



1
00:00:36,070 --> 00:00:34,000
good afternoon from the Kennedy Space

2
00:00:38,830 --> 00:00:36,080
Center in Florida this is space shuttle

3
00:00:40,210 --> 00:00:38,840
Endeavour launch control the countdown

4
00:00:42,939 --> 00:00:40,220
for launch of space shuttle Endeavour

5
00:00:45,610 --> 00:00:42,949
tonight on mission STS 89 is continuing

6
00:00:49,930 --> 00:00:45,620
on schedule launch is scheduled to occur

7
00:00:51,400 --> 00:00:49,940
at about 948 p.m. Eastern Time and we

8
00:00:55,509 --> 00:00:51,410
are currently at a scheduled hold at

9
00:00:57,610 --> 00:00:55,519
t-minus 3 hours work at launch pad 39a

10
00:01:00,600 --> 00:00:57,620
as well as operations here in the firing

11
00:01:03,160 --> 00:01:00,610
room are continuing as planned

12
00:01:05,710 --> 00:01:03,170
this is endeavours first mission to dock

13
00:01:07,480 --> 00:01:05,720

with Russia's space station Mir the

14

00:01:09,460 --> 00:01:07,490

previous seven docking missions were all

15

00:01:12,550 --> 00:01:09,470

successfully done with the orbiter

16

00:01:14,380 --> 00:01:12,560

Atlantis with an on-time launch docking

17

00:01:16,660 --> 00:01:14,390

of endeavour with Mir is set to occur at

18

00:01:26,160 --> 00:01:16,670

about 3 p.m. Eastern Time on Saturday

19

00:01:31,530 --> 00:01:28,770

and we're with live pictures now from

20

00:01:33,570 --> 00:01:31,540

the crew quarters and the operations

21

00:01:35,390 --> 00:01:33,580

check-out building as our seven

22

00:01:39,020 --> 00:01:35,400

astronauts are seated for their

23

00:01:44,850 --> 00:01:39,030

traditional meal prior to launch

24

00:01:46,530 --> 00:01:44,860

sharapov as mission specialists as well

25

00:01:48,540 --> 00:01:46,540

as we just saw mission specialist James

26
00:01:50,940 --> 00:01:48,550
Riley here is Vani Dunbar who is

27
00:01:53,310 --> 00:01:50,950
preparing for her fifth flight into

28
00:01:55,999 --> 00:01:53,320
space today she is the most experienced

29
00:01:59,460 --> 00:01:56,009
astronaut of all the crew members today

30
00:02:03,240 --> 00:01:59,470
which are commanded by Terry Wolcott who

31
00:02:06,210 --> 00:02:03,250
will be leading this crew of seven Andy

32
00:02:12,509 --> 00:02:06,220
Thomas will be remaining on Mir for four

33
00:02:14,070 --> 00:02:12,519
months Michael Anderson and pilot Joe

34
00:02:17,550 --> 00:02:14,080
Edwards are preparing for their first

35
00:02:19,410 --> 00:02:17,560
flights into space today everybody looks

36
00:02:21,690 --> 00:02:19,420
like they're wide awake they have been

37
00:02:24,060 --> 00:02:21,700
in fact awake since about nine o'clock

38
00:02:26,370 --> 00:02:24,070

this morning they've had two meals since

39

00:02:28,470 --> 00:02:26,380

that time and this is a simply a snack

40

00:02:30,569 --> 00:02:28,480

that they will have before they make

41

00:02:34,860 --> 00:02:30,579

final preparations to board the orbiter

42

00:02:38,789 --> 00:02:34,870

Endeavour and then launch tonight at our

43

00:02:41,370 --> 00:02:38,799

preferred launch time of 948 p.m. at the

44

00:02:44,220 --> 00:02:41,380

shuttle pad the final inspection team is

45

00:02:47,580 --> 00:02:44,230

continue are continuing their operations

46

00:02:50,460 --> 00:02:47,590

to make final inspections of the orbiter

47

00:02:53,910 --> 00:02:50,470

as well as to look for any potential

48

00:02:55,620 --> 00:02:53,920

debris items that may be on the pad

49

00:02:57,900 --> 00:02:55,630

surface or on any of the number of

50

00:03:00,150 --> 00:02:57,910

walkways that go run up and down the

51
00:03:04,530 --> 00:03:00,160
full length of the vehicle they'll also

52
00:03:06,630 --> 00:03:04,540
be looking for any build ups of ice or

53
00:03:12,569 --> 00:03:06,640
frost on the external tank following the

54
00:03:18,080 --> 00:03:12,579
loading of the cryogenic reactants and

55
00:03:20,479 --> 00:03:18,090
we have now moved to live TV of our

56
00:03:23,009 --> 00:03:20,489
astronauts that are being suited up

57
00:03:27,270 --> 00:03:23,019
they've just completed their weather

58
00:03:28,740 --> 00:03:27,280
briefing and are making an effort to get

59
00:03:31,880 --> 00:03:28,750
a little bit ahead of schedule so they

60
00:03:34,050 --> 00:03:31,890
have moved on into the suit up room a

61
00:03:36,840 --> 00:03:34,060
commander Terry will cut of course being

62
00:03:41,320 --> 00:03:40,120
commander of this mission is dead again

63
00:03:44,290 --> 00:03:41,330

received his weather briefing just

64

00:03:46,060 --> 00:03:44,300

moments ago and was told that we will

65

00:03:47,440 --> 00:03:46,070

proceed with our activities tonight that

66

00:03:53,170 --> 00:03:47,450

there are no technical issues that we're

67

00:03:55,120 --> 00:03:53,180

dealing with Boni Dunbar who was

68

00:03:55,540 --> 00:03:55,130

preparing to make her fifth flight into

69

00:04:00,160 --> 00:03:55,550

space

70

00:04:02,860 --> 00:04:00,170

tonight is also making final

71

00:04:08,890 --> 00:04:02,870

preparations to ensure that her suit is

72

00:04:12,220 --> 00:04:08,900

tight and snug Joe Edwards of course

73

00:04:14,320 --> 00:04:12,230

seen he is the pilot of this crew and he

74

00:04:17,140 --> 00:04:14,330

is preparing for his first flight into

75

00:04:19,240 --> 00:04:17,150

space and we have seated here Michael

76

00:04:26,140 --> 00:04:19,250

Anderson again also making his first

77

00:04:27,580 --> 00:04:26,150

flight into space Jim Riley also making

78

00:04:30,810 --> 00:04:27,590

his first flight into space he is

79

00:04:34,600 --> 00:04:30,820

designated mission specialist number one

80

00:04:36,460 --> 00:04:34,610

and he is saying hello to his friends

81

00:04:38,410 --> 00:04:36,470

and family who may be watching or who

82

00:04:40,780 --> 00:04:38,420

have actually come to the space center

83

00:04:44,020 --> 00:04:40,790

to watch his launch tonight Salazar

84

00:04:47,800 --> 00:04:44,030

sharapov is a graduate from the Moscow

85

00:04:49,510 --> 00:04:47,810

State University he was also a pilot

86

00:04:52,210 --> 00:04:49,520

instructor in the Russian Air Force and

87

00:04:53,680 --> 00:04:52,220

he was been training at the Gagarin

88

00:04:56,409 --> 00:04:53,690

cosmonaut training center to be an

89

00:05:01,240 --> 00:04:56,419

astronaut or a cosmonaut candidate since

90

00:05:02,980 --> 00:05:01,250

1990 Andy Thomas will be making his

91

00:05:04,720 --> 00:05:02,990

second trip aboard the shuttle but this

92

00:05:07,150 --> 00:05:04,730

will be his first time to visit the

93

00:05:10,030 --> 00:05:07,160

space station Mir which will be his home

94

00:05:11,770 --> 00:05:10,040

for the next four months he will replace

95

00:05:13,470 --> 00:05:11,780

astronaut Dave Wolfe who has been on Mir

96

00:05:16,300 --> 00:05:13,480

September

97

00:05:25,170 --> 00:05:16,310

Thomas is scheduled to be the seventh

98

00:05:29,730 --> 00:05:27,360

and at this time we do have live shots

99

00:05:32,250 --> 00:05:29,740

from the third floor of the operations

100

00:05:34,380 --> 00:05:32,260

and check-out building as the crew exit

101
00:05:36,030 --> 00:05:34,390
their crew quarters and make their way

102
00:05:38,070 --> 00:05:36,040
down the hallway toward the elevator

103
00:05:41,160 --> 00:05:38,080
which will take them out to the

104
00:05:43,110 --> 00:05:41,170
astronaut van which will then take them

105
00:05:45,330 --> 00:05:43,120
out to the pad and they're being greeted

106
00:05:47,850 --> 00:05:45,340
by well-wishers and supporters employees

107
00:05:49,380 --> 00:05:47,860
at the Kennedy Space Center who like to

108
00:05:51,570 --> 00:05:49,390
get a last glimpse of the crew before

109
00:05:54,630 --> 00:05:51,580
they head off into space spending the

110
00:05:58,010 --> 00:05:54,640
next nine days in orbit five of those

111
00:06:00,270 --> 00:05:58,020
days a doctor with the MIR Space Station

112
00:06:01,800 --> 00:06:00,280
and the astronauts coming out of the

113
00:06:05,120 --> 00:06:01,810

quarters right now

114

00:06:07,920 --> 00:06:05,130

as they are being led by their commander

115

00:06:10,580 --> 00:06:07,930

Terry Wolcott followed by pilot Joe

116

00:06:14,750 --> 00:06:10,590

Edwards mission specialist bonny Dunbar

117

00:07:13,590 --> 00:06:14,760

Michael Anderson Salle's on sharp off

118

00:07:20,050 --> 00:07:15,850

and this is a view from the white room

119

00:07:22,330 --> 00:07:20,060

as our commander Terry will cut is

120

00:07:24,070 --> 00:07:22,340

making final preparations to enter the

121

00:07:25,990 --> 00:07:24,080

orbiter he is he will be the first to

122

00:07:28,870 --> 00:07:26,000

enter the vehicle so that he can begin

123

00:07:30,970 --> 00:07:28,880

the enormous task of making sure that

124

00:07:39,190 --> 00:07:30,980

everything is set up and ready to go for

125

00:07:43,990 --> 00:07:41,380

mission specialist Andy Tom Thomas

126

00:07:46,990 --> 00:07:44,000

making his second trip aboard the

127

00:07:49,540 --> 00:07:47,000

shuttle again he will remain on Mir for

128

00:07:51,280 --> 00:07:49,550

the next four months replacing astronaut

129

00:07:52,980 --> 00:07:51,290

Dave wolf who has been on board Mir

130

00:07:55,510 --> 00:07:52,990

since September

131

00:08:03,370 --> 00:07:55,520

Thomas will become the seventh and final

132

00:08:06,550 --> 00:08:03,380

astronaut to live aboard mir pilot joe

133

00:08:08,650 --> 00:08:06,560

edwards has just now crawled into the

134

00:08:11,590 --> 00:08:08,660

orbiter and he will be followed by

135

00:08:13,300 --> 00:08:11,600

mission specialists Bonnie Dunbar the

136

00:08:15,280 --> 00:08:13,310

most experienced astronaut in this

137

00:08:29,650 --> 00:08:15,290

flight having gone into space four times

138

00:08:35,930 --> 00:08:33,079

PFF okay good

139

00:08:39,459 --> 00:08:35,940

I think at 5:44 okay I'll put my foot in

140

00:08:47,380 --> 00:08:41,089

all right sorry

141

00:09:07,160 --> 00:08:47,390

OTC fire sword that's my 54 in your cape

142

00:09:21,269 --> 00:09:11,249

okay sweetie update contact the LPS OTC

143

00:09:23,160 --> 00:09:21,279

I got you loud and clear how many I

144

00:09:26,119 --> 00:09:23,170

wonder if I active on aircraft one had

145

00:09:29,660 --> 00:09:26,129

bought it at e3 2008 verify logically

146

00:09:33,150 --> 00:09:29,670

cd80 diversify loud click you get that

147

00:09:36,660 --> 00:09:33,160

log play activity affects allowable

148

00:09:39,179 --> 00:09:36,670

clear Dave King is being introduced

149

00:09:40,769 --> 00:09:39,189

today as the new launch director it can

150

00:09:43,139 --> 00:09:40,779

be space enter he is only the third

151
00:09:46,079 --> 00:09:43,149
launch director to keep his head since

152
00:09:46,740 --> 00:09:46,089
we had returned to flight of the space

153
00:09:50,670 --> 00:09:46,750
shuttle

154
00:09:52,980 --> 00:09:50,680
King began his career with NASA in 1983

155
00:09:55,259 --> 00:09:52,990
as a main propulsion engineer he later

156
00:09:57,269 --> 00:09:55,269
served as flow director for the orbiter

157
00:09:59,340 --> 00:09:57,279
discovery and as the acting deputy

158
00:10:07,019 --> 00:09:59,350
director of the installation Operations

159
00:10:09,030 --> 00:10:07,029
Directorate say Terry looks like

160
00:10:10,379 --> 00:10:09,040
weather's good looks like we got a good

161
00:10:12,119 --> 00:10:10,389
vehicle and we're gonna try to get you

162
00:10:14,429 --> 00:10:12,129
out of town tonight and now be looking

163
00:10:23,280 --> 00:10:14,439

forward to seeing you back here and 9 to

164

00:10:25,829 --> 00:10:23,290

10 days thanks to your workforce here at

165

00:10:27,269 --> 00:10:25,839

KSC and all the honorees that are down

166

00:10:33,660 --> 00:10:27,279

here for this fish by the way this

167

00:10:35,160 --> 00:10:33,670

launches and we have orbiter access arm

168

00:10:35,600 --> 00:10:35,170

now being retracted away from the

169

00:10:39,600 --> 00:10:35,610

vehicle

170

00:10:58,560 --> 00:10:39,610

this arm can be returned to position

171

00:11:05,760 --> 00:11:01,830

Oh TCC LCAP starts completment 3:30

172

00:11:07,890 --> 00:11:05,770

thank you and final error surface checks

173

00:11:09,600 --> 00:11:07,900

of the orbiters a lavon's as well as the

174

00:11:12,060 --> 00:11:09,610

rudder or being completed at this time

175

00:11:16,350 --> 00:11:12,070

this verifies the orbiters hydraulic

176
00:11:17,940 --> 00:11:16,360
systems and the three main engines are

177
00:11:21,860 --> 00:11:17,950
being gimbal for a final test before

178
00:11:26,820 --> 00:11:24,269
and we're standing by for the retraction

179
00:11:28,440 --> 00:11:26,830
of the gaseous oxygen get hood away from

180
00:11:31,380 --> 00:11:28,450
the external tank and it is being

181
00:11:33,510 --> 00:11:31,390
retracted at this time inside the bronze

182
00:11:35,519 --> 00:11:33,520
color tank is about 500,000 gallons of

183
00:12:01,160 --> 00:11:35,529
super cold liquid fuels that run on the

184
00:12:11,640 --> 00:12:06,660
nine eight seven six we have a dope star

185
00:12:13,740 --> 00:12:11,650
four three two one we have booster

186
00:12:15,570 --> 00:12:13,750
ignition and liftoff of the space

187
00:12:25,100 --> 00:12:15,580
shuttle Endeavour continuing the union

188
00:12:30,990 --> 00:12:29,220

Roger roll endeavour Houston is now

189

00:12:33,540 --> 00:12:31,000

controlling the roll maneuver is

190

00:12:34,860 --> 00:12:33,550

complete endeavours now it's down Lena's

191

00:12:43,560 --> 00:12:34,870

level position headed to a rendezvous

192

00:12:53,960 --> 00:12:45,810

thirty seconds into flight endeavour now

193

00:12:58,050 --> 00:12:55,769

endeavours engines are now throttling

194

00:13:03,300 --> 00:12:58,060

down to sixty-seven percent of rated

195

00:13:05,040 --> 00:13:03,310

thrust endeavours now passing through

196

00:13:06,860 --> 00:13:05,050

the area of maximum aerodynamic pressure

197

00:13:09,019 --> 00:13:06,870

on the vehicle in the lower atmosphere

198

00:13:11,639 --> 00:13:09,029

downrange from the Kennedy Space Center

199

00:13:26,150 --> 00:13:11,649

2.3 miles travelling into speed of just

200

00:13:35,970 --> 00:13:34,650

and every houston go at throttle up one

201
00:13:37,830 --> 00:13:35,980
minute 19 seconds into the flight

202
00:13:39,960 --> 00:13:37,840
endeavors three liquid-fueled engines

203
00:13:42,120 --> 00:13:39,970
are now back at full throttle 104

204
00:13:43,380 --> 00:13:42,130
percent of rated thrust endeavour

205
00:13:45,420 --> 00:13:43,390
downrange from the Kennedy Space Center

206
00:13:47,820 --> 00:13:45,430
a distance of about ten and a half miles

207
00:13:50,880 --> 00:13:47,830
traveling at the speed of about 2,000

208
00:14:22,450 --> 00:13:50,890
miles per hour just about seven minutes

209
00:14:25,900 --> 00:14:24,370
two minutes nine seconds into the flight

210
00:14:27,780 --> 00:14:25,910
to the booster officer confirms good

211
00:14:29,950 --> 00:14:27,790
separation of the solid rocket boosters

212
00:14:31,420 --> 00:14:29,960
and never now downrange from the Kennedy

213
00:14:33,730 --> 00:14:31,430

Space Center at a distance of about

214

00:14:43,090 --> 00:14:33,740

thirty eight miles and performance

215

00:14:50,920 --> 00:14:43,100

nominal endeavour Houston two engine

216

00:14:53,050 --> 00:14:50,930

town two minutes 35 seconds into the

217

00:14:55,090 --> 00:14:53,060

flight and diverse performance has been

218

00:14:57,100 --> 00:14:55,100

as expected and in the event of a single

219

00:14:58,630 --> 00:14:57,110

engine failure endeavour could now reach

220

00:15:02,560 --> 00:14:58,640

the transatlantic landing site at

221

00:15:04,450 --> 00:15:02,570

Zaragoza Spain telemetry still

222

00:15:06,430 --> 00:15:04,460

continuing to indicate that all three