



A PHONE CALL TO SPACE

1
00:00:02,480 --> 00:00:14,950

[Music]

2
00:00:23,830 --> 00:00:17,410

thank you

3
00:00:29,029 --> 00:00:26,450

and uh we're with you on two

4
00:00:31,130 --> 00:00:29,039

Hey Joe it's Mark Kelly how are you how

5
00:00:33,650 --> 00:00:31,140

are you guys doing Senator Kelly it's

6
00:00:35,930 --> 00:00:33,660

great to hear your voice and uh great I

7
00:00:37,610 --> 00:00:35,940

believe you've got a whole group there

8
00:00:39,470 --> 00:00:37,620

in FCC and we're really glad that you

9
00:00:42,110 --> 00:00:39,480

all could come to visit and say hi yeah

10
00:00:43,850 --> 00:00:42,120

I got a bunch of interns some of them up

11
00:00:46,490 --> 00:00:43,860

here in the seats I've got four of them

12
00:00:48,650 --> 00:00:46,500

here with me and they've got a few

13
00:00:49,970 --> 00:00:48,660

questions for you if you have some time

14

00:00:53,029 --> 00:00:49,980

for that

15

00:00:55,189 --> 00:00:53,039

sounds great we're ready

16

00:00:56,990 --> 00:00:55,199

hi this is Alec realm at Rice University

17

00:00:59,389 --> 00:00:57,000

my sister won't be able to talk with you

18

00:01:02,630 --> 00:00:59,399

all today what words of encouragement

19

00:01:05,390 --> 00:01:02,640

can you all offer in the age of Artemis

20

00:01:07,429 --> 00:01:05,400

especially for younger students as we

21

00:01:09,530 --> 00:01:07,439

look forward to expanding Humanity's

22

00:01:11,090 --> 00:01:09,540

presence on other worlds

23

00:01:16,390 --> 00:01:11,100

yeah it's a great question it's a super

24

00:01:22,850 --> 00:01:19,429

Vehicles being flown right now we came

25

00:01:25,850 --> 00:01:22,860

up as as you know on a SpaceX crew

26
00:01:29,270 --> 00:01:25,860
dragon or Dragon Freedom we also while

27
00:01:32,630 --> 00:01:29,280
we've been up here we had the Boeing oft

28
00:01:35,929 --> 00:01:32,640
Mission successfully DACA Starliner so

29
00:01:38,510 --> 00:01:35,939
you got both of those in in rotation we

30
00:01:40,850 --> 00:01:38,520
also have the soyuz as well getting

31
00:01:43,130 --> 00:01:40,860
people up here to the ISS like our

32
00:01:45,530 --> 00:01:43,140
Russian cosmonaut and then as you

33
00:01:48,350 --> 00:01:45,540
mentioned we're also working on the

34
00:01:52,130 --> 00:01:48,360
Artemis program so I'm super excited to

35
00:01:55,010 --> 00:01:52,140
to see Artemis one kick off and the

36
00:01:56,690 --> 00:01:55,020
follow-on missions that will ensue so we

37
00:01:58,969 --> 00:01:56,700
definitely in terms of words of

38
00:02:00,889 --> 00:01:58,979

encouragement you are are entering at

39

00:02:03,109 --> 00:02:00,899

the right time it is a super exciting

40

00:02:05,090 --> 00:02:03,119

time in human space flight right now and

41

00:02:07,670 --> 00:02:05,100

we need all of you we need all of your

42

00:02:10,790 --> 00:02:07,680

all of your passion all of your energy

43

00:02:12,890 --> 00:02:10,800

all of your expertise and as we look to

44

00:02:15,830 --> 00:02:12,900

the Future we're just going to need you

45

00:02:19,210 --> 00:02:15,840

all to help Infiltrate The the workforce

46

00:02:21,710 --> 00:02:19,220

and help Inspire us to continue to

47

00:02:22,809 --> 00:02:21,720

explore and continue to do these hard

48

00:02:24,729 --> 00:02:22,819

things

49

00:02:28,130 --> 00:02:24,739

foreign

50

00:02:30,290 --> 00:02:28,140

hello my name is Madison Clark I am born

51
00:02:32,570 --> 00:02:30,300
in Arizona and raised in Hawaii and I go

52
00:02:34,850 --> 00:02:32,580
to Arizona State University my question

53
00:02:38,330 --> 00:02:34,860
for you is do you view Humanity

54
00:02:39,830 --> 00:02:38,340
differently once you have left Earth

55
00:02:42,290 --> 00:02:39,840
and that's a that's a good question

56
00:02:44,390 --> 00:02:42,300
that's when we get uh fairly often um

57
00:02:46,369 --> 00:02:44,400
and I I think maybe you would find

58
00:02:47,750 --> 00:02:46,379
across the astronaut core anyway that

59
00:02:49,850 --> 00:02:47,760
you know we're such an international

60
00:02:51,589 --> 00:02:49,860
collaboration here on the International

61
00:02:54,110 --> 00:02:51,599
Space Station with you know so many

62
00:02:56,330 --> 00:02:54,120
countries being involved that we all see

63
00:02:57,770 --> 00:02:56,340

ourselves as one anyway uh what I will

64

00:03:00,170 --> 00:02:57,780

say is that being up here certainly

65

00:03:02,690 --> 00:03:00,180

reinforces that though uh you know we

66

00:03:04,070 --> 00:03:02,700

look out and uh you know to me the most

67

00:03:06,830 --> 00:03:04,080

beautiful thing that we look at when we

68

00:03:09,770 --> 00:03:06,840

look out the uh out the window uh why

69

00:03:12,530 --> 00:03:09,780

you might say Mars but uh I would say I

70

00:03:14,750 --> 00:03:12,540

would say at Birth and you know wore

71

00:03:16,670 --> 00:03:14,760

this tiny little island of Life uh you

72

00:03:19,430 --> 00:03:16,680

know amidst the Blackness of space out

73

00:03:21,470 --> 00:03:19,440

there right now and you know so once you

74

00:03:22,910 --> 00:03:21,480

once you look at it in that context and

75

00:03:24,830 --> 00:03:22,920

you realize that we're all living on

76

00:03:27,290 --> 00:03:24,840

spaceship earth and we're all kind of

77

00:03:30,170 --> 00:03:27,300

part of the same crew it gives you

78

00:03:32,809 --> 00:03:30,180

certainly a different perspective on um

79

00:03:34,550 --> 00:03:32,819

on our place and our relationships with

80

00:03:35,930 --> 00:03:34,560

each other and so I think a lot of us

81

00:03:37,850 --> 00:03:35,940

come into that with that kind of

82

00:03:40,070 --> 00:03:37,860

perspective but it's reinforced by by

83

00:03:43,250 --> 00:03:40,080

being a to be a part of the the huge

84

00:03:46,850 --> 00:03:43,260

team that makes the space station happen

85

00:03:49,309 --> 00:03:46,860

hi uh this is Ian Fernandez I'm from San

86

00:03:52,070 --> 00:03:49,319

Antonio Texas and

87

00:03:53,869 --> 00:03:52,080

um I go to Princeton University and I'm

88

00:03:56,289 --> 00:03:53,879

currently working on a software program

89

00:03:59,089 --> 00:03:56,299

with the space radiation analysis group

90

00:04:02,390 --> 00:03:59,099

to predict the occurrence of radiation

91

00:04:04,190 --> 00:04:02,400

inducing space weather events like major

92

00:04:07,190 --> 00:04:04,200

solar flares and Chrono Mass ejections

93

00:04:09,170 --> 00:04:07,200

so what I was wondering was what are

94

00:04:11,750 --> 00:04:09,180

some of the effects that such radiation

95

00:04:14,570 --> 00:04:11,760

concerns have on astronaut life aboard

96

00:04:15,890 --> 00:04:14,580

the International Space Station and what

97

00:04:18,170 --> 00:04:15,900

type of role do you think space

98

00:04:19,909 --> 00:04:18,180

radiation will play going forward as we

99

00:04:22,250 --> 00:04:19,919

embark on longer term missions to Mars

100

00:04:24,290 --> 00:04:22,260

and onwards thank you

101
00:04:25,850 --> 00:04:24,300
that's a great question we actually saw

102
00:04:28,490 --> 00:04:25,860
the effects of some of that radiation

103
00:04:30,469 --> 00:04:28,500
this past week with increased Aurora

104
00:04:32,510 --> 00:04:30,479
activity it's absolutely beautiful but

105
00:04:33,770 --> 00:04:32,520
it's also a reminder that there's that

106
00:04:36,110 --> 00:04:33,780
we're being exposed to increased

107
00:04:38,870 --> 00:04:36,120
radiation as a result of that

108
00:04:40,670 --> 00:04:38,880
thankfully we still here in low earth

109
00:04:43,969 --> 00:04:40,680
orbit we're still under the Van Hellen

110
00:04:46,430 --> 00:04:43,979
belts we still are protected in great

111
00:04:49,129 --> 00:04:46,440
part from Galactic Cosmic radiation and

112
00:04:50,990 --> 00:04:49,139
many silver particle uh types of

113
00:04:53,090 --> 00:04:51,000

radiation as well I don't think that we

114

00:04:55,070 --> 00:04:53,100

really think about radiation all that we

115

00:04:57,290 --> 00:04:55,080

know we're getting a higher exposure but

116

00:05:00,290 --> 00:04:57,300

we don't have to think about it quite as

117

00:05:02,650 --> 00:05:00,300

much as when our explorers venture to

118

00:05:06,110 --> 00:05:02,660

the moon and go on to Mars and certainly

119

00:05:09,110 --> 00:05:06,120

uh outside of the protection of the

120

00:05:11,390 --> 00:05:09,120

Earth's geomagnetic influence and the

121

00:05:13,969 --> 00:05:11,400

Van Allen belt radiation was a serious

122

00:05:16,909 --> 00:05:13,979

concern both for short-term and

123

00:05:17,990 --> 00:05:16,919

long-term effects and so I think that's

124

00:05:19,969 --> 00:05:18,000

one of the things that we're still

125

00:05:22,129 --> 00:05:19,979

working on as we think about that that

126

00:05:25,909 --> 00:05:22,139

exploration that long trip to Mars and

127

00:05:28,990 --> 00:05:25,919

back and we certainly appreciate your

128

00:05:34,010 --> 00:05:29,000

work in the in in space radiation group

129

00:05:36,590 --> 00:05:34,020

and we need brights Engineers Physicians

130

00:05:38,510 --> 00:05:36,600

researchers to help us catch they need

131

00:05:41,090 --> 00:05:38,520

to solve this problem as we continue to

132

00:05:43,909 --> 00:05:41,100

venture outward

133

00:05:45,110 --> 00:05:43,919

hi this is Priscilla from Texas A M

134

00:05:47,090 --> 00:05:45,120

University

135

00:05:49,010 --> 00:05:47,100

and my question is

136

00:05:51,890 --> 00:05:49,020

what was going to your mind during your

137

00:05:55,490 --> 00:05:51,900

first launch and how have those feelings

138

00:05:57,290 --> 00:05:55,500

changed through your launch thus far

139

00:06:00,230 --> 00:05:57,300

such an interesting question because it

140

00:06:03,350 --> 00:06:00,240

was definitely quite different for me um

141

00:06:06,650 --> 00:06:03,360

launch for me was like this this moment

142

00:06:09,170 --> 00:06:06,660

of concentrated significance it was the

143

00:06:11,390 --> 00:06:09,180

end point of years of preparation and

144

00:06:13,670 --> 00:06:11,400

training and in a broad sense something

145

00:06:16,730 --> 00:06:13,680

that I had looked forward to and worked

146

00:06:18,710 --> 00:06:16,740

towards all my life and it was also the

147

00:06:20,689 --> 00:06:18,720

beginning of this new life I had not

148

00:06:23,809 --> 00:06:20,699

experienced yet in space station this

149

00:06:25,850 --> 00:06:23,819

except the rest of your life and so I

150

00:06:29,090 --> 00:06:25,860

experienced it like that very very much

151
00:06:30,950 --> 00:06:29,100
focused on the presence I I thought that

152
00:06:32,689 --> 00:06:30,960
I would be maybe a little bit afraid at

153
00:06:35,749 --> 00:06:32,699
the moment of launch but I think that I

154
00:06:38,510 --> 00:06:35,759
was just so happy that sheer happiness

155
00:06:41,390 --> 00:06:38,520
didn't leave any space for for fear or

156
00:06:44,150 --> 00:06:41,400
worry and I you know I was just open to

157
00:06:45,890 --> 00:06:44,160
the experience and and Incredibly happy

158
00:06:49,309 --> 00:06:45,900
and the second time I was of course

159
00:06:53,090 --> 00:06:49,319
equally happy maybe less overwhelmed by

160
00:06:55,490 --> 00:06:53,100
the emotions and more aware of the

161
00:06:57,890 --> 00:06:55,500
details and of what was I was

162
00:06:59,930 --> 00:06:57,900
experiencing and I was even jotting down

163
00:07:02,390 --> 00:06:59,940

notes because I really wanted to

164

00:07:04,010 --> 00:07:02,400

remember all the details of that amazing

165

00:07:06,050 --> 00:07:04,020

experience which is very short and in

166

00:07:08,090 --> 00:07:06,060

the launches less than nine minutes you

167

00:07:09,409 --> 00:07:08,100

know from in both cases it was my first

168

00:07:11,930 --> 00:07:09,419

and second launch

169

00:07:14,150 --> 00:07:11,940

um and so it's such an intense but short

170

00:07:16,189 --> 00:07:14,160

experience that you want to remember on

171

00:07:18,110 --> 00:07:16,199

the details

172

00:07:20,450 --> 00:07:18,120

thank you Samantha this is Mark Kelly

173

00:07:22,850 --> 00:07:20,460

again and Chell and Bob and Jessica

174

00:07:24,950 --> 00:07:22,860

thanks for taking the time uh out of

175

00:07:27,070 --> 00:07:24,960

your day to do this for these interns

176

00:07:29,990 --> 00:07:27,080

which are as you said are so important

177

00:07:31,790 --> 00:07:30,000

uh that you know fill these jobs after

178

00:07:33,650 --> 00:07:31,800

you know folks like me and eventually

179

00:07:35,689 --> 00:07:33,660

you know all of you guys move on to

180

00:07:38,570 --> 00:07:35,699

something else it's uh great that we

181

00:07:40,550 --> 00:07:38,580

have you know really smart and uh you

182

00:07:42,110 --> 00:07:40,560

know folks coming from universities uh

183

00:07:44,150 --> 00:07:42,120

you know not only across the country but

184

00:07:45,350 --> 00:07:44,160

from other countries as well so thanks

185

00:07:57,309 --> 00:07:45,360

for taking your time today and I'm going