



1
00:01:08,410 --> 00:01:05,620
it's a shuttle control at t-minus two

2
00:01:10,359 --> 00:01:08,420
hours 31 minutes 35 seconds and counting

3
00:01:21,880 --> 00:01:10,369
and the flight crew is deploying the

4
00:01:33,820 --> 00:01:21,890
operations and check out where they will

5
00:01:37,120 --> 00:01:35,410
announcer test director has called the

6
00:01:38,590 --> 00:01:37,130
crew quarters and has verified that we

7
00:01:40,510 --> 00:01:38,600
are ready to support the flight crews

8
00:01:42,990 --> 00:01:40,520
departure from the crew quarters and

9
00:01:45,520 --> 00:01:43,000
their subsequent arrival at the pad

10
00:01:47,889 --> 00:01:45,530
cloud of news media representatives and

11
00:01:49,859 --> 00:01:47,899
employees have gathered at the walkway

12
00:01:52,359 --> 00:01:49,869
the crew will use to exit the building

13
00:02:00,840 --> 00:01:52,369

standing by at the astronaut ban which

14

00:02:00,850 --> 00:02:05,630

and here comes the crew for mission 51g

15

00:02:11,040 --> 00:02:09,090

led by commander Brandon Stein and

16

00:02:21,320 --> 00:02:11,050

waving to the well wishers they're

17

00:02:27,240 --> 00:02:24,840

followed by John fading and Frenchman

18

00:02:30,930 --> 00:02:27,250

Patrick bothering in that's three

19

00:02:33,600 --> 00:02:30,940

Shannon lucid Steve Megan astronaut John

20

00:02:37,530 --> 00:02:33,610

Young and there was George Abbey

21

00:02:39,510 --> 00:02:37,540

director of flight crew operations and

22

00:02:50,760 --> 00:02:39,520

the 51 jet flight crew will be departing

23

00:02:52,530 --> 00:02:50,770

shortly for Launchpad 39a this is

24

00:02:54,840 --> 00:02:52,540

shuttle launch control at t-minus two

25

00:02:55,199 --> 00:02:54,850

hours eight minutes 43 seconds and

26

00:02:57,750 --> 00:02:55,209

counting

27

00:02:59,490 --> 00:02:57,760

the flight crew has arrived at the right

28

00:03:01,770 --> 00:02:59,500

woman each member will now put on his

29

00:03:03,360 --> 00:03:01,780

integrated egress harness and his launch

30

00:03:07,229 --> 00:03:03,370

and entry helmet before getting into the

31

00:03:09,210 --> 00:03:07,239

vehicle commander Dan brandenstein and

32

00:03:11,940 --> 00:03:09,220

pilot John Creighton will be the first

33

00:03:14,520 --> 00:03:11,950

to get in and they are presently getting

34

00:03:16,920 --> 00:03:14,530

into their gear they'll be followed by

35

00:03:18,900 --> 00:03:16,930

mission specialist John Fabian and Steve

36

00:03:21,660 --> 00:03:18,910

Nagle and finally the two payload

37

00:03:28,110 --> 00:03:21,670

specialists Patrick burglary and assault

38

00:03:30,569 --> 00:03:28,120

on Al Saud and ms3 Shannon lucid pilot

39

00:03:37,420 --> 00:03:30,579

Jael Clayton getting his helmet on at

40

00:03:54,220 --> 00:03:40,330

where's the mission specialist Shannon

41

00:03:57,309 --> 00:03:54,230

lucid and Steve next night Patrick

42

00:04:01,240 --> 00:03:57,319

doggery is 39 is he playing any of the

43

00:04:03,819 --> 00:04:01,250

warble at this point he is a lieutenant

44

00:04:07,059 --> 00:04:03,829

colonel in the French Air Force and it's

45

00:04:09,160 --> 00:04:07,069

held a number of just pilot assignments

46

00:05:22,280 --> 00:04:09,170

and his work more than 4,000 hours of

47

00:05:26,960 --> 00:05:24,020

we're t-minus one minute and Counting

48

00:05:29,660 --> 00:05:26,970

all systems go the sound suppression

49

00:05:32,000 --> 00:05:29,670

water system is now being armed we left

50

00:05:36,050 --> 00:05:32,010

off water will be released at t minus 16

51
00:05:36,980 --> 00:05:36,060
seconds t minus 48 seconds so a rocket

52
00:05:38,630 --> 00:05:36,990
booster development flight

53
00:05:40,940 --> 00:05:38,640
instrumentation recorder has gone to the

54
00:05:42,050 --> 00:05:40,950
record mode in a main propulsion system

55
00:05:46,630 --> 00:05:42,060
liquid oxygen and liquid hydrogen

56
00:05:50,740 --> 00:05:48,680
we're coming up on an auto sequence

57
00:05:54,710 --> 00:05:50,750
start

58
00:05:55,760 --> 00:05:54,720
t-minus 31 seconds and we have a vapor I

59
00:05:57,590 --> 00:05:55,770
don't sequence start

60
00:05:59,180 --> 00:05:57,600
disco is for redundant computers have

61
00:06:02,600 --> 00:05:59,190
primary control of critical vehicle

62
00:06:04,250 --> 00:06:02,610
functions t-minus 21 seconds and

63
00:06:07,790 --> 00:06:04,260

counting as well the engine nozzle

64

00:08:35,580 --> 00:06:07,800

profile is now underway t minus 16

65

00:08:45,550 --> 00:08:38,920

we have confirmation of solid rocket

66

00:08:51,220 --> 00:08:45,560

booster separation on time velocity

67

00:08:57,820 --> 00:08:51,230

fifty to ninety feet per second range 33

68

00:09:08,820 --> 00:08:57,830

miles discovery Houston first stage

69

00:09:08,830 --> 00:09:28,470

downrange 53 miles 60 93

70

00:09:28,480 --> 00:09:38,880

main engine cutoff is confirmed

71

00:09:46,780 --> 00:09:42,940

there will be no arms long maneuver this

72

00:11:34,320 --> 00:09:46,790

is a direct insertion trajectory there

73

00:11:50,370 --> 00:11:36,030

they're copying we have a good picture

74

00:11:54,840 --> 00:11:52,890

we're gonna try to show you up on the

75

00:11:58,530 --> 00:11:54,850

elbow camera if you are gonna still be

76

00:12:00,180 --> 00:11:58,540

with us the TV okay John we're still

77

00:12:02,010 --> 00:12:00,190

with you we have a picture now on the

78

00:12:19,610 --> 00:12:02,020

elbow camera so we'll be waiting to see

79

00:12:27,390 --> 00:12:19,620

the spit up 15 seconds 10 9 8 7 6 5 4 3

80

00:12:29,610 --> 00:12:27,400

2 1 0 and we do have a verification

81

00:12:43,040 --> 00:12:29,620

electronic verification that the

82

00:12:47,460 --> 00:12:45,900

data reflects it to be a nominal

83

00:14:12,210 --> 00:12:47,470

deployment will stand by now for the

84

00:15:12,610 --> 00:14:15,030

Telstar deployment upcoming in one

85

00:15:18,940 --> 00:15:14,890

it's a discovery with here a post deploy

86

00:15:20,470 --> 00:15:18,950

report Roger we're ready to copy John

87

00:15:26,590 --> 00:15:20,480

sounds to me like us three up and three

88

00:15:28,510 --> 00:15:26,600

away sides retired Oh an already for

89

00:15:29,920 --> 00:15:28,520

retirement quite yet Bob but that we're

90

00:15:33,070 --> 00:15:29,930

glad to be three for three

91

00:15:36,760 --> 00:15:33,080

we were up on time attitude one Niner

92

00:15:42,550 --> 00:15:36,770

five decimal eight live six seven

93

00:15:43,470 --> 00:15:42,560

decimal 7 6 and to 1 decimal 1 0 the

94

00:15:46,900 --> 00:15:43,480

rates

95

00:15:51,070 --> 00:15:46,910

negative point zero zero one negative

96

00:15:54,490 --> 00:15:51,080

point zero zero two and positive point

97

00:16:00,580 --> 00:15:54,500

zero zero three there's more anomalies

98

00:16:02,230 --> 00:16:00,590

we all say nominal nominal nah well that

99

00:16:09,100 --> 00:16:02,240

sounds good I like good work to me John

100

00:16:10,840 --> 00:16:09,110

well done well we appreciate all the

101
00:16:16,369 --> 00:16:10,850
good work at Houston okay I need to make

102
00:16:19,590 --> 00:16:18,809
Rajal i'm sure everybody that had a hand

103
00:16:21,449 --> 00:16:19,600
in it

104
00:16:24,360 --> 00:16:21,459
enjoys the success that you've seen and

105
00:17:38,070 --> 00:16:24,370
enjoys hearing your reports that

106
00:17:44,020 --> 00:17:41,049
my notes about three days longer than

107
00:17:45,580 --> 00:17:44,030
her so it's no a debatable point my mind

108
00:17:47,049 --> 00:17:45,590
anyway but I thank you very much for

109
00:17:51,430 --> 00:17:47,059
this great honor and especially the

110
00:18:07,050 --> 00:17:51,440
quick our gladly I Roger copy do you

111
00:18:11,610 --> 00:18:09,900
see what so we got the cake and Rita did

112
00:18:14,340 --> 00:18:11,620
a great job of making up a hundred

113
00:18:33,990 --> 00:18:14,350

prisoners American and space cake and

114

00:18:49,920 --> 00:18:36,030

and discovery we're zooming in on the

115

00:18:53,280 --> 00:18:49,930

cake now it looks pretty good performing

116

00:19:05,180 --> 00:18:53,290

great we got a few more days to go and a

117

00:21:49,390 --> 00:19:07,830

thanks a lot Dan for the views and we

118

00:21:53,410 --> 00:21:51,640

I'm bagging with your wife to this there

119

00:21:55,240 --> 00:21:53,420

were few people down there over the

120

00:21:58,510 --> 00:21:55,250

brass and watch it or watch it to see if

121

00:22:11,070 --> 00:21:58,520

we were gonna put over that's

122

00:22:17,460 --> 00:22:14,190

you folks down there can know he was

123

00:22:18,810 --> 00:22:17,470

just like advertised Roger John we

124

00:23:59,690 --> 00:22:18,820

watched it look great we got a good

125

00:24:03,660 --> 00:24:01,710

discovery Houston thank you very much

126
00:24:05,580 --> 00:24:03,670
for the show we all really appreciated

127
00:24:07,530 --> 00:24:05,590
and particularly thanks from the flight

128
00:25:01,830 --> 00:24:07,540
director he's going to make good use of

129
00:25:01,840 --> 00:25:13,950
discovery Houston

130
00:25:18,070 --> 00:25:16,420
Roger discovery requests all crew

131
00:25:20,140 --> 00:25:18,080
members temporarily drop what they're

132
00:25:21,820 --> 00:25:20,150
doing and floated attention I have an

133
00:25:23,680 --> 00:25:21,830
important announcement to make and

134
00:25:53,720 --> 00:25:23,690
request also that Steve Meg will make

135
00:25:58,169 --> 00:25:55,919
it has been determined that in about

136
00:26:00,360 --> 00:25:58,179
five seconds Steve will pet will

137
00:26:15,810 --> 00:26:00,370
start the 100th orbit of this flight to

138
00:26:20,620 --> 00:26:18,520

the 100th American has just started the

139

00:26:37,500 --> 00:26:20,630

100th orbit of this flight which will be

140

00:26:42,030 --> 00:26:40,200

and Steve if you're available you would

141

00:26:47,310 --> 00:26:42,040

do us a great honor by giving us a few

142

00:26:48,840 --> 00:26:47,320

words on this occasion I'm flabbergasted

143

00:26:51,180 --> 00:26:48,850

to say the least

144

00:26:52,590 --> 00:26:51,190

I'm very pleased about this it's really

145

00:26:54,120 --> 00:26:52,600

something that everyone can go out and

146

00:27:02,280 --> 00:26:54,130

look at every night and look at my orbit

147

00:27:04,140 --> 00:27:02,290

this guy the starting point for the

148

00:27:06,270 --> 00:27:04,150

Steve Vega world it was because we were

149

00:27:12,900 --> 00:27:06,280

over half a cutscene rocky fires but

150

00:27:16,350 --> 00:27:12,910

just like even Roger and be advised that

151
00:27:33,700 --> 00:27:16,360
was the 100th nose on the 100th note of

152
00:27:52,970 --> 00:27:37,460
so that was the 100 snows on the 100

153
00:27:54,710 --> 00:27:52,980
note of this and as the confetti slowly

154
00:27:56,600 --> 00:27:54,720
falls to the floor and the ceremony has

155
00:27:57,950 --> 00:27:56,610
gradually come to a close we wondered if

156
00:28:00,200 --> 00:27:57,960
he would do us the honor of performing

157
00:28:07,970 --> 00:28:00,210
the 100 the plate note for us please

158
00:28:10,130 --> 00:28:07,980
I have a switch on our 12 go ahead as

159
00:28:16,280 --> 00:28:10,140
we'd like the water tank Bravo inlet to

160
00:28:17,960 --> 00:28:16,290
open please okay you got it I think

161
00:28:24,860 --> 00:28:17,970
that's about the Hunter cycle on that

162
00:28:30,710 --> 00:28:27,049
and we requested hard copies of our

163
00:30:21,080 --> 00:28:30,720

scopes to give you on return thanks a

164

00:30:21,090 --> 00:30:30,750

discovery Houston with you Duty dress

165

00:30:36,419 --> 00:30:33,120

Roger Houston we read you loud and clear

166

00:30:40,020 --> 00:30:36,429

and sometimes ready on the mid-deck okay

167

00:30:41,430 --> 00:30:40,030

we have a good downlink I'll hand you

168

00:30:51,210 --> 00:30:41,440

over this time to the Washington

169

00:30:59,000 --> 00:30:51,220

commentator dear some fun we are proud

170

00:31:06,169 --> 00:30:59,010

of your machines it is a great

171

00:31:12,900 --> 00:31:06,179

achievement I wish to send through you

172

00:31:19,020 --> 00:31:12,910

my best wishes to his Excellency

173

00:31:22,710 --> 00:31:19,030

President Reagan and V friendly American

174

00:31:33,450 --> 00:31:22,720

nations thank you very much I hope see

175

00:31:33,810 --> 00:31:33,460

you soon my best like what what shall I

176

00:31:37,530 --> 00:31:33,820

do

177

00:31:38,789 --> 00:31:37,540

I'm I'm very happy this time when I see

178

00:31:42,470 --> 00:31:38,799

you need cover

179

00:32:29,659 --> 00:31:42,480

I'm very happy when I give you your

180

00:34:20,570 --> 00:32:33,049

yeoman enter Quran

181

00:34:26,369 --> 00:34:23,040

News Agency your question for Patrick

182

00:34:28,619 --> 00:34:26,379

Beaudry what are the specific lessons

183

00:34:30,090 --> 00:34:28,629

you can draw from your trip in space for

184

00:34:34,909 --> 00:34:30,100

the project when European Space Shuttle

185

00:34:41,990 --> 00:34:39,379

I think there is not an immediate

186

00:34:46,099 --> 00:34:42,000

profits for the future of the project

187

00:34:48,200 --> 00:34:46,109

helmet but you know it's likely the site

188

00:34:50,240 --> 00:34:48,210

and the condition of flight it states

189

00:34:52,779 --> 00:34:50,250

already from from the condition of life

190

00:34:55,250 --> 00:34:52,789

we know the earth and even from the

191

00:35:08,259 --> 00:34:55,260

condition of life we have the bobbin

192

00:35:11,240 --> 00:35:08,269

aircraft so it will be very useful area

193

00:35:13,460 --> 00:35:11,250

for commander brandenstein and John

194

00:35:15,859 --> 00:35:13,470

Fabian you both flow just about two

195

00:35:18,019 --> 00:35:15,869

years ago is there any difference do you

196

00:35:19,880 --> 00:35:18,029

notice any difference in in the earth

197

00:35:21,529 --> 00:35:19,890

there any differences in your

198

00:35:30,210 --> 00:35:21,539

observations this time from two years

199

00:35:35,010 --> 00:35:33,300

well it's the best thing about fifth

200

00:35:37,430 --> 00:35:35,020

Ida's I got the commandment which means

201
00:35:39,359 --> 00:35:37,440
I get to land it when we get home but

202
00:35:41,309 --> 00:35:39,369
obviously with a crew of seven

203
00:35:43,140 --> 00:35:41,319
conditions are a little more crowded and

204
00:35:44,730 --> 00:35:43,150
we have to be a little more conscious of

205
00:35:49,290 --> 00:35:44,740
where we move and how we plan our

206
00:35:51,540 --> 00:35:49,300
program we feel very proud of the four

207
00:35:54,150 --> 00:35:51,550
satellites so that we deployed also went

208
00:35:55,020 --> 00:35:54,160
back and retrieved one and follow the

209
00:35:56,880 --> 00:35:55,030
whole crew because they've done a

210
00:35:58,710 --> 00:35:56,890
tremendous job and we're just looking

211
00:36:12,620 --> 00:35:58,720
forward to wrapping it up today and

212
00:36:27,740 --> 00:36:15,200
altitude fifty two thousand feet

213
00:36:40,310 --> 00:36:35,910

a mile touchdown 267 medical miles per

214

00:36:52,109 --> 00:36:40,320

hour current speed altitude 10,000 feet

215

00:36:57,749 --> 00:36:55,229

phyto says the cleaner hands that credit

216

00:36:59,130 --> 00:36:57,759

to the crying Clyde soap and discovery

217

00:37:00,749 --> 00:36:59,140

hit and show you're correcting the

218

00:37:02,939 --> 00:37:00,759

glideslope slightly right us airline

219

00:37:10,319 --> 00:37:02,949

surface earns one three five at ten

220

00:37:13,140 --> 00:37:10,329

that's ten knots from the left until a

221

00:37:14,779 --> 00:37:13,150

touchdown in a minute four miles with me

222

00:37:20,400 --> 00:37:14,789

into the runway

223

00:37:25,370 --> 00:37:20,410

6,300 feet altitude st. great 192 feet

224

00:37:40,380 --> 00:37:33,599

airspeed 290 nuts three thousand feet

225

00:37:45,779 --> 00:37:40,390

altitude thirty thousand feet even two

226
00:37:53,489 --> 00:37:45,789
miles from the end of the runway one

227
00:37:54,809 --> 00:37:53,499
thousand feet out to sink rate is now 70

228
00:38:01,140 --> 00:37:54,819
feet per second

229
00:38:02,870 --> 00:38:01,150
PR down one mile from the runway on

230
00:38:07,169 --> 00:38:02,880
eighty six feet

231
00:38:09,769 --> 00:38:07,179
gear down in locked and we had touched

232
00:38:23,770 --> 00:38:09,779
down at mission elapsed time seven days

233
00:38:43,470 --> 00:38:27,060
and we expect a rollout margin to be

234
00:39:15,400 --> 00:38:47,609
a wheel step at seven days

235
00:39:21,290 --> 00:39:18,500
this Mission Control Houston egressing

236
00:39:23,150 --> 00:39:21,300
the discovery of commander Dan

237
00:39:26,480 --> 00:39:23,160
brandenstein pilot John Creighton

238
00:39:30,350 --> 00:39:26,490

mission specialist John Fabian Shannon

239

00:39:35,210 --> 00:39:30,360

lucid Steve Nagle payload specialists