

1
00:01:50,240 --> 00:01:48,080
good morning Atlantis and to let you

2
00:02:03,130 --> 00:01:50,250
know Bonnie run help with the wakeup

3
00:02:14,100 --> 00:02:07,540
good morning Sam a lot of clear and I

4
00:02:51,690 --> 00:02:14,110
think we're gonna be reluctant alone I

5
00:02:56,430 --> 00:02:54,150
while this work continues in the space

6
00:02:58,290 --> 00:02:56,440
lab science module the entry team of

7
00:03:01,559 --> 00:02:58,300
flight controllers led by entry flight

8
00:03:03,690 --> 00:03:01,569
director Wayne Hale has been on console

9
00:03:06,150 --> 00:03:03,700
since about two o'clock this morning as

10
00:03:08,610 --> 00:03:06,160
they cycle themselves into the same

11
00:03:10,470 --> 00:03:08,620
shift they'll work tomorrow in support

12
00:03:12,750 --> 00:03:10,480
of all the preparations required for

13
00:03:14,880 --> 00:03:12,760

Atlantis as deorbit burn and return to

14

00:03:16,710 --> 00:03:14,890

the Kennedy Space Center entry flight

15

00:03:18,120 --> 00:03:16,720

director Wayne Hale has already had one

16

00:03:20,100 --> 00:03:18,130

weather briefing from the spaceflight

17

00:03:22,530 --> 00:03:20,110

meteorology group this morning is

18

00:03:25,020 --> 00:03:22,540

expecting a more detailed weather

19

00:03:27,420 --> 00:03:25,030

briefing from those forecasters about a

20

00:03:30,600 --> 00:03:27,430

half an hour from now as he continues to

21

00:03:32,699 --> 00:03:30,610

formulate his strategy and that of the

22

00:03:34,890 --> 00:03:32,709

entry team to present to the mission

23

00:03:39,140 --> 00:03:34,900

management team of top NASA managers and

24

00:03:43,949 --> 00:03:42,569

and a Space Lab Houston for Bonnie to

25

00:04:09,920 --> 00:03:43,959

related arm we just need to know how

26

00:04:09,930 --> 00:05:33,390

200ml

27

00:05:38,439 --> 00:05:35,740

special I abuse and talk Pharrell and

28

00:05:40,749 --> 00:05:38,449

I'll B&B advises just to go ahead and

29

00:05:54,320 --> 00:05:40,759

proceed they did get your question and

30

00:06:02,880 --> 00:05:57,300

did the cute part of a lot books he did

31

00:06:14,790 --> 00:06:02,890

the programming in the controller I copy

32

00:06:17,790 --> 00:06:14,800

that we accepted to really run all right

33

00:06:20,400 --> 00:06:17,800

let me start with a big picture question

34

00:06:22,830 --> 00:06:20,410

commander gibson one of this mission was

35

00:06:24,990 --> 00:06:22,840

to go up and get norm thagard and to do

36

00:06:27,990 --> 00:06:25,000

some long-term experiments about

37

00:06:29,580 --> 00:06:28,000

long-term space days but the other part

38

00:06:31,440 --> 00:06:29,590

of it was to prove it could be done

39

00:06:33,240 --> 00:06:31,450

technically to prove it could be done

40

00:06:36,210 --> 00:06:33,250

politically that we could work with the

41

00:06:38,280 --> 00:06:36,220

Russians put those on a balance and tell

42

00:06:45,090 --> 00:06:38,290

me which was the most important part of

43

00:06:47,100 --> 00:06:45,100

this flight Nancy I guess it's hard to

44

00:06:48,600 --> 00:06:47,110

say that one was more important than the

45

00:06:52,590 --> 00:06:48,610

other because they all had their very

46

00:06:54,360 --> 00:06:52,600

specific purposes you mentioned that it

47

00:06:56,460 --> 00:06:54,370

was done to show that it could be done I

48

00:06:59,310 --> 00:06:56,470

think we really integrated it more into

49

00:07:02,100 --> 00:06:59,320

a a long-term picture than just to go

50

00:07:03,840 --> 00:07:02,110

show that it could be done we are all

51
00:07:05,550 --> 00:07:03,850
interested in building International

52
00:07:07,140 --> 00:07:05,560
Space Station and working together and

53
00:07:10,080 --> 00:07:07,150
making that work and this is one of the

54
00:07:12,300 --> 00:07:10,090
first steps on the way we have divided

55
00:07:14,610 --> 00:07:12,310
it up to call what we call phase one and

56
00:07:16,830 --> 00:07:14,620
then leading into phase 2 phase one is

57
00:07:19,590 --> 00:07:16,840
the flights to mirror and those are

58
00:07:21,150 --> 00:07:19,600
doing many of the projects many of the

59
00:07:23,820 --> 00:07:21,160
techniques many of the tests that will

60
00:07:25,680 --> 00:07:23,830
be doing in phase 2 so this is just one

61
00:07:30,270 --> 00:07:25,690
small part of the of the whole overall

62
00:07:32,220 --> 00:07:30,280
picture again commander Gibson norm

63
00:07:34,650 --> 00:07:32,230

thagard has been pretty open about

64

00:07:38,760 --> 00:07:34,660

saying that this is likely to be his

65

00:07:41,580 --> 00:07:38,770

last flight I'm wondering about you how

66

00:07:43,680 --> 00:07:41,590

likely are you to fly again and what is

67

00:07:45,840 --> 00:07:43,690

it that NASA could offer you after you

68

00:07:47,460 --> 00:07:45,850

have done what you have said is pretty

69

00:07:53,160 --> 00:07:47,470

much the pirating challenge of a

70

00:07:54,750 --> 00:07:53,170

lifetime well fancy I guess I had to

71

00:07:57,390 --> 00:07:54,760

admit that's a pretty good question and

72

00:07:59,100 --> 00:07:57,400

I've been wondering to myself well gee

73

00:08:00,270 --> 00:07:59,110

what what am I going to do after this

74

00:08:02,280 --> 00:08:00,280

one

75

00:08:04,800 --> 00:08:02,290

oh you know if I don't know that I need

76

00:08:06,030 --> 00:08:04,810

to top this one but how am I going to

77

00:08:08,010 --> 00:08:06,040

get a more interesting and more

78

00:08:11,400 --> 00:08:08,020

challenging flight in the future after

79

00:08:15,510 --> 00:08:11,410

this and the answer is i guess i don't

80

00:08:18,510 --> 00:08:15,520

know i'm not exactly sure when i move to

81

00:08:20,159 --> 00:08:18,520

next or what what i do within NASA I

82

00:08:21,540 --> 00:08:20,169

think I've learned quite a few things

83

00:08:25,260 --> 00:08:21,550

that would be very useful and very

84

00:08:27,870 --> 00:08:25,270

valuable to NASA maybe this is the last

85

00:08:29,430 --> 00:08:27,880

time I fly I don't know I guess I'm

86

00:08:31,409 --> 00:08:29,440

keeping an open mind and I'm keeping all

87

00:08:35,219 --> 00:08:31,419

the options open still at this point

88

00:08:37,649 --> 00:08:35,229

Nancy let me ask Greg Harbaugh a

89

00:08:40,589 --> 00:08:37,659

question you've had the chance to talk

90

00:08:43,230 --> 00:08:40,599

with norm thagard and he has said that

91

00:08:46,590 --> 00:08:43,240

three months in space is doable but that

92

00:08:48,480 --> 00:08:46,600

six months or a year is in his mind

93

00:08:51,030 --> 00:08:48,490

pretty difficult thing to do I'm just

94

00:08:53,970 --> 00:08:51,040

wondering would you be interested in a

95

00:08:55,680 --> 00:08:53,980

long-term stay and what is it that you

96

00:08:56,970 --> 00:08:55,690

have what is your reaction to what norm

97

00:08:59,490 --> 00:08:56,980

thagard has had to say is that

98

00:09:05,250 --> 00:08:59,500

discouraged you in any way from wanting

99

00:09:06,570 --> 00:09:05,260

to make a long stay yourself Lillian see

100

00:09:09,540 --> 00:09:06,580

I don't know that I'm a candidate for

101
00:09:12,960 --> 00:09:09,550
that kind of a flight I think having a

102
00:09:17,760 --> 00:09:12,970
medical doctor do that kind of long

103
00:09:21,180 --> 00:09:17,770
duration activity to do the self

104
00:09:23,100 --> 00:09:21,190
analysis self-diagnosis that would be

105
00:09:26,960 --> 00:09:23,110
most useful from a scientific return

106
00:09:30,720 --> 00:09:26,970
standpoint would be probably the optimum

107
00:09:33,860 --> 00:09:30,730
but nonetheless answer to your question

108
00:09:36,810 --> 00:09:33,870
I'm not sure that I have the mindset to

109
00:09:39,329 --> 00:09:36,820
go stay someplace for three to six or

110
00:09:41,250 --> 00:09:39,339
twelve months if I wasn't going

111
00:09:43,200 --> 00:09:41,260
somewhere I think maybe if we were on

112
00:09:47,280 --> 00:09:43,210
our way to Mars I'd be very interested

113
00:09:49,920 --> 00:09:47,290

but going up and staying on Space

114

00:09:52,950 --> 00:09:49,930

Station I don't know but I haven't been

115

00:09:55,860 --> 00:09:52,960

confronted with that question and I

116

00:09:59,400 --> 00:09:55,870

guess I'll beg off until somebody asked

117

00:10:02,190 --> 00:09:59,410

me whether I really want to do it put me

118

00:10:03,990 --> 00:10:02,200

in that position let me ask commander

119

00:10:07,260 --> 00:10:04,000

deser off the question and he spent

120

00:10:10,710 --> 00:10:07,270

three months aboard mir tell me what it

121

00:10:13,439 --> 00:10:10,720

is about your character your personnel

122

00:10:16,139 --> 00:10:13,449

that makes you able to stay for long

123

00:10:18,990 --> 00:10:16,149

terms in space and would you be

124

00:10:20,699 --> 00:10:19,000

interested in six months a year or maybe

125

00:10:22,829 --> 00:10:20,709

even a length of time it would take to

126

00:10:25,319 --> 00:10:22,839

go to Mars what would make you able to

127

00:10:27,509 --> 00:10:25,329

do that personally pesotum user data

128

00:10:30,150 --> 00:10:27,519

across commander Aduro we really number

129

00:10:32,879 --> 00:10:30,160

two stands a bullet rock mr. Hollister

130

00:10:36,059 --> 00:10:32,889

escherichia sepia chart actual character

131

00:10:39,360 --> 00:10:36,069

a tapas wallet one video editing by

132

00:10:41,429 --> 00:10:39,370

Bhavani aniston see he believes into the

133

00:10:49,050 --> 00:10:41,439

Sony of little a pallet of

134

00:10:54,079 --> 00:10:49,060

crystallization acrylic edition well

135

00:11:00,030 --> 00:10:54,089

actually longer the flight the more

136

00:11:02,490 --> 00:11:00,040

person becomes more intense in all of

137

00:11:09,869 --> 00:11:02,500

his aspects in the good and kind of the

138

00:11:12,960 --> 00:11:09,879

not-so-good make long flights on

139

00:11:15,689 --> 00:11:12,970

existing in new new stations and

140

00:11:19,100 --> 00:11:15,699

stations that are working on a more

141

00:11:21,299 --> 00:11:19,110

contemporary level and are more

142

00:11:23,369 --> 00:11:21,309

technologically advanced or is certainly

143

00:11:26,999 --> 00:11:23,379

interesting and I would with great

144

00:11:29,939 --> 00:11:27,009

pleasure would agree to do this if I

145

00:11:31,949 --> 00:11:29,949

have the opportunity to fly to the new

146

00:11:38,929 --> 00:11:31,959

alpha station I think this would be very

147

00:11:43,819 --> 00:11:38,939

interesting to try and how this would be

148

00:11:47,939 --> 00:11:43,829

it would be even more interesting if

149

00:11:50,910 --> 00:11:47,949

there would be a big international team

150

00:11:52,829 --> 00:11:50,920

that consists not only of Americans in

151
00:11:56,670 --> 00:11:52,839
Russian cosmonauts and astronauts but

152
00:12:01,049 --> 00:11:56,680
also astronauts and cosmonauts from

153
00:12:03,360 --> 00:12:01,059
other countries commander Desert Storm

154
00:12:06,449 --> 00:12:03,370
has said he got lonely up there

155
00:12:08,309 --> 00:12:06,459
did you get lonely up there commandeer

156
00:12:10,559 --> 00:12:08,319
the desert of northern Taggarts gazelles

157
00:12:14,759 --> 00:12:10,569
to immobility noka number two Stan save

158
00:12:22,000 --> 00:12:19,540
no no I wasn't lonely actually there was

159
00:12:24,310 --> 00:12:22,010
a lot of work to do and there wasn't

160
00:12:30,759 --> 00:12:24,320
even time to think about missing

161
00:12:36,930 --> 00:12:30,769
anything norm was somewhat lonely i but

162
00:12:39,519 --> 00:12:36,940
i wouldn't say very lonely and he was so

163
00:12:41,920 --> 00:12:39,529

loaded down with work the same way that

164

00:12:49,960 --> 00:12:41,930

we were with all sorts of technical

165

00:12:54,600 --> 00:12:49,970

issues norm wasn't loaded down so much

166

00:12:57,370 --> 00:12:54,610

that we we were a little late in

167

00:13:02,050 --> 00:12:57,380

accepting a new model module with new

168

00:13:03,579 --> 00:13:02,060

equipment linea not leave charlie

169

00:13:06,819 --> 00:13:03,589

Precourt out of this you know always

170

00:13:08,860 --> 00:13:06,829

there are detractors to the space

171

00:13:10,900 --> 00:13:08,870

program it comes up every year for a

172

00:13:12,370 --> 00:13:10,910

vote it's going to be the space station

173

00:13:13,990 --> 00:13:12,380

is going to be coming up again in

174

00:13:16,329 --> 00:13:14,000

Congress undoubtedly there will be those

175

00:13:17,680 --> 00:13:16,339

who try to kill it are there people that

176

00:13:19,300 --> 00:13:17,690

you just have to write off who are

177

00:13:20,650 --> 00:13:19,310

always going to do this or after a

178

00:13:22,840 --> 00:13:20,660

mission it's been given this much

179

00:13:24,939 --> 00:13:22,850

international publicity and talked about

180

00:13:26,620 --> 00:13:24,949

this much in terms of success do you

181

00:13:28,449 --> 00:13:26,630

find it frustrating that you have to

182

00:13:34,420 --> 00:13:28,459

fight these battles over and over again

183

00:13:36,309 --> 00:13:34,430

I look at it to respects I think it's

184

00:13:37,840 --> 00:13:36,319

good that there's some skeptics out

185

00:13:40,000 --> 00:13:37,850

there to keep us honest and make sure

186

00:13:41,500 --> 00:13:40,010

that we produce the maximum product for

187

00:13:43,059 --> 00:13:41,510

the dollar that's spent on the program

188

00:13:45,400 --> 00:13:43,069

on the other hand there's a little bit

189

00:13:47,139 --> 00:13:45,410

of frustration that if you work in

190

00:13:49,150 --> 00:13:47,149

something like this like we do it's our

191

00:13:51,280 --> 00:13:49,160

life and we are very very dedicated to

192

00:13:52,540 --> 00:13:51,290

it we believe in it completely and it's

193

00:13:55,960 --> 00:13:52,550

somewhat frustrating that we can't

194

00:13:59,110 --> 00:13:55,970

communicate how important it is to those

195

00:14:00,220 --> 00:13:59,120

people who doubt it and I guess it kind

196

00:14:01,990 --> 00:14:00,230

of falls back to your earlier question

197

00:14:03,939 --> 00:14:02,000

to hoot about what was the most

198

00:14:06,970 --> 00:14:03,949

important part of the flight whether it

199

00:14:08,710 --> 00:14:06,980

be political or technical I think what

200

00:14:10,990 --> 00:14:08,720

really goes on here is that there's a

201
00:14:13,120 --> 00:14:11,000
little bit of everything for everybody

202
00:14:14,829 --> 00:14:13,130
in what we're doing in space whether it

203
00:14:16,300 --> 00:14:14,839
be research whether it be international

204
00:14:18,850 --> 00:14:16,310
relationships whether it be new

205
00:14:20,500 --> 00:14:18,860
technologies for everyday life on earth

206
00:14:22,180 --> 00:14:20,510
whether it be from motivating our

207
00:14:24,040 --> 00:14:22,190
children will it be for education you

208
00:14:26,199 --> 00:14:24,050
can look all different directions and

209
00:14:27,460 --> 00:14:26,209
what we do impacts every different area

210
00:14:29,950 --> 00:14:27,470
of our lives so

211
00:14:31,570 --> 00:14:29,960
yes there is some frustration but it

212
00:14:33,940 --> 00:14:31,580
keeps us honest and I think it's healthy

213
00:14:35,980 --> 00:14:33,950

and that's our process that was made our

214

00:14:38,650 --> 00:14:35,990

country strong and now I think that same

215

00:14:40,090 --> 00:14:38,660

process will make our entire globe

216

00:14:42,820 --> 00:14:40,100

strong internationally as we join

217

00:14:43,900 --> 00:14:42,830

together one of the biggest results I

218

00:14:46,150 --> 00:14:43,910

think of this flight is that we've

219

00:14:49,600 --> 00:14:46,160

demonstrated a willingness both sides

220

00:14:50,770 --> 00:14:49,610

and now internationally to to carry on

221

00:14:53,530 --> 00:14:50,780

with this kind of project and it's

222

00:14:55,180 --> 00:14:53,540

really encouraging well that brings to

223

00:14:58,960 --> 00:14:55,190

mind something that Greg Harbaugh said

224

00:15:03,130 --> 00:14:58,970

before he left which is that remember

225

00:15:05,080 --> 00:15:03,140

asking him about something what he

226

00:15:08,140 --> 00:15:05,090

thought would come of this and and Greg

227

00:15:11,440 --> 00:15:08,150

you said that 20 years ago there was a

228

00:15:13,630 --> 00:15:11,450

lot of Hope after a parlor freeze but

229

00:15:15,640 --> 00:15:13,640

the danger now is sitting back and not

230

00:15:18,550 --> 00:15:15,650

committing ourselves the same thing that

231

00:15:20,620 --> 00:15:18,560

happened 20 years ago if it were up to

232

00:15:22,300 --> 00:15:20,630

you what would you do right this minute

233

00:15:24,400 --> 00:15:22,310

right now or as soon as you got back on

234

00:15:30,850 --> 00:15:24,410

the ground to keep this going to keep

235

00:15:34,240 --> 00:15:30,860

this interest to generate it what would

236

00:15:35,710 --> 00:15:34,250

I do personally be fancy and what would

237

00:15:40,660 --> 00:15:35,720

you tell NASA to do and what would you

238

00:15:43,530 --> 00:15:40,670

do personally well I think we've done

239

00:15:47,890 --> 00:15:43,540

with what we can do on a personal level

240

00:15:50,890 --> 00:15:47,900

we've accomplished our mission you know

241

00:15:53,800 --> 00:15:50,900

we set out for a very with a very

242

00:15:56,100 --> 00:15:53,810

challenging set of objectives and we

243

00:16:02,800 --> 00:15:56,110

satisfied those and I think we did it

244

00:16:05,950 --> 00:16:02,810

very well with regard to NASA you know I

245

00:16:10,300 --> 00:16:05,960

think we could we need to do a good job

246

00:16:14,460 --> 00:16:10,310

of telling the American people what what

247

00:16:17,020 --> 00:16:14,470

we do and why we do it and to follow up

248

00:16:21,340 --> 00:16:17,030

charlie's point to let folks know why it

249

00:16:25,690 --> 00:16:21,350

is worthwhile any on the tax dollar that

250

00:16:28,750 --> 00:16:25,700

the taxpayer spends that pays for our

251
00:16:30,970 --> 00:16:28,760
budget you know we we do an awful lot if

252
00:16:33,310 --> 00:16:30,980
you look back and created some sort of

253
00:16:35,650 --> 00:16:33,320
an anthology at will we've done just in

254
00:16:37,730 --> 00:16:35,660
the shuttle program with all the

255
00:16:40,130 --> 00:16:37,740
satellite deploys and retreat

256
00:16:42,800 --> 00:16:40,140
season and some of the amazing fantastic

257
00:16:46,010 --> 00:16:42,810
things we've done with just the space

258
00:16:49,400 --> 00:16:46,020
shuttle it's really quite an impressive

259
00:16:52,280 --> 00:16:49,410
list of accomplishments and I think the

260
00:16:53,660 --> 00:16:52,290
American public needs to have that kept

261
00:16:56,330 --> 00:16:53,670
in front of them so that they appreciate

262
00:16:58,790 --> 00:16:56,340
what the space program is really doing

263
00:17:03,620 --> 00:16:58,800

for them and I guess I would try to be

264

00:17:06,080 --> 00:17:03,630

aggressive at getting that word out okay

265

00:17:07,970 --> 00:17:06,090

I think I lost the the end of the answer

266

00:17:12,260 --> 00:17:07,980

to that question but let me go ahead and

267

00:17:15,560 --> 00:17:12,270

ask 11 more of commander des Arras if he

268

00:17:17,540 --> 00:17:15,570

can can hear me which is what is the

269

00:17:19,220 --> 00:17:17,550

saying that he is looking forward the

270

00:17:21,380 --> 00:17:19,230

real human thing that he is looking

271

00:17:22,790 --> 00:17:21,390

forward to doing the most when he gets

272

00:17:24,350 --> 00:17:22,800

back does he want to take a walk in the

273

00:17:26,720 --> 00:17:24,360

woods you want to take a hot shower away

274

00:17:28,760 --> 00:17:26,730

the first real human thing after saying

275

00:17:32,330 --> 00:17:28,770

his family that he wants to do when he

276

00:17:33,800 --> 00:17:32,340

gets home no school today is busy but

277

00:17:37,460 --> 00:17:33,810

can yet swash watya tangible solutions

278

00:17:41,270 --> 00:17:37,470

assaulting Andrew Guevara's stove a

279

00:17:43,460 --> 00:17:41,280

rattata stilt positive okok we presume

280

00:17:46,670 --> 00:17:43,470

latisse if theta so I similarly stop

281

00:17:49,760 --> 00:17:46,680

evocative is still at theorem non

282

00:17:58,280 --> 00:17:49,770

premier Reynaud garage a douche puku let

283

00:18:02,540 --> 00:17:58,290

palazzo what taco baroda yeah very first

284

00:18:04,640 --> 00:18:02,550

thing I probably want to do is to stand

285

00:18:08,480 --> 00:18:04,650

under a hot shower for a pretty long

286

00:18:11,540 --> 00:18:08,490

time and I've missed that and second

287

00:18:15,920 --> 00:18:11,550

thing with I'd like to meet with my

288

00:18:19,400 --> 00:18:15,930

family with my kids my wife to talk to

289

00:18:25,010 --> 00:18:19,410

socialize take a little walk if there is

290

00:18:29,180 --> 00:18:25,020

such an opportunity immediately tell you

291

00:18:32,110 --> 00:18:29,190

the truth I miss I miss people pretty

292

00:18:34,550 --> 00:18:32,120

much and kind of the everyday earth life

293

00:18:37,010 --> 00:18:34,560

one last real quick question for hoot

294

00:18:38,420 --> 00:18:37,020

its twenty years since Apollo Soyuz 20

295

00:18:44,350 --> 00:18:38,430

years from now what do you want people

296

00:18:50,180 --> 00:18:48,140

Danny I hope they'll say it was it was a

297

00:18:52,850 --> 00:18:50,190

very good success I hope they'll say

298

00:18:56,450 --> 00:18:52,860

that it had been an incredibly long dry

299

00:18:59,150 --> 00:18:56,460

spell between apollo-soyuz and SDS 71

300

00:19:02,090 --> 00:18:59,160

but then look at all the other missions

301

00:19:04,850 --> 00:19:02,100

that we did and look at how SDS 71

302

00:19:07,400 --> 00:19:04,860

helped open the way between the United

303

00:19:13,420 --> 00:19:07,410

States and Russia and that we existed in

304

00:19:25,510 --> 00:19:16,700

and Lena's we have you an air-to-ground

305

00:19:28,580 --> 00:19:25,520

one through my life okay so you're clear

306

00:19:31,940 --> 00:19:28,590

Ianús you are loud and clear on here to

307

00:21:00,399 --> 00:19:31,950

ground one plus go over and try a UHF

308

00:21:16,590 --> 00:21:03,440

Atlantis unbelievable picture nor by

309

00:21:27,490 --> 00:21:20,650

well story that this loop is still a