
NASA

1
00:00:26,470 --> 00:00:24,910
hello and welcome to our show i'm your

2
00:00:28,269 --> 00:00:26,480
host a mentality of NASA's Digital

3
00:00:30,060 --> 00:00:28,279
Learning Network coming to you from

4
00:00:32,290 --> 00:00:30,070
NASA's Kennedy Space Center in Florida

5
00:00:34,810 --> 00:00:32,300
space shuttle Endeavour and its crew are

6
00:00:36,700 --> 00:00:34,820
ready to launch on the sts-127 mission

7
00:00:38,799 --> 00:00:36,710
to the International Space Station their

8
00:00:41,020 --> 00:00:38,809
key assignment deliver and install the

9
00:00:43,450 --> 00:00:41,030
final two elements of the Kibo Japanese

10
00:00:45,430 --> 00:00:43,460
experiment module I'll be your guide as

11
00:00:47,580 --> 00:00:45,440
we retrace the steps leading up to the

12
00:00:50,500 --> 00:00:47,590
launch of the station's latest additions

13
00:00:52,750 --> 00:00:50,510

coming up will introduce the sts-127

14
00:00:54,759 --> 00:00:52,760
astronauts and take a look at space

15
00:00:57,939 --> 00:00:54,769
shuttle endeavour's unusual route to

16
00:01:00,399 --> 00:00:57,949
launch pad 39a the first NASA's mission

17
00:01:02,259 --> 00:01:00,409
payload manager Scott Higginbotham shows

18
00:01:04,689 --> 00:01:02,269
us how Japan's expose facility and

19
00:01:06,910 --> 00:01:04,699
exposed section components were ready

20
00:01:09,850 --> 00:01:06,920
for space and the unique way they'll be

21
00:01:13,000 --> 00:01:09,860
used hi I'm Scott Higginbotham NASA's

22
00:01:14,920 --> 00:01:13,010
mission manager for sts-127 flight of

23
00:01:17,230 --> 00:01:14,930
the remaining two Kibo elements to the

24
00:01:19,480 --> 00:01:17,240
International Space Station we're here

25
00:01:22,060 --> 00:01:19,490
today in the KSC space station

26
00:01:23,440 --> 00:01:22,070
processing facility where the two Kibo

27
00:01:25,450 --> 00:01:23,450
elements were prepared for launch

28
00:01:27,789 --> 00:01:25,460
they're currently in endeavours payload

29
00:01:29,139 --> 00:01:27,799
Bay ready to fly but this is where most

30
00:01:31,929 --> 00:01:29,149
of the work took place getting them

31
00:01:33,480 --> 00:01:31,939
ready to go fly we have three primary

32
00:01:35,980 --> 00:01:33,490
payload elements that we're launching on

33
00:01:38,380 --> 00:01:35,990
sts-127 or as we in the International

34
00:01:40,870 --> 00:01:38,390
Space Station program call it mission 2

35
00:01:44,410 --> 00:01:40,880
j.a the first is the integrated cargo

36
00:01:46,389 --> 00:01:44,420
carrier or ICC and that cargo carrier is

37
00:01:48,429 --> 00:01:46,399
carrying up nine different large spare

38
00:01:50,469 --> 00:01:48,439

parts for the exterior of the space

39
00:01:52,179 --> 00:01:50,479
station these are all us provided spare

40
00:01:55,120 --> 00:01:52,189
parts and they will be deployed on the

41
00:01:56,469 --> 00:01:55,130
station for use additionally on this

42
00:01:58,870 --> 00:01:56,479
mission we have the two japanese

43
00:02:01,989 --> 00:01:58,880
elements we have the exposed facility or

44
00:02:04,749 --> 00:02:01,999
EF and the EF will be mated permanently

45
00:02:07,149 --> 00:02:04,759
to the japanese pressurized module where

46
00:02:09,300 --> 00:02:07,159
it will serve as a platform perform

47
00:02:11,440 --> 00:02:09,310
experiments out in the vacuum of space

48
00:02:13,990 --> 00:02:11,450
also on this mission we have the

49
00:02:15,970 --> 00:02:14,000
japanese exposed section which is

50
00:02:18,850 --> 00:02:15,980
basically a carrier that will be used to

51
00:02:20,620 --> 00:02:18,860
take to space three large payloads that

52
00:02:22,660 --> 00:02:20,630
will then be mounted to the EF during

53
00:02:26,380 --> 00:02:22,670
the mission and then it will return home

54
00:02:28,120 --> 00:02:26,390
in mid-may we installed all three of the

55
00:02:30,610 --> 00:02:28,130
primary payload elements into our

56
00:02:32,350 --> 00:02:30,620
transportation canister using the cranes

57
00:02:34,060 --> 00:02:32,360
here in this facility

58
00:02:35,740 --> 00:02:34,070
after all three were in the canister the

59
00:02:38,320 --> 00:02:35,750
canister was moved to another facility

60
00:02:40,330 --> 00:02:38,330
here at KSC called the canister rotation

61
00:02:42,130 --> 00:02:40,340
facility where the canister was lifted

62
00:02:44,080 --> 00:02:42,140
up from a horizontal orientation and

63
00:02:46,360 --> 00:02:44,090

placed in a vertical orientation for

64
00:02:48,730 --> 00:02:46,370
delivery to the pad then after a

65
00:02:50,890 --> 00:02:48,740
substantial weather delay we delivered

66
00:02:52,930 --> 00:02:50,900
that canister to the pad hoisted it up

67
00:02:55,060 --> 00:02:52,940
into the pad a service structure and

68
00:02:57,850 --> 00:02:55,070
then ultimately transferred those three

69
00:03:00,040 --> 00:02:57,860
payloads from that structure into the

70
00:03:02,260 --> 00:03:00,050
orbiter endeavor for launch the

71
00:03:04,140 --> 00:03:02,270
integrated cargo carrier was prepared by

72
00:03:06,910 --> 00:03:04,150
a stream North America they are a

73
00:03:08,680 --> 00:03:06,920
subcontractor to NASA and they did the

74
00:03:10,479 --> 00:03:08,690
work on the integrated cargo carrier

75
00:03:13,300 --> 00:03:10,489
down at their facility in Port Canaveral

76
00:03:15,100 --> 00:03:13,310
Florida it took them about a year to

77
00:03:17,680 --> 00:03:15,110
prepare that cargo carrier for flight

78
00:03:20,080 --> 00:03:17,690
the two Japanese elements were prepared

79
00:03:22,240 --> 00:03:20,090
by a variety of Japanese contractors

80
00:03:23,680 --> 00:03:22,250
NASA helped after the hardware arrived

81
00:03:26,229 --> 00:03:23,690
here but the bulk of the work was done

82
00:03:28,690 --> 00:03:26,239
by the japanese space agency and their

83
00:03:30,370 --> 00:03:28,700
contractors here in florida now the work

84
00:03:32,620 --> 00:03:30,380
on these two elements began many many

85
00:03:35,110 --> 00:03:32,630
years ago unfortunately due to a series

86
00:03:37,120 --> 00:03:35,120
of delays this hardware has been on the

87
00:03:38,830 --> 00:03:37,130
ground for quite some time so the work

88
00:03:40,570 --> 00:03:38,840

really has been spanning almost a

89
00:03:43,090 --> 00:03:40,580
ten-year period getting these two

90
00:03:46,180 --> 00:03:43,100
Japanese elements ready for launch ISS

91
00:03:49,000 --> 00:03:46,190
mission 2 j.a or sts-127 marks the

92
00:03:51,910 --> 00:03:49,010
conclusion of the assembly of the Kibo

93
00:03:54,220 --> 00:03:51,920
Japanese experiment module there are

94
00:03:55,990 --> 00:03:54,230
three permanent large pieces of Kibo

95
00:03:57,880 --> 00:03:56,000
this mission is carrying up the last

96
00:03:59,470 --> 00:03:57,890
piece the exposed facility that will

97
00:04:02,080 --> 00:03:59,480
stay behind as a permanent piece of the

98
00:04:03,520 --> 00:04:02,090
International Space Station thanks Scott

99
00:04:06,070 --> 00:04:03,530
for taking the time to describe

100
00:04:07,630 --> 00:04:06,080
endeavours mission and payload to us now

101
00:04:09,130 --> 00:04:07,640
I'd like you to meet the dedicated

102
00:04:11,800 --> 00:04:09,140
astronauts who will take part in this

103
00:04:13,360 --> 00:04:11,810
demanding mission mark Polanski will

104
00:04:15,820 --> 00:04:13,370
command endeavor and Doug Hurley will

105
00:04:18,390 --> 00:04:15,830
serve as the pilot mission specialists

106
00:04:22,420 --> 00:04:18,400
are Christopher Cassidy Tom Marshburn

107
00:04:24,870 --> 00:04:22,430
Dave wolf tim kopra and Canadian Space

108
00:04:26,730 --> 00:04:24,880
Agency astronaut julie payette

109
00:04:28,950 --> 00:04:26,740
the mission will deliver copra to the

110
00:04:31,560 --> 00:04:28,960
station is expedition 19 flight engineer

111
00:04:33,960 --> 00:04:31,570
and science officer and return Japan

112
00:04:38,040 --> 00:04:33,970
aerospace exploration agency astronaut

113
00:04:39,990 --> 00:04:38,050

koichi wakata to earth Hurley Cassidy

114
00:04:42,270 --> 00:04:40,000
Marshburn and copra will be making their

115
00:04:44,010 --> 00:04:42,280
first trips into space and let's not

116
00:04:46,590 --> 00:04:44,020
forget about space shuttle Endeavour it

117
00:04:49,200 --> 00:04:46,600
stood vigilant on launch pad 39b as a

118
00:04:50,940 --> 00:04:49,210
rescue vehicle during Atlantis's recent

119
00:04:53,970 --> 00:04:50,950
mission to upgrade NASA's Hubble Space

120
00:04:56,100 --> 00:04:53,980
Telescope after Atlantis is safe return

121
00:04:58,410 --> 00:04:56,110
endeavour was rolled around to Pattaya

122
00:05:00,540 --> 00:04:58,420
top one of NASA's enormous crawler

123
00:05:02,790 --> 00:05:00,550
transporters to take top billing on the

124
00:05:04,740 --> 00:05:02,800
seaside launch pad with the Kibo

125
00:05:06,720 --> 00:05:04,750
elements safely secured in its cargo bay

126
00:05:11,670 --> 00:05:06,730
endeavour is now ready to set sail on

127
00:05:13,890 --> 00:05:11,680
its 23rd mission into space I hope you

128
00:05:17,780 --> 00:05:13,900
enjoyed today's webcast tune in to NASA

129
00:05:21,540 --> 00:05:17,790
TV for live launch coverage or go to ww

130
00:05:23,670 --> 00:05:21,550
NSF gov / shuttle and check out NASA's