



1  
00:00:14,470 --> 00:00:12,709  
good morning endeavor and a special good

2  
00:00:16,870 --> 00:00:14,480  
morning to you today drew

3  
00:00:19,429 --> 00:00:16,880  
hey good morning good morning houston uh

4  
00:00:21,910 --> 00:00:19,439  
good morning to my beautiful family and

5  
00:00:23,830 --> 00:00:21,920  
uh thanks for that uh fantastic song by

6  
00:00:26,310 --> 00:00:23,840  
the uh great canadian rock band the

7  
00:00:28,470 --> 00:00:26,320  
tragically hip great friends of ours and

8  
00:00:32,630 --> 00:00:28,480  
uh i'm happy that my wife and kids were

9  
00:00:37,750 --> 00:00:35,590  
a focused inspection of endeavors

10  
00:00:39,510 --> 00:00:37,760  
thermal protection system tiles on the

11  
00:00:41,830 --> 00:00:39,520  
underside of the vehicle

12  
00:00:44,869 --> 00:00:41,840  
is required for the flight

13  
00:00:48,150 --> 00:00:44,879

there's one tile that they couldn't get

14

00:00:50,470 --> 00:00:48,160

a good enough resolution on in terms of

15

00:00:55,110 --> 00:00:50,480

the overall dimensions and the depth

16

00:00:56,830 --> 00:00:55,120

primarily of that damage tile area and

17

00:01:02,630 --> 00:00:56,840

thus a requirement for focused

18

00:01:07,429 --> 00:01:04,070

and this is the

19

00:01:09,990 --> 00:01:07,439

view of the damage area that the tile

20

00:01:13,109 --> 00:01:10,000

that crosses essentially over a couple

21

00:01:16,230 --> 00:01:13,119

of tiles this area is between the

22

00:01:18,870 --> 00:01:16,240

right main landing gear door and the

23

00:01:21,270 --> 00:01:18,880

external tank door on the starboard side

24

00:01:23,190 --> 00:01:21,280

of the right side

25

00:01:25,109 --> 00:01:23,200

and they'll tell if there's anything we

26

00:01:26,630 --> 00:01:25,119

need to do about it doesn't look so bad

27

00:01:29,590 --> 00:01:26,640

though

28

00:01:32,069 --> 00:01:29,600

okay spank uh i'm ready box do not close

29

00:01:36,630 --> 00:01:32,079

idc software minimized

30

00:01:36,640 --> 00:02:01,990

resize and position av boxes

31

00:02:07,990 --> 00:02:05,830

and so at 40 40 i will hit stop scan

32

00:02:10,469 --> 00:02:08,000

dear astronauts am very happy to have

33

00:02:12,790 --> 00:02:10,479

this extraordinary opportunity to

34

00:02:14,949 --> 00:02:12,800

converse with you during your mission

35

00:02:17,589 --> 00:02:14,959

and especially grateful to be able to

36

00:02:19,350 --> 00:02:17,599

speak to so many of you as both crews

37

00:02:22,309 --> 00:02:19,360

are present on the space situation of

38

00:02:24,470 --> 00:02:22,319

this time from the space situation have

39

00:02:26,550 --> 00:02:24,480

a very different view of the earth

40

00:02:29,190 --> 00:02:26,560

you fly over different continents and

41

00:02:31,509 --> 00:02:29,200

nations several times a day

42

00:02:34,470 --> 00:02:31,519

i think it must be obvious to you

43

00:02:37,030 --> 00:02:34,480

how we all live together on one earth

44

00:02:39,350 --> 00:02:37,040

and how absurd it is that we fight and

45

00:02:41,670 --> 00:02:39,360

kill each one

46

00:02:44,070 --> 00:02:41,680

i know that markelly's wife was a victim

47

00:02:46,630 --> 00:02:44,080

of a serious attack and i hope her

48

00:02:48,229 --> 00:02:46,640

health continues to improve

49

00:02:50,309 --> 00:02:48,239

when you are contemplating the earth

50

00:02:52,790 --> 00:02:50,319

from upstairs

51  
00:02:54,710 --> 00:02:52,800  
so you ever wonder about survey

52  
00:02:55,509 --> 00:02:54,720  
nations and people live together down

53  
00:02:57,750 --> 00:02:55,519  
here

54  
00:03:00,949 --> 00:02:57,760  
about how science can contribute to the

55  
00:03:02,949 --> 00:03:00,959  
cause of peace

56  
00:03:04,710 --> 00:03:02,959  
well thank you for uh

57  
00:03:06,630 --> 00:03:04,720  
uh the

58  
00:03:09,110 --> 00:03:06,640  
kind words your holiness and thank you

59  
00:03:09,910 --> 00:03:09,120  
for mentioning my wife gabby

60  
00:03:12,790 --> 00:03:09,920  
um

61  
00:03:14,149 --> 00:03:12,800  
it's a very good question we we fly over

62  
00:03:16,229 --> 00:03:14,159  
most of the world and you don't see

63  
00:03:17,430 --> 00:03:16,239

borders uh but at the same time we

64

00:03:19,430 --> 00:03:17,440

realize

65

00:03:20,790 --> 00:03:19,440

that that people fight with each other

66

00:03:22,710 --> 00:03:20,800

and there's a lot of violence in this

67

00:03:25,110 --> 00:03:22,720

world and it's really an unfortunate

68

00:03:26,710 --> 00:03:25,120

thing usually

69

00:03:28,229 --> 00:03:26,720

people fight over many different things

70

00:03:30,869 --> 00:03:28,239

as we're seeing in the middle east right

71

00:03:33,670 --> 00:03:30,879

now it's somewhat for

72

00:03:35,750 --> 00:03:33,680

democracy in certain areas but usually

73

00:03:39,270 --> 00:03:35,760

people fight for resources

74

00:03:41,030 --> 00:03:39,280

uh and it's interesting in space

75

00:03:44,390 --> 00:03:41,040

you know on earth

76

00:03:46,630 --> 00:03:44,400

often people fight for energy

77

00:03:48,470 --> 00:03:46,640

in space we use solar power

78

00:03:51,509 --> 00:03:48,480

and we have fuel cells on the space

79

00:03:53,350 --> 00:03:51,519

shuttle but it's on the space station

80

00:03:55,910 --> 00:03:53,360

it it's um

81

00:03:57,750 --> 00:03:55,920

you know the science and the technology

82

00:04:00,390 --> 00:03:57,760

that we put into the space station to

83

00:04:02,229 --> 00:04:00,400

develop a solar power capability gives

84

00:04:05,030 --> 00:04:02,239

us pretty much unlimited amount of

85

00:04:07,589 --> 00:04:05,040

energy and if those technologies could

86

00:04:12,789 --> 00:04:07,599

be adapted more on earth we could

87

00:04:15,750 --> 00:04:14,869

i'll take you on a little tour

88

00:04:17,990 --> 00:04:15,760

of

89

00:04:19,670 --> 00:04:18,000

the whole assembled

90

00:04:21,909 --> 00:04:19,680

stack here with this with the space

91

00:04:24,629 --> 00:04:21,919

shuttle attached to the space station

92

00:04:27,350 --> 00:04:24,639

it's an amazingly massive complex

93

00:04:29,590 --> 00:04:27,360

and let's take a little ride and uh look

94

00:04:31,110 --> 00:04:29,600

at the whole thing

95

00:04:32,790 --> 00:04:31,120

so here we are in the flight deck of the

96

00:04:39,189 --> 00:04:32,800

shuttle

97

00:04:46,230 --> 00:04:41,510

turn the corner

98

00:04:46,240 --> 00:04:50,070

coming into the space station here

99

00:04:54,270 --> 00:04:51,670

we might have missed a call but we were

100

00:04:57,510 --> 00:04:54,280

wanting to make sure that

101  
00:05:01,749 --> 00:04:57,520  
uh before we changed out the uh in this

102  
00:05:01,759 --> 00:05:05,670  
storage area

103  
00:05:13,110 --> 00:05:08,710  
all right back out of the gym

104  
00:05:16,070 --> 00:05:15,029  
all these bags extra bags you see

105  
00:05:18,870 --> 00:05:16,080  
because we're

106  
00:05:20,950 --> 00:05:18,880  
transferring things back and forth uh

107  
00:05:23,110 --> 00:05:20,960  
through the station cargo and

108  
00:05:26,070 --> 00:05:23,120  
some experiments coming back and here we

109  
00:05:28,870 --> 00:05:26,080  
are in note 2 and there's box hey box

110  
00:05:32,469 --> 00:05:28,880  
there's katie hi hey katie

111  
00:05:45,909 --> 00:05:35,110  
there's dima

112  
00:05:49,909 --> 00:05:47,590  
turn this corner and we're into node

113  
00:05:53,270 --> 00:05:49,919

three

114

00:05:56,070 --> 00:05:53,280

this is unbelievable and this is 360

115

00:06:00,070 --> 00:05:58,230

there's this

116

00:06:01,830 --> 00:06:00,080

there's a soyuz and a progress right

117

00:06:07,029 --> 00:06:01,840

there

118

00:06:12,469 --> 00:06:07,039

spdm

119

00:06:18,230 --> 00:06:16,230

and on the other side the airlock

120

00:06:23,670 --> 00:06:18,240

where we're setting up for spanky and

121

00:06:27,670 --> 00:06:25,110

number two

122

00:06:29,830 --> 00:06:27,680

hey look this is uh my suit awesome i

123

00:06:32,390 --> 00:06:29,840

have no stripes and so that's how you'll

124

00:06:34,550 --> 00:06:32,400

be able to differentiate me from

125

00:06:36,150 --> 00:06:34,560

dr feustel's suit right here which has

126  
00:06:38,230 --> 00:06:36,160  
red stripes if you look that's the last

127  
00:06:40,230 --> 00:06:38,240  
of the stripes of the master

128  
00:06:41,270 --> 00:06:40,240  
that's right

129  
00:06:43,350 --> 00:06:41,280  
all right

130  
00:06:45,270 --> 00:06:43,360  
now we're heading into

131  
00:06:53,430 --> 00:06:45,280  
pma one

132  
00:06:59,189 --> 00:06:56,390  
and down here is the new russian module

133  
00:07:01,749 --> 00:06:59,199  
research module mrm and all the way at

134  
00:07:03,510 --> 00:07:01,759  
the other end of that

135  
00:07:06,629 --> 00:07:03,520  
is another docking compartment

136  
00:07:08,950 --> 00:07:06,639  
equivalent module

137  
00:07:12,230 --> 00:07:08,960  
it's a bit noisier in here

138  
00:07:16,070 --> 00:07:13,589

actually this is the bayou the living

139

00:07:17,990 --> 00:07:16,080

compartment of the uh sawyers now you're

140

00:07:19,749 --> 00:07:18,000

looking into the side the decent module

141

00:07:21,510 --> 00:07:19,759

of the soils

142

00:07:23,589 --> 00:07:21,520

no docking compartment here

143

00:07:37,029 --> 00:07:23,599

this is the old living compartment now

144

00:07:37,039 --> 00:07:39,589

all right now

145

00:07:45,270 --> 00:07:42,629

that's service module there's upside up

146

00:07:48,550 --> 00:07:45,280

and here we have

147

00:07:52,790 --> 00:07:48,560

the docking compartment where the

148

00:07:57,350 --> 00:07:54,790

and inside there is another bayo living

149

00:07:59,510 --> 00:07:57,360

compartment of the soyuz

150

00:08:02,230 --> 00:07:59,520

they have another docking compartment

151

00:08:07,670 --> 00:08:02,240

some spacesuits and airway lawn suits

152

00:08:12,550 --> 00:08:10,070

service module beautiful windows here

153

00:08:18,790 --> 00:08:12,560

looking down at the earth there's soyuz

154

00:08:18,800 --> 00:08:23,430

hello hello how are you very good

155

00:08:23,440 --> 00:08:32,469

watch out that's a urine container

156

00:08:37,269 --> 00:08:33,430

all right

157

00:08:37,279 --> 00:08:43,509

and this is the way to the atm

158

00:08:47,350 --> 00:08:45,030

another

159

00:08:48,949 --> 00:08:47,360

really great transport vehicle with a

160

00:08:52,550 --> 00:08:48,959

lot of volume