



1  
00:06:08,870 --> 00:01:02,180  
good morning endeavour welcome to flight

2  
00:06:17,210 --> 00:06:13,040  
okay pepper ah si si si si o si Parrikar

3  
00:06:20,060 --> 00:06:17,220  
a seek a sixth oh-ho-ho toady chatter no

4  
00:06:23,030 --> 00:06:20,070  
robot Romano eight Oklahoma desgas Rita

5  
00:06:29,990 --> 00:06:23,040  
- Kuroda patented our avocado for just a

6  
00:06:33,740 --> 00:06:30,000  
sec okay okay cool hydras my automated

7  
00:06:37,810 --> 00:06:33,750  
SEO Oksana techical in Destin oh ah yeah

8  
00:08:36,200 --> 00:06:37,820  
glossy kio metronidazole sample cases yo

9  
00:08:44,640 --> 00:08:40,680  
go ahead cuicci yes summer we would like

10  
00:10:48,200 --> 00:08:44,650  
to turn the power off on the Oh 1940

11  
00:10:56,490 --> 00:10:51,180  
oK we've got you now and it's a great

12  
00:11:02,900 --> 00:10:56,500  
image okay Debra you ready to talk with

13  
00:11:08,790 --> 00:11:05,730

Tom Miller please give endeavor a call

14

00:11:11,880 --> 00:11:08,800

yes I am in Charlotte North Carolina

15

00:11:15,350 --> 00:11:11,890

where we just got through with a tail

16

00:11:17,700 --> 00:11:15,360

end of a winter snowstorm how are you

17

00:11:27,720 --> 00:11:17,710

okay Tom and reading you loud and clear

18

00:11:29,340 --> 00:11:27,730

good same here and thank you the crew of

19

00:11:30,720 --> 00:11:29,350

the space shuttle Endeavour is nearing

20

00:11:33,000 --> 00:11:30,730

the halfway point of its nine-day

21

00:11:34,440 --> 00:11:33,010

mission in space the six men blasted off

22

00:11:36,390 --> 00:11:34,450

from Cape Canaveral Thursday morning

23

00:11:38,520 --> 00:11:36,400

just yesterday they successfully

24

00:11:40,470 --> 00:11:38,530

recovered a four-ton Japanese satellite

25

00:11:42,360 --> 00:11:40,480

and they still have a lot to do

26

00:11:44,670 --> 00:11:42,370

including releasing and retrieving a

27

00:11:46,620 --> 00:11:44,680

u.s. satellite and conducting two

28

00:11:48,540 --> 00:11:46,630

spacewalks before returning to Earth on

29

00:11:49,980 --> 00:11:48,550

the 20th and we're pleased to have them

30

00:11:53,490 --> 00:11:49,990

with us now from aboard the shuttle

31

00:11:56,400 --> 00:11:53,500

Endeavour good morning gentlemen good

32

00:12:00,420 --> 00:11:58,680

accepting a piece of space junk you had

33

00:12:02,310 --> 00:12:00,430

to maneuver around the other day how

34

00:12:07,470 --> 00:12:02,320

would you characterize the mission is

35

00:12:09,030 --> 00:12:07,480

going so far well it was just a little

36

00:12:10,200 --> 00:12:09,040

surprise for us but it's not something

37

00:12:12,300 --> 00:12:10,210

that's all that unusual

38

00:12:13,860 --> 00:12:12,310

the missions going great and we had a

39

00:12:16,140 --> 00:12:13,870

real big day yesterday

40

00:12:18,360 --> 00:12:16,150

big day for you know for us the crew

41

00:12:20,520 --> 00:12:18,370

burn answer and furnesto the Japanese

42

00:12:21,780 --> 00:12:20,530

Space Agency as we as we grapple their

43

00:12:23,880 --> 00:12:21,790

satellite it was a great thing

44

00:12:25,170 --> 00:12:23,890

yeah it was a good day in fact you

45

00:12:27,690 --> 00:12:25,180

completed your primary mission

46

00:12:30,420 --> 00:12:27,700

I think mr. Walcott are you responsible

47

00:12:33,270 --> 00:12:30,430

for operating the robotic arm that

48

00:12:35,370 --> 00:12:33,280

snatched in your country's satellite can

49

00:12:41,640 --> 00:12:35,380

you describe how you felt after you

50

00:12:43,650 --> 00:12:41,650

completed that successfully yes the

51  
00:12:47,610 --> 00:12:43,660  
other what become of the space shuttle

52  
00:12:50,750 --> 00:12:47,620  
works are very fine and this successful

53  
00:12:53,940 --> 00:12:50,760  
retrieval the SFU showed a very good

54  
00:12:55,740 --> 00:12:53,950  
example of the illumination and the

55  
00:12:58,170 --> 00:12:55,750  
international cooperation between Japan

56  
00:13:01,110 --> 00:12:58,180  
and the United States and I'm very happy

57  
00:13:02,280 --> 00:13:01,120  
to be part of this effort

58  
00:13:03,869 --> 00:13:02,290  
you're gonna go back to your country

59  
00:13:11,280 --> 00:13:03,879  
hero you know how are you going to

60  
00:13:14,569 --> 00:13:11,290  
handle the success well after this

61  
00:13:17,040 --> 00:13:14,579  
mission since this mission is a very

62  
00:13:20,129 --> 00:13:17,050  
interesting mission for all of us and

63  
00:13:22,920 --> 00:13:20,139

this involves the retrieval of satellite

64

00:13:25,829 --> 00:13:22,930

random viewing and extra vehicle

65

00:13:27,629 --> 00:13:25,839

activity and I learned a lot through the

66

00:13:29,009 --> 00:13:27,639

training and through this mission to

67

00:13:31,079 --> 00:13:29,019

prepare for the space station assembly

68

00:13:34,619 --> 00:13:31,089

mission so after this mission I will be

69

00:13:36,960 --> 00:13:34,629

ready to be trained for future space

70

00:13:38,489 --> 00:13:36,970

station assembly mission I want to know

71

00:13:47,999 --> 00:13:38,499

how you felt when you were awakened to

72

00:13:51,960 --> 00:13:48,009

theme music from the movie Godzilla you

73

00:13:53,790 --> 00:13:51,970

don't have to answer that let me go to

74

00:13:55,619 --> 00:13:53,800

you're the only medical doctor on board

75

00:13:57,449 --> 00:13:55,629

and in addition to your degrees in

76

00:13:59,009 --> 00:13:57,459

engineering what's your specialty on

77

00:14:05,400 --> 00:13:59,019

this mission being both a medical doctor

78

00:14:06,949 --> 00:14:05,410

and an engineer well I'm doing a number

79

00:14:09,480 --> 00:14:06,959

of different things on on this flight

80

00:14:12,119 --> 00:14:09,490

tomorrow I'm excited about the

81

00:14:16,049 --> 00:14:12,129

opportunity to go outside and do a

82

00:14:17,850 --> 00:14:16,059

spacewalk in addition to that as you

83

00:14:19,860 --> 00:14:17,860

said I'm the medical officer although

84

00:14:21,809 --> 00:14:19,870

that Duty has been very easy since

85

00:14:24,540 --> 00:14:21,819

nobody's had any kind of medical

86

00:14:26,340 --> 00:14:24,550

problems I also am responsible for a

87

00:14:28,259 --> 00:14:26,350

photo TV documentation so I'm taking

88

00:14:30,749 --> 00:14:28,269

pictures like crazy we're hoping to

89

00:14:34,079 --> 00:14:30,759

bring back some absolutely spectacular

90

00:14:36,840 --> 00:14:34,089

views of the earth and the satellites

91

00:14:38,610 --> 00:14:36,850

and the DDA's and I'm also responsible

92

00:14:42,389 --> 00:14:38,620

for some of the secondaries that we have

93

00:14:44,819 --> 00:14:42,399

on board including FSB V and some of the

94

00:14:46,559 --> 00:14:44,829

mid decks great I hope we get a chance

95

00:14:49,819 --> 00:14:46,569

to look at those pictures I hope some of

96

00:14:54,689 --> 00:14:49,829

them will be shared with us in the media

97

00:14:56,759 --> 00:14:54,699

absolutely good dr. cha your designated

98

00:14:59,639 --> 00:14:56,769

as the prime space Walker what does that

99

00:15:03,629 --> 00:14:59,649

mean you walk twice and what do you hope

100

00:15:05,069 --> 00:15:03,639

to accomplish out there oh that's right

101  
00:15:07,919 --> 00:15:05,079  
I'll be performing through the

102  
00:15:09,449 --> 00:15:07,929  
spacewalks what it means to be the lead

103  
00:15:10,919 --> 00:15:09,459  
was that pre-flight for the previous

104  
00:15:13,319 --> 00:15:10,929  
year I've been following all the issues

105  
00:15:14,440 --> 00:15:13,329  
and developing and getting our timelines

106  
00:15:16,720 --> 00:15:14,450  
getting all the

107  
00:15:18,819 --> 00:15:16,730  
we're developed for our spacewalks and

108  
00:15:21,100 --> 00:15:18,829  
we'll be going out tomorrow dan and I

109  
00:15:24,100 --> 00:15:21,110  
will and Western I'll be going out

110  
00:15:25,930 --> 00:15:24,110  
couple days later the primary objective

111  
00:15:27,250 --> 00:15:25,940  
or the objective of the spacewalks is

112  
00:15:31,900 --> 00:15:27,260  
for the International Space Station

113  
00:15:33,490 --> 00:15:31,910

we'll be evaluating the design concepts

114

00:15:36,400 --> 00:15:33,500

the maintenance concepts and the

115

00:15:38,319 --> 00:15:36,410

assembly concepts to make sure that and

116

00:15:41,319 --> 00:15:38,329

all these data will keep directly back

117

00:15:43,290 --> 00:15:41,329

into the space station program to make

118

00:15:47,079 --> 00:15:43,300

sure that we come up with a design and a

119

00:15:49,870 --> 00:15:47,089

method that will work now you practice

120

00:15:51,879 --> 00:15:49,880

these I would imagine quite extensively

121

00:15:55,480 --> 00:15:51,889

back on earth probably in another water

122

00:15:55,930 --> 00:15:55,490

tank or something like that that's

123

00:15:58,030 --> 00:15:55,940

correct

124

00:15:59,230 --> 00:15:58,040

three of us have undergone many hours of

125

00:16:01,540 --> 00:15:59,240

training in the weightless environment

126

00:16:03,759 --> 00:16:01,550

training facility which is you know the

127

00:16:05,379 --> 00:16:03,769

big swimming pool where we get in our

128

00:16:06,879 --> 00:16:05,389

suits and get down there and get

129

00:16:08,560 --> 00:16:06,889

neutrally buoyant so we can float around

130

00:16:11,319 --> 00:16:08,570

in the water and simulate our tasks

131

00:16:12,670 --> 00:16:11,329

I imagine though doing the real thing is

132

00:16:16,540 --> 00:16:12,680

quite different are you a little bit

133

00:16:17,949 --> 00:16:16,550

nervous about it at all I think you're

134

00:16:19,960 --> 00:16:17,959

right it's gonna be quite different but

135

00:16:22,689 --> 00:16:19,970

no I think the wood is excited we're I

136

00:16:24,460 --> 00:16:22,699

think we're all very excited to get

137

00:16:28,210 --> 00:16:24,470

outside tomorrow and then I'll get again

138

00:16:29,650 --> 00:16:28,220

on Monday or Tuesday yeah you'd lose

139

00:16:32,230 --> 00:16:29,660

time up there we lose time here on the

140

00:16:36,490 --> 00:16:32,240

night side too when you're on your

141

00:16:39,819 --> 00:16:36,500

appetite and sleep yeah let me ask you

142

00:16:42,370 --> 00:16:39,829

how takeoff wise on Thursday I think I

143

00:16:44,800 --> 00:16:42,380

think you fellas took off in the coldest

144

00:16:47,110 --> 00:16:44,810

weather since since Challenger and the

145

00:16:48,850 --> 00:16:47,120

old wing problem it was about 44 degrees

146

00:16:50,170 --> 00:16:48,860

I understand in Cape Canaveral were you

147

00:16:54,630 --> 00:16:50,180

what you fellows anxious at all about

148

00:16:57,519 --> 00:16:54,640

that I know Tom actually we weren't

149

00:16:59,910 --> 00:16:57,529

we're very aware of the temperature

150

00:17:02,590 --> 00:16:59,920

limits and the procedures that NASA has

151  
00:17:03,880 --> 00:17:02,600  
to launch the space shuttle so we are

152  
00:17:07,000 --> 00:17:03,890  
very comfortable with the temperature

153  
00:17:09,280 --> 00:17:07,010  
the ride itself was actually pretty much

154  
00:17:11,049 --> 00:17:09,290  
what we expected it's been described to

155  
00:17:13,299 --> 00:17:11,059  
me several times and they do a pretty

156  
00:17:16,000 --> 00:17:13,309  
good job simulating it the first two

157  
00:17:17,829 --> 00:17:16,010  
minutes really reminded me of a catapult

158  
00:17:20,890 --> 00:17:17,839  
shot back in my days flying off aircraft

159  
00:17:22,929 --> 00:17:20,900  
carrier so rather than a two second cat

160  
00:17:25,449 --> 00:17:22,939  
shot it was more like a two-minute cat

161  
00:17:26,679 --> 00:17:25,459  
shot and then once the booster separated

162  
00:17:27,590 --> 00:17:26,689  
it was a pretty smooth ride all the way

163  
00:17:30,020 --> 00:17:27,600

to Meco so

164

00:17:31,549 --> 00:17:30,030

it was real exciting and you know we got

165

00:17:33,380 --> 00:17:31,559

a lot of we saw a lot of the light

166

00:17:46,260 --> 00:17:33,390

coming in through our windows - I heard

167

00:17:46,270 --> 00:17:57,950

okay or on the flight deck now

168

00:18:03,170 --> 00:18:00,590

I don't know what to think I'm going to

169

00:18:44,000 --> 00:18:03,180

go and put the oath preheat mode and

170

00:18:49,250 --> 00:18:46,730

and he stood up Rose pre-heat boat is

171

00:20:36,789 --> 00:18:49,260

complete standing by for the air is yes

172

00:20:36,799 --> 00:20:44,090

nevermind

173

00:20:50,930 --> 00:20:47,920

that's right yeah further analysis of

174

00:20:55,280 --> 00:20:50,940

SFU thermal during different attitudes

175

00:20:59,300 --> 00:20:55,290

here shows us that we may not have any

176  
00:21:02,720 --> 00:20:59,310  
heater elements failed in engineering

177  
00:21:06,170 --> 00:21:02,730  
thermal analysis of SFU shows that we

178  
00:21:09,260 --> 00:21:06,180  
have adequate SFU thermal margin

179  
00:21:12,020 --> 00:21:09,270  
throughout the entire host deploy in

180  
00:21:15,140 --> 00:21:12,030  
rendezvous profile currently we are

181  
00:21:17,030 --> 00:21:15,150  
working toward a deploy with a window

182  
00:21:22,190 --> 00:21:17,040  
opening per the flight plan in three

183  
00:21:25,970 --> 00:21:22,200  
days one hour and 51 minutes during

184  
00:21:28,490 --> 00:21:25,980  
orbit 49 that deploy Rev we will have

185  
00:21:32,450 --> 00:21:28,500  
very adequate come s-bend

186  
00:21:34,910 --> 00:21:32,460  
and we will do both for the release

187  
00:21:40,550 --> 00:21:34,920  
intercept burn we'll be doing an early

188  
00:21:42,950 --> 00:21:40,560

handover tour sure that come that's

189

00:21:44,600 --> 00:21:42,960

great news very glad to hear that and

190

00:21:47,470 --> 00:21:44,610

they will certainly be ready for that

191

00:23:35,009 --> 00:21:47,480

I'm glad to hear well calm with us wrong

192

00:23:46,769 --> 00:23:37,810

they're a bank with you tenders west and

193

00:23:54,279 --> 00:23:48,909

hey story you want me to proceed with

194

00:23:56,139 --> 00:23:54,289

SLA disabled and we'll coordinate that

195

00:26:30,440 --> 00:23:56,149

sir we'll get the lid open and get lazy

196

00:26:46,340 --> 00:26:32,640

scores you're done with the kayuu we're

197

00:26:46,350 --> 00:28:49,659

at store the is yes examine

198

00:28:56,810 --> 00:28:54,019

that is my time in the hand from there

199

00:28:59,930 --> 00:28:56,820

one hour 29 minutes a delta will launch

200

00:29:01,460 --> 00:28:59,940

out of Florida with a career set you

201  
00:29:02,960 --> 00:29:01,470  
probably will not have a chance to see

202  
00:30:01,590 --> 00:29:02,970  
it but we didn't want to pass up the

203  
00:30:54,310 --> 00:30:11,910  
and ever the Delta did launch thank you

204  
00:32:47,270 --> 00:30:56,419  
never no need to reply we're going to

205  
00:32:52,250 --> 00:32:50,060  
of the 34 update it turned out we were

206  
00:32:54,470 --> 00:32:52,260  
able to see that Delta and it was a

207  
00:32:59,240 --> 00:32:54,480  
beautiful sight up above the atmosphere

208  
00:33:03,410 --> 00:32:59,250  
with a long food that is fantastic

209  
00:33:05,360 --> 00:33:03,420  
and maybe at first it was truly

210  
00:33:07,220 --> 00:33:05,370  
something at the last minute we grabbed

211  
00:33:12,500 --> 00:33:07,230  
the camcorder and maybe we will be able

212  
00:33:19,900 --> 00:33:12,510  
to bring some of that home okay we look

213  
00:33:24,320 --> 00:33:22,460

this is Mission Control Houston is a

214

00:33:25,970 --> 00:33:24,330

well is the less than then it's always

215

00:33:30,680 --> 00:33:25,980

worthwhile trying even if it seems

216

00:33:32,540 --> 00:33:30,690

impossible you bet in fact it was a

217

00:33:34,580 --> 00:33:32,550

beautiful clear night across the United

218

00:33:37,820 --> 00:33:34,590

States we saw Dallas Houston and then

219

00:33:39,530 --> 00:33:37,830

looked up and saw this bright white ball

220

00:33:41,180 --> 00:33:39,540

of light almost look like the moon

221

00:33:44,150 --> 00:33:41,190

rising and then it stretched out into a

222

00:33:46,340 --> 00:33:44,160

long line then that line faded into a

223

00:33:55,230 --> 00:33:46,350

deep speckled red and then finally faded

224

00:33:55,240 --> 00:34:05,180

you

225

00:34:10,799 --> 00:34:09,149

at about 5 10 a.m. Central time as they

226

00:34:13,940 --> 00:34:10,809

were preparing a for the release the

227

00:34:16,440 --> 00:34:13,950

Yeast flyer again that Delta launched a

228

00:34:18,539 --> 00:34:16,450

launch of curious at a Korean

229

00:34:20,399 --> 00:34:18,549

communication satellite it occurred from

230

00:34:21,480 --> 00:34:20,409

the Kennedy Space Center at to 5:10 a.m.

231

00:34:25,049 --> 00:34:21,490

Central Time

232

00:34:26,909 --> 00:34:25,059

the crew are there reporting that they

233

00:34:32,220 --> 00:34:26,919

were able to see that endeavour at that

234

00:34:35,339 --> 00:34:32,230

time was approaching at the Gulf of

235

00:34:40,349 --> 00:34:35,349

Mexico and of course going right across

236

00:34:57,070 --> 00:34:40,359

the southern United States and then a