1
00:00:06,789 --> 00:00:02,470
station this is houston are you ready

2
00:00:11,030 --> 00:00:09,270
we're ready for the event houston

3
00:00:13,669 --> 00:00:11,040
berlin this is houston please call

4
00:01:07,510 --> 00:00:13,679
station for a voice check

5
00:01:25,190 --> 00:01:21,270
is

6
00:01:27,190 --> 00:01:25,200
hartsfield of

7
00:01:34,069 --> 00:01:27,200
d1

8
00:01:37,749 --> 00:01:36,069
amanda hartfield we have you loud and

9
00:01:42,149 --> 00:01:37,759
clear aboard the international space

10
00:01:45,510 --> 00:01:44,069
and we also welcome you here to a

11
00:01:47,270 --> 00:01:45,520
special evening

12
00:01:50,149 --> 00:01:47,280
here in berlin where we're celebrating

13
00:01:51,749 --> 00:01:50,159

the 25th anniversary of the d1 mission

14
00:01:54,069 --> 00:01:51,759
in the audience we have distinguished

15
00:01:55,910 --> 00:01:54,079
guests from the german parliament

16
00:01:57,830 --> 00:01:55,920
industry and science

17
00:01:59,030 --> 00:01:57,840
please let me introduce the people who

18
00:02:01,270 --> 00:01:59,040
will make this

19
00:02:03,350 --> 00:02:01,280
in-flight call together with me

20
00:02:04,310 --> 00:02:03,360
first of all our host and member of the

21
00:02:06,709 --> 00:02:04,320
german

22
00:02:09,350 --> 00:02:06,719
parliament and chairman of the aviation

23
00:02:12,229 --> 00:02:09,360
and space group of the german parliament

24
00:02:14,630 --> 00:02:12,239
mr claus peter vilsh

25
00:02:15,990 --> 00:02:14,640
and also the coordinator for air and

26
00:02:22,070 --> 00:02:16,000
space mr

27
00:02:27,510 --> 00:02:24,070
this is a member of parliament class

28
00:02:30,390 --> 00:02:27,520
peter village welcome to berlin crew of

29
00:02:31,509 --> 00:02:30,400
expedition 25 and to our celebration of

30
00:02:36,710 --> 00:02:31,519
the

31
00:02:38,150 --> 00:02:36,720
we are really excited to be able to talk

32
00:02:39,350 --> 00:02:38,160
to you

33
00:02:41,910 --> 00:02:39,360
and with you

34
00:02:48,150 --> 00:02:41,920
and we would first of all not naturally

35
00:02:52,869 --> 00:02:50,150
the real pleasure to join you and uh

36
00:02:55,030 --> 00:02:52,879
we're currently uh flying over japan and

37
00:02:57,589 --> 00:02:55,040
we're on a descending node uh coming out

38
00:02:59,750 --> 00:02:57,599

over the pacific ocean uh traveling at

39
00:03:02,229 --> 00:02:59,760
eight kilometers per second so pretty

40
00:03:07,670 --> 00:03:02,239
quickly uh we orbit the earth once every

41
00:03:11,589 --> 00:03:09,589
thank you i now have the honor and

42
00:03:14,149 --> 00:03:11,599
pleasure to hand over to a very special

43
00:03:17,270 --> 00:03:14,159
guest of our parliamentarian group for

44
00:03:19,589 --> 00:03:17,280
this tonight is the state secretary in

45
00:03:21,830 --> 00:03:19,599
the ministry of economics and technology

46
00:03:24,710 --> 00:03:21,840
of the federal republic of germany mr

47
00:03:26,470 --> 00:03:24,720
peter hinson please

48
00:03:30,309 --> 00:03:26,480
this is peter hinzer

49
00:03:33,430 --> 00:03:30,319
we in germany are very proud of the iss

50
00:03:34,630 --> 00:03:33,440
it's humanity's greatest ever technology

51
00:03:37,589 --> 00:03:34,640
project

52
00:03:39,990 --> 00:03:37,599
my question to you in the iss what are

53
00:03:41,110 --> 00:03:40,000
the main experiments you are currently

54
00:03:43,110 --> 00:03:41,120
working on

55
00:03:43,949 --> 00:03:43,120
and how is the columbus control center

56
00:03:52,710 --> 00:03:43,959
and

57
00:03:56,550 --> 00:03:54,789
well uh welcome aboard the space station

58
00:03:58,869 --> 00:03:56,560
we're actually in the columbus module

59
00:04:01,509 --> 00:03:58,879
which is a uh which was built there in

60
00:04:03,429 --> 00:04:01,519
bremen and uh by the sharp engineers

61
00:04:05,750 --> 00:04:03,439
there we also

62
00:04:08,149 --> 00:04:05,760
do much of our training over in the

63
00:04:09,509 --> 00:04:08,159

european astronaut center in cologne

64
00:04:12,149 --> 00:04:09,519
near cologne

65
00:04:13,670 --> 00:04:12,159
and we also have a control team a

66
00:04:16,870 --> 00:04:13,680
mission control team and over

67
00:04:19,030 --> 00:04:16,880
faufenhofen uh that helps us uh on a

68
00:04:21,349 --> 00:04:19,040
daily basis actually many many times a

69
00:04:23,350 --> 00:04:21,359
day as we operate the different the

70
00:04:25,670 --> 00:04:23,360
varied experiments here in the columbus

71
00:04:30,070 --> 00:04:25,680
module and the other the other

72
00:04:33,990 --> 00:04:31,909
as far as the types of experiments we're

73
00:04:35,510 --> 00:04:34,000
doing we have such a wide range of

74
00:04:37,749 --> 00:04:35,520
experiments on board the station right

75
00:04:39,590 --> 00:04:37,759
now it's hard to cover all of them we

76
00:04:41,350 --> 00:04:39,600
have experiments in just about every

77
00:04:44,790 --> 00:04:41,360
field of science from the biological

78
00:04:46,870 --> 00:04:44,800
sciences to the material sciences to the

79
00:04:49,270 --> 00:04:46,880
physical sciences so

80
00:04:51,830 --> 00:04:49,280
i guess some of the ones that come to

81
00:04:54,830 --> 00:04:51,840
mind right off i this week was working

82
00:04:57,110 --> 00:04:54,840
on a an experiment with plants for the

83
00:04:59,110 --> 00:04:57,120
japanese we've had

84
00:05:02,390 --> 00:04:59,120
capillary flow experiments looking at

85
00:05:04,870 --> 00:05:02,400
how fluids move in space we've got

86
00:05:06,790 --> 00:05:04,880
experiments that were test subjects

87
00:05:08,550 --> 00:05:06,800
using our bodies to understand how they

88
00:05:10,310 --> 00:05:08,560

adapt in space

89
00:05:17,110 --> 00:05:10,320
so just a whole wide range of things

90
00:05:22,310 --> 00:05:19,110
thank you so much

91
00:05:24,310 --> 00:05:22,320
one last question the german government

92
00:05:26,469 --> 00:05:24,320
is in favor of an extension of the

93
00:05:28,870 --> 00:05:26,479
lifetime of iss

94
00:05:36,710 --> 00:05:28,880
what benefits would an extension of the

95
00:05:41,189 --> 00:05:38,310
we're really just coming onto the

96
00:05:43,110 --> 00:05:41,199
threshold of the uh a full utilization

97
00:05:45,430 --> 00:05:43,120
of this space station as an orbiting

98
00:05:46,710 --> 00:05:45,440
laboratory and uh here they're in the

99
00:05:49,189 --> 00:05:46,720
columbus module and the other

100
00:05:51,590 --> 00:05:49,199
laboratories on board we're just now

101
00:05:54,469 --> 00:05:51,600
coming up to full operation and it's

102
00:05:57,189 --> 00:05:54,479
very very exciting to see uh the amount

103
00:06:00,070 --> 00:05:57,199
of activity the amount of excitement in

104
00:06:02,309 --> 00:06:00,080
the area of science uh the area of

105
00:06:04,150 --> 00:06:02,319
education bringing the science back to

106
00:06:07,110 --> 00:06:04,160
earth to our children and to our

107
00:06:08,870 --> 00:06:07,120
scientists and um i think it's going to

108
00:06:10,950 --> 00:06:08,880
be amazing what we see over the next

109
00:06:12,950 --> 00:06:10,960
several years and it's due

110
00:06:15,430 --> 00:06:12,960
in large part to the pioneers that are

111
00:06:18,309 --> 00:06:15,440
there uh commander hartf hartsfield and

112
00:06:20,790 --> 00:06:18,319
his crew who pioneered some of the early

113
00:06:22,550 --> 00:06:20,800

space laboratories and now we're really

114
00:06:25,430 --> 00:06:22,560
seeing it come to fruition where we'll

115
00:06:27,749 --> 00:06:25,440
see uh this payback for our investment

116
00:06:30,309 --> 00:06:27,759
of our technology of our engineering

117
00:06:32,550 --> 00:06:30,319
skills and of our scientists that we put

118
00:06:35,990 --> 00:06:32,560
into the into the space station now i

119
00:06:38,309 --> 00:06:36,000
think we're to begin to start to see um

120
00:06:40,309 --> 00:06:38,319
return in the areas of medicine

121
00:06:43,430 --> 00:06:40,319
breakthroughs in the area of medicine in

122
00:06:45,510 --> 00:06:43,440
the area of agriculture as we uh as we

123
00:06:46,870 --> 00:06:45,520
uh take a look at um

124
00:06:49,110 --> 00:06:46,880
at the

125
00:06:51,830 --> 00:06:49,120
experiments that dr walker was talking

126
00:06:54,150 --> 00:06:51,840
about uh in in the area of uh growing

127
00:06:55,749 --> 00:06:54,160
crops and taking care of our our land

128
00:06:57,510 --> 00:06:55,759
and things like this so i think it's

129
00:07:00,070 --> 00:06:57,520
going to be a very very exciting future

130
00:07:05,189 --> 00:07:00,080
for our children and for future crews of

131
00:07:09,430 --> 00:07:06,950
this is uh

132
00:07:11,350 --> 00:07:09,440
this is empty village again

133
00:07:13,749 --> 00:07:11,360
you know in berlin where the front line

134
00:07:15,350 --> 00:07:13,759
between east and west germany was

135
00:07:16,870 --> 00:07:15,360
it's a great experience for us to have

136
00:07:19,270 --> 00:07:16,880
you talking

137
00:07:22,230 --> 00:07:19,280
to us and to our international guests

138
00:07:24,390 --> 00:07:22,240

down here you up there

139
00:07:26,390 --> 00:07:24,400
international crew space has become

140
00:07:27,589 --> 00:07:26,400
truly an international business

141
00:07:30,390 --> 00:07:27,599
so

142
00:07:32,469 --> 00:07:30,400
and for me the iss is quite a symbol for

143
00:07:39,270 --> 00:07:32,479
that what do you what would you say on

144
00:07:42,870 --> 00:07:40,870
well i think it's you know one of the

145
00:07:45,029 --> 00:07:42,880
greatest examples of international

146
00:07:47,830 --> 00:07:45,039
cooperation we've had in

147
00:07:50,070 --> 00:07:47,840
you know in the history of our planet

148
00:07:53,430 --> 00:07:50,080
you know this facility is an amazing

149
00:07:55,510 --> 00:07:53,440
facility it's uh incredibly complicated

150
00:07:58,070 --> 00:07:55,520
uh to build it uses different

151
00:08:01,029 --> 00:07:58,080
technologies that are made in different

152
00:08:02,950 --> 00:08:01,039
different countries

153
00:08:05,830 --> 00:08:02,960
with uh you know different philosophy

154
00:08:07,350 --> 00:08:05,840
engineering philosophies and

155
00:08:09,510 --> 00:08:07,360
the fact that we've been able to put it

156
00:08:11,350 --> 00:08:09,520
together in orbit

157
00:08:14,869 --> 00:08:11,360
in a vacuum while flying around the

158
00:08:16,550 --> 00:08:14,879
earth at 17 500 miles an hour is i think

159
00:08:18,309 --> 00:08:16,560
an amazing feat

160
00:08:19,990 --> 00:08:18,319
and uh you know everyone that is

161
00:08:22,309 --> 00:08:20,000
involved in this program from the crew

162
00:08:23,670 --> 00:08:22,319
members uh you know and everyone else

163
00:08:24,869 --> 00:08:23,680

that

164
00:08:26,550 --> 00:08:24,879
you know all the engineers and

165
00:08:28,550 --> 00:08:26,560
scientists and designers and all the

166
00:08:29,909 --> 00:08:28,560
support people should be very very proud

167
00:08:32,709 --> 00:08:29,919
of the

168
00:08:34,949 --> 00:08:32,719
this uh you know amazing facility we've

169
00:08:36,790 --> 00:08:34,959
built besides the three of us here there

170
00:08:38,230 --> 00:08:36,800
are also three russian crew members on

171
00:08:40,949 --> 00:08:38,240
board

172
00:08:42,790 --> 00:08:40,959
and soon um in the next uh probably

173
00:08:45,350 --> 00:08:42,800
about six weeks we're going to have a

174
00:08:47,750 --> 00:08:45,360
european astronaut

175
00:08:53,509 --> 00:08:47,760
that you know rounds out the crew of

176
00:08:58,389 --> 00:08:55,509
this is mp village again germany has

177
00:09:01,190 --> 00:08:58,399
provided together with esa major

178
00:09:02,630 --> 00:09:01,200
contributions to the iss

179
00:09:05,910 --> 00:09:02,640
we have a lot of people here around in

180
00:09:09,990 --> 00:09:05,920
our auditorium who really took important

181
00:09:11,670 --> 00:09:10,000
parts on this work what is the role of

182
00:09:13,750 --> 00:09:11,680
polit politics

183
00:09:15,190 --> 00:09:13,760
what are your expectations towards

184
00:09:17,829 --> 00:09:15,200
politics

185
00:09:19,990 --> 00:09:17,839
for the implementation realization and

186
00:09:25,670 --> 00:09:20,000
of such a project like columbus or the

187
00:09:28,070 --> 00:09:26,710
well

188
00:09:31,509 --> 00:09:28,080

clearly

189
00:09:33,590 --> 00:09:31,519
flying in space and doing it safely and

190
00:09:34,630 --> 00:09:33,600
doing it in the manner that we've chosen

191
00:09:37,190 --> 00:09:34,640
is

192
00:09:38,070 --> 00:09:37,200
you know very can be expensive and there

193
00:09:40,310 --> 00:09:38,080
are

194
00:09:41,350 --> 00:09:40,320
you know fiscal realities to to this

195
00:09:42,550 --> 00:09:41,360
program

196
00:09:45,670 --> 00:09:42,560
so

197
00:09:47,910 --> 00:09:45,680
politics clearly uh plays a part

198
00:09:50,470 --> 00:09:47,920
and uh you know i think it's our job to

199
00:09:53,269 --> 00:09:50,480
be able to answer these questions but

200
00:09:55,590 --> 00:09:53,279
you know in general um

201
00:09:57,590 --> 00:09:55,600
you know our management and you know

202
00:10:00,470 --> 00:09:57,600
leadership and governments

203
00:10:02,069 --> 00:10:00,480
answer the questions of of politics and

204
00:10:03,670 --> 00:10:02,079
you know specifically with regards to

205
00:10:05,190 --> 00:10:03,680
financing so

206
00:10:06,310 --> 00:10:05,200
you know it's something we're aware of

207
00:10:09,190 --> 00:10:06,320
but

208
00:10:15,269 --> 00:10:09,200
you know to have a specific answers is

209
00:10:18,389 --> 00:10:17,269
hey wales uh this is hank hartsfield

210
00:10:20,150 --> 00:10:18,399
again

211
00:10:22,870 --> 00:10:20,160
i have a question it looks like

212
00:10:25,110 --> 00:10:22,880
everything goes real smooth now and face

213
00:10:27,430 --> 00:10:25,120

in your vehicle

214
00:10:28,470 --> 00:10:27,440
it's great to see how well it goes for

215
00:10:31,030 --> 00:10:28,480
us

216
00:10:33,110 --> 00:10:31,040
space inside the space lab was somewhat

217
00:10:35,110 --> 00:10:33,120
limited you're better off today aren't

218
00:10:40,630 --> 00:10:35,120
you how is it up there on a long

219
00:10:44,630 --> 00:10:43,110
from the uh uh commander herzegovina i

220
00:10:46,389 --> 00:10:44,640
can't imagine how you did it with such a

221
00:10:49,030 --> 00:10:46,399
small laboratory but

222
00:10:50,389 --> 00:10:49,040
it is very very spacious and of course

223
00:10:52,470 --> 00:10:50,399
because we don't have well we have

224
00:10:54,069 --> 00:10:52,480
microgravity up here you can use the

225
00:10:55,990 --> 00:10:54,079
ceiling or the floor

226
00:10:57,990 --> 00:10:56,000
or the walls and we have experiments

227
00:11:00,550 --> 00:10:58,000
that are covering each of the four

228
00:11:02,949 --> 00:11:00,560
quadrants we actually have over 130

229
00:11:05,110 --> 00:11:02,959
experiments going on right now in the

230
00:11:08,310 --> 00:11:05,120
space station it's just a tremendous

231
00:11:09,990 --> 00:11:08,320
laboratory and uh very very spacious and

232
00:11:12,230 --> 00:11:10,000
um

233
00:11:14,710 --> 00:11:12,240
and we have we have four laboratories of

234
00:11:17,509 --> 00:11:14,720
course we have uh the uh the

235
00:11:19,269 --> 00:11:17,519
contribution uh by the european space

236
00:11:21,750 --> 00:11:19,279
agency is we're

237
00:11:24,150 --> 00:11:21,760
standing in here today in the columbus

238
00:11:26,870 --> 00:11:24,160

module we also have the uh japanese

239
00:11:29,350 --> 00:11:26,880
experiment module the gem module that we

240
00:11:31,269 --> 00:11:29,360
have tremendous number of experiments in

241
00:11:34,310 --> 00:11:31,279
and the us laboratory and then we also

242
00:11:36,389 --> 00:11:34,320
have our russian partners uh doing uh

243
00:11:39,430 --> 00:11:36,399
experiments and as well in the russian

244
00:11:41,750 --> 00:11:39,440
segment so it's a it's a tremendous

245
00:11:45,110 --> 00:11:41,760
place it's got a tremendous amount of

246
00:11:51,030 --> 00:11:45,120
volume and uh and uh it's uh it's

247
00:11:54,310 --> 00:11:52,790
this is sempi village again talking we

248
00:11:58,150 --> 00:11:54,320
are you know you heard we are

249
00:12:00,870 --> 00:11:58,160
celebrating the 25th anniversary of d1

250
00:12:02,710 --> 00:12:00,880
and what in your opinion are the future

251
00:12:09,509 --> 00:12:02,720
challenges what do you think where will

252
00:12:15,190 --> 00:12:12,949
in 25 years that we'll be uh we'll be

253
00:12:16,629 --> 00:12:15,200
uh learning from the things the things

254
00:12:19,670 --> 00:12:16,639
that we've learned here that we will

255
00:12:21,910 --> 00:12:19,680
have had breakthroughs uh on in science

256
00:12:23,990 --> 00:12:21,920
on our planet and i hope to be watching

257
00:12:30,230 --> 00:12:24,000
our some of our children walking on the

258
00:12:37,829 --> 00:12:33,350
okay i thank you very much so far i have

259
00:12:41,269 --> 00:12:38,790
thank you

260
00:12:43,590 --> 00:12:41,279
crew of expedition 25 for sharing your

261
00:12:45,269 --> 00:12:43,600
precious time with us on behalf of the

262
00:12:46,470 --> 00:12:45,279
aviation and space group in the deutsche

263
00:12:49,430 --> 00:12:46,480

bundestag

264
00:12:51,590 --> 00:12:49,440
um i can tell you that we are happy that

265
00:12:54,710 --> 00:12:51,600
the operation of iss has been extended

266
00:12:56,310 --> 00:12:54,720
until 2020 i wish you all the best and

267
00:12:58,310 --> 00:12:56,320
successful mission

268
00:13:00,310 --> 00:12:58,320
and sending best wishes from the

269
00:13:08,790 --> 00:13:00,320
audience as well

270
00:13:12,150 --> 00:13:10,550
very much we really appreciate you

271
00:13:13,990 --> 00:13:12,160
joining us today

272
00:13:16,230 --> 00:13:14,000
aboard the international space station

273
00:13:18,870 --> 00:13:16,240
and thank a big thank you to all of our

274
00:13:21,269 --> 00:13:18,880
partners there in germany uh obviously

275
00:13:24,230 --> 00:13:21,279
to our uh to our sharp engineers in

276
00:13:26,389 --> 00:13:24,240
bremen who built our uh the module that

277
00:13:28,870 --> 00:13:26,399
we're in now all of our scientists our

278
00:13:31,750 --> 00:13:28,880
control team and over faufenhofen

279
00:13:34,470 --> 00:13:31,760
our uh our training teams and uh near

280
00:13:36,550 --> 00:13:34,480
cologne the dlr who's been so

281
00:13:38,629 --> 00:13:36,560
instrumental in uh and everything that

282
00:13:40,790 --> 00:13:38,639
was that's occurring up here in space

283
00:13:43,030 --> 00:13:40,800
now where we really really appreciate it

284
00:13:46,069 --> 00:13:43,040
it's a it's a total team effort

285
00:13:48,069 --> 00:13:46,079
and uh and your effort uh and sacrifice

286
00:13:49,430 --> 00:13:48,079
is not lost on us and we so deeply

287
00:13:55,110 --> 00:13:49,440
appreciate

288
00:13:55,120 --> 00:14:06,470

outside