1
00:00:41,939 --> 00:00:39,060
good morning we begin NASA television

2
00:00:43,819 --> 00:00:41,949
coverage of mission STS 72 here at the

3
00:00:46,590 --> 00:00:43,829
John F Kennedy Space Center in Florida

4
00:00:48,329 --> 00:00:46,600
we're just hours away from the 74th

5
00:00:50,819 --> 00:00:48,339
space shuttle launch and the tenth

6
00:00:53,610 --> 00:00:50,829
flight of the orbiter Endeavour with a

7
00:00:55,979 --> 00:00:53,620
crew of six astronauts liftoff is

8
00:01:00,740 --> 00:00:55,989
planned at 4:18 a.m. Eastern Time the

9
00:01:07,170 --> 00:01:03,780
this is shuttle launch control t-minus

10
00:01:10,520 --> 00:01:07,180
three hours and holding final inspection

11
00:01:12,300 --> 00:01:10,530
team is on the mobile launcher platform

12
00:01:16,109 --> 00:01:12,310
continuing their inspections of the

13
00:01:18,649 --> 00:01:16,119

vehicle the team has about eight members

14
00:01:21,899 --> 00:01:18,659
representing NASA the contractors and

15
00:01:25,410 --> 00:01:21,909
Greg cat nick of the case of Kennedy

16
00:01:27,179 --> 00:01:25,420
Space Center is leading the team the

17
00:01:29,310 --> 00:01:27,189
team carries a variety of instruments

18
00:01:30,810 --> 00:01:29,320
one is a portable infrared scanner to

19
00:01:33,450 --> 00:01:30,820
measure temperatures on the cryogenic

20
00:01:35,639 --> 00:01:33,460
surfaces of the tank engines and orbiter

21
00:01:37,830 --> 00:01:35,649
they also measure temperatures of the

22
00:01:58,880 --> 00:01:37,840
solid rocket booster cases and segment

23
00:02:04,880 --> 00:02:02,030
and here we have the crew sitting down

24
00:02:08,480 --> 00:02:04,890
at the traditional table the decorated

25
00:02:10,400 --> 00:02:08,490
cake bearing their STS 72 insignia we

26
00:02:12,590 --> 00:02:10,410
have mission specialist kawiti Wakata

27
00:02:16,000 --> 00:02:12,600
flying for the first time aboard the

28
00:02:22,000 --> 00:02:16,010
shuttle co h e is a astronaut from NASA

29
00:02:24,380 --> 00:02:22,010
born in Japan and dr. Daniel berry

30
00:02:30,170 --> 00:02:24,390
flying for the first time aboard the

31
00:02:33,710 --> 00:02:30,180
shuttle this morning very will be one of

32
00:02:36,320 --> 00:02:33,720
the EDA specialists and pilot Brent Jett

33
00:02:39,770 --> 00:02:36,330
also flying aboard the shuttle the first

34
00:02:42,440 --> 00:02:39,780
time you'll be monitoring using the RMS

35
00:02:45,350 --> 00:02:42,450
for the flight crew whether performing

36
00:02:47,510 --> 00:02:45,360
EPA's here we have commander Brian Duffy

37
00:02:50,180 --> 00:02:47,520
flying for the third time aboard the

38
00:02:52,820 --> 00:02:50,190

shuttle today Duffy the most experienced

39
00:02:56,720 --> 00:02:52,830
in the shuttle for the whole crew

40
00:02:58,460 --> 00:02:56,730
mission specialist Leroy Chiao he's

41
00:03:00,800 --> 00:02:58,470
making his second flight today aboard

42
00:03:04,640 --> 00:03:00,810
the shuttle he will be involved in to

43
00:03:07,400 --> 00:03:04,650
the spacewalks and serving a slight

44
00:03:09,370 --> 00:03:07,410
engineer Winston Scott flying for the

45
00:03:11,240 --> 00:03:09,380
first time aboard the shuttle today

46
00:03:16,160 --> 00:03:11,250
again the crew has been awake since

47
00:03:17,240 --> 00:03:16,170
about 7 p.m. and they're getting right

48
00:03:19,910 --> 00:03:17,250
on their schedule that they'll be

49
00:04:05,000 --> 00:03:19,920
following during the nine-day mission

50
00:04:10,970 --> 00:04:08,070
the funnel inspection team is continuing

51
00:04:13,800 --> 00:04:10,980
their assessment and we do have the

52
00:04:15,360 --> 00:04:13,810
astronauts in the crew quarters getting

53
00:04:21,240 --> 00:04:15,370
into the launcher entry suits

54
00:04:24,180 --> 00:04:21,250
I got commander Brian Duffy he's making

55
00:04:25,740 --> 00:04:24,190
his third flight into space today it's

56
00:04:28,320 --> 00:04:25,750
commander he's got the overall

57
00:04:30,630 --> 00:04:28,330
responsibility of the flight he's the

58
00:04:35,730 --> 00:04:30,640
most experienced space flyer on this

59
00:04:37,320 --> 00:04:35,740
mission and of course during the reentry

60
00:04:40,970 --> 00:04:37,330
he will take control just minutes before

61
00:04:42,950 --> 00:04:40,980
touchdown and will be responsible for

62
00:04:48,150 --> 00:04:42,960
relevant systems on board the vehicle

63
00:04:52,050 --> 00:04:48,160

during the rendezvous manoeuvres and

64
00:04:54,420 --> 00:04:52,060
show a rookie Brent Jett is making his

65
00:04:56,520 --> 00:04:54,430
first flight he will be assisting Duffy

66
00:04:59,760 --> 00:04:56,530
at the flight controls including the to

67
00:05:02,190 --> 00:04:59,770
rendezvous operations jet will also

68
00:05:11,490 --> 00:05:02,200
operate the robot arm during the two

69
00:05:13,520 --> 00:05:11,500
spacewalks that are planned and Asda

70
00:05:16,680 --> 00:05:13,530
astronaut mission specialist

71
00:05:20,070 --> 00:05:16,690
Karrueche Wakata going on the space

72
00:05:22,350 --> 00:05:20,080
shuttle for the first time Ricardo will

73
00:05:25,770 --> 00:05:22,360
be using their robot arm during the

74
00:05:28,770 --> 00:05:25,780
mission to retrieve the Japanese space

75
00:05:32,240 --> 00:05:28,780
flower unit satellite and will also use

76
00:05:39,409 --> 00:05:32,250
the arm to deploy and retrieve the most

77
00:05:42,330 --> 00:05:39,419
scientific flyer across the room

78
00:05:45,060 --> 00:05:42,340
flight engineer Winston Scott and

79
00:05:47,340 --> 00:05:45,070
mission specialist Leroy Chiao tower

80
00:05:50,750 --> 00:05:47,350
making his second flight aboard the

81
00:05:53,190 --> 00:05:50,760
shuttle I'm ready to go this morning and

82
00:05:57,360 --> 00:05:53,200
child will be involved in both of the

83
00:05:59,310 --> 00:05:57,370
spacewalks planned for the mission also

84
00:06:02,880 --> 00:05:59,320
he is prime operator for the commercial

85
00:06:05,580 --> 00:06:02,890
protein crystal growth experiment rookie

86
00:06:07,640 --> 00:06:05,590
Shuttle astronaut was to Scott flying

87
00:06:09,890 --> 00:06:07,650
for the first time

88
00:06:16,900 --> 00:06:09,900

he serves as the flight engineer for

89
00:06:20,090 --> 00:06:16,910
this mission in the capacity he will be

90
00:06:23,090 --> 00:06:20,100
responsible for the this space floor

91
00:06:24,650 --> 00:06:23,100
unit systems the oast flyer systems will

92
00:06:33,350 --> 00:06:24,660
be operating several of the secondary

93
00:06:36,680 --> 00:06:33,360
experiments and we have mission

94
00:06:39,350 --> 00:06:36,690
specialists dr. dan Barry he's saying

95
00:06:42,170 --> 00:06:39,360
he's ready to go for lunch today he's

96
00:06:43,760 --> 00:06:42,180
also playing for the first time aboard

97
00:06:57,860 --> 00:06:43,770
the shuttle he will be involved in the

98
00:07:04,820 --> 00:07:00,560
crew will be departing for launch pad

99
00:07:06,470 --> 00:07:04,830
39b in about 20-30 minutes and it's

100
00:07:10,520 --> 00:07:06,480
about a 30 minute ride out to the launch

101
00:07:13,129 --> 00:07:10,530
pad again things look good for launch

102
00:07:16,640 --> 00:07:13,139
as far as weather is concerned here at

103
00:07:18,680 --> 00:07:16,650
KSC and no ice concerns with the

104
00:07:21,950 --> 00:07:18,690
external tank or anywhere on the vehicle

105
00:07:29,210 --> 00:07:21,960
at all the ice team reported that things

106
00:07:33,350 --> 00:07:29,220
look very good here we have the

107
00:07:35,570 --> 00:07:33,360
astronauts for mission STS 72 coming out

108
00:07:36,890 --> 00:07:35,580
of their crew quarters at the operations

109
00:07:38,330 --> 00:07:36,900
and check-out building they'll be

110
00:07:46,700 --> 00:07:38,340
getting into an elevator where will they

111
00:07:48,650 --> 00:07:46,710
ride down to the first floor crew 6

112
00:07:49,969 --> 00:07:48,660
again has been training for the better

113
00:07:52,909 --> 00:07:49,979

part of the year there

114
00:07:55,550 --> 00:07:52,919
spent most of their time training for

115
00:08:14,730 --> 00:07:55,560
this particular flight from our

116
00:08:42,699 --> 00:08:16,950
we have the team led by commander Brian

117
00:08:52,579 --> 00:08:44,379
and the cruel right outs in the

118
00:09:04,239 --> 00:08:56,559
it's about a 30 minute ride to pad 39b

119
00:09:04,249 --> 00:10:00,180
and the Astro van is off

120
00:10:05,350 --> 00:10:02,920
this is shuttle launch control we've got

121
00:10:44,090 --> 00:10:05,360
these STS 72 flight crew now with the

122
00:10:50,760 --> 00:10:47,190
Brian Duffy is commander of the flight

123
00:10:53,820 --> 00:10:50,770
and he is has overall responsibility for

124
00:10:56,280 --> 00:10:53,830
the mission Duffy is a colonel in the

125
00:10:57,960 --> 00:10:56,290
Air Force he's the most experienced

126
00:11:02,579 --> 00:10:57,970
space flier on the mission having flown

127
00:11:09,690 --> 00:11:02,589
twice before as pilot of STS 45 in 1992

128
00:11:12,570 --> 00:11:09,700
and STS 57 in 1993 Duffy is a native of

129
00:11:15,390 --> 00:11:12,580
Boston Massachusetts he was director of

130
00:11:17,519 --> 00:11:15,400
the f-15 test flights at Eglin Air Force

131
00:11:19,800 --> 00:11:17,529
Base in Florida before being selected as

132
00:11:24,360 --> 00:11:19,810
an astronaut candidate in that by NASA

133
00:11:27,570 --> 00:11:24,370
in 1985 and mission specialist dr. dan

134
00:11:29,790 --> 00:11:27,580
Barry now getting ready to take his

135
00:11:38,180 --> 00:11:29,800
assigned seat he will be seated down in

136
00:11:44,930 --> 00:11:41,300
berry called south hadley message she

137
00:11:46,699 --> 00:11:44,940
sits his hometown and he earned five

138
00:11:47,869 --> 00:11:46,709

degrees after high school including a

139
00:11:49,490 --> 00:11:47,879
doctorate in electrical engineering

140
00:11:51,439 --> 00:11:49,500
computer science from Princeton

141
00:11:55,790 --> 00:11:51,449
University and a doctorate in medicine

142
00:11:58,429 --> 00:11:55,800
from the University of Miami and

143
00:12:53,560 --> 00:11:58,439
commander Duffy has nicknamed him doctor

144
00:12:58,220 --> 00:12:56,210
mission specialist Karrueche Wakata is

145
00:12:59,930 --> 00:12:58,230
now getting the rest of his gear on

146
00:13:05,450 --> 00:12:59,940
getting ready for his first flight

147
00:13:09,260 --> 00:13:05,460
aboard the space shuttle ricotta is from

148
00:13:11,360 --> 00:13:09,270
the Japanese space agency and will be

149
00:13:13,010 --> 00:13:11,370
operating the remote remote manipulator

150
00:13:15,170 --> 00:13:13,020
system robotic arm

151
00:13:18,560 --> 00:13:15,180
he's responsible for grappling the

152
00:17:01,350 --> 00:13:18,570
satellites and for berthing him in the

153
00:17:24,510 --> 00:17:04,210
we'd like to hear five minutes and

154
00:17:45,310 --> 00:17:43,410
to minus five minutes and Counting a

155
00:17:47,890 --> 00:17:45,320
profile test of the orbiters

156
00:17:49,480 --> 00:17:47,900
aerosurfaces has started the orbiter

157
00:17:51,190 --> 00:17:49,490
flight control surfaces are being moved

158
00:18:01,380 --> 00:17:51,200
through a pre-programmed pattern to

159
00:18:14,310 --> 00:18:03,660
the main engines are being gimballed and

160
00:18:18,360 --> 00:18:16,649
all systems are go at this time just a

161
00:18:20,340 --> 00:18:18,370
few minutes away from the tenth voyage

162
00:18:30,590 --> 00:18:20,350
of Endeavour with a crew of six on the

163
00:18:46,759 --> 00:18:42,560

2-3 minutes and Counting external tank

164
00:18:49,009 --> 00:18:46,769
is now being pressurized for flight the

165
00:18:52,310 --> 00:18:49,019
gaseous oxygen vent hood at the very top

166
00:19:43,860 --> 00:18:52,320
of the tank will be moved away retracted

167
00:19:48,790 --> 00:19:47,080
at the team - 31 second point endeavors

168
00:20:14,460 --> 00:19:48,800
onboard computers will have control of

169
00:20:19,060 --> 00:20:17,470
in the next few seconds thousands of

170
00:20:20,980 --> 00:20:19,070
gallons of water will be dumped onto the

171
00:20:22,480 --> 00:20:20,990
launch platform to help suppress the

172
00:20:25,799 --> 00:20:22,490
sound and shock of the seven million

173
00:20:34,240 --> 00:20:25,809
pounds of thrust produced by the shuttle

174
00:21:45,180 --> 00:20:34,250
t-minus 15 seconds 12 11 10 9 8 we have

175
00:21:45,190 --> 00:22:36,480
now try one back up

176
00:22:36,490 --> 00:22:58,080
standing by

177
00:23:18,500 --> 00:23:01,470
SRB separation is confirmed time two

178
00:23:24,980 --> 00:23:22,380
downrange from the 45 nautical miles now