



1
00:00:56,430 --> 00:00:53,330
in this world the headlines read

2
00:00:57,750 --> 00:00:56,440
overfilled with Robin still company

3
00:01:04,799 --> 00:00:57,760
through right this wrong with finding

4
00:01:04,809 --> 00:01:25,170
speed of my thing

5
00:01:30,220 --> 00:01:28,210
never Houston good morning no need to

6
00:01:35,590 --> 00:01:30,230
fear underdog is here with his dog

7
00:01:43,660 --> 00:01:35,600
crewmates good morning Dan that was

8
00:01:48,070 --> 00:01:43,670
great music we're ready to go never for

9
00:01:56,080 --> 00:01:48,080
Cujo no further action or fire we got

10
00:01:57,820 --> 00:01:56,090
you thanks again the jet thruster

11
00:01:59,050 --> 00:01:57,830
firings are referred to by flight

12
00:02:01,140 --> 00:01:59,060
director Jeff Bantle and his

13
00:02:05,170 --> 00:02:01,150

conversation with commander Dave Walker

14

00:02:07,210 --> 00:02:05,180

involve a series of pre-programmed tests

15

00:02:09,250 --> 00:02:07,220

built into the timeline to enable

16

00:02:10,930 --> 00:02:09,260

instruments on the free flying 4,300

17

00:02:13,750 --> 00:02:10,940

pounds satellite to record the pressure

18

00:02:15,670 --> 00:02:13,760

heat and a characterization of the jet

19

00:02:17,260 --> 00:02:15,680

thruster firings of an orbiting space

20

00:02:24,479 --> 00:02:17,270

shuttle against a free flying space

21

00:02:27,790 --> 00:02:24,489

structure again this live picture from

22

00:02:29,710 --> 00:02:27,800

cameras aboard endeavours and located in

23

00:02:31,210 --> 00:02:29,720

the payload Bay and showing the whip

24

00:02:33,580 --> 00:02:31,220

shield facility as the orbiter

25

00:04:08,809 --> 00:02:33,590

approaches the 200-foot mark from the

26

00:04:14,119 --> 00:04:11,479

and that is expected with the wheel

27

00:04:37,749 --> 00:04:14,129

speed and prior to getting into grandpa

28

00:04:41,920 --> 00:04:40,149

the weight shield facility has once

29

00:04:43,899 --> 00:04:41,930

again been placed in the safe hold mode

30

00:04:46,360 --> 00:04:43,909

to ensure an extra layer of protection

31

00:04:48,610 --> 00:04:46,370

for its attitude control system and in

32

00:04:52,029 --> 00:04:48,620

this view you can see the robot arm

33

00:04:53,529 --> 00:04:52,039

being maneuvered into place for the

34

00:05:02,690 --> 00:04:53,539

eventual grapple of the Wakefield

35

00:05:08,660 --> 00:05:05,570

this view from a payload bay camera in

36

00:05:11,990 --> 00:05:08,670

the rear of endeavours cargo bay showing

37

00:05:13,640 --> 00:05:12,000

the robot arm being extended towards the

38

00:05:15,950 --> 00:05:13,650

wake shield facility for a grapple

39

00:05:17,540 --> 00:05:15,960

flight controllers here are watching the

40

00:05:20,390 --> 00:05:17,550

attitude control system on the wake

41

00:05:22,640 --> 00:05:20,400

shield very carefully making sure it is

42

00:05:25,280 --> 00:05:22,650

as stable as possible at the time that

43

00:05:36,719 --> 00:05:25,290

the end effector reaches the grapple

44

00:05:42,159 --> 00:05:39,309

everything has gone pretty much by the

45

00:05:44,259 --> 00:05:42,169

book this morning a flawless rendezvous

46

00:05:45,969 --> 00:05:44,269

by commander Dave Walker and pilot Ken

47

00:05:48,309 --> 00:05:45,979

cockerel to get endeavour back into

48

00:05:51,070 --> 00:05:48,319

position to conduct a series of jet

49

00:05:53,919 --> 00:05:51,080

thruster firings upon the wake shield

50

00:05:57,399 --> 00:05:53,929

facility from distances of 290 and 200

51
00:06:00,159 --> 00:05:57,409
feet unofficially a total of 14 jet

52
00:06:04,029 --> 00:06:00,169
thruster firings were conducted to

53
00:06:07,179 --> 00:06:04,039
gather valuable data on heat pressure

54
00:06:12,389 --> 00:06:07,189
and forces impinged upon the free flying

55
00:06:17,889 --> 00:06:15,759
astronaut Jim Newman at the aft flight

56
00:06:20,739 --> 00:06:17,899
deck of Endeavour now slowly moving the

57
00:06:22,779 --> 00:06:20,749
robot I am robot arm in for the capture

58
00:06:27,189 --> 00:06:22,789
of the wake shield facility to complete

59
00:06:29,350 --> 00:06:27,199
three days of free flight payload

60
00:06:31,629 --> 00:06:29,360
controllers here very happy with the

61
00:06:50,760 --> 00:06:31,639
performance of wake shield it is a very

62
00:06:58,840 --> 00:06:53,020
stewardess bass cleff is stable looks

63
00:07:36,670 --> 00:06:58,850

like we have a data problem we concur

64

00:07:41,990 --> 00:07:39,710

good view now of the end effector of the

65

00:07:43,760 --> 00:07:42,000

robot arm man by Jim Newman on the a

66

00:07:45,559 --> 00:07:43,770

flight deck of Endeavour moving in

67

00:07:56,510 --> 00:07:45,569

slowly but surely for the capture of the

68

00:07:58,309 --> 00:07:56,520

wake shield facility the orbiter now in

69

00:08:00,200 --> 00:07:58,319

so-called free drift no jet thruster

70

00:08:02,869 --> 00:08:00,210

firings anymore as Jim Newman moves the

71

00:09:27,730 --> 00:08:02,879

robot arm carefully in for the grapple

72

00:09:31,930 --> 00:09:29,950

astronaut Jim Newman has backed the arm

73

00:09:42,440 --> 00:09:31,940

off so he can realign the end effector

74

00:10:11,100 --> 00:09:44,329

the end-effector is now aligned with the

75

00:10:28,430 --> 00:10:13,259

flight controllers report the capture of

76

00:10:28,440 --> 00:10:38,620

outstanding endeavor

77

00:10:47,050 --> 00:10:45,940

I'm mighty proud of my dog story this is

78

00:10:50,140 --> 00:10:47,060

Mission Control Houston

79

00:10:50,740 --> 00:10:50,150

as endeavour flies over the Gulf of

80

00:10:53,350 --> 00:10:50,750

Mexico

81

00:10:55,240 --> 00:10:53,360

it holds the weight shield facility in

82

00:10:57,910 --> 00:10:55,250

place on the end of the shuttles robot

83

00:10:59,710 --> 00:10:57,920

arm the other of the two free-flying

84

00:11:01,300 --> 00:10:59,720

satellites that were deployed and

85

00:11:03,730 --> 00:11:01,310

retrieved by endeavour during this

86

00:11:05,650 --> 00:11:03,740

flight the Spartan spacecraft can be

87

00:11:15,300 --> 00:11:05,660

seen in the payload Bay in this

88

00:11:30,480 --> 00:11:27,360

a Asiata on the right pod thank you in

89

00:11:33,510 --> 00:11:30,490

this view from the rear payload bay

90

00:11:35,640 --> 00:11:33,520

cameras Houston endeavour this is the

91

00:11:37,500 --> 00:11:35,650

wake side of the wake shield facility

92

00:11:39,269 --> 00:11:37,510

the side on which the carousel is

93

00:11:41,640 --> 00:11:39,279

located and the growth of these

94

00:11:43,530 --> 00:11:41,650

thin-film epitaxial materials has been

95

00:11:46,890 --> 00:11:43,540

conducted over three days of free flight

96

00:11:48,750 --> 00:11:46,900

the the arm now in motion ready to

97

00:13:12,880 --> 00:11:48,760

rebirth the weight shield facility back

98

00:13:17,540 --> 00:13:15,260

this is Mission Control Houston the

99

00:13:18,470 --> 00:13:17,550

payload deployment and retrieval officer

100

00:13:20,720 --> 00:13:18,480

here in the flight control room

101
00:13:22,579 --> 00:13:20,730
confirming that we are in the final

102
00:13:33,150 --> 00:13:22,589
activities for the berthing of the wake

103
00:13:38,199 --> 00:13:36,100
this is Mission Control Houston in this

104
00:13:39,790 --> 00:13:38,209
view from one of the rear payload bay

105
00:13:41,920 --> 00:13:39,800
cameras on board endeavour we see the

106
00:13:45,610 --> 00:13:41,930
wake shield facility close to its

107
00:13:47,560 --> 00:13:45,620
birthing position with Jim Newman at the

108
00:13:49,480 --> 00:13:47,570
controls of the shuttles robot arm ready

109
00:13:58,329 --> 00:13:49,490
to place that forty three hundred pound

110
00:13:59,980 --> 00:13:58,339
satellite back into its carrier in this

111
00:14:01,329 --> 00:13:59,990
view of endeavours payload Bay we see

112
00:14:03,190 --> 00:14:01,339
the wake shield facility being

113
00:14:05,620 --> 00:14:03,200

maneuvered very slowly back into its

114

00:14:08,740 --> 00:14:05,630

berth position and it's cross Bay

115

00:14:11,290 --> 00:14:08,750

carrier mounted directly behind the

116

00:14:13,240 --> 00:14:11,300

Spartan spacecraft which was the first

117

00:14:15,220 --> 00:14:13,250

of the two satellites to be deployed and

118

00:15:09,610 --> 00:14:15,230

successfully retrieved by the five

119

00:15:13,999 --> 00:15:12,499

this is Mission Control Houston we are

120

00:15:15,590 --> 00:15:14,009

receiving television from endeavours

121

00:15:21,699 --> 00:15:15,600

payload Bay cameras as endeavour

122

00:15:25,280 --> 00:15:23,660

Mexico on a track that will take its

123

00:15:28,040 --> 00:15:25,290

crew doing along the western coast of

124

00:15:29,420 --> 00:15:28,050

Central America and ever continues to

125

00:15:33,139 --> 00:15:29,430

circle the earth head an altitude of

126

00:15:34,730 --> 00:15:33,149

about 270 NAT nautical miles tucked in

127

00:15:38,090 --> 00:15:34,740

its payload Bay this morning the weight

128

00:15:40,280 --> 00:15:38,100

shield facility having completed three

129

00:15:42,319 --> 00:15:40,290

days of free flying operations during

130

00:15:44,449 --> 00:15:42,329

which four out of seven possible