



1
00:00:37,470 --> 00:00:34,860
the countdown for launch of space

2
00:00:40,560 --> 00:00:37,480
shuttle Columbia on mission STS 75 is

3
00:00:43,350 --> 00:00:40,570
continuing on schedule today the window

4
00:00:46,380 --> 00:00:43,360
for launch of Columbia opens at 3:18

5
00:00:50,250 --> 00:00:46,390
p.m. Eastern Time and extends for two

6
00:00:52,590 --> 00:00:50,260
and a half hours work at launch pad 39b

7
00:00:54,229 --> 00:00:52,600
as well as operations here in firing

8
00:00:57,180 --> 00:00:54,239
room 1 at the launch control center

9
00:00:58,979 --> 00:00:57,190
continues as planned no technical issues

10
00:01:00,479 --> 00:00:58,989
or problems are being worked or

11
00:01:02,729 --> 00:01:00,489
discussed at this time and we do

12
00:01:04,410 --> 00:01:02,739
anticipate an on-time liftoff of the

13
00:01:39,069 --> 00:01:04,420

shuttle Columbia and the seven-member

14

00:01:43,359 --> 00:01:41,420

everything continues to go well with the

15

00:01:46,219 --> 00:01:43,369

countdown the crew is on schedule

16

00:01:49,609 --> 00:01:46,229

exactly on schedule to be taking out to

17

00:01:51,380 --> 00:01:49,619

the pad they'll be suited up in the next

18

00:01:59,749 --> 00:01:51,390

few moments after they complete their

19

00:02:01,700 --> 00:01:59,759

meal the crew has just completed a

20

00:02:03,260 --> 00:02:01,710

briefing on the weather conditions here

21

00:02:08,020 --> 00:02:03,270

at Kennedy Space Center as well as at

22

00:02:13,660 --> 00:02:11,240

again we do have live TV of our crew

23

00:02:16,759 --> 00:02:13,670

being suited up for flight today

24

00:02:21,380 --> 00:02:16,769

starting with mission commander Andy

25

00:02:23,870 --> 00:02:21,390

Allen who his pilot is Scott Horowitz

26
00:02:27,470 --> 00:02:23,880
who is a lieutenant colonel in the US

27
00:02:32,949 --> 00:02:27,480
Air Force doc Horowitz as he is referred

28
00:02:38,330 --> 00:02:35,350
standing on the left is claude nicollier

29
00:02:42,410 --> 00:02:38,340
he is on his third flight today he is a

30
00:02:44,270 --> 00:02:42,420
European Space Agency astronaut again he

31
00:02:46,430 --> 00:02:44,280
is standing next to and discussing the

32
00:02:52,750 --> 00:02:46,440
mission with payload specialist Umberto

33
00:02:58,280 --> 00:02:55,069
Jeff Hoffman doesn't have his helmet on

34
00:03:01,789 --> 00:02:58,290
yet easily identifiable with his a broad

35
00:03:03,650 --> 00:03:01,799
smile Jeff is on his fifth flight today

36
00:03:05,990 --> 00:03:03,660
he's flown four times previously holds a

37
00:03:07,190 --> 00:03:06,000
doctorate degree in astrophysics and has

38
00:03:12,630 --> 00:03:07,200

been working on the tethered satellite

39

00:03:18,180 --> 00:03:16,170

mauricio Kelly is a astronaut from the

40

00:03:20,309 --> 00:03:18,190

European Space Agency and a lieutenant

41

00:03:25,620 --> 00:03:20,319

colonel in the Italian Air Force this is

42

00:03:29,160 --> 00:03:25,630

his first flight another one of our very

43

00:03:30,720 --> 00:03:29,170

veteran fliers as Franklin chang-diaz he

44

00:03:31,380 --> 00:03:30,730

has flown four times this will be his

45

00:03:33,150 --> 00:03:31,390

fifth flight

46

00:03:42,479 --> 00:03:33,160

he is the payload commander for this

47

00:03:45,210 --> 00:03:42,489

mission and the commander and Andy Allen

48

00:03:49,140 --> 00:03:45,220

has emerged from the building followed

49

00:03:56,100 --> 00:03:49,150

by those pilots Pat Horowitz and payload

50

00:03:58,680 --> 00:03:56,110

commander from chang-diaz mission we see

51
00:04:35,709 --> 00:03:58,690
Oh Kelly and payload specialist Umberto

52
00:04:47,470 --> 00:04:38,559
do I hear 30 cm ago 232 you and

53
00:04:51,000 --> 00:04:49,150
and they final test of the flight

54
00:04:53,530 --> 00:04:51,010
control services will soon be conducted

55
00:04:55,060 --> 00:04:53,540
this is a program pattern of movements

56
00:04:56,710 --> 00:04:55,070
designed to verify the readiness for

57
00:05:12,010 --> 00:04:56,720
launch of the engines and other flight

58
00:05:15,430 --> 00:05:13,840
the final error surface checks of the

59
00:05:17,650 --> 00:05:15,440
warbirds flaps and weather are being

60
00:05:25,090 --> 00:05:17,660
completed this verifies all of those

61
00:05:25,100 --> 00:06:03,150
and the engines are being

62
00:06:07,150 --> 00:06:05,170
and we have a go for autosequence start

63
00:06:08,860 --> 00:06:07,160

Colombia's onboard computers have

64

00:06:16,240 --> 00:06:08,870

primary control of all the vehicles

65

00:06:34,040 --> 00:06:19,970

t-minus 15 seconds

66

00:06:36,380 --> 00:06:34,050

t-minus 12 11 to 1 and we have liftoff

67

00:06:38,210 --> 00:06:36,390

of the space shuttle Columbia continuing

68

00:06:48,240 --> 00:06:38,220

space research through tether satellite

69

00:06:53,920 --> 00:06:52,570

Columbia Houston now controlling I'll be

70

00:07:02,159 --> 00:06:53,930

rolling on course for a twenty eight

71

00:07:14,909 --> 00:07:08,650

Rajasthan by some beware Shan good

72

00:07:19,899 --> 00:07:18,519

they call with that all engines

73

00:07:21,339 --> 00:07:19,909

operating well onboard Columbia

74

00:07:22,809 --> 00:07:21,349

Columbia's engines now throttling down

75

00:07:24,309 --> 00:07:22,819

to two thirds total to prepare the

76

00:07:50,879 --> 00:07:24,319

spacecraft to pass through the area of

77

00:07:54,790 --> 00:07:52,839

booster officer confirms a good

78

00:07:56,499 --> 00:07:54,800

separation of the twin side rockets

79

00:07:57,879 --> 00:07:56,509

lumpy now in its second stage main

80

00:08:00,999 --> 00:07:57,889

engines three main engines again

81

00:08:10,839 --> 00:08:01,009

operating well at full throttle Columbia

82

00:08:12,670 --> 00:08:10,849

performance nominal six minutes till

83

00:08:22,089 --> 00:08:12,680

cut-off of the main engines Columbia's

84

00:08:26,129 --> 00:08:22,099

altitude now 33 nautical miles Columbia

85

00:08:28,330 --> 00:08:26,139

speed now 6,200 miles per hour

86

00:08:31,170 --> 00:08:28,340

Columbia's trajectory will level off at

87

00:08:33,730 --> 00:08:31,180

this point as it accelerates to the East

88

00:08:36,069 --> 00:08:33,740

almost tripling its current speed to

89

00:08:43,899 --> 00:08:36,079

reach the 17,000 400 miles per hour

90

00:08:45,819 --> 00:08:43,909

required for orbit we're just now

91

00:08:47,350 --> 00:08:45,829

receiving live television from

92

00:08:49,840 --> 00:08:47,360

Columbia's it passes almost directly

93

00:08:51,340 --> 00:08:49,850

overhead the Houston area this

94

00:08:53,199 --> 00:08:51,350

television through the Merritt Island

95

00:08:55,689 --> 00:08:53,209

tracking station located near the

96

00:08:57,250 --> 00:08:55,699

Kennedy Space Center in Florida onboard

97

00:08:58,689 --> 00:08:57,260

all activities continue to go smoothly

98

00:09:00,850 --> 00:08:58,699

for the crew they've opened the payload

99

00:09:02,380 --> 00:09:00,860

bay doors in just about 10 minutes ago

100

00:09:04,420 --> 00:09:02,390

or so they were given a go for orbit

101

00:09:07,360 --> 00:09:04,430

operations so that go the indication

102

00:09:08,590 --> 00:09:07,370

that they can be prepared to stay in

103

00:09:11,710 --> 00:09:08,600

orbit for an extended period of time

104

00:09:48,730 --> 00:09:11,720

currently on track have for their 14-day

105

00:09:48,740 --> 00:09:59,190

Columbia Houston

106

00:10:04,510 --> 00:10:02,500

yeah and it just given you a heads up

107

00:10:05,980 --> 00:10:04,520

that you have a go to configure for

108

00:10:39,610 --> 00:10:05,990

Bernier's and then you can go to

109

00:10:43,930 --> 00:10:42,250

we are standing by to receive live

110

00:10:46,240 --> 00:10:43,940

television of the astronauts in the

111

00:10:49,210 --> 00:10:46,250

operations and check-out building at

112

00:10:55,210 --> 00:10:49,220

Kennedy Space Center as they are seated

113

00:10:57,640 --> 00:10:55,220

for their breakfast and here we have

114

00:11:01,150 --> 00:10:57,650

live TV of the crew the crew are divided

115

00:11:02,560 --> 00:11:01,160

into three shifts for this mission so

116

00:11:03,850 --> 00:11:02,570

for this last meal before launch they

117

00:11:07,660 --> 00:11:03,860

are eating either breakfast lunch or

118

00:11:09,880 --> 00:11:07,670

dinner depending on what sleep cycle

119

00:11:10,840 --> 00:11:09,890

they are on this has been set up to

120

00:11:12,579 --> 00:11:10,850

accommodate the round-the-clock

121

00:11:18,820 --> 00:11:12,589

operations of the various experiment

122

00:11:22,600 --> 00:11:18,830

packages on board the shuttle Maurizio

123

00:11:24,220 --> 00:11:22,610

Kelly is from the European Space Agency

124

00:11:27,400 --> 00:11:24,230

he'll be making his first trip into

125

00:11:29,940 --> 00:11:27,410

space today and to the right is a

126

00:11:36,629 --> 00:11:29,950

veteran space flier Franklin chang-diaz

127

00:11:44,039 --> 00:11:39,419

Scott Horowitz or doc Horowitz is a

128

00:11:45,629 --> 00:11:44,049

lieutenant colonel in the Air Force he's

129

00:11:48,569 --> 00:11:45,639

preparing for his first flight and

130

00:11:50,639 --> 00:11:48,579

commander Andy Allen a lieutenant

131

00:11:54,410 --> 00:11:50,649

colonel nd Marine Corps is preparing for

132

00:12:00,600 --> 00:11:57,900

mission specialist Jeffrey Hoffman also

133

00:12:05,329 --> 00:12:00,610

a very experienced space flier preparing

134

00:12:11,479 --> 00:12:08,100

and rounding out the seven-member crew

135

00:12:13,919 --> 00:12:11,489

was on the Left we have claude nicollier

136

00:12:17,549 --> 00:12:13,929

who was making his third flight in space

137

00:12:35,600 --> 00:12:17,559

as well as umberto guido nee who was

138

00:12:39,890 --> 00:12:37,920

everything continues to go well with the

139

00:12:42,750 --> 00:12:39,900

countdown the crew is on schedule

140

00:12:46,140 --> 00:12:42,760

exactly on schedule to be taking out to

141

00:12:47,910 --> 00:12:46,150

the pad they'll be suited up in the next

142

00:12:51,690 --> 00:12:47,920

few moments after they complete their

143

00:12:53,850 --> 00:12:51,700

meal after suit up of course they will

144

00:12:55,350 --> 00:12:53,860

then walk out to the pad or out to the

145

00:12:57,510 --> 00:12:55,360

astro van which will carry them out to

146

00:13:00,390 --> 00:12:57,520

the pad that departure for the pad

147

00:13:02,070 --> 00:13:00,400

remains on schedule for just a few

148

00:13:43,920 --> 00:13:02,080

minutes before 12 noon Eastern Time

149

00:13:51,510 --> 00:13:48,160

tanking operations were went without

150

00:13:54,940 --> 00:13:51,520

incident today and all when it's planned

151
00:13:57,370 --> 00:13:54,950
no problems with the tanking will

152
00:14:00,100 --> 00:13:57,380
reported today's lunch will be

153
00:14:02,260 --> 00:14:00,110
Colombia's 19th flight and the 75th

154
00:14:52,620 --> 00:14:02,270
shuttle flight overall and NASA's Space

155
00:14:57,100 --> 00:14:54,880
this is shuttle launch control at

156
00:14:59,590 --> 00:14:57,110
t-minus 3 hours in holding and we do

157
00:15:03,880 --> 00:14:59,600
have live TV of our crew being suited up

158
00:15:05,380 --> 00:15:03,890
for flight today starting with mission

159
00:15:08,740 --> 00:15:05,390
commander Andy Allen who was on his

160
00:15:12,220 --> 00:15:08,750
third spaceflight today served as pilot

161
00:15:14,680 --> 00:15:12,230
for both STS 62 and 46 the first flight

162
00:15:17,770 --> 00:15:14,690
of the tether satellite he has a major

163
00:15:20,440 --> 00:15:17,780

in marine core and has more than 4,000

164

00:15:26,740 --> 00:15:20,450

hours of flight time in over 30 types of

165

00:15:28,960 --> 00:15:26,750

aircraft commander Allen was born in

166

00:15:31,060 --> 00:15:28,970

Philadelphia Pennsylvania he's a

167

00:15:39,340 --> 00:15:31,070

graduate of the u.s. naval test pilot

168

00:15:41,140 --> 00:15:39,350

school his pilot is Scott Horowitz who

169

00:15:47,650 --> 00:15:41,150

is a lieutenant colonel in the US Air

170

00:15:51,610 --> 00:15:47,660

Force doc Horowitz as he is referred to

171

00:15:53,650 --> 00:15:51,620

is on his first shuttle mission again he

172

00:16:00,850 --> 00:15:53,660

is a in the Air Force holds a doctorate

173

00:16:04,290 --> 00:16:00,860

degree in aerospace engineering moving

174

00:16:07,120 --> 00:16:04,300

on around the room we have two of our

175

00:16:09,640 --> 00:16:07,130

well we have our payload specialist - as

176

00:16:16,480 --> 00:16:09,650

Imbert Doug Wead we don't he who is with

177

00:16:18,430 --> 00:16:16,490

the Italian space agency Umberto is an

178

00:16:21,070 --> 00:16:18,440

Italian space agency astronaut and a

179

00:16:24,160 --> 00:16:21,080

researcher for the Italian space physics

180

00:16:26,560 --> 00:16:24,170

Institute he is standing well he was

181

00:16:31,240 --> 00:16:26,570

standing next to one of our other

182

00:16:32,860 --> 00:16:31,250

payload specialists suit up technicians

183

00:16:34,090 --> 00:16:32,870

are assisting the crew and getting their

184

00:16:36,360 --> 00:16:34,100

suits on of course when they have their

185

00:16:39,460 --> 00:16:36,370

helmets on with the dark visors

186

00:16:41,530 --> 00:16:39,470

impossible to tell who they are in this

187

00:16:44,410 --> 00:16:41,540

case Jeff Hoffman doesn't have his

188

00:16:48,430 --> 00:16:44,420

helmet on yet easily identifiable with

189

00:16:53,170 --> 00:16:48,440

his broad smile he was born in Brooklyn

190

00:16:54,940 --> 00:16:53,180

grew up in Scarsdale New York Jeff is on

191

00:16:56,380 --> 00:16:54,950

his fifth flight today he's flown four

192

00:16:58,600 --> 00:16:56,390

times previously holds a doctorate

193

00:16:59,620 --> 00:16:58,610

degree in astrophysics and has been

194

00:17:10,889 --> 00:16:59,630

working on the tethered satellite

195

00:17:16,600 --> 00:17:14,619

mauricio Kelly is a astronaut from the

196

00:17:18,730 --> 00:17:16,610

European Space Agency and a lieutenant

197

00:17:20,889 --> 00:17:18,740

colonel in the Italian Air Force this is

198

00:17:27,990 --> 00:17:20,899

his first flight he has flown over 2200

199

00:17:32,950 --> 00:17:30,639

these suits are capable of being

200

00:17:35,860 --> 00:17:32,960

partially inflated to provide added

201
00:17:39,960 --> 00:17:35,870
comfort and protection during launch and

202
00:17:42,789 --> 00:17:39,970
landing operations of the space shuttle

203
00:17:45,039 --> 00:17:42,799
another one of our very veteran fliers

204
00:17:46,810 --> 00:17:45,049
as Franklin chang-diaz he has flown five

205
00:17:49,060 --> 00:17:46,820
times or excuse me he has flown four

206
00:17:50,230 --> 00:17:49,070
times this will be his fifth flight he

207
00:17:52,360 --> 00:17:50,240
is the payload commander for this

208
00:17:54,999 --> 00:17:52,370
mission he holds a doctorate degree and

209
00:17:56,590 --> 00:17:55,009
applied plasma physics and as director

210
00:17:58,749 --> 00:17:56,600
of the advanced space propulsion

211
00:18:08,600 --> 00:17:58,759
laboratory at the University of Houston

212
00:18:13,980 --> 00:18:11,010
standing on the left is claude nicollier

213
00:18:16,740 --> 00:18:13,990

he is on his third flight today he is a

214

00:18:21,150 --> 00:18:16,750

European Space Agency astronaut who has

215

00:18:22,790 --> 00:18:21,160

flown on both sts-61 and STS 46 he is a

216

00:18:26,090 --> 00:18:22,800

captain and the Swiss Air Force and

217

00:18:28,410 --> 00:18:26,100

holds a master's degree in astrophysics

218

00:18:29,880 --> 00:18:28,420

again he is standing next to and

219

00:18:32,580 --> 00:18:29,890

discussing the mission with payload

220

00:18:51,000 --> 00:18:32,590

specialist Umberto Guido knee of the

221

00:18:55,660 --> 00:18:53,200

this is shuttle launch control at

222

00:18:58,810 --> 00:18:55,670

t-minus three hours and holding and we

223

00:19:00,010 --> 00:18:58,820

do have live television of our flight

224

00:19:01,450 --> 00:19:00,020

crew on the third floor of the

225

00:19:04,510 --> 00:19:01,460

operations check-out building just

226
00:19:06,460 --> 00:19:04,520
departing their suit up room and making

227
00:19:09,669 --> 00:19:06,470
their way toward the elevator which will

228
00:19:11,049 --> 00:19:09,679
take them to the base of the room there

229
00:19:14,340 --> 00:19:11,059
is a wide range of interest on this

230
00:19:16,299 --> 00:19:14,350
mission and its international crew

231
00:19:18,190 --> 00:19:16,309
workers at Kennedy Space Center of

232
00:19:29,850 --> 00:19:18,200
course are all anxious to see this one

233
00:19:34,750 --> 00:19:32,410
all events in today's launch countdown

234
00:19:37,780 --> 00:19:34,760
continue to proceed without any problems

235
00:19:39,430 --> 00:19:37,790
we're standing by for the crew to exit

236
00:19:41,470 --> 00:19:39,440
their crew quarters exit the operations

237
00:19:44,560 --> 00:19:41,480
to check out building in KSC's

238
00:19:47,440 --> 00:19:44,570

industrial area they will be entering

239

00:19:49,740 --> 00:19:47,450

this astronaut van which will then take

240

00:19:55,330 --> 00:19:49,750

them on their 25 minute drive out to

241

00:19:59,060 --> 00:19:55,340

launch pad 39b on the eastern coast of

242

00:20:04,010 --> 00:20:01,690

and the commander and Andy Allen has

243

00:20:08,270 --> 00:20:04,020

emerged from the building followed by

244

00:20:15,590 --> 00:20:08,280

his pilot Scott Horlicks and commander

245

00:20:26,140 --> 00:20:15,600

I'm saying he is Moishe okay Lee and

246

00:20:30,650 --> 00:20:28,460

riding along with the crew in the

247

00:20:32,690 --> 00:20:30,660

astronaut van our members of the flight

248

00:20:34,580 --> 00:20:32,700

crew office and other astronauts who

249

00:20:37,790 --> 00:20:34,590

will be performing weather assessment

250

00:20:40,040 --> 00:20:37,800

functions for the launch today astronaut

251
00:20:41,720 --> 00:20:40,050
Robert hoot Gibson will be piloting the

252
00:20:44,270 --> 00:20:41,730
shuttle training aircraft which will be

253
00:21:05,340 --> 00:20:44,280
used for weather reconnaissance prior to

254
00:21:05,350 --> 00:21:10,420
frequently we have support from the

255
00:21:16,060 --> 00:21:13,270
Air Force or from NASA helicopters and

256
00:22:00,990 --> 00:21:16,070
from pilots who also track the crews

257
00:22:06,940 --> 00:22:03,460
we have a view of the flight crew at the

258
00:22:08,800 --> 00:22:06,950
195-foot level at pad 39b as they are

259
00:22:15,090 --> 00:22:08,810
making their final preparations to enter

260
00:22:18,870 --> 00:22:16,950
the crew for this mission have been at

261
00:22:20,850 --> 00:22:18,880
Kennedy Space Center since Monday

262
00:22:21,749 --> 00:22:20,860
afternoon during their stay here they

263
00:22:23,519 --> 00:22:21,759

have been through the standard

264

00:22:26,009 --> 00:22:23,529

pre-launch activities including flying

265

00:22:28,019 --> 00:22:26,019

the shuttle training aircraft going over

266

00:22:46,660 --> 00:22:28,029

pad procedures and taking part in

267

00:22:51,910 --> 00:22:49,310

currently standing in the white room as

268

00:22:54,500 --> 00:22:51,920

it is called because of obvious

269

00:22:56,450 --> 00:22:54,510

whiteness of the paint we have the

270

00:26:33,890 --> 00:22:56,460

commander of this flight Andy Allen he

271

00:26:40,470 --> 00:26:37,860

we have a good view of the two veteran

272

00:26:43,860 --> 00:26:40,480

fliers jeff hoffman and franklin

273

00:26:45,540 --> 00:26:43,870

chang-diaz on the right both they're

274

00:26:55,700 --> 00:26:45,550

preparing to make their fifth flight

275

00:26:59,850 --> 00:26:55,710

into space today franklin chang-diaz

276

00:27:03,110 --> 00:26:59,860

holding up a sign to his wife Peggy and

277

00:27:07,020 --> 00:27:03,120

his four children Jean Sonya Lydia and

278

00:27:10,290 --> 00:27:07,030

Miranda as he prepares to enter the

279

00:27:12,690 --> 00:27:10,300

space shuttle Columbia for his fifth