
MONTIGNY
D
D
l'espace?

1
00:00:09,910 --> 00:00:06,550
secure oscar radio 4 india sierra copy

2
00:00:26,950 --> 00:00:09,920
foxwort 6 kilo romeo portable station

3
00:00:32,870 --> 00:00:29,589
hello to everybody and the ap new years

4
00:00:35,590 --> 00:00:32,880
for 2012 about the space station you are

5
00:00:37,750 --> 00:00:35,600
getting any noise at this time but it's

6
00:00:39,190 --> 00:00:37,760
okay my name is punk i will do you

7
00:00:41,590 --> 00:00:39,200
cookie over

8
00:00:47,350 --> 00:00:41,600
i copy you love it clear this is uh this

9
00:00:51,670 --> 00:00:49,430
many thanks for this special event we

10
00:00:54,229 --> 00:00:51,680
have a crowd of about 300 people

11
00:00:57,110 --> 00:00:54,239
listening to you students of course but

12
00:00:58,869 --> 00:00:57,120
also teachers and vips we have tv and

13
00:01:01,510 --> 00:00:58,879

radio broadcast station reporting the

14
00:01:03,510 --> 00:01:01,520
event and for the first time so the

15
00:01:05,910 --> 00:01:03,520
first uh one in france we have an

16
00:01:06,910 --> 00:01:05,920
astronaut with us leopold

17
00:01:09,990 --> 00:01:06,920
from

18
00:01:17,510 --> 00:01:10,000
sts-122 mission is behind me how do you

19
00:01:22,390 --> 00:01:20,550
so much interest and so many kids and

20
00:01:24,630 --> 00:01:22,400
the media here to support today's event

21
00:01:26,870 --> 00:01:24,640
i'm ready to start the question

22
00:01:28,710 --> 00:01:26,880
roger roger our guest operator is

23
00:01:31,830 --> 00:01:28,720
joffrey a student from decath high

24
00:01:34,149 --> 00:01:31,840
school who just got his radio license

25
00:01:36,710 --> 00:01:34,159
for this kentucky he's going to speak on

26
00:01:38,870 --> 00:01:36,720
behalf of all students are you ready for

27
00:01:41,830 --> 00:01:38,880
the first question that over

28
00:01:44,310 --> 00:01:41,840
absolutely i am ready

29
00:01:46,710 --> 00:01:44,320
hello to friends speaking

30
00:01:49,190 --> 00:01:46,720
uh question question number one by

31
00:01:51,910 --> 00:01:49,200
valentine how did you feel during your

32
00:01:53,910 --> 00:01:51,920
first day in space over

33
00:01:56,550 --> 00:01:53,920
this answer for valentine my first day

34
00:01:58,870 --> 00:01:56,560
in space was in september of 2000 the

35
00:02:01,030 --> 00:01:58,880
board of space shuttle mission and it

36
00:02:01,830 --> 00:02:01,040
was absolutely wonderful

37
00:02:04,550 --> 00:02:01,840
and

38
00:02:07,910 --> 00:02:04,560

my second day in space my second trip to

39
00:02:09,430 --> 00:02:07,920
space was equally so and when i launched

40
00:02:11,990 --> 00:02:09,440
about a month and a half ago to return

41
00:02:13,510 --> 00:02:12,000
to space station exactly the same uh

42
00:02:16,150 --> 00:02:13,520
this is uh

43
00:02:17,750 --> 00:02:16,160
from a physical standpoint um i both

44
00:02:19,589 --> 00:02:17,760
flying in space and i love flying in

45
00:02:22,070 --> 00:02:19,599
space from the minute the rockets the

46
00:02:24,390 --> 00:02:22,080
rocket then should start this is uh this

47
00:02:26,949 --> 00:02:24,400
is really one of my uh what am i like

48
00:02:32,229 --> 00:02:29,510
question number two by mati

49
00:02:35,509 --> 00:02:32,239
was becoming an astrologer children

50
00:02:38,309 --> 00:02:35,519
did someone inspire you like a war model

51
00:02:42,150 --> 00:02:40,309
and i have to say as a child

52
00:02:43,990 --> 00:02:42,160
when i watch the apollo vicious shortly

53
00:02:45,910 --> 00:02:44,000
before my eighth birthday that is what

54
00:02:48,390 --> 00:02:45,920
got me interested in space it got me

55
00:02:50,630 --> 00:02:48,400
interested in astronomy but i did not at

56
00:02:52,710 --> 00:02:50,640
that age not and not until i was already

57
00:02:54,390 --> 00:02:52,720
an adult actually think about becoming

58
00:02:57,110 --> 00:02:54,400
an astronaut to me it didn't seem

59
00:03:00,470 --> 00:02:57,120
something possible and i think that's an

60
00:03:03,670 --> 00:03:00,480
important lesson for kids today is to

61
00:03:06,550 --> 00:03:03,680
dream big and to see those dreams to

62
00:03:08,229 --> 00:03:06,560
fruition if at all possible and for me

63
00:03:10,390 --> 00:03:08,239

it wasn't until i was already a pilot

64
00:03:12,630 --> 00:03:10,400
the coast guard and a colleague of mine

65
00:03:14,070 --> 00:03:12,640
became you know uh was selected for the

66
00:03:16,229 --> 00:03:14,080
astronaut program that i think about

67
00:03:19,190 --> 00:03:16,239
doing this before

68
00:03:21,270 --> 00:03:19,200
question number three by marco reb

69
00:03:26,149 --> 00:03:21,280
how do you cope with cultural

70
00:03:28,470 --> 00:03:26,159
differences between astronauts over

71
00:03:30,390 --> 00:03:28,480
i have never seen it be an issue with

72
00:03:31,670 --> 00:03:30,400
cultural differences between astronauts

73
00:03:33,509 --> 00:03:31,680
at board space

74
00:03:35,990 --> 00:03:33,519
uh nor during our training everybody

75
00:03:38,149 --> 00:03:36,000
that does this does it because of a real

76
00:03:40,710 --> 00:03:38,159
uh love for space flight a love for

77
00:03:43,350 --> 00:03:40,720
exploration and the cultural differences

78
00:03:45,270 --> 00:03:43,360
in our opinion i think are such a minor

79
00:03:48,630 --> 00:03:45,280
part we are all humans we're all human

80
00:03:49,589 --> 00:03:48,640
space explorers and we'd love to exist

81
00:03:51,750 --> 00:03:49,599
thanks

82
00:03:52,949 --> 00:03:51,760
question number four

83
00:03:55,509 --> 00:03:52,959
by luca

84
00:03:58,229 --> 00:03:55,519
have you ever done funny experiments in

85
00:04:01,270 --> 00:03:58,239
space could you give us some examples

86
00:04:05,509 --> 00:04:03,190
one of the experiments that we did just

87
00:04:08,309 --> 00:04:05,519
yesterday just uh you know

88
00:04:09,830 --> 00:04:08,319

not official by any means but you can uh

89
00:04:12,309 --> 00:04:09,840
through a conservation of angular

90
00:04:14,390 --> 00:04:12,319
momentum you can change the attitude of

91
00:04:17,030 --> 00:04:14,400
the orientation that you are in relative

92
00:04:18,390 --> 00:04:17,040
to inertial space well relative to the

93
00:04:20,949 --> 00:04:18,400
the surrounding structure and space

94
00:04:22,950 --> 00:04:20,959
station for example if i just stand in

95
00:04:25,189 --> 00:04:22,960
for i just float in the body of open

96
00:04:26,870 --> 00:04:25,199
buying the space station and if i tell

97
00:04:29,430 --> 00:04:26,880
my legs like i would if i were on a

98
00:04:31,350 --> 00:04:29,440
bicycle if i pedal those legs forward my

99
00:04:33,670 --> 00:04:31,360
body will go backwards if i pedal my

100
00:04:35,909 --> 00:04:33,680
legs backwards my body will go forward i

101
00:04:38,310 --> 00:04:35,919
can do the same thing and jaw with my

102
00:04:41,110 --> 00:04:38,320
legs rotating counterclockwise beneath

103
00:04:42,469 --> 00:04:41,120
me and my upper body will turn clockwise

104
00:04:45,189 --> 00:04:42,479
you can do it with your arms or your

105
00:04:47,670 --> 00:04:45,199
legs it looks very funny but it has

106
00:04:50,070 --> 00:04:47,680
perhaps interesting implications for how

107
00:04:53,350 --> 00:04:50,080
we might control attitude in the in the

108
00:05:00,629 --> 00:04:56,550
question number five girlfriend we have

109
00:05:03,749 --> 00:05:00,639
taken pictures of the iss with telescope

110
00:05:05,749 --> 00:05:03,759
have you also got the kind of equipment

111
00:05:08,870 --> 00:05:05,759
and do you have time to observe the

112
00:05:12,950 --> 00:05:10,469
we don't have enough time to clear the

113
00:05:14,550 --> 00:05:12,960

stars onboard space station uh our days

114
00:05:15,990 --> 00:05:14,560
are very busy at the end of the day so

115
00:05:18,310 --> 00:05:16,000
we'll have a chance to do that we have

116
00:05:21,670 --> 00:05:18,320
wonderful cameras with wonderful long

117
00:05:24,150 --> 00:05:21,680
lenses on the order of 1 600 millimeters

118
00:05:27,830 --> 00:05:24,160
and we can also be our cameras allow us

119
00:05:29,350 --> 00:05:27,840
to take uh relatively fast exposures um

120
00:05:31,189 --> 00:05:29,360
even at deep space so we've taken

121
00:05:33,110 --> 00:05:31,199
pictures of comets of stars and all

122
00:05:35,189 --> 00:05:33,120
kinds of other things myself i'm an

123
00:05:37,670 --> 00:05:35,199
amateur astronomer i have telescopes

124
00:05:39,270 --> 00:05:37,680
that i use a lot on planet earth

125
00:05:41,590 --> 00:05:39,280
i've never actually imaged the space

126
00:05:44,629 --> 00:05:41,600
station i'm not trying to do that but uh

127
00:05:47,749 --> 00:05:44,639
i've done uh image stars and uh

128
00:05:50,870 --> 00:05:47,759
galaxies and nebula before

129
00:05:53,430 --> 00:05:50,880
thanks question number six by coming

130
00:05:56,309 --> 00:05:53,440
have you already experienced

131
00:05:57,830 --> 00:05:56,319
extravehicular activity over

132
00:05:59,749 --> 00:05:57,840
again

133
00:06:02,070 --> 00:05:59,759
this was a couple of years ago at sps

134
00:06:03,590 --> 00:06:02,080
115 we did one i did one of the

135
00:06:05,909 --> 00:06:03,600
spacewalks to help

136
00:06:07,990 --> 00:06:05,919
build the international space station uh

137
00:06:10,230 --> 00:06:08,000
electrical power system to put some of

138
00:06:12,950 --> 00:06:10,240

the large solar rays that we have on the

139
00:06:15,510 --> 00:06:12,960
us segment of space station and uh as

140
00:06:18,469 --> 00:06:15,520
much fun as space flight is relative to

141
00:06:19,909 --> 00:06:18,479
uh to life on earth a space walk is that

142
00:06:20,710 --> 00:06:19,919
much more fun

143
00:06:22,309 --> 00:06:20,720
than

144
00:06:23,430 --> 00:06:22,319
even working aboard the space station to

145
00:06:25,350 --> 00:06:23,440
see if you're

146
00:06:26,950 --> 00:06:25,360
independent of anything around you to

147
00:06:28,950 --> 00:06:26,960
see the earth through very thin

148
00:06:32,469 --> 00:06:28,960
polycarbonate lens of the

149
00:06:37,990 --> 00:06:32,479
of the uh the space advisors is just a

150
00:06:43,670 --> 00:06:40,790
does your water recovery system filter

151
00:06:47,350 --> 00:06:43,680
over the water and is it really

152
00:06:52,070 --> 00:06:49,589
probably on the overall of about 70 of

153
00:06:53,589 --> 00:06:52,080
the wastewater and it greatly reduces

154
00:06:57,430 --> 00:06:53,599
our

155
00:06:59,189 --> 00:06:57,440
ground that is important we want to go

156
00:07:01,270 --> 00:06:59,199
to mars we want to go to the boat and

157
00:07:04,070 --> 00:07:01,280
stay there we have to be able to use

158
00:07:07,029 --> 00:07:04,080
almost everything that we have

159
00:07:09,110 --> 00:07:07,039
question number eight by vermont

160
00:07:12,070 --> 00:07:09,120
have you already got the first results

161
00:07:14,950 --> 00:07:12,080
of the alpha magnet

162
00:07:16,469 --> 00:07:14,960
spectrometer experiment

163
00:07:18,469 --> 00:07:16,479

and over

164
00:07:20,070 --> 00:07:18,479
we have not yet got that i know of

165
00:07:22,309 --> 00:07:20,080
preliminary results from the alpha

166
00:07:24,629 --> 00:07:22,319
magnetic spectrometer it has already

167
00:07:27,350 --> 00:07:24,639
discovered and captured uh

168
00:07:29,830 --> 00:07:27,360
millions i believe at this point of

169
00:07:31,830 --> 00:07:29,840
both battery antibiotic particles so

170
00:07:33,189 --> 00:07:31,840
that data is still being analyzed in the

171
00:07:35,110 --> 00:07:33,199
ground and it will be this is a

172
00:07:36,150 --> 00:07:35,120
long-term experiment to actually find

173
00:07:37,749 --> 00:07:36,160
the things

174
00:07:39,749 --> 00:07:37,759
the information out that we want about

175
00:07:41,749 --> 00:07:39,759
dark matter dark energy is going to take

176
00:07:43,589 --> 00:07:41,759
a lot of time and a lot of computational

177
00:07:46,869 --> 00:07:43,599
work

178
00:07:49,189 --> 00:07:46,879
thanks christopher 9 by murray what has

179
00:07:52,150 --> 00:07:49,199
been the most exciting experiment for

180
00:07:53,589 --> 00:07:52,160
you so far over

181
00:07:56,070 --> 00:07:53,599
i think one of the most exciting

182
00:07:58,309 --> 00:07:56,080
experiments that has a tremendous amount

183
00:07:59,909 --> 00:07:58,319
of potential for life on earth is the

184
00:08:01,830 --> 00:07:59,919
experiment that we're doing in a

185
00:08:03,270 --> 00:08:01,840
combustion integrated rack this rack

186
00:08:05,830 --> 00:08:03,280
allows us to

187
00:08:07,670 --> 00:08:05,840
suspend small droplets of various

188
00:08:11,189 --> 00:08:07,680

different fuels in all different kinds

189
00:08:13,350 --> 00:08:11,199
of environments and very precisely study

190
00:08:15,670 --> 00:08:13,360
in a controlled session absent gravity

191
00:08:18,869 --> 00:08:15,680
absent to the gravity-infused convection

192
00:08:21,029 --> 00:08:18,879
exactly how the fuel is combusted and

193
00:08:22,710 --> 00:08:21,039
through doing that we can improve the

194
00:08:24,710 --> 00:08:22,720
fuel efficiency of cars on earth

195
00:08:28,309 --> 00:08:24,720
intellectual power generation plans we

196
00:08:30,309 --> 00:08:28,319
can also improve flight safety for a

197
00:08:32,310 --> 00:08:30,319
space environment design better fuel

198
00:08:34,550 --> 00:08:32,320
systems and better fire suppression

199
00:08:36,230 --> 00:08:34,560
systems for spacecraft and future

200
00:08:37,750 --> 00:08:36,240
spacecraft over time

201
00:08:40,630 --> 00:08:37,760
roger many things

202
00:08:42,550 --> 00:08:40,640
then this is compact only one you left

203
00:08:44,630 --> 00:08:42,560
this is a great day for all of us it

204
00:08:46,870 --> 00:08:44,640
concludes it concludes more than a year

205
00:08:49,269 --> 00:08:46,880
of close collaboration between school

206
00:08:52,150 --> 00:08:49,279
and our radio club we are quite happy to

207
00:08:54,070 --> 00:08:52,160
have made it before ending until some

208
00:09:12,949 --> 00:08:54,080
seconds i crossed the microphone the

209
00:09:12,959 --> 00:09:30,710
but very much

210
00:09:34,710 --> 00:09:32,630
okay well fantastic it was uh it was

211
00:09:36,949 --> 00:09:34,720
great to answer the questions and

212
00:09:39,030 --> 00:09:36,959
spending a little time with you and i

213
00:09:40,710 --> 00:09:39,040

think all the work that folks do on the

214
00:09:41,990 --> 00:09:40,720
ground to help make this possible is

215
00:09:44,070 --> 00:09:42,000
very important and i think it's very

216
00:09:46,790 --> 00:09:44,080
important to get the message out that an

217
00:09:48,470 --> 00:09:46,800
international space exploration board

218
00:09:50,710 --> 00:09:48,480
program like this is critical for the

219
00:09:52,150 --> 00:09:50,720
future of humanity

220
00:09:54,389 --> 00:09:52,160
okay same thing

221
00:09:56,550 --> 00:09:54,399
uh thanks so much for your working space

222
00:09:58,150 --> 00:09:56,560
under the dreams induced now good luck

223
00:10:00,550 --> 00:09:58,160
in space then yeah all the way to the

224
00:10:02,949 --> 00:10:00,560
crew was getting radio from the sierra

225
00:10:03,430 --> 00:10:02,959
sierra that was probably a six kilo

226
00:10:05,190 --> 00:10:03,440
kilo or

227
00:10:12,389 --> 00:10:05,200
table station together with the

228
00:10:16,630 --> 00:10:14,389
this is our four iss thank you very much

229
00:10:21,190 --> 00:10:16,640
for the qso very much enjoyed spending