

00:10:44,480 --> 00:10:59,190

foreign

70

00:11:03,430 --> 00:11:00,790

it's a very long tradition it goes back

71

00:11:06,310 --> 00:11:03,440

till uh all the way uh before yuri

72

00:11:09,110 --> 00:11:06,320

alexavich first flew and uh it's a way

73

00:11:10,790 --> 00:11:09,120

for us to connect to the the people that

74

00:11:12,150 --> 00:11:10,800

have flown on every soyuz who have

75

00:11:13,990 --> 00:11:12,160

planted all the trees you see around

76

00:11:15,430 --> 00:11:14,000

here

77

00:11:17,190 --> 00:11:15,440

to me it's a difficult place for trees

78

00:11:18,870 --> 00:11:17,200

to live but sometimes it's a difficult

79

00:11:34,470 --> 00:11:18,880

place for humans to live in space so

80

00:11:34,480 --> 00:11:42,630

foreign

81

00:11:42,640 --> 00:11:59,269

good morning

82

00:12:11,829 --> 00:12:01,030

so when you climb in climb up make sure

83

00:12:11,839 --> 00:12:38,790

hmm

84

00:12:38,800 --> 00:13:16,710

this is

85

00:13:33,590 --> 00:13:18,470

okay they wanted to bring the wall still

86

00:15:31,110 --> 00:14:02,470

foreign

87

00:15:31,120 --> 00:15:45,749

thank you

88

00:15:45,759 --> 00:16:23,350

okay

89

00:16:23,360 --> 00:16:37,269

hmm

90

00:16:37,279 --> 00:16:55,910

um

91

00:18:25,750 --> 00:17:45,350

we're doing a suit

92

00:18:25,760 --> 00:18:38,870

okay look at me

93

00:18:38,880 --> 00:18:57,110

look at me

94

00:19:14,470 --> 00:18:58,630

slowly

95

00:19:14,480 --> 00:19:32,549

oh

96

00:19:32,559 --> 00:19:49,350

who is first

97

00:19:49,360 --> 00:19:53,830

um

98

00:19:58,390 --> 00:19:56,789

yeah it's pretty pretty complicated

99

00:20:00,710 --> 00:19:58,400

but i think it's really good to get the

100

00:20:05,029 --> 00:20:00,720

training

101
00:20:05,039 --> 00:20:36,710
thank idea

102
00:20:36,720 --> 00:20:52,710
you have a new exhibit please come in

103
00:20:56,950 --> 00:20:54,870
because this portion is dedicated to our

104
00:20:58,950 --> 00:20:56,960
cosmodrome

105
00:21:02,149 --> 00:20:58,960
all of the historical images you see

106
00:21:05,510 --> 00:21:03,909
back in the good old days there was an

107
00:21:16,149 --> 00:21:05,520
orchestra there was music playing

108
00:21:20,630 --> 00:21:18,950
it's very important to exhibit item

109
00:21:22,149 --> 00:21:20,640
because you see that in the early days

110
00:21:41,590 --> 00:21:22,159
there was nothing like that in the

111
00:22:04,950 --> 00:21:47,990
some space for us

112
00:22:04,960 --> 00:22:20,789
foreign

113
00:22:25,510 --> 00:22:23,110

and ultimately we decided that there is

114

00:22:29,110 --> 00:22:25,520

no need for competition we need to work

115

00:22:36,390 --> 00:22:32,870

and this was tested on the unique

116

00:22:37,990 --> 00:22:36,400

experience of the sayus apollo mission

117

00:22:39,990 --> 00:22:38,000

and this has shown

118

00:22:48,470 --> 00:22:40,000

that only together we are able to

119

00:22:54,390 --> 00:22:51,110

it's important to remember the

120

00:23:12,070 --> 00:22:54,400

important role of the backup crew

121

00:24:12,630 --> 00:24:00,630

c

122

00:24:12,640 --> 00:24:16,070

it is a unique

123

00:24:21,750 --> 00:24:18,390

unique endeavor

124

00:24:40,390 --> 00:24:21,760

here i just want to say that this flag

125

00:24:40,400 --> 00:24:50,950

okay

126

00:24:54,630 --> 00:24:52,950

so today we're getting the ship the

127

00:25:02,310 --> 00:24:54,640

vehicle ready and the configuration in

128

00:25:25,029 --> 00:25:04,070

and that was our schedule i think we're

129

00:25:25,039 --> 00:25:30,710

oh

130

00:25:30,720 --> 00:25:49,110

foreign

131

00:25:49,120 --> 00:26:07,350

okay

132

00:26:07,360 --> 00:26:26,549

um

133

00:26:26,559 --> 00:26:50,870

oh

134

00:26:50,880 --> 00:26:54,789

we're ready thank you all so much

135

00:26:54,799 --> 00:26:58,230

thank you well then

136

00:26:58,240 --> 00:27:02,310

yeah thank you

137

00:27:08,070 --> 00:27:04,070

yes as usual everything looks good

138

00:27:08,080 --> 00:27:12,950

okay best of luck for the remaining days

139

00:27:12,960 --> 00:27:45,669

okay thank you

140

00:27:45,679 --> 00:27:49,110

is

141

00:27:49,120 --> 00:28:00,830

yeah we're very pleased a great

142

00:28:04,950 --> 00:28:03,590

rocket it's very impressive

143

00:28:06,950 --> 00:28:04,960

it's

144

00:28:08,710 --> 00:28:06,960

a great opportunity to get here up close

145

00:28:10,549 --> 00:28:08,720

to it and see it as it's assembled it's

146

00:28:13,430 --> 00:28:10,559

a very different way to put the rockets

147

00:28:15,190 --> 00:28:13,440

together then we put shuttles together

148

00:28:17,110 --> 00:28:15,200

it happens much quicker

149

00:28:23,510 --> 00:28:17,120

and it's very impressive to get this

150

00:28:34,230 --> 00:28:25,990

that's right that's our rocket

151

00:28:37,590 --> 00:28:35,830

how is it going to be for you stuck in

152

00:28:38,870 --> 00:28:37,600

that little compartment

153

00:28:43,190 --> 00:28:38,880

that's okay we'll be fine we'll get to

154

00:28:47,750 --> 00:28:45,269

okay everything looks good

155

00:28:49,590 --> 00:28:47,760

you look wonderful as usual this is our

156

00:28:53,510 --> 00:28:49,600

veteran

157

00:29:52,830 --> 00:28:55,750

yes the launch is in good hands

158

00:29:52,840 --> 00:31:48,870

oh oh