



1  
00:00:08,450 --> 00:00:05,690  
it was eight weeks ago tomorrow the last

2  
00:00:10,549 --> 00:00:08,460  
time that a Soyuz spacecraft returned to

3  
00:00:12,950 --> 00:00:10,559  
earth bringing international space

4  
00:00:15,980 --> 00:00:12,960  
station crew members home in this

5  
00:00:18,589 --> 00:00:15,990  
particular case after 188 days in space

6  
00:00:22,009 --> 00:00:18,599  
more than 3,000 orbits of the earth

7  
00:00:24,859 --> 00:00:22,019  
totaling some 79 million miles it

8  
00:00:27,829 --> 00:00:24,869  
delivered cosmonaut Michael Turan jaksa

9  
00:00:29,599 --> 00:00:27,839  
astronaut Koichi Wakata and NASA's Rick

10  
00:00:31,189 --> 00:00:29,609  
Mastracchio who joins us here in the

11  
00:00:33,229 --> 00:00:31,199  
flight control room this morning Rick

12  
00:00:35,389 --> 00:00:33,239  
it's nice to see you back on earth good

13  
00:00:37,540 --> 00:00:35,399

morning back happy to be here we spend

14

00:00:40,340 --> 00:00:37,550

an awful lot of time talking about how

15

00:00:42,020 --> 00:00:40,350

astronauts take care of themselves on

16

00:00:45,619 --> 00:00:42,030

orbit in fact I've done it already this

17

00:00:47,630 --> 00:00:45,629

morning to get repaired to return to a

18

00:00:48,860 --> 00:00:47,640

one gravity environment so first

19

00:00:51,709 --> 00:00:48,870

question is how you do it how you

20

00:00:54,169 --> 00:00:51,719

feeling oh I'm feeling great you know we

21

00:00:56,060 --> 00:00:54,179

exercise quite a bit on board space

22

00:00:58,729 --> 00:00:56,070

station a couple hours a day I pushed

23

00:01:00,470 --> 00:00:58,739

myself very hard in the hopes that it

24

00:01:02,119 --> 00:01:00,480

would make my life easier after i land

25

00:01:04,249 --> 00:01:02,129

it and i think i was pretty successful

26

00:01:06,170 --> 00:01:04,259

as i felt a lot better than i expected i

27

00:01:09,080 --> 00:01:06,180

thought it would take many many weeks to

28

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

really to feel good but had some

29

00:01:13,100 --> 00:01:11,100

vestibular for a couple hours that went

30

00:01:14,950 --> 00:01:13,110

away pretty quickly and in terms of

31

00:01:17,359 --> 00:01:14,960

muscle strength on my strength never

32

00:01:19,550 --> 00:01:17,369

didn't change from pre flight so I'm

33

00:01:22,010 --> 00:01:19,560

feeling pretty good bets that is an

34

00:01:23,569 --> 00:01:22,020

improvement I think over much earlier in

35

00:01:26,209 --> 00:01:23,579

the station program where astronauts

36

00:01:28,670 --> 00:01:26,219

came home and felt pretty crummy for

37

00:01:30,050 --> 00:01:28,680

quite a long time do you think that the

38

00:01:31,310 --> 00:01:30,060

work that you're doing is what's made

39

00:01:33,529 --> 00:01:31,320

the difference yeah of course you know

40

00:01:34,910 --> 00:01:33,539

the the engineers the scientists the

41

00:01:36,590 --> 00:01:34,920

doctors they're getting much smarter

42

00:01:39,080 --> 00:01:36,600

they're figuring out the right exercises

43

00:01:40,910 --> 00:01:39,090

for us we got better equipment and so

44

00:01:42,649 --> 00:01:40,920

I'll call that comes together and if you

45

00:01:44,209 --> 00:01:42,659

work hard on orbit and do what the the

46

00:01:46,510 --> 00:01:44,219

exercise folks tell you you come back

47

00:01:48,349 --> 00:01:46,520

pretty good shape any thoughts about

48

00:01:50,179 --> 00:01:48,359

improvements that could be made in that

49

00:01:51,200 --> 00:01:50,189

area or things you might want to do you

50

00:01:53,209 --> 00:01:51,210

know there's always room for improvement

51  
00:01:54,709 --> 00:01:53,219  
one of the one of the things is that we

52  
00:01:56,959 --> 00:01:54,719  
actually have to spend two two and a

53  
00:01:59,209 --> 00:01:56,969  
half hours a day exercising so the goal

54  
00:02:00,800 --> 00:01:59,219  
now would be try to now figure out what

55  
00:02:02,240 --> 00:02:00,810  
exercise can we do but shorten that

56  
00:02:04,459 --> 00:02:02,250  
length of time so that the crew member

57  
00:02:05,870 --> 00:02:04,469  
can spend more time doing science and

58  
00:02:07,700 --> 00:02:05,880  
doing maintenance and not as much time

59  
00:02:09,550 --> 00:02:07,710  
exercising but still come back feeling

60  
00:02:12,560 --> 00:02:09,560  
as good and being as healthy as he is

61  
00:02:14,150 --> 00:02:12,570  
this mission was your first flight in a

62  
00:02:17,990 --> 00:02:14,160  
Soyuz space grant

63  
00:02:19,760 --> 00:02:18,000

what was that like so uses I flew Space

64

00:02:21,200 --> 00:02:19,770

Shuttle three times so so he's is

65

00:02:23,300 --> 00:02:21,210

obviously a quite a different vehicle

66

00:02:26,090 --> 00:02:23,310

space shuttles much bigger much roomier

67

00:02:27,830 --> 00:02:26,100

has incredible capabilities whereas the

68

00:02:30,110 --> 00:02:27,840

Soyuz is a very small very compact

69

00:02:33,230 --> 00:02:30,120

vehicle but also very reliable very

70

00:02:34,880 --> 00:02:33,240

efficient so going up wasn't much

71

00:02:36,470 --> 00:02:34,890

different but coming back it was oh it

72

00:02:39,200 --> 00:02:36,480

was quite a bit of a kind of I call that

73

00:02:40,760 --> 00:02:39,210

the wild ride had come home and that was

74

00:02:43,010 --> 00:02:40,770

quite interesting and it was actually

75

00:02:45,140 --> 00:02:43,020

kind of fun a bumpy ride when you say a

76

00:02:47,810 --> 00:02:45,150

while yeah a lot of rotation a lot of

77

00:02:49,640 --> 00:02:47,820

spinning a lot of being tossed about hit

78

00:02:51,020 --> 00:02:49,650

hard when you when you land on the

79

00:02:52,400 --> 00:02:51,030

ground so nothing like a space shuttle

80

00:02:55,370 --> 00:02:52,410

which is basically like an airplane

81

00:02:57,200 --> 00:02:55,380

landing very comfortable those retro

82

00:02:59,720 --> 00:02:57,210

rockets they fire a few feet off the

83

00:03:02,120 --> 00:02:59,730

ground make all the difference I assume

84

00:03:03,560 --> 00:03:02,130

they do it's hard to tell India I only

85

00:03:06,350 --> 00:03:03,570

have one landing under my belt with the

86

00:03:08,540 --> 00:03:06,360

Rockets that I assume they helped 188

87

00:03:11,540 --> 00:03:08,550

days in space your first long-duration

88

00:03:13,940 --> 00:03:11,550

mission was it what you expected it to

89  
00:03:15,470 --> 00:03:13,950  
be going in you must have had some some

90  
00:03:17,450 --> 00:03:15,480  
preconceptions of what it's going to be

91  
00:03:19,430 --> 00:03:17,460  
like to have to spend that much time in

92  
00:03:21,050 --> 00:03:19,440  
that place yeah i think it is you know

93  
00:03:22,910 --> 00:03:21,060  
we do a lot of training we do a lot of

94  
00:03:24,800 --> 00:03:22,920  
preparing for the science we do a lot of

95  
00:03:26,030 --> 00:03:24,810  
training with the with the scientists

96  
00:03:28,820 --> 00:03:26,040  
and the investigators on their

97  
00:03:29,990 --> 00:03:28,830  
experiments so we kind of get a good

98  
00:03:31,460 --> 00:03:30,000  
feel for what it's going to be like of

99  
00:03:33,050 --> 00:03:31,470  
course i bend the space station several

100  
00:03:34,580 --> 00:03:33,060  
times so i knew what the living up there

101  
00:03:37,550 --> 00:03:34,590  
was going to be like so i think it was

102  
00:03:40,760 --> 00:03:37,560  
exactly what I expected did it feel

103  
00:03:43,790 --> 00:03:40,770  
longer or shorter than you were expected

104  
00:03:46,190 --> 00:03:43,800  
well you know people ask me that but the

105  
00:03:47,900 --> 00:03:46,200  
the days go by fast the work days go by

106  
00:03:50,000 --> 00:03:47,910  
very very fast but there's just a lot of

107  
00:03:52,550 --> 00:03:50,010  
those work days 188 days is a long time

108  
00:03:55,479 --> 00:03:52,560  
but it did of course you know time goes

109  
00:03:59,060 --> 00:03:55,489  
by fast the older you get it seems uh

110  
00:04:01,610 --> 00:03:59,070  
yeah it went by pretty quick did you get

111  
00:04:04,100 --> 00:04:01,620  
enough opportunity to to maintain

112  
00:04:06,320 --> 00:04:04,110  
contact with your family and friends so

113  
00:04:08,060 --> 00:04:06,330

that you still feel connected oh yes

114

00:04:10,430 --> 00:04:08,070

yeah you know the space station we have

115

00:04:12,800 --> 00:04:10,440

quite a few tools to stay contact

116

00:04:14,260 --> 00:04:12,810

connected with our families we have we

117

00:04:17,570 --> 00:04:14,270

have the Internet of course with email

118

00:04:19,670 --> 00:04:17,580

we have telephone the IP phone and we

119

00:04:22,400 --> 00:04:19,680

have the video conferencing once a week

120

00:04:23,990 --> 00:04:22,410

so I felt very connected to my my wife

121

00:04:25,310 --> 00:04:24,000

and kids and my friends I've called

122

00:04:26,810 --> 00:04:25,320

friends that I haven't talked to in

123

00:04:27,650 --> 00:04:26,820

years usually I don't make many phone

124

00:04:29,030 --> 00:04:27,660

calls when I'm here

125

00:04:30,380 --> 00:04:29,040

but I took the opportunity to call a lot

126

00:04:32,930 --> 00:04:30,390

of friends and all my family members

127

00:04:34,490 --> 00:04:32,940

while I was up there Denver's made it

128

00:04:36,020 --> 00:04:34,500

quite a surprise somebody out of the

129

00:04:38,450 --> 00:04:36,030

blue calling from space yeah I think

130

00:04:39,890 --> 00:04:38,460

they I think folks enjoy it so it was it

131

00:04:41,810 --> 00:04:39,900

was fun to talk to folks get caught up

132

00:04:44,510 --> 00:04:41,820

do you get to feel like you live there

133

00:04:46,400 --> 00:04:44,520

instead of are just being visiting there

134

00:04:47,840 --> 00:04:46,410

oh yeah you out you act you absolutely

135

00:04:49,910 --> 00:04:47,850

feel like you live there i mean you

136

00:04:52,010 --> 00:04:49,920

sleep there you eat there you work there

137

00:04:53,480 --> 00:04:52,020

and on the weekends you're there so you

138

00:04:55,010 --> 00:04:53,490

are there twenty-four/seven so you

139

00:04:57,860 --> 00:04:55,020

absolutely feel like you're living there

140

00:05:00,200 --> 00:04:57,870

for a long time what were the most

141

00:05:02,330 --> 00:05:00,210

memorable events for you from this

142

00:05:04,190 --> 00:05:02,340

planet like any space mission the most

143

00:05:06,650 --> 00:05:04,200

memorable events are the dynamic events

144

00:05:08,030 --> 00:05:06,660

the things like asset and entry the

145

00:05:09,680 --> 00:05:08,040

things like the spacewalks we did

146

00:05:11,210 --> 00:05:09,690

several spacewalks and of course the

147

00:05:13,220 --> 00:05:11,220

visiting vehicles it was always a fun

148

00:05:15,110 --> 00:05:13,230

day when a visiting vehicle came it

149

00:05:17,090 --> 00:05:15,120

brought food it brought science abroad

150

00:05:18,620 --> 00:05:17,100

equipment so it was always a great day

151

00:05:21,050 --> 00:05:18,630

when a visiting vehicle came we got to

152

00:05:22,670 --> 00:05:21,060

open the hatch to a new shiny vehicle so

153

00:05:25,190 --> 00:05:22,680

all those events are obviously very

154

00:05:27,980 --> 00:05:25,200

memorable the spacewalks as you

155

00:05:29,960 --> 00:05:27,990

mentioned be that has to be something of

156

00:05:31,700 --> 00:05:29,970

a memory since they were not expected

157

00:05:33,260 --> 00:05:31,710

they were they were added after you

158

00:05:35,090 --> 00:05:33,270

arrived yeah absolutely they were not

159

00:05:36,560 --> 00:05:35,100

expected in any way but you know the

160

00:05:37,850 --> 00:05:36,570

space station is getting a little older

161

00:05:40,400 --> 00:05:37,860

and we have a lot of spare parts up

162

00:05:42,770 --> 00:05:40,410

there so the system is made to go out

163

00:05:45,080 --> 00:05:42,780

and repair these components as they fail

164

00:05:46,490 --> 00:05:45,090

that's how it was all designed and yeah

165

00:05:47,900 --> 00:05:46,500

we got to do a few of them and get the

166

00:05:50,030 --> 00:05:47,910

space station back up and running now

167

00:05:52,010 --> 00:05:50,040

those weren't your first spacewalks but

168

00:05:54,080 --> 00:05:52,020

another opportunity to go crawl around

169

00:05:56,510 --> 00:05:54,090

on that thing must be must be pretty

170

00:05:58,070 --> 00:05:56,520

excited yeah Spacely space walks are a

171

00:05:59,659 --> 00:05:58,080

lot of work they're very challenging

172

00:06:01,250 --> 00:05:59,669

mentally and physically but they're very

173

00:06:02,330 --> 00:06:01,260

rewarding it's it's great when you're

174

00:06:04,760 --> 00:06:02,340

out there you get great views of the

175

00:06:06,800 --> 00:06:04,770

earth it's just a it's enjoyable to be

176  
00:06:08,630 --> 00:06:06,810  
working on the hardware out there you

177  
00:06:11,150 --> 00:06:08,640  
mentioned visiting vehicles and the

178  
00:06:13,400 --> 00:06:11,160  
station right now is is got another

179  
00:06:16,280 --> 00:06:13,410  
visiting vehicle a Cygnus vehicle that

180  
00:06:19,400 --> 00:06:16,290  
should be arriving the next week that

181  
00:06:21,710 --> 00:06:19,410  
must be pretty interesting to to do that

182  
00:06:24,230 --> 00:06:21,720  
prep work that Steve Swanson and his

183  
00:06:25,610 --> 00:06:24,240  
crewmates are involved in right now to

184  
00:06:27,170 --> 00:06:25,620  
brush up on the skills that will be

185  
00:06:29,540 --> 00:06:27,180  
needed to go reach out and grab that

186  
00:06:30,980 --> 00:06:29,550  
thing yeah absolutely it's a we have a

187  
00:06:32,920 --> 00:06:30,990  
great trainer up there called robot

188  
00:06:35,960 --> 00:06:32,930

where the crew members actually can

189

00:06:38,150 --> 00:06:35,970

practice capturing the visiting vehicles

190

00:06:40,460 --> 00:06:38,160

with the robotic arm it's a great tool

191

00:06:42,860 --> 00:06:40,470

it prepares the crew very well for the

192

00:06:45,950 --> 00:06:42,870

operations in the cupola and of course

193

00:06:47,510 --> 00:06:45,960

the actual day of the capture is a very

194

00:06:49,940 --> 00:06:47,520

exciting day it's a very busy day for

195

00:06:52,070 --> 00:06:49,950

the crew but it's also very rewarding at

196

00:06:53,480 --> 00:06:52,080

the end you have another module hooked

197

00:06:54,740 --> 00:06:53,490

up to the space station a visiting

198

00:06:56,660 --> 00:06:54,750

vehicle and you open the hatch and you

199

00:06:58,070 --> 00:06:56,670

got all this great equipment being

200

00:07:00,830 --> 00:06:58,080

delivered to you then with any luck a

201  
00:07:02,960 --> 00:07:00,840  
little fresh food yeah usually there's

202  
00:07:06,260 --> 00:07:02,970  
something a few surprises on board that

203  
00:07:08,600 --> 00:07:06,270  
everybody really enjoys you spent about

204  
00:07:11,060 --> 00:07:08,610  
seven months of your life off of the

205  
00:07:13,280 --> 00:07:11,070  
planet now which I guess is not

206  
00:07:15,410 --> 00:07:13,290  
something you expected that was going to

207  
00:07:18,380 --> 00:07:15,420  
happen when you were a young boy or

208  
00:07:20,510 --> 00:07:18,390  
maybe a college student looking forward

209  
00:07:21,830 --> 00:07:20,520  
what's next for you now yeah you were

210  
00:07:24,050 --> 00:07:21,840  
saying a moment ago that you got some

211  
00:07:25,760 --> 00:07:24,060  
unused vacation time oh yeah of course I

212  
00:07:26,750 --> 00:07:25,770  
have lots of you unused vacation time so

213  
00:07:29,120 --> 00:07:26,760

I'm going to take some time off and

214

00:07:31,190 --> 00:07:29,130

enjoy myself and recharge my batteries

215

00:07:32,510 --> 00:07:31,200

but I think we're the United States

216

00:07:34,310 --> 00:07:32,520

space program is coming into a very

217

00:07:35,780 --> 00:07:34,320

exciting time we got Oh Ryan and we have

218

00:07:37,820 --> 00:07:35,790

the commercial vehicles being developed

219

00:07:39,710 --> 00:07:37,830

and we'll be launching soon in a few

220

00:07:41,330 --> 00:07:39,720

years so I hope to get involved in that

221

00:07:44,030 --> 00:07:41,340

and the design and development of those

222

00:07:45,590 --> 00:07:44,040

vehicles Rick I really appreciate you

223

00:07:47,600 --> 00:07:45,600

taking a couple of minutes to talk about

224

00:07:50,180 --> 00:07:47,610

and welcome back thank you that's ass