



1
00:00:12,789 --> 00:00:10,310
good morning discovery and a special

2
00:00:15,190 --> 00:00:12,799
good morning to you steve lindsey

3
00:00:17,990 --> 00:00:15,200
good morning mike and thanks to my

4
00:00:20,070 --> 00:00:18,000
family for that song

5
00:00:22,550 --> 00:00:20,080
houston discovery from the station for

6
00:00:24,150 --> 00:00:22,560
robo starting the gravel now

7
00:00:25,910 --> 00:00:24,160
story

8
00:00:27,910 --> 00:00:25,920
houston copies

9
00:00:29,910 --> 00:00:27,920
and this begins our robotics operations

10
00:00:32,549 --> 00:00:29,920
today as the station's arm will be used

11
00:00:33,990 --> 00:00:32,559
to reach over grab on to the obss

12
00:00:35,990 --> 00:00:34,000
lift it out of the payload bay and hand

13
00:00:38,950 --> 00:00:36,000

it off to discovery's robotic arm

14

00:00:42,470 --> 00:00:38,960

houston and discovery you are go for

15

00:00:44,869 --> 00:00:42,480

srms obsess grapple

16

00:00:46,790 --> 00:00:44,879

okay

17

00:00:48,790 --> 00:00:46,800

all right can you see the cupola

18

00:00:51,029 --> 00:00:48,800

yes they can all right so this is a

19

00:00:53,590 --> 00:00:51,039

beautiful place to work from you'll see

20

00:00:55,670 --> 00:00:53,600

we're pointing towards the earth um

21

00:00:57,270 --> 00:00:55,680

just beautiful panoramic windows and

22

00:00:59,510 --> 00:00:57,280

very fortunately we have the robotics

23

00:01:02,389 --> 00:00:59,520

workstation set up in here so that we

24

00:01:05,509 --> 00:01:02,399

can work with both the uh

25

00:01:07,350 --> 00:01:05,519

station arm and then in partnership with

26
00:01:09,190 --> 00:01:07,360
the guys over on the shuttle who have

27
00:01:12,310 --> 00:01:09,200
the shuttle robotic arm

28
00:01:14,230 --> 00:01:12,320
and today mike and i did some work uh

29
00:01:16,630 --> 00:01:14,240
moving the big shuttle boom

30
00:01:18,230 --> 00:01:16,640
out and around and handing it off to the

31
00:01:20,310 --> 00:01:18,240
um shuttle arm

32
00:01:21,670 --> 00:01:20,320
station

33
00:01:24,070 --> 00:01:21,680
um

34
00:01:25,670 --> 00:01:24,080
later katie and i got to do a task that

35
00:01:27,429 --> 00:01:25,680
we call a walk-off which is where we

36
00:01:29,190 --> 00:01:27,439
take one end of the arm

37
00:01:31,429 --> 00:01:29,200
put it on a place on the station take

38
00:01:34,310 --> 00:01:31,439

the other end off and now the base and

39

00:01:36,069 --> 00:01:34,320

the tip are exchanged so basically this

40

00:01:37,510 --> 00:01:36,079

arm is very cool because you can move it

41

00:01:39,350 --> 00:01:37,520

all over the space station to different

42

00:01:40,469 --> 00:01:39,360

spots and it gives you different access

43

00:01:41,990 --> 00:01:40,479

to

44

00:01:44,789 --> 00:01:42,000

do all kinds of work across the space

45

00:01:49,109 --> 00:01:46,389

what are you up to today

46

00:01:50,710 --> 00:01:49,119

i am trent i'm a transfer in food

47

00:01:56,469 --> 00:01:50,720

delivering the crew care package

48

00:02:03,429 --> 00:01:57,830

hey katie

49

00:02:08,389 --> 00:02:05,270

so that's your day today

50

00:02:12,550 --> 00:02:08,399

a little robotics this morning did obss

51
00:02:14,550 --> 00:02:12,560
handover and uh doing transfer and uh

52
00:02:18,550 --> 00:02:14,560
learning how much i don't know about

53
00:02:22,790 --> 00:02:19,990
tell us what you've done today well

54
00:02:25,430 --> 00:02:22,800
let's see i uh i got up i flew through

55
00:02:28,229 --> 00:02:25,440
this magnificent station and then uh i

56
00:02:30,470 --> 00:02:28,239
got to remove the obss from the payload

57
00:02:31,990 --> 00:02:30,480
bay twirl it around and hand it off to

58
00:02:33,990 --> 00:02:32,000
the shuttle arm so the shuttle guys

59
00:02:36,790 --> 00:02:34,000
could uh that's us

60
00:02:38,949 --> 00:02:36,800
uh use it to look around and then i did

61
00:02:41,030 --> 00:02:38,959
the activation checkout of the new

62
00:02:43,030 --> 00:02:41,040
tonometer with our eye simulators and

63
00:02:44,710 --> 00:02:43,040

now i get to go exercise

64

00:02:48,309 --> 00:02:44,720

mostly i'm just enjoying being back on

65

00:02:49,910 --> 00:02:48,319

this magnificent stack of modules

66

00:02:52,710 --> 00:02:49,920

i remember the first shuttle flight back

67

00:02:55,509 --> 00:02:52,720

in 1981 my three daughters don't they

68

00:02:58,470 --> 00:02:55,519

have no idea do you think space travel

69

00:03:00,630 --> 00:02:58,480

is getting to be old news what's next

70

00:03:01,670 --> 00:03:00,640

for nasa after the shuttle program is

71

00:03:03,430 --> 00:03:01,680

retired

72

00:03:05,430 --> 00:03:03,440

well i think the objective that nasa set

73

00:03:07,350 --> 00:03:05,440

out back in 58

74

00:03:08,710 --> 00:03:07,360

was that that space travel shouldn't

75

00:03:10,710 --> 00:03:08,720

really be news after a while it should

76

00:03:12,470 --> 00:03:10,720

be part of our routine existence so to

77

00:03:14,149 --> 00:03:12,480

think that we've had the space station

78

00:03:15,830 --> 00:03:14,159

continually inhabited for the last 10

79

00:03:17,430 --> 00:03:15,840

years so there are fifth graders who've

80

00:03:19,190 --> 00:03:17,440

never known the space station not to be

81

00:03:21,030 --> 00:03:19,200

in space with astronauts on board i

82

00:03:22,070 --> 00:03:21,040

think is a major success a milestone for

83

00:03:23,990 --> 00:03:22,080

nasa

84

00:03:26,470 --> 00:03:24,000

so what i look forward to in the future

85

00:03:28,149 --> 00:03:26,480

is when space travel becomes routine uh

86

00:03:29,750 --> 00:03:28,159

just as back in the 1930s only

87

00:03:31,350 --> 00:03:29,760

daredevils and barnstormers took to the

88

00:03:33,509 --> 00:03:31,360

skies and now we have everybody flying

89

00:03:35,190 --> 00:03:33,519

around on airlines at some point and uh

90

00:03:37,350 --> 00:03:35,200

before these children become

91

00:03:39,350 --> 00:03:37,360

old uh we should have routine travel

92

00:03:41,190 --> 00:03:39,360

people above the planet here above earth

93

00:03:43,110 --> 00:03:41,200

here and maybe traveling out to the moon

94

00:03:44,869 --> 00:03:43,120

uh for nasa i think to push out into the

95

00:03:45,830 --> 00:03:44,879

solar system is what's next for us go to

96

00:03:48,149 --> 00:03:45,840

the moon

97

00:03:49,750 --> 00:03:48,159

go to mars the asteroid belt to go and

98

00:03:52,630 --> 00:03:49,760

explore to push out the frontiers which

99

00:03:54,710 --> 00:03:52,640

we've been doing since 1958

100

00:03:56,270 --> 00:03:54,720

so here we have b alvin drew and steve

101
00:03:58,550 --> 00:03:56,280
bowen

102
00:04:00,229 --> 00:03:58,560
uncharacteristically speechless actually

103
00:04:02,149 --> 00:04:00,239
they can't talk because they're wearing

104
00:04:06,149 --> 00:04:02,159
masks

105
00:04:08,710 --> 00:04:06,159
because they're terribly comfortable

106
00:04:10,470 --> 00:04:08,720
and they're starting to uh pre-breathe

107
00:04:12,149 --> 00:04:10,480
oxygen to wash the nitrogen out of their

108
00:04:13,190 --> 00:04:12,159
bodies getting ready for their spacewalk

109
00:04:14,869 --> 00:04:13,200
tomorrow

110
00:04:16,150 --> 00:04:14,879
in about a half hour we're going to shut

111
00:04:18,229 --> 00:04:16,160
the door here and they're going to

112
00:04:21,670 --> 00:04:18,239
depress down to uh

113
00:04:23,270 --> 00:04:21,680

about 10.2 psi roughly about 10 000 feet

114

00:04:25,749 --> 00:04:23,280

in altitude and

115

00:04:27,350 --> 00:04:25,759

they'll uh spend the night there and uh

116

00:04:28,790 --> 00:04:27,360

we'll let them out for a short time in

117

00:04:30,390 --> 00:04:28,800

the morning

118

00:04:31,830 --> 00:04:30,400

to hit the bathroom and clean up a

119

00:04:34,070 --> 00:04:31,840

little bit and then we'll go back in

120

00:04:36,070 --> 00:04:34,080

here and they'll be on masks for that

121

00:04:37,670 --> 00:04:36,080

and once they get back in here we'll get

122

00:04:39,590 --> 00:04:37,680

them all dressed up in their spacesuits

123

00:04:41,350 --> 00:04:39,600

and ready to go out the door

124

00:04:43,510 --> 00:04:41,360

and our commander has given them all

125

00:04:45,110 --> 00:04:43,520

sorts of words of encouragement and also

126

00:04:46,469 --> 00:04:45,120

told that if they do a bad job he won't

127

00:04:48,469 --> 00:04:46,479

let him back in