

# The Shuttle's Last Flight

AN END. A NEW BEGINNING.



1  
00:00:07,340 --> 00:00:08,341  
Nobody knew where we

2  
00:00:08,341 --> 00:00:09,843  
would be 10 years ago.

3  
00:00:11,578 --> 00:00:12,812  
It got really quiet here

4  
00:00:12,812 --> 00:00:13,780  
at the Kennedy Space Center.

5  
00:00:16,983 --> 00:00:17,784  
But I don't think

6  
00:00:17,784 --> 00:00:19,386  
anyone really could have envisioned

7  
00:00:19,386 --> 00:00:20,353  
where we are today.

8  
00:00:20,353 --> 00:00:21,087  
And liftoff!

9  
00:00:21,087 --> 00:00:22,522  
Liftoff! Liftoff!

10  
00:00:22,822 --> 00:00:26,693  
July 8, 2011

11  
00:00:27,160 --> 00:00:28,261  
Today, weather permitting,

12  
00:00:28,261 --> 00:00:29,896  
Atlantis will display its power

13  
00:00:29,896 --> 00:00:31,831

and spectacle one last time

14

00:00:31,831 --> 00:00:32,832

under the direction of flight

15

00:00:32,832 --> 00:00:34,401

director Richard Jones.

16

00:00:35,001 --> 00:00:36,603

The shuttle was sort of iconic.

17

00:00:37,003 --> 00:00:38,004

You know, there weren't many

18

00:00:38,571 --> 00:00:40,040

spaceships that looked like it.

19

00:00:40,040 --> 00:00:41,941

There weren't any that landed like it.

20

00:00:42,642 --> 00:00:44,544

And I think it had become sort of

21

00:00:44,577 --> 00:00:45,912

so commonplace.

22

00:00:45,912 --> 00:00:47,080

Yeah, you know, the shuttle flies

23

00:00:47,080 --> 00:00:48,114

six times a year.

24

00:00:48,448 --> 00:00:49,349

It has done it ever

25

00:00:49,349 --> 00:00:50,650

since I was a little kid

26

00:00:50,650 --> 00:00:51,951

or even before I was born.

27

00:00:52,619 --> 00:00:54,154

And I think it just became a bit

28

00:00:54,154 --> 00:00:55,588

of a surprise to the world

29

00:00:55,588 --> 00:00:56,790

that, wow, it's it's

30

00:00:56,790 --> 00:00:57,757

not going to fly anymore.

31

00:01:01,061 --> 00:01:03,730

Here's our commander, Chris Ferguson.

32

00:01:04,230 --> 00:01:06,066

He's in the suit up room.

33

00:01:06,066 --> 00:01:08,701

Going over to pilot Doug Hurley.

34

00:01:09,102 --> 00:01:10,470

And here is mission

35

00:01:10,470 --> 00:01:12,605

specialist number one, Sandy Magnus.

36

00:01:12,806 --> 00:01:14,340

This is Rex Walheim.

37

00:01:14,941 --> 00:01:16,843

He's our mission specialist number two.

38

00:01:17,310 --> 00:01:19,779

He's making his third space flight.

39

00:01:19,813 --> 00:01:22,082

He spent more than 24 days in space.

40

00:01:22,382 --> 00:01:23,650

It was a real honor

41

00:01:23,850 --> 00:01:25,985

to be a part of the last shuttle

42

00:01:25,985 --> 00:01:27,554

mission, STS- 135,

43

00:01:28,254 --> 00:01:29,422

because it's such -

44

00:01:29,422 --> 00:01:30,757

it was such an important mission

45

00:01:30,757 --> 00:01:33,526

from the viewpoint of really showcasing

46

00:01:33,960 --> 00:01:35,895

what the shuttle program accomplished

47

00:01:35,929 --> 00:01:37,430

during its so 30 years.

48

00:01:39,165 --> 00:01:40,300

And here they come.

49

00:01:40,733 --> 00:01:41,868

I was looked upon a shuttle

50

00:01:41,868 --> 00:01:44,571

flight is like preparing for Christmas.

51

00:01:44,737 --> 00:01:45,071

You know,

52

00:01:45,738 --> 00:01:47,307

all the work is done ahead of time.

53

00:01:48,274 --> 00:01:49,375

You know, all the shopping

54

00:01:49,375 --> 00:01:50,009

and the cooking.

55

00:01:50,009 --> 00:01:51,311

And that's what the training is like.

56

00:01:51,878 --> 00:01:52,579

You know, when you launch,

57

00:01:52,579 --> 00:01:53,480

it's like Christmas Day.

58

00:01:53,513 --> 00:01:55,248

You get - if you did everything

59

00:01:55,248 --> 00:01:56,583

the right way, preparing for it,

60

00:01:56,649 --> 00:01:57,650

it's it's all fun.

61

00:02:01,454 --> 00:02:03,623

Jones has already polled his team for a

62

00:02:03,623 --> 00:02:06,226

go for launch from a systems perspective,

63

00:02:06,559 --> 00:02:08,828

as has the International Space Station

64

00:02:08,828 --> 00:02:10,363

flight control team led today

65

00:02:10,363 --> 00:02:12,165

by flight director Emily Nelson.

66

00:02:13,199 --> 00:02:15,068

This is an incredibly experienced

67

00:02:15,068 --> 00:02:15,902

and dedicated team

68

00:02:16,236 --> 00:02:17,604

that gets the people on the orbiter.

69

00:02:18,404 --> 00:02:24,744

[music builds]

70

00:02:25,311 --> 00:02:26,779

OK, Fergie, we're starting to feel

71

00:02:26,779 --> 00:02:27,547

pretty good down here

72

00:02:27,547 --> 00:02:28,882

on the ground about this one today.

73

00:02:28,882 --> 00:02:29,883

So on behalf of the

74

00:02:30,683 --> 00:02:31,851

greatest team in the world,

75

00:02:32,418 --> 00:02:33,086

good luck to you

76

00:02:33,086 --> 00:02:34,554

and your crew on the final flight

77

00:02:34,554 --> 00:02:35,855

of a true American icon.

78

00:02:36,589 --> 00:02:38,158

Let's light this fire one more time

79

00:02:38,158 --> 00:02:38,892

Mike and witness

80

00:02:38,892 --> 00:02:40,493

this great nation at it's best.

81

00:02:40,493 --> 00:02:42,929

The crew of Atlantis is ready for launch.

82

00:02:44,130 --> 00:02:47,567

T minus 35, 33 ...

83

00:02:47,567 --> 00:02:50,803

Clock will hold at T minus 31 seconds due to a failue.

84

00:02:52,038 --> 00:02:53,273

And all of a sudden at 31

85

00:02:53,273 --> 00:02:55,308

seconds, it's like, oh, we're stopping.

86

00:02:55,675 --> 00:02:57,110

And we all looked around like, huh?

87

00:02:57,110 --> 00:02:58,044

What do you mean we're stopping?

88

00:02:58,178 --> 00:02:59,179

You don't stop .

89

00:02:59,179 --> 00:03:01,014

We have 31 seconds to lifting off.

90

00:03:01,080 --> 00:03:01,714

What had happened

91

00:03:01,714 --> 00:03:03,650

was that the little beanie cap

92

00:03:03,650 --> 00:03:05,652

that sits on top of the external tank,

93

00:03:05,852 --> 00:03:07,287

you know, they get that out of the way

94

00:03:07,520 --> 00:03:08,421

so so we can launch.

95

00:03:08,721 --> 00:03:09,656

And when they moved it

96

00:03:09,656 --> 00:03:11,224

out of the way, there was a microswitch

97

00:03:11,224 --> 00:03:12,592

that was supposed to the launch control

98

00:03:12,592 --> 00:03:13,893

center, "Hey, I'm out of the way.

99

00:03:13,893 --> 00:03:14,794

It's safe to launch."

100

00:03:15,028 --> 00:03:16,296

And that microsystem failed.

101  
00:03:16,296 --> 00:03:17,664  
And so the launch control center wasn't

102  
00:03:17,664 --> 00:03:19,232  
sure if it was out of the way or not.

103  
00:03:19,232 --> 00:03:22,035  
OTC says we need to verify using a camera.

104  
00:03:22,035 --> 00:03:23,870  
But it's just amazing how seamlessly

105  
00:03:23,870 --> 00:03:25,338  
the entire ground game team

106  
00:03:25,338 --> 00:03:26,906  
ended up covering it and we ended up

107  
00:03:26,906 --> 00:03:28,508  
launching just a few minutes late.

108  
00:03:28,508 --> 00:03:31,077  
This is CMC, we verify - retracted.

109  
00:03:31,911 --> 00:03:32,879  
It's like, oh, wait, we're launching!

110  
00:03:33,246 --> 00:03:36,716  
Nine, eight, seven, six ...

111  
00:03:36,716 --> 00:03:38,084  
[Roar of engines igniting]

112  
00:03:38,084 --> 00:03:41,120  
All three engines up and burning ...

113  
00:03:41,120 --> 00:03:44,591

two, one, zero and liftoff,

114

00:03:44,591 --> 00:03:46,693

the final liftoff of Atlantis

115

00:03:46,793 --> 00:03:48,661

on the shoulders of the space shuttle,

116

00:03:48,928 --> 00:03:51,598

America will continue the dream.

117

00:03:52,198 --> 00:03:53,299

Roll Program, Houston.

118

00:03:54,500 --> 00:03:55,835

Roger, roll Atlantis.

119

00:04:01,874 --> 00:04:02,842

Atlantis, station

120

00:04:02,842 --> 00:04:04,444

on the big loop, we have you in sight.

121

00:04:05,178 --> 00:04:05,645

Excellent.

122

00:04:05,645 --> 00:04:06,479

We'll be there soon.

123

00:04:06,479 --> 00:04:08,748

Every time I was in the shuttle

124

00:04:08,748 --> 00:04:10,416

and we were rendezvous and docking

125

00:04:10,617 --> 00:04:11,551

to the space station.

126  
00:04:11,651 --> 00:04:13,119  
Every time I was awestruck

127  
00:04:13,119 --> 00:04:14,487  
because it starts out

128  
00:04:14,487 --> 00:04:15,888  
as this distant point of light.

129  
00:04:16,122 --> 00:04:16,956  
And then you keep getting

130  
00:04:16,956 --> 00:04:17,724  
closer and closer.

131  
00:04:17,757 --> 00:04:18,925  
It's getting bigger and bigger.

132  
00:04:18,925 --> 00:04:21,527  
And it's like, wow, look what we did.

133  
00:04:22,028 --> 00:04:23,796  
This is a monster building

134  
00:04:23,796 --> 00:04:25,498  
that we've built in space.

135  
00:04:26,099 --> 00:04:27,533  
Atlantis, Aladdin,

136  
00:04:27,533 --> 00:04:29,702  
welcome to the International Space Station

137  
00:04:29,702 --> 00:04:31,170  
for the last time.

138  
00:04:31,170 --> 00:04:33,640

Big ol' Russian hug.

139

00:04:35,308 --> 00:04:36,342

How you doing guys?

140

00:04:36,342 --> 00:04:37,844

The crew is just wonderful.

141

00:04:38,044 --> 00:04:39,412

We got along really well.

142

00:04:39,512 --> 00:04:40,546

You know, I think we

143

00:04:40,747 --> 00:04:41,748

we laughed at each other

144

00:04:42,715 --> 00:04:45,084

and we knew when it was time to work

145

00:04:45,084 --> 00:04:46,452

and we knew when it was time to,

146

00:04:47,086 --> 00:04:47,820

you know, relax.

147

00:04:48,488 --> 00:04:49,756

This is President Obama.

148

00:04:49,756 --> 00:04:50,657

Who am I talking to?

149

00:04:50,857 --> 00:04:51,791

Hello, Mr. President.

150

00:04:51,791 --> 00:04:53,960

You're talking to the Increment 28 crew

151  
00:04:53,960 --> 00:04:55,061  
and the crew of the space

152  
00:04:55,061 --> 00:04:55,928  
shuttle Atlantis.

153  
00:04:56,562 --> 00:04:57,196  
Oh, that's funny see,

154  
00:04:57,397 --> 00:04:59,032  
because I was just dialing out for pizza.

155  
00:04:59,198 --> 00:05:00,333  
I just want to say

156  
00:05:00,800 --> 00:05:02,101  
how proud I am of all of you.

157  
00:05:02,335 --> 00:05:03,736  
Congratulations to NASA,

158  
00:05:04,270 --> 00:05:06,506  
to all our international partners

159  
00:05:06,706 --> 00:05:08,007  
and all the personnel past

160  
00:05:08,007 --> 00:05:09,609  
and present who've spent countless hours

161  
00:05:09,609 --> 00:05:10,910  
and untold effort

162  
00:05:10,910 --> 00:05:11,911  
making the space shuttle

163  
00:05:12,545 --> 00:05:14,213

and the International Space Station

164

00:05:14,614 --> 00:05:15,882

a unique part of our history.

165

00:05:18,017 --> 00:05:19,919

Transfer's the name of the game today,

166

00:05:19,919 --> 00:05:22,355

as it will be for the next several days,

167

00:05:22,722 --> 00:05:24,223

as the crew presses ahead

168

00:05:24,557 --> 00:05:25,958

to complete the transfer

169

00:05:25,958 --> 00:05:28,294

of almost five tons of supplies

170

00:05:28,561 --> 00:05:29,896

from Raffaello to the

171

00:05:29,896 --> 00:05:32,865

International Space Station that will help fortify

172

00:05:32,865 --> 00:05:35,134

the complex for the next 12 months.

173

00:05:36,069 --> 00:05:37,136

I have never been

174

00:05:37,136 --> 00:05:38,171

so busy my whole entire life

175

00:05:38,438 --> 00:05:40,073

just executing that mission on orbit.

176

00:05:40,506 --> 00:05:42,175

We worked really hard,

177

00:05:42,375 --> 00:05:43,976

but we had a lot of good time

178

00:05:43,976 --> 00:05:44,644

while we're doing it.

179

00:05:49,482 --> 00:05:50,350

Good morning, Houston.

180

00:05:50,750 --> 00:05:53,553

We're getting ready for undock today.

181

00:05:53,553 --> 00:05:55,154

We get to do one last lap

182

00:05:55,154 --> 00:05:56,856

with Atlantis around the ISS

183

00:05:56,856 --> 00:05:59,025

and then start our trip home.

184

00:05:59,025 --> 00:06:00,860

Undocking confirmed.

185

00:06:00,860 --> 00:06:05,365

[bell ringing]

186

00:06:06,899 --> 00:06:08,101

Atlantis departing

187

00:06:08,101 --> 00:06:09,635

the International Space Station

188

00:06:09,635 --> 00:06:10,503

for the last time.

189

00:06:10,970 --> 00:06:15,508

■■■

190

00:06:16,142 --> 00:06:17,910

There was one night before we landed,

191

00:06:18,311 --> 00:06:20,179

we had all of our tasks done.

192

00:06:20,780 --> 00:06:22,448

We were ready the next day

193

00:06:22,448 --> 00:06:23,750

to deorbit and come home.

194

00:06:23,950 --> 00:06:25,451

And the four of us had an opportunity

195

00:06:25,451 --> 00:06:27,053

to hang out in the flight deck

196

00:06:27,353 --> 00:06:28,721

and watch the world go by

197

00:06:28,721 --> 00:06:30,189

and that's where we had a chance to

198

00:06:30,189 --> 00:06:31,958

really focus on, wow, this is,

199

00:06:32,191 --> 00:06:33,359

you know, the last night a space

200

00:06:33,359 --> 00:06:34,460

shuttle is going to be on orbit.

201

00:06:34,660 --> 00:06:37,363



202

00:06:37,697 --> 00:06:39,365

It's it's kind of interesting to be here

203

00:06:39,365 --> 00:06:41,200

on the final night of a shuttle mission.

204

00:06:41,634 --> 00:06:42,769

Don't quite know what to think.

205

00:06:42,802 --> 00:06:44,003

We're just trying to take it all in.

206

00:06:45,238 --> 00:06:47,073

There was a little part of me that was sad.

207

00:06:47,073 --> 00:06:48,775

I thought this is an amazing vehicle.

208

00:06:48,808 --> 00:06:49,542

You know, here it is -

209

00:06:49,542 --> 00:06:51,844

It's sort of fed us and sustained us

210

00:06:51,844 --> 00:06:53,413

and it got to it in space safely.

211

00:06:53,413 --> 00:06:55,148

And it's going to take us home tomorrow safely.

212

00:06:55,148 --> 00:06:57,350

And it's just a shame to put it to bed.

213

00:06:57,583 --> 00:06:59,018

You know, there's just it seems like

214

00:06:59,018 --> 00:07:00,286

there's so much more life in it,

215

00:07:01,053 --> 00:07:02,355

but we understand

216

00:07:02,355 --> 00:07:03,756

all good things do come to an end.

217

00:07:03,923 --> 00:07:05,658

July 21, 2011

218

00:07:05,658 --> 00:07:09,362

Atlantis, Houston, you are go for the deorbit burn.

219

00:07:09,962 --> 00:07:11,330

And you can maneuver on time.

220

00:07:19,739 --> 00:07:21,007

Landing gear down and locked.

221

00:07:27,413 --> 00:07:28,648

Main gear touchdown.

222

00:07:30,082 --> 00:07:34,854

Hurley now deploying the drag chute ...

223

00:07:34,854 --> 00:07:36,355

Having fired the imagination

224

00:07:36,355 --> 00:07:37,290

of a generation,

225

00:07:37,623 --> 00:07:38,791

a ship like no other,

226

00:07:38,825 --> 00:07:40,426

its place in history secured

227

00:07:41,093 --> 00:07:42,662

the space shuttle pulls into port

228

00:07:43,162 --> 00:07:44,163

for the last time,

229

00:07:44,697 --> 00:07:46,899

its voyage at an end.

230

00:07:47,767 --> 00:07:52,205

[engines power down]

231

00:07:53,105 --> 00:07:54,574

Well, you're always relieved

232

00:07:54,574 --> 00:07:55,975

that your mission went well

233

00:07:56,008 --> 00:07:57,109

and then you got everything done

234

00:07:57,109 --> 00:07:58,077

everybody wanted to get done,

235

00:07:58,077 --> 00:08:00,012

so there was relief, but there was

236

00:08:00,179 --> 00:08:03,416

I remember we sat there when we landed

237

00:08:03,850 --> 00:08:07,286

and none of us wanted to move (laughs)

238

00:08:07,286 --> 00:08:09,021

because we knew that was it.

239

00:08:09,222 --> 00:08:11,224

The minute we left the shuttle, you know,

240

00:08:11,224 --> 00:08:13,392

and got out of our suits,

241

00:08:13,392 --> 00:08:14,560

that it was was all over.

242

00:08:14,560 --> 00:08:15,461

And we're just kind of looking around, OK,

243

00:08:15,695 --> 00:08:17,330

who's going to move first? (laughs)

244

00:08:17,497 --> 00:08:18,898

Nobody wanted to move. (laughs)

245

00:08:19,599 --> 00:08:21,734

Mission complete, Houston

246

00:08:21,734 --> 00:08:24,237

after serving the world for over 30 years

247

00:08:24,237 --> 00:08:25,338

the space shuttle earned

248

00:08:25,338 --> 00:08:26,038

its place in history

249

00:08:26,038 --> 00:08:27,974

and has come to a final stop.

250

00:08:28,474 --> 00:08:29,675

We copy your wheels stop

251

00:08:29,675 --> 00:08:30,943

and we'll take this opportunity

252

00:08:30,943 --> 00:08:32,678

to congratulate you, Atlantis,

253

00:08:33,145 --> 00:08:34,881

as well as the thousands of passionate

254

00:08:34,881 --> 00:08:36,382

individuals across this great

255

00:08:36,816 --> 00:08:38,084

space-faring nation

256

00:08:38,551 --> 00:08:39,552

who truly empower

257

00:08:39,552 --> 00:08:41,087

this incredible spacecraft,

258

00:08:41,654 --> 00:08:43,556

which for three decades has inspired

259

00:08:43,556 --> 00:08:45,124

millions around the globe.

260

00:08:45,892 --> 00:08:47,260

Job well done, American.

261

00:08:51,931 --> 00:08:59,305

[soft music]

262

00:09:01,007 --> 00:09:02,275

You know, it's interesting to be,

263

00:09:02,275 --> 00:09:03,576

I guess, a sort of a

264

00:09:03,943 --> 00:09:06,312

a leader in the in the Boeing company

265

00:09:06,679 --> 00:09:08,648

with the ability to influence

266

00:09:08,648 --> 00:09:10,149

not only the design of a spacecraft,

267

00:09:10,149 --> 00:09:12,451

but also have an opportunity

268

00:09:12,451 --> 00:09:14,453

to talk to a lot of our young engineers.

269

00:09:15,154 --> 00:09:15,888

You know, after

270

00:09:16,122 --> 00:09:18,190

we successfully complete OFT-2

271

00:09:18,190 --> 00:09:19,625

you know, then all eyes

272

00:09:19,625 --> 00:09:20,927

are on flying the crew next.

273

00:09:21,160 --> 00:09:21,727

And that's that's

274

00:09:21,761 --> 00:09:22,562

going to be really exciting.

275

00:09:22,562 --> 00:09:23,629

We're looking forward to that.

276

00:09:23,829 --> 00:09:26,599

[epic music]

277

00:09:26,866 --> 00:09:28,267

We've got SpaceX flying people.

278

00:09:28,501 --> 00:09:30,503

We've got two companies ready to do

279

00:09:30,503 --> 00:09:32,505

suborbital business here soon.

280

00:09:34,807 --> 00:09:37,977

We've got the Artemis I launch in the near future.

281

00:09:37,977 --> 00:09:39,579

I mean, there's so many things

282

00:09:39,579 --> 00:09:40,846

that are now that, after

283

00:09:40,846 --> 00:09:42,582

this decade ready to emerge

284

00:09:43,049 --> 00:09:45,117

and really, I think, excite the public

285

00:09:45,117 --> 00:09:46,018

about all the great things

286

00:09:46,018 --> 00:09:46,819

we're doing in space.

287

00:09:48,487 --> 00:09:49,956

You know, the space shuttle changed the way

288

00:09:49,956 --> 00:09:51,691

we view the world and it's changed

289

00:09:51,691 --> 00:09:53,192

the way we view our universe.

290

00:09:53,793 --> 00:09:54,760

It's a lot of emotion today,

291

00:09:54,760 --> 00:09:55,928

but one thing is indisputable -

292

00:09:56,162 --> 00:09:58,230

America's not gonna stop exploring.

293

00:09:58,230 --> 00:10:00,032

Thank you, Columbia,

294

00:10:00,299 --> 00:10:02,168

Challenger, Discovery, Endeavor

295

00:10:02,768 --> 00:10:03,703

and our ship, Atlantis.

296

00:10:04,337 --> 00:10:05,371

Thank you for protecting us

297

00:10:06,105 --> 00:10:07,073

and bringing this program

298

00:10:07,073 --> 00:10:08,507

to such a fitting end.