
MISSION CONTROL CENTER
PAO

1
00:00:05,030 --> 00:00:03,429
anna fisher you were just 28 years old

2
00:00:06,710 --> 00:00:05,040
and only five or six years out of

3
00:00:08,390 --> 00:00:06,720
medical school when you were selected

4
00:00:10,310 --> 00:00:08,400
for astronaut training

5
00:00:12,549 --> 00:00:10,320
what was it that drove you to apply for

6
00:00:14,230 --> 00:00:12,559
that job at that time of your life

7
00:00:16,230 --> 00:00:14,240
well it was my dream job it's what i

8
00:00:17,430 --> 00:00:16,240
always had wanted to do since i was 12

9
00:00:20,070 --> 00:00:17,440
years old and

10
00:00:21,029 --> 00:00:20,080
listened to alan shepard's suborbital

11
00:00:21,750 --> 00:00:21,039
flight

12
00:00:23,269 --> 00:00:21,760
and

13
00:00:25,189 --> 00:00:23,279

it just seemed like a dream that wasn't

14
00:00:26,950 --> 00:00:25,199
going to be possible because

15
00:00:28,710 --> 00:00:26,960
there weren't a lot of women astronauts

16
00:00:31,750 --> 00:00:28,720
most of the astronauts at that time were

17
00:00:33,430 --> 00:00:31,760
test pilots and i just thought it was an

18
00:00:36,549 --> 00:00:33,440
unrealistic dream and when i suddenly

19
00:00:38,389 --> 00:00:36,559
found out that nasa was selecting

20
00:00:40,950 --> 00:00:38,399
scientists to be mission specialists it

21
00:00:42,790 --> 00:00:40,960
was like my dream job i didn't hesitate

22
00:00:44,470 --> 00:00:42,800
i applied immediately and

23
00:00:46,790 --> 00:00:44,480
i actually found out about it fairly

24
00:00:48,549 --> 00:00:46,800
late i found out about a month before

25
00:00:50,310 --> 00:00:48,559
the deadline so i barely got my

26
00:00:52,150 --> 00:00:50,320
application in because it was a lot of

27
00:00:54,549 --> 00:00:52,160
paperwork to fill out

28
00:00:55,590 --> 00:00:54,559
so i mailed my application i guess june

29
00:00:57,590 --> 00:00:55,600
30th

30
00:00:59,270 --> 00:00:57,600
and was interviewing the third week in

31
00:01:00,310 --> 00:00:59,280
august so it all happened pretty quickly

32
00:01:02,470 --> 00:01:00,320
after that

33
00:01:05,350 --> 00:01:02,480
and then your first flight came during

34
00:01:07,350 --> 00:01:05,360
this week of november in 1984.

35
00:01:08,870 --> 00:01:07,360
what's your favorite memory of your time

36
00:01:10,550 --> 00:01:08,880
in space

37
00:01:11,910 --> 00:01:10,560
oh that's such a hard question to answer

38
00:01:13,750 --> 00:01:11,920

because there's just like so many

39
00:01:16,870 --> 00:01:13,760
favorite memories um

40
00:01:18,630 --> 00:01:16,880
of course that was a very um difficult

41
00:01:20,230 --> 00:01:18,640
mission because it was something that

42
00:01:21,109 --> 00:01:20,240
the program hadn't

43
00:01:22,469 --> 00:01:21,119
uh

44
00:01:24,149 --> 00:01:22,479
that we were doing something very

45
00:01:26,550 --> 00:01:24,159
different for that early in the space

46
00:01:28,310 --> 00:01:26,560
shuttle program so one of the happiest

47
00:01:29,670 --> 00:01:28,320
memories was that last day after we had

48
00:01:31,190 --> 00:01:29,680
the two satellites sitting in the

49
00:01:33,190 --> 00:01:31,200
payload bay looking

50
00:01:35,030 --> 00:01:33,200
looking at them and thinking gosh did we

51
00:01:36,550 --> 00:01:35,040
really do all that because it was a lot

52
00:01:38,390 --> 00:01:36,560
of work

53
00:01:42,069 --> 00:01:38,400
a fair amount of risk i mean risk of

54
00:01:44,069 --> 00:01:42,079
success not so much of life but it was a

55
00:01:45,270 --> 00:01:44,079
very exciting mission so there's that

56
00:01:47,270 --> 00:01:45,280
and then there's

57
00:01:50,870 --> 00:01:47,280
the the launch of course is the most

58
00:01:53,030 --> 00:01:50,880
amazing part of a mission and then

59
00:01:54,630 --> 00:01:53,040
the views out the window

60
00:01:56,709 --> 00:01:54,640
i remember looking at the snow capped

61
00:01:58,469 --> 00:01:56,719
himalayas we launched with a full moon

62
00:01:59,830 --> 00:01:58,479
under a full moon

63
00:02:01,510 --> 00:01:59,840

and um

64
00:02:03,350 --> 00:02:01,520
and then just the camaraderie with them

65
00:02:04,389 --> 00:02:03,360
with my crew i launched with a

66
00:02:06,389 --> 00:02:04,399
um

67
00:02:08,949 --> 00:02:06,399
it was like my family almost my second

68
00:02:10,949 --> 00:02:08,959
family so just that camaraderie

69
00:02:12,630 --> 00:02:10,959
at the end of the mission so just lots

70
00:02:13,510 --> 00:02:12,640
of wonderful warm memories and with the

71
00:02:16,470 --> 00:02:13,520
team

72
00:02:18,150 --> 00:02:16,480
um milt heflin who's

73
00:02:19,830 --> 00:02:18,160
still here as well was the lead flight

74
00:02:21,910 --> 00:02:19,840
director for our flight so just that

75
00:02:23,510 --> 00:02:21,920
whole teamwork with the ground those are

76
00:02:25,350 --> 00:02:23,520
you know there's just so many memories i

77
00:02:27,350 --> 00:02:25,360
could go on and on but those are a few

78
00:02:29,750 --> 00:02:27,360
of the highlights we put together a few

79
00:02:31,750 --> 00:02:29,760
scenes of that mission and i'd like to

80
00:02:33,110 --> 00:02:31,760
ask you to tell us what it is that we're

81
00:02:35,030 --> 00:02:33,120
seeing here and as you mentioned

82
00:02:38,630 --> 00:02:35,040
starting with the launch what is it like

83
00:02:40,470 --> 00:02:38,640
to ride that that rocket to space well

84
00:02:42,150 --> 00:02:40,480
um some people won't remember that they

85
00:02:43,990 --> 00:02:42,160
used to have e-tickets in disney

86
00:02:46,630 --> 00:02:44,000
disneyland but it was definitely an

87
00:02:48,630 --> 00:02:46,640
e-ticket ride

88
00:02:50,949 --> 00:02:48,640

we launched actually on dale gardner's

89
00:02:52,550 --> 00:02:50,959
birthday we had a we scrubbed our first

90
00:02:54,630 --> 00:02:52,560
day because of the high altitude winds

91
00:02:56,309 --> 00:02:54,640
and i remember dale gardner telling the

92
00:02:58,149 --> 00:02:56,319
launch director that he promised not to

93
00:03:00,949 --> 00:02:58,159
blow out the candles

94
00:03:03,030 --> 00:03:00,959
but it was a real exciting ride and then

95
00:03:05,430 --> 00:03:03,040
and the to experience weightlessness for

96
00:03:07,030 --> 00:03:05,440
the first time oh it was just amazing

97
00:03:09,589 --> 00:03:07,040
you know the first time you get up there

98
00:03:10,790 --> 00:03:09,599
and and in one second you go from three

99
00:03:13,509 --> 00:03:10,800
g's to

100
00:03:15,030 --> 00:03:13,519
zero g to weightlessness and the feeling

101
00:03:16,390 --> 00:03:15,040
is spectacular i think you can see my

102
00:03:17,830 --> 00:03:16,400
necklace that i'm wearing here that i

103
00:03:19,270 --> 00:03:17,840
was wearing on board

104
00:03:20,949 --> 00:03:19,280
that flight

105
00:03:23,350 --> 00:03:20,959
then we launched two communication

106
00:03:25,830 --> 00:03:23,360
satellite this was the anik

107
00:03:28,149 --> 00:03:25,840
uh satellite that i was the lead for um

108
00:03:29,430 --> 00:03:28,159
which we launched for the canadian

109
00:03:31,350 --> 00:03:29,440
government and it's still up there

110
00:03:33,910 --> 00:03:31,360
functioning and then the cencom which

111
00:03:35,830 --> 00:03:33,920
was a communication satellite for the

112
00:03:38,470 --> 00:03:35,840
for the navy which dale gardner was the

113
00:03:39,430 --> 00:03:38,480

lead for and i was the backbit

114
00:03:41,750 --> 00:03:39,440
now

115
00:03:43,589 --> 00:03:41,760
many people will remember as the

116
00:03:45,350 --> 00:03:43,599
exciting the highlights of the mission

117
00:03:47,670 --> 00:03:45,360
is the fact that well i mean of course

118
00:03:49,110 --> 00:03:47,680
there was the the required grabbing

119
00:03:51,190 --> 00:03:49,120
candy right

120
00:03:53,110 --> 00:03:51,200
yeah this is my favorite scene to show

121
00:03:55,589 --> 00:03:53,120
when i'm talking to kids

122
00:03:57,350 --> 00:03:55,599
of course perhaps not so technical but

123
00:03:58,470 --> 00:03:57,360
still a lot of fun but it makes the

124
00:04:00,229 --> 00:03:58,480
point

125
00:04:02,149 --> 00:04:00,239
is the fact that you were going after a

126
00:04:03,670 --> 00:04:02,159
couple of satellites uh

127
00:04:05,509 --> 00:04:03,680
tell us why quickly why did you have to

128
00:04:07,350 --> 00:04:05,519
go get these well the two satellites

129
00:04:09,190 --> 00:04:07,360
were perfectly good satellites but

130
00:04:10,949 --> 00:04:09,200
they're um apogee kick motors that were

131
00:04:12,149 --> 00:04:10,959
supposed to take them to geosynchronous

132
00:04:13,910 --> 00:04:12,159
orbit failed

133
00:04:15,110 --> 00:04:13,920
like four seconds into about a four

134
00:04:16,870 --> 00:04:15,120
minute burn

135
00:04:19,270 --> 00:04:16,880
so the insurance companies were actually

136
00:04:20,550 --> 00:04:19,280
the big drivers to try to retrieve these

137
00:04:23,270 --> 00:04:20,560
satellites that were worth you know

138
00:04:25,189 --> 00:04:23,280

millions and millions of dollars so

139
00:04:27,110 --> 00:04:25,199
we devised a stinger-like device that

140
00:04:28,790 --> 00:04:27,120
you see dale gardner here flying up to

141
00:04:31,990 --> 00:04:28,800
the satellite

142
00:04:33,670 --> 00:04:32,000
that sticks into the aft end of the

143
00:04:35,430 --> 00:04:33,680
of the satellite because it was

144
00:04:37,830 --> 00:04:35,440
surrounded by solar arrays so there was

145
00:04:39,590 --> 00:04:37,840
really no other place where you could

146
00:04:41,990 --> 00:04:39,600
other than at the either end touch it

147
00:04:43,510 --> 00:04:42,000
without damaging the solar arrays so

148
00:04:44,629 --> 00:04:43,520
here you see dale docking with the

149
00:04:46,390 --> 00:04:44,639
satellite

150
00:04:48,150 --> 00:04:46,400
and then

151
00:04:49,830 --> 00:04:48,160
eventually i went over and grabbed it

152
00:04:51,030 --> 00:04:49,840
with the arm this is kind of an

153
00:04:53,270 --> 00:04:51,040
abbreviated

154
00:04:54,950 --> 00:04:53,280
version it doesn't show all the details

155
00:04:56,550 --> 00:04:54,960
but then we brought the satellite down

156
00:04:58,150 --> 00:04:56,560
into the payload bay and we had to

157
00:04:59,990 --> 00:04:58,160
attach another device because somehow we

158
00:05:02,150 --> 00:05:00,000
had to stick it

159
00:05:03,830 --> 00:05:02,160
attach it to the payload bay so that it

160
00:05:05,830 --> 00:05:03,840
would be brought back and not harmed and

161
00:05:08,230 --> 00:05:05,840
would not harm the shuttle as well

162
00:05:10,070 --> 00:05:08,240
so here you see them working to put the

163
00:05:11,990 --> 00:05:10,080

birthing mechanism

164
00:05:13,350 --> 00:05:12,000
to the bottom of the satellite and then

165
00:05:15,029 --> 00:05:13,360
like i said there was that day where

166
00:05:16,469 --> 00:05:15,039
they were both in the bay and we could

167
00:05:18,469 --> 00:05:16,479
hardly believe it

168
00:05:20,469 --> 00:05:18,479
and then here we're landing at the the

169
00:05:23,590 --> 00:05:20,479
kennedy space center and

170
00:05:26,150 --> 00:05:23,600
it was just really a spectacular mission

171
00:05:27,270 --> 00:05:26,160
went almost flawlessly and then to be

172
00:05:30,390 --> 00:05:27,280
back home

173
00:05:32,150 --> 00:05:30,400
and get to see your family again was a

174
00:05:34,950 --> 00:05:32,160
remarkable feeling i do remember though

175
00:05:36,150 --> 00:05:34,960
that i felt like an 800 pound gorilla

176
00:05:37,990 --> 00:05:36,160
at this point

177
00:05:39,830 --> 00:05:38,000
i had some switches that i had to throw

178
00:05:41,670 --> 00:05:39,840
in the overhead compartment

179
00:05:43,590 --> 00:05:41,680
um which in the simulator i could do in

180
00:05:44,950 --> 00:05:43,600
30 seconds it probably took me a couple

181
00:05:47,350 --> 00:05:44,960
of minutes because i actually felt like

182
00:05:49,430 --> 00:05:47,360
i had to lift my arm up to reach the

183
00:05:50,230 --> 00:05:49,440
switches it really is that dramatic as

184
00:05:52,070 --> 00:05:50,240
well

185
00:05:53,350 --> 00:05:52,080
i definitely felt like an 800 pound

186
00:05:55,510 --> 00:05:53,360
gorilla

187
00:05:57,830 --> 00:05:55,520
you had been assigned to a second flight

188
00:05:59,670 --> 00:05:57,840

uh but the loss of challenger

189
00:06:01,430 --> 00:05:59,680
which came after your flight of course

190
00:06:03,590 --> 00:06:01,440
changed everybody's plans

191
00:06:05,510 --> 00:06:03,600
what was your task what jobs were you

192
00:06:07,990 --> 00:06:05,520
working on in those those months after

193
00:06:09,670 --> 00:06:08,000
challenge well um we would have been the

194
00:06:11,189 --> 00:06:09,680
flight right after challengers we were

195
00:06:13,350 --> 00:06:11,199
very close to being ready to go

196
00:06:15,029 --> 00:06:13,360
ourselves at that point

197
00:06:17,430 --> 00:06:15,039
i was actually the lead for our flight

198
00:06:19,270 --> 00:06:17,440
data file and we used the the two two

199
00:06:21,510 --> 00:06:19,280
and a half years from the time

200
00:06:22,870 --> 00:06:21,520
challenger flew to when we flew again i

201
00:06:25,110 --> 00:06:22,880
mean to when challenger happened to when

202
00:06:27,670 --> 00:06:25,120
we flew again to totally go through our

203
00:06:29,350 --> 00:06:27,680
entire flight data file and we redid our

204
00:06:31,830 --> 00:06:29,360
procedures we

205
00:06:33,749 --> 00:06:31,840
made sure everything was correct and so

206
00:06:35,350 --> 00:06:33,759
that was the thing that i worked on uh

207
00:06:37,510 --> 00:06:35,360
in the in between time till we flew

208
00:06:40,230 --> 00:06:37,520
again and recalculated the commander of

209
00:06:42,550 --> 00:06:40,240
51a was also the commander of the return

210
00:06:44,629 --> 00:06:42,560
of light sts-26

211
00:06:47,029 --> 00:06:44,639
now when you returned to nasa in the

212
00:06:49,749 --> 00:06:47,039
mid-1990s after a leave of absence your

213
00:06:52,150 --> 00:06:49,759

job in the astronaut office was more in

214
00:06:54,309 --> 00:06:52,160
the international space station program

215
00:06:56,790 --> 00:06:54,319
explain what it was you were doing at

216
00:06:58,309 --> 00:06:56,800
that time well when i um i should say

217
00:07:00,070 --> 00:06:58,319
you know i took a seven-year leave of

218
00:07:01,670 --> 00:07:00,080
absence it wasn't really planned that

219
00:07:03,510 --> 00:07:01,680
way it just wound up working out that

220
00:07:04,469 --> 00:07:03,520
way to stay home and raise my daughters

221
00:07:06,309 --> 00:07:04,479
and

222
00:07:07,990 --> 00:07:06,319
spend time with them so when i came back

223
00:07:10,070 --> 00:07:08,000
in 1996

224
00:07:12,390 --> 00:07:10,080
the office was very different when i

225
00:07:14,230 --> 00:07:12,400
left nobody had computers when i came

226
00:07:16,790 --> 00:07:14,240
back everybody had their own computer we

227
00:07:18,870 --> 00:07:16,800
weren't to laptops yet but

228
00:07:21,110 --> 00:07:18,880
so it was a very different environment a

229
00:07:22,390 --> 00:07:21,120
very different way of doing business but

230
00:07:24,469 --> 00:07:22,400
one of the things that was interesting

231
00:07:26,230 --> 00:07:24,479
was there was nobody left who really

232
00:07:27,990 --> 00:07:26,240
remembered what the shuttle program was

233
00:07:29,830 --> 00:07:28,000
like at the very beginning

234
00:07:32,230 --> 00:07:29,840
and i think a lot of the astronaut

235
00:07:33,909 --> 00:07:32,240
office expectations of where the

236
00:07:36,150 --> 00:07:33,919
training should be where the procedure

237
00:07:38,070 --> 00:07:36,160
should be the level of maturity was a

238
00:07:39,270 --> 00:07:38,080

little unrealistic and so i was able to

239
00:07:41,029 --> 00:07:39,280
point out

240
00:07:42,150 --> 00:07:41,039
that um you know this is what it's like

241
00:07:44,550 --> 00:07:42,160
at the beginning of the program

242
00:07:47,110 --> 00:07:44,560
everything isn't perfect so i was able

243
00:07:48,790 --> 00:07:47,120
to take that experience and be chief of

244
00:07:51,430 --> 00:07:48,800
the space station branch

245
00:07:53,029 --> 00:07:51,440
as we were developing the procedures the

246
00:07:54,950 --> 00:07:53,039
training and so forth for the

247
00:07:57,029 --> 00:07:54,960
international space station

248
00:07:59,270 --> 00:07:57,039
and i consider that

249
00:08:02,869 --> 00:07:59,280
one of the most enjoyable assignments i

250
00:08:04,629 --> 00:08:02,879
had at nasa and it's fun now to see the

251
00:08:06,150 --> 00:08:04,639
space station up there because we were

252
00:08:08,309 --> 00:08:06,160
just trying to figure out at that time

253
00:08:10,309 --> 00:08:08,319
how we were going to do it and how we

254
00:08:11,990 --> 00:08:10,319
were going to work with our russian

255
00:08:14,070 --> 00:08:12,000
colleagues and our the other

256
00:08:17,189 --> 00:08:14,080
international partners so it was a

257
00:08:19,350 --> 00:08:17,199
really um fun couple of years and lately

258
00:08:21,670 --> 00:08:19,360
you've been back working here in mission

259
00:08:23,510 --> 00:08:21,680
control as a capcom as a spacecraft

260
00:08:25,749 --> 00:08:23,520
communicator which is something that you

261
00:08:27,189 --> 00:08:25,759
did in the shuttle program as well yes

262
00:08:30,150 --> 00:08:27,199
but it was really different i was a

263
00:08:31,909 --> 00:08:30,160

capcom for sts-8 and 9

264
00:08:34,230 --> 00:08:31,919
which were shuttle flights and you know

265
00:08:36,230 --> 00:08:34,240
that it's very different because for a

266
00:08:38,949 --> 00:08:36,240
shuttle being a capcom for shuttle

267
00:08:40,389 --> 00:08:38,959
mission you had a defined team and you

268
00:08:42,389 --> 00:08:40,399
all trained together

269
00:08:45,190 --> 00:08:42,399
you know the ascent team the orbit team

270
00:08:46,710 --> 00:08:45,200
the entry teams and so you all knew each

271
00:08:48,870 --> 00:08:46,720
other you knew the crew

272
00:08:50,230 --> 00:08:48,880
here it's very different with 24 7

273
00:08:52,870 --> 00:08:50,240
operations

274
00:08:54,710 --> 00:08:52,880
um every position is manned in in a

275
00:08:56,470 --> 00:08:54,720
different manner

276
00:08:58,230 --> 00:08:56,480
but it's really fun to come back after

277
00:08:59,990 --> 00:08:58,240
having been at the beginning of the

278
00:09:01,670 --> 00:09:00,000
program and thinking how were we going

279
00:09:02,630 --> 00:09:01,680
to operate

280
00:09:04,389 --> 00:09:02,640
what kind of were we going to have

281
00:09:06,470 --> 00:09:04,399
electronic procedures i mean the shuttle

282
00:09:08,070 --> 00:09:06,480
we had paper procedures so it took a

283
00:09:10,310 --> 00:09:08,080
while to convince the first couple of

284
00:09:11,990 --> 00:09:10,320
crews that we were going to have to go

285
00:09:14,710 --> 00:09:12,000
to electronic it just wasn't going to

286
00:09:16,949 --> 00:09:14,720
work um since we could not keep up to

287
00:09:18,870 --> 00:09:16,959
date keep books up to date that much so

288
00:09:21,190 --> 00:09:18,880

different things like that and then the

289
00:09:23,670 --> 00:09:21,200
control center is entirely electronic

290
00:09:26,710 --> 00:09:23,680
now so that's a big change from

291
00:09:29,030 --> 00:09:26,720
from the the early shuttle program so

292
00:09:31,350 --> 00:09:29,040
from shuttle to space station you're

293
00:09:33,829 --> 00:09:31,360
also today working on the next vehicle

294
00:09:35,910 --> 00:09:33,839
on on the orion spacecraft uh tell me

295
00:09:38,470 --> 00:09:35,920
about your job there and what you're

296
00:09:41,509 --> 00:09:38,480
involved with yes i'm working on the the

297
00:09:44,070 --> 00:09:41,519
displays for the orion vehicle we have a

298
00:09:45,590 --> 00:09:44,080
rapid prototyping lab where we're

299
00:09:47,110 --> 00:09:45,600
coming up with our ideas of an

300
00:09:49,509 --> 00:09:47,120
electronic procedure viewer that

301
00:09:51,190 --> 00:09:49,519
interacts with the with the orion

302
00:09:53,110 --> 00:09:51,200
displays and we've been doing

303
00:09:56,310 --> 00:09:53,120
evaluations to see how that works and

304
00:09:58,949 --> 00:09:56,320
then we're also making um that work and

305
00:10:00,630 --> 00:09:58,959
the the type of displays the look and

306
00:10:02,150 --> 00:10:00,640
feel of the displays available to some

307
00:10:03,269 --> 00:10:02,160
of the commercial crew folks if they

308
00:10:06,150 --> 00:10:03,279
choose to

309
00:10:08,389 --> 00:10:06,160
to want to use it i personally believe

310
00:10:11,190 --> 00:10:08,399
that as we go into this new era of

311
00:10:12,949 --> 00:10:11,200
commercial crew plus the orion vehicle

312
00:10:14,630 --> 00:10:12,959
it would be really nice to have all the

313
00:10:16,630 --> 00:10:14,640

vehicles have sort of a common looking

314
00:10:18,949 --> 00:10:16,640
field rather than each vehicle being

315
00:10:20,710 --> 00:10:18,959
totally different than the other ones so

316
00:10:21,670 --> 00:10:20,720
we'll see if we're successful about that

317
00:10:24,150 --> 00:10:21,680
but

318
00:10:26,870 --> 00:10:24,160
this is my third big program so it's

319
00:10:28,870 --> 00:10:26,880
really i find it fascinating

320
00:10:30,069 --> 00:10:28,880
to be at the beginning of a program like

321
00:10:32,150 --> 00:10:30,079
beginning of shuttle beginning of

322
00:10:34,790 --> 00:10:32,160
station and now the beginning of orion

323
00:10:36,470 --> 00:10:34,800
and commercial crew just to just think

324
00:10:38,310 --> 00:10:36,480
about how you're going to do it and then

325
00:10:39,670 --> 00:10:38,320
to see how it actually winds up turning

326
00:10:41,590 --> 00:10:39,680
out is

327
00:10:43,430 --> 00:10:41,600
extremely rewarding

328
00:10:45,829 --> 00:10:43,440
think about all of them for a second if

329
00:10:47,990 --> 00:10:45,839
you think to the nasa of today and the

330
00:10:49,910 --> 00:10:48,000
one that was here when you arrived in

331
00:10:51,990 --> 00:10:49,920
1978

332
00:10:54,790 --> 00:10:52,000
how do you feel about the progress that

333
00:10:57,110 --> 00:10:54,800
this agency has made in that time

334
00:10:58,630 --> 00:10:57,120
well it's i mean it's amazing the the

335
00:11:00,790 --> 00:10:58,640
progress that was made with the shuttle

336
00:11:02,230 --> 00:11:00,800
program i mean when i first

337
00:11:03,509 --> 00:11:02,240
arrived here

338
00:11:05,190 --> 00:11:03,519

you know we were inventing the

339
00:11:06,630 --> 00:11:05,200
procedures we were inventing the

340
00:11:09,910 --> 00:11:06,640
training

341
00:11:12,310 --> 00:11:09,920
and then to see it become such a

342
00:11:13,910 --> 00:11:12,320
efficient training

343
00:11:16,630 --> 00:11:13,920
organization and to see the shuttle

344
00:11:17,910 --> 00:11:16,640
flying so smoothly and pretty much on

345
00:11:19,829 --> 00:11:17,920
time you know with a couple of

346
00:11:21,829 --> 00:11:19,839
exceptions that was definitely not the

347
00:11:24,630 --> 00:11:21,839
case in the early days um

348
00:11:26,710 --> 00:11:24,640
but the the challenges um that the

349
00:11:29,269 --> 00:11:26,720
agency faces i think are

350
00:11:30,710 --> 00:11:29,279
are kind of the same although i mean the

351
00:11:32,069 --> 00:11:30,720
thing i remember most at the beginning

352
00:11:33,509 --> 00:11:32,079
of the shuttle program is you were

353
00:11:35,750 --> 00:11:33,519
constantly worried that it was going to

354
00:11:38,790 --> 00:11:35,760
be cancelled because of lack of funding

355
00:11:40,949 --> 00:11:38,800
and i see that same issue coming here

356
00:11:44,389 --> 00:11:40,959
right now and i think that's just one of

357
00:11:47,030 --> 00:11:44,399
the the um you know when you're going to

358
00:11:48,949 --> 00:11:47,040
do space travel it is expensive and so

359
00:11:51,670 --> 00:11:48,959
it's always going to be competing with

360
00:11:56,069 --> 00:11:53,509
things that they need to spend budget

361
00:11:57,509 --> 00:11:56,079
dollars on so i think that's just always

362
00:11:58,550 --> 00:11:57,519
going to be the case and i think that's

363
00:12:00,310 --> 00:11:58,560

one of the neat things about the

364
00:12:01,990 --> 00:12:00,320
international partnership

365
00:12:04,870 --> 00:12:02,000
particularly if we go beyond low earth

366
00:12:06,389 --> 00:12:04,880
orbit i'm trying to spread that cost so

367
00:12:10,069 --> 00:12:06,399
in that sense

368
00:12:12,550 --> 00:12:10,079
i really don't see a lot of change

369
00:12:14,230 --> 00:12:12,560
anna fisher thank you for a few minutes

370
00:12:15,910 --> 00:12:14,240
and and for the memories it's very

371
00:12:17,990 --> 00:12:15,920
interesting to hear about where we've

372
00:12:18,870 --> 00:12:18,000
come from well thank you so much i

373
00:12:21,750 --> 00:12:18,880
really

374
00:12:24,870 --> 00:12:21,760
feel privileged astronaut anna fisher a