



1
00:01:11,120 --> 00:01:04,790
this is shuttle launch control we now

2
00:01:14,990 --> 00:01:11,130
have the STS 69 flight crew got this is

3
00:01:17,270 --> 00:01:15,000
specialist Mike Bernhardt we flying for

4
00:01:22,040 --> 00:01:17,280
the first time today he'll be one of the

5
00:01:25,340 --> 00:01:22,050
EBA crewmen Jim Voss also one who will

6
00:01:28,999 --> 00:01:25,350
be performing EBA commander David Walker

7
00:01:33,950 --> 00:01:29,009
flying for the fourth time pilot Ken

8
00:01:37,969 --> 00:01:33,960
cockerel a mission specialist Jim Newman

9
00:01:41,300 --> 00:01:37,979
flying for the second time today you'll

10
00:01:43,580 --> 00:01:41,310
notice the crew has dog dog food bowls

11
00:01:45,950 --> 00:01:43,590
in front of them they've dubbed

12
00:01:48,650 --> 00:01:45,960
themselves the dog crew and they've had

13
00:01:52,820 --> 00:01:48,660

a lot of fun with that title and just

14

00:01:55,100 --> 00:01:52,830

each of them have a dog name and this is

15

00:01:58,969 --> 00:01:55,110

just a fun thing that the crews decided

16

00:02:01,810 --> 00:01:58,979

to do the cake in the Sun of the table

17

00:02:04,880 --> 00:02:01,820

traditional cake has the STS 69 emblem

18

00:02:06,950 --> 00:02:04,890

the insignia reflects the multi-faceted

19

00:02:08,690 --> 00:02:06,960

objectives of the mission we've got more

20

00:02:10,940 --> 00:02:08,700

than 60 experiments and pieces of

21

00:02:19,130 --> 00:02:10,950

hardware to be tested covering almost

22

00:02:21,110 --> 00:02:19,140

every scientific discipline this is

23

00:02:24,080 --> 00:02:21,120

shuttle launch control at t-minus three

24

00:02:25,759 --> 00:02:24,090

hours and holding we now have the flight

25

00:02:29,390 --> 00:02:25,769

crew getting into their launch and entry

26
00:02:30,440 --> 00:02:29,400
suits commander David Walker commander

27
00:02:33,770 --> 00:02:30,450
has just been briefed on weather

28
00:02:35,890 --> 00:02:33,780
conditions here in Florida and at the

29
00:02:38,150 --> 00:02:35,900
tell sites

30
00:02:41,090 --> 00:02:38,160
he has overall responsibility for

31
00:02:42,680 --> 00:02:41,100
commanding the flight and his primary

32
00:02:48,740 --> 00:02:42,690
job is to oversee and coordinate all

33
00:02:51,020 --> 00:02:48,750
mission activities pilot Ken cockerel he

34
00:02:53,180 --> 00:02:51,030
will assist the commander in the over

35
00:02:55,250 --> 00:02:53,190
side of the orbiter systems and vehicle

36
00:03:04,980 --> 00:02:55,260
maneuvers as required by the payload

37
00:03:13,050 --> 00:03:06,960
Kru does need assistance getting into

38
00:03:14,550 --> 00:03:13,060

their gear it's quite cumbersome and the

39

00:03:15,960 --> 00:03:14,560

checks are made the suit technicians

40

00:03:19,290 --> 00:03:15,970

make checks other suits to make sure

41

00:03:20,610 --> 00:03:19,300

they're functioning properly they filled

42

00:03:26,550 --> 00:03:20,620

the suits with air to make sure there

43

00:03:28,200 --> 00:03:26,560

are no leaks and perform a test believe

44

00:03:30,780 --> 00:03:28,210

this is mission specialist Mike

45

00:03:32,490 --> 00:03:30,790

Bernhardt making his first flight

46

00:03:38,790 --> 00:03:32,500

today he's designated as one of these

47

00:03:42,570 --> 00:03:38,800

space walkers on the mission on the

48

00:03:45,750 --> 00:03:42,580

other side of the room we've got the

49

00:03:49,860 --> 00:03:45,760

rest of the crew mission specialists Jim

50

00:03:51,960 --> 00:03:49,870

boss he's designated as one of the ebee

51
00:03:59,370 --> 00:03:51,970
a crew members he's also a payload

52
00:04:01,020 --> 00:03:59,380
commander on this flight he's

53
00:04:07,130 --> 00:04:01,030
responsible for all of the diverse

54
00:04:13,540 --> 00:04:10,200
and we have mission specialist James

55
00:04:22,160 --> 00:04:17,360
there's a gym basa posing with one of

56
00:04:23,780 --> 00:04:22,170
the suit technicians mission specialist

57
00:04:26,510 --> 00:04:23,790
Newman flying for the second time today

58
00:04:29,320 --> 00:04:26,520
he will be operating the remote

59
00:04:41,890 --> 00:04:32,900
he's signifying he's ready to go for STS

60
00:04:44,090 --> 00:04:41,900
69 also in in the crew suit-up room was

61
00:04:46,280 --> 00:04:44,100
astronaut Bob Cabana who would be flying

62
00:04:48,530 --> 00:04:46,290
in the t-38 and the shuttle training

63
00:04:50,960 --> 00:04:48,540

aircraft later this morning checking out

64

00:04:55,580 --> 00:04:50,970

actual conditions for the weather here

65

00:04:57,590 --> 00:04:55,590

in Florida crew is scheduled to be

66

00:05:05,519 --> 00:04:57,600

leaving the operations and check-out

67

00:05:10,889 --> 00:05:08,309

all of the communication systems and

68

00:05:12,509 --> 00:05:10,899

headset gear inside of their spaces are

69

00:05:14,219 --> 00:05:12,519

checked out to make sure they're

70

00:05:27,119 --> 00:05:14,229

operating properly before the crew heads

71

00:05:29,519 --> 00:05:27,129

out to the launch pad this is shuttle

72

00:05:32,729 --> 00:05:29,529

launch control we've got the STS 69

73

00:05:53,710 --> 00:05:32,739

flight crew getting ready to depart the

74

00:06:19,689 --> 00:05:55,660

we have to member David Walker a pilot

75

00:06:19,699 --> 00:06:27,659

and the crews now in the astronaut van

76

00:06:31,809 --> 00:06:29,830

will be walking across their obiter

77

00:06:36,339 --> 00:06:31,819

access arm to get to the white room

78

00:06:38,019 --> 00:06:36,349

which leads to the crew module again

79

00:06:39,700 --> 00:06:38,029

it's very quiet here in the firing room

80

00:06:43,600 --> 00:06:39,710

the launch team not tracking any

81

00:06:47,249 --> 00:06:43,610

technical issues weather conditions are

82

00:06:50,140 --> 00:06:47,259

very very nice at the current time and

83

00:06:52,179 --> 00:06:50,150

concern is that as the temperatures heat

84

00:06:54,429 --> 00:06:52,189

up that would cause some cloudiness and

85

00:06:56,830 --> 00:06:54,439

possible rain in the area commander

86

00:06:58,950 --> 00:06:56,840

David Walker now being assisted with the

87

00:07:02,019 --> 00:06:58,960

remainder of his flight crew equipment

88

00:07:05,800 --> 00:07:02,029

he has overall responsibility for the

89
00:07:07,390 --> 00:07:05,810
STS 69 mission he recently described how

90
00:07:09,159 --> 00:07:07,400
the crew will deploy the wake shield

91
00:07:14,850 --> 00:07:09,169
facility which is one of the primary

92
00:07:20,309 --> 00:07:17,339
pilot King cockerels now being assisted

93
00:07:22,589 --> 00:07:20,319
with his flight suit he will assist

94
00:07:24,420 --> 00:07:22,599
commander David Walker in the complex

95
00:07:25,950 --> 00:07:24,430
and delicate maneuvers endeavour must

96
00:07:27,779 --> 00:07:25,960
make during the deploy rendezvous and

97
00:07:37,399 --> 00:07:27,789
retrieval operations of the wake shield

98
00:07:45,740 --> 00:07:39,930
this is shuttle launch control at 2

99
00:07:50,700 --> 00:07:48,540
just heard commander Walker performing

100
00:07:53,219 --> 00:07:50,710
voice checks with test conductors here

101
00:07:55,800 --> 00:07:53,229
and in the launch control center and

102
00:07:58,230 --> 00:07:55,810
also with astronaut Eileen Collins who

103
00:08:03,980 --> 00:07:58,240
is the Capcom sitting in Houston at

104
00:08:07,700 --> 00:08:06,320
mission specialist Mike Bernhardt is now

105
00:08:10,040 --> 00:08:07,710
being assisted with his flight suit

106
00:08:13,730 --> 00:08:10,050
he'll be the next one to board the space

107
00:08:15,740 --> 00:08:13,740
shuttle he is the only shuttle rookie on

108
00:08:18,380 --> 00:08:15,750
the flight he has spent many hours below

109
00:08:20,570 --> 00:08:18,390
the surface as a deep-sea diver and

110
00:08:23,240 --> 00:08:20,580
project engineer on subsea oil field

111
00:08:24,890 --> 00:08:23,250
construction and repair projects on this

112
00:08:26,600 --> 00:08:24,900
mission Earnhardt will get a different

113
00:08:29,180 --> 00:08:26,610

perspective of what it's like at about

114

00:08:31,610 --> 00:08:29,190

190 nautical miles above the planet

115

00:08:39,710 --> 00:08:31,620

during his walk in space with mission

116

00:08:41,810 --> 00:08:39,720

specialist Voss now getting a view of

117

00:08:43,340 --> 00:08:41,820

payload commander James boss he's

118

00:08:45,800 --> 00:08:43,350

responsible for the diverse payload

119

00:08:47,720 --> 00:08:45,810

operations he's also one of the

120

00:08:50,210 --> 00:08:47,730

designated space walkers on the planned

121

00:09:04,710 --> 00:08:50,220

six-hour spacewalk set to occur on

122

00:09:08,640 --> 00:09:06,880

mission specialist Jim Newman will be

123

00:09:11,470 --> 00:09:08,650

the last to climb aboard endeavour today

124

00:09:14,740 --> 00:09:11,480

he will deploy the wake shield facility

125

00:09:16,060 --> 00:09:14,750

on flight day five he's also involved in

126

00:09:23,440 --> 00:09:16,070

operating the robot arm during the

127

00:09:25,480 --> 00:09:23,450

spacewalk we've got the shuttle training

128

00:09:28,120 --> 00:09:25,490

aircraft out of the shuttle landing

129

00:09:30,130 --> 00:09:28,130

facility astronaut Bob Cabana in that

130

00:09:32,830 --> 00:09:30,140

aircraft he'll be making real-time

131

00:09:34,510 --> 00:09:32,840

assessment of the weather conditions in

132

00:09:38,530 --> 00:09:34,520

this vicinity of the Kennedy Space

133

00:09:40,030 --> 00:09:38,540

Center we always have an astronaut

134

00:09:42,070 --> 00:09:40,040

flying in the STA for weather

135

00:09:54,150 --> 00:09:42,080

reconnaissance during this time in our

136

00:10:00,880 --> 00:09:58,600

OTC CBC PT c and LPS by console software

137

00:10:02,440 --> 00:10:00,890

completed properly the t-minus 20

138

00:10:18,250 --> 00:10:02,450

minutes only the program's listed may be

139

00:10:20,769 --> 00:10:18,260

active step 854 countdown clock now has

140

00:10:22,930 --> 00:10:20,779

resumed we will march down to the next

141

00:10:42,810 --> 00:10:22,940

hold at the t minus 10 nine minute mark

142

00:10:57,850 --> 00:10:49,150

thank you

143

00:11:02,800 --> 00:10:57,860

a folder on the supply way up at Phillip

144

00:11:04,840 --> 00:11:02,810

our and flap yours 126 and 127 engineers

145

00:11:06,850 --> 00:11:04,850

is ready to see a copy focus thanks to

146

00:11:08,050 --> 00:11:06,860

launch that Thank You lost collectors

147

00:11:10,480 --> 00:11:08,060

you want to proceed

148

00:11:13,720 --> 00:11:10,490

copy that and its launch detected coming

149

00:11:20,790 --> 00:11:13,730

around for poll for plans to los palos

150

00:11:23,710 --> 00:11:20,800

electro go top engineering director

151

00:11:26,470 --> 00:11:23,720

Thank You quality you go copy that

152

00:11:27,699 --> 00:11:26,480

and range Weller dr. Wynn open three

153

00:11:38,770 --> 00:11:27,709

come on copy that

154

00:11:50,470 --> 00:11:49,720

and I'll planetary loss retro 212 copy

155

00:11:53,530 --> 00:11:50,480

that thank you

156

00:11:55,510 --> 00:11:53,540

and endeavour looks like we opened up

157

00:11:57,760 --> 00:11:55,520

the gate and was all turned you loose

158

00:12:03,900 --> 00:11:57,770

totally to have a good Hut we'll see you

159

00:12:06,070 --> 00:12:03,910

back here in about 11 days and MTD MTD

160

00:12:19,790 --> 00:12:06,080

last sector you're clear to proceed

161

00:12:30,729 --> 00:12:23,949

because I talk war was doing on my mark

162

00:12:41,190 --> 00:12:30,739

five four three two one mark

163

00:12:51,540 --> 00:12:43,290

the orbiters access arm will be

164

00:12:53,009 --> 00:12:51,550

retracted away from the vehicle this arm

165

00:13:02,100 --> 00:12:53,019

can be retracted in just a few

166

00:13:03,840 --> 00:13:02,110

minutes if necessary all items and

167

00:13:06,689 --> 00:13:03,850

concerns have been cleared up for launch

168

00:13:08,790 --> 00:13:06,699

today weather conditions again are go

169

00:13:13,139 --> 00:13:08,800

for launch and we have no technical

170

00:13:14,699 --> 00:13:13,149

issues just past the t-minus seven

171

00:13:24,030 --> 00:13:14,709

minute mark and our launch - for

172

00:13:26,490 --> 00:13:24,040

endeavour in the next few minutes we'll

173

00:13:42,570 --> 00:13:26,500

retracted gaseous oxygen vent hood away

174

00:14:11,910 --> 00:13:44,850

pilot will be closing their visors in

175

00:14:11,920 --> 00:14:20,020

la cerveza

176

00:14:23,980 --> 00:14:22,180

at the t-minus 30 one second mark

177

00:14:33,510 --> 00:14:23,990

endeavors onboard computers will have

178

00:14:37,140 --> 00:14:35,550

two seconds before launch thousands of

179

00:14:39,330 --> 00:14:37,150

the gallon of gallons of water will be

180

00:14:57,840 --> 00:14:39,340

dumped on the launch platform to help

181

00:14:57,850 --> 00:15:07,140

12

182

00:15:19,510 --> 00:15:12,280

- one booster ignition and liftoff of

183

00:15:21,150 --> 00:15:19,520

Endeavour on the 74 flight Houston now

184

00:15:36,079 --> 00:15:21,160

controlling the flight of Endeavour

185

00:15:40,189 --> 00:15:38,420

five seconds into the fight endeavours

186

00:15:41,960 --> 00:15:40,199

three liquid-fuel main engines begin to

187

00:15:44,420 --> 00:15:41,970

throttle back in a two-step fashion to

188

00:15:45,530 --> 00:15:44,430

67% of regular performance that will

189

00:15:47,540 --> 00:15:45,540

dampen the stress on the shuttle

190

00:16:01,010 --> 00:15:47,550

aerosurfaces as it breaks through the

191

00:16:04,320 --> 00:16:02,850

fifty-five seconds into the flight

192

00:16:06,360 --> 00:16:04,330

endeavour passes through the sound

193

00:16:08,760 --> 00:16:06,370

barrier the main engines begin in the

194

00:16:10,260 --> 00:16:08,770

threat back up to full throttle all of

195

00:16:12,000 --> 00:16:10,270

the engines performing normally along

196

00:16:30,260 --> 00:16:12,010

with endeavours 3 power producing fuel

197

00:16:33,900 --> 00:16:32,220

throttle up call acknowledged by

198

00:16:35,760 --> 00:16:33,910

Commander Dave Walker he's joined on the

199

00:16:37,110 --> 00:16:35,770

flight deck by pilot Ken cockerel flight

200

00:16:38,970 --> 00:16:37,120

engineer Jim Newman and payload

201
00:16:40,740 --> 00:16:38,980
commander Jim Voss mission specialist

202
00:16:44,220 --> 00:16:40,750
Mike Bernhardt seated alone down on the

203
00:16:48,060 --> 00:16:44,230
mid-deck one minute 35 seconds into the

204
00:16:50,250 --> 00:16:48,070
flight endeavour more than 88,000 feet

205
00:16:52,079 --> 00:16:50,260
in altitude traveling more than 3,000

206
00:16:53,790 --> 00:16:52,089
feet per second already 13 miles

207
00:17:01,560 --> 00:16:53,800
downrange from the Kennedy Space Center

208
00:17:03,390 --> 00:17:01,570
on a Dewey's trajectory one minute 50

209
00:17:04,559 --> 00:17:03,400
seconds into the flight 15 seconds away

210
00:17:06,449 --> 00:17:04,569
from solid rocket booster separation

211
00:17:24,970 --> 00:17:06,459
that will be confirmed by the booster

212
00:17:29,590 --> 00:17:27,730
endeavor now 155 thousand feet in

213
00:17:31,690 --> 00:17:29,600

altitude more than 26 and a half miles

214

00:17:32,850 --> 00:17:31,700

downrange booster officer confirms a

215

00:17:41,320 --> 00:17:32,860

good solid rocket booster separation

216

00:17:43,210 --> 00:17:41,330

endeavour performance nominal spacecraft

217

00:17:44,800 --> 00:17:43,220

communicator Eileen Collins indicating a

218

00:17:59,460 --> 00:17:44,810

perfect vibe this morning on the solid