1
00:00:12,870 --> 00:00:10,310
the space shuttle discovery named for

2
00:00:14,950 --> 00:00:12,880
past ships of exploration was delivered

3
00:00:17,109 --> 00:00:14,960
from its palmdale california shuttle

4
00:00:19,670 --> 00:00:17,119
factory to nasa's kennedy space center

5
00:00:21,910 --> 00:00:19,680
in november 1983.

6
00:00:24,230 --> 00:00:21,920
since then discovery has lived up to the

7
00:00:26,310 --> 00:00:24,240
historic legacy of its name

8
00:00:27,830 --> 00:00:26,320
it flew to space more times than any

9
00:00:30,230 --> 00:00:27,840
other spacecraft

10
00:00:32,790 --> 00:00:30,240
in orbit it released a telescope to

11
00:00:34,549 --> 00:00:32,800
probe the universe and a spacecraft to

12
00:00:36,310 --> 00:00:34,559
explore the sun

13
00:00:38,630 --> 00:00:36,320

it carried laboratories to study

14
00:00:41,110 --> 00:00:38,640
weightlessness and instruments to study

15
00:00:43,270 --> 00:00:41,120
the earth and its atmosphere

16
00:00:45,270 --> 00:00:43,280
early in its career discovery became the

17
00:00:55,590 --> 00:00:45,280
first spacecraft to bring a satellite

18
00:01:00,229 --> 00:00:57,590
but perhaps even more compelling than

19
00:01:01,990 --> 00:01:00,239
the discoveries that enabled in space is

20
00:01:08,230 --> 00:01:02,000
the spirit this vehicle has helped

21
00:01:11,830 --> 00:01:09,830
its missions include flights that

22
00:01:14,070 --> 00:01:11,840
showcased how one time cold war

23
00:01:15,749 --> 00:01:14,080
adversaries can become long-term friends

24
00:01:17,590 --> 00:01:15,759
for exploration

25
00:01:20,550 --> 00:01:17,600
its flights further expanded space

26
00:01:21,670 --> 00:01:20,560
travel beyond boundaries of age gender

27
00:01:23,910 --> 00:01:21,680
and race

28
00:01:26,230 --> 00:01:23,920
counting among those who flew on it the

29
00:01:28,550 --> 00:01:26,240
oldest astronaut the first female

30
00:01:30,550 --> 00:01:28,560
shuttle pilot and the first african

31
00:01:33,109 --> 00:01:30,560
american space walker

32
00:01:34,950 --> 00:01:33,119
but above all discovery twice proved

33
00:01:37,190 --> 00:01:34,960
that america had the will and the

34
00:01:39,270 --> 00:01:37,200
determination to persevere

35
00:01:40,950 --> 00:01:39,280
and succeed in the face of devastating

36
00:01:43,350 --> 00:01:40,960
grief and tragedy

37
00:01:48,630 --> 00:01:43,360
returning america to space after the

38
00:01:53,590 --> 00:01:50,710

discovery is the most accomplished space

39
00:01:56,709 --> 00:01:53,600
shuttle ever set to complete 39 flights

40
00:01:59,429 --> 00:01:56,719
in all amounting to over 5 000 trips

41
00:02:09,510 --> 00:01:59,439
around the earth and more than 300 days

42
00:02:15,270 --> 00:02:11,750
discovery's long history in space began

43
00:02:16,630 --> 00:02:15,280
in august 1984. three two

44
00:02:18,949 --> 00:02:16,640
one

45
00:02:21,990 --> 00:02:18,959
we have srb ignition and we have liftoff

46
00:02:23,750 --> 00:02:22,000
liftoff of mission 41d the first flight

47
00:02:25,430 --> 00:02:23,760
of the orbiter discovery and the shuttle

48
00:02:27,030 --> 00:02:25,440
has cleared the tower

49
00:02:29,270 --> 00:02:27,040
when it launched from the kennedy space

50
00:02:32,070 --> 00:02:29,280
center on sts-41d

51
00:02:34,630 --> 00:02:32,080
discovery held more than 41 000 pounds

52
00:02:36,470 --> 00:02:34,640
of cargo in its payload bay a shuttle

53
00:02:38,630 --> 00:02:36,480
record at the time

54
00:02:40,710 --> 00:02:38,640
the primary cargo consisted of three

55
00:02:43,190 --> 00:02:40,720
communications satellites

56
00:02:45,190 --> 00:02:43,200
among them was leesat the first large

57
00:02:46,949 --> 00:02:45,200
communications satellite specifically

58
00:02:48,229 --> 00:02:46,959
designed to be deployed by a space

59
00:02:50,390 --> 00:02:48,239
shuttle

60
00:02:52,949 --> 00:02:50,400
the six-person crew deployed all three

61
00:02:55,750 --> 00:02:52,959
satellites and tested an experimental

62
00:03:01,430 --> 00:02:55,760
solar array wing to prove technology for

63
00:03:07,190 --> 00:03:03,910

on its second mission sts-51a in

64
00:03:09,430 --> 00:03:07,200
november 1984 discovery headed to orbit

65
00:03:11,190 --> 00:03:09,440
to deploy two more satellites and

66
00:03:13,110 --> 00:03:11,200
retrieve two others

67
00:03:15,030 --> 00:03:13,120
the spectacular retrievals would be

68
00:03:17,350 --> 00:03:15,040
accomplished by astronauts using jet

69
00:03:19,270 --> 00:03:17,360
packs called the man maneuvering units

70
00:03:21,270 --> 00:03:19,280
or mmus

71
00:03:24,789 --> 00:03:21,280
the retrieval of the first satellite

72
00:03:26,949 --> 00:03:24,799
palapa b2 took some improvisation

73
00:03:29,670 --> 00:03:26,959
spacewalker joe allen first captured the

74
00:03:32,710 --> 00:03:29,680
satellite with a device called a stinger

75
00:03:35,190 --> 00:03:32,720
and guided it to discovery's payload bay

76
00:03:37,430 --> 00:03:35,200
after experiencing initial problems the

77
00:03:48,949 --> 00:03:37,440
crew teamed up to manually birth it in

78
00:03:54,550 --> 00:03:50,710
the mission marked the final time the

79
00:03:59,509 --> 00:03:57,350
in 1985 discovery became the only

80
00:04:00,550 --> 00:03:59,519
shuttle to fly four missions in the same

81
00:04:03,190 --> 00:04:00,560
year

82
00:04:06,070 --> 00:04:03,200
one of those sts-51d

83
00:04:08,149 --> 00:04:06,080
included two more satellite deploys

84
00:04:10,309 --> 00:04:08,159
utah senator jake garn was a mission

85
00:04:12,309 --> 00:04:10,319
specialist on the crew becoming the

86
00:04:13,750 --> 00:04:12,319
first sitting member of congress to fly

87
00:04:15,910 --> 00:04:13,760
in space

88
00:04:18,550 --> 00:04:15,920

during landing discovery suffered a

89
00:04:20,390 --> 00:04:18,560
blown front tire and brake damage

90
00:04:22,230 --> 00:04:20,400
the incident prompted nasa to move

91
00:04:24,790 --> 00:04:22,240
future shuttle landings to edwards air

92
00:04:26,790 --> 00:04:24,800
force base in california until nose

93
00:04:37,990 --> 00:04:26,800
wheel steering and brake improvements

94
00:04:41,670 --> 00:04:39,590
the tragic loss of the shuttle

95
00:04:45,270 --> 00:04:41,680
challenger and its seven crew members

96
00:04:47,430 --> 00:04:45,280
stunned the world in january 1986.

97
00:04:50,070 --> 00:04:47,440
in its aftermath nasa turned to

98
00:04:52,710 --> 00:04:50,080
discovery to return americans to space

99
00:04:54,950 --> 00:04:52,720
with a myriad of safety improvements

100
00:05:00,950 --> 00:04:54,960
with the world watching discovery

101
00:05:08,070 --> 00:05:03,430
americans return to space as discovery

102
00:05:13,670 --> 00:05:11,189
during the 4-day sts-26 return to flight

103
00:05:15,830 --> 00:05:13,680
mission discovery's crew deployed a nasa

104
00:05:17,670 --> 00:05:15,840
tracking and data relay satellite

105
00:05:18,870 --> 00:05:17,680
identical to the one lost aboard

106
00:05:21,029 --> 00:05:18,880
challenger

107
00:05:23,029 --> 00:05:21,039
a host of experiments were performed

108
00:05:29,350 --> 00:05:23,039
before discovery made a triumphant

109
00:05:36,469 --> 00:05:31,830
discovery welcome back a great ending to

110
00:05:40,950 --> 00:05:38,790
in 1990 discovery flew a pair of

111
00:05:43,430 --> 00:05:40,960
missions to extend humankind's vision

112
00:05:45,749 --> 00:05:43,440
into the cosmos

113
00:05:49,029 --> 00:05:45,759

in april discovery carried the hubble

114
00:05:50,790 --> 00:05:49,039
space telescope to orbit on sts-31

115
00:05:53,070 --> 00:05:50,800
releasing it at the highest altitude

116
00:05:55,270 --> 00:05:53,080
flown by a shuttle to that date almost

117
00:05:57,189 --> 00:05:55,280
380 miles

118
00:05:59,189 --> 00:05:57,199
hubble's 20 years of observing the

119
00:06:01,749 --> 00:05:59,199
universe have yielded breathtaking

120
00:06:03,830 --> 00:06:01,759
images and a better understanding of our

121
00:06:05,830 --> 00:06:03,840
place in the cosmos

122
00:06:07,909 --> 00:06:05,840
discovery would be called upon to visit

123
00:06:12,390 --> 00:06:07,919
and upgrade the telescope on two

124
00:06:13,909 --> 00:06:12,400
subsequent missions sts-82 in 1997 and

125
00:06:20,070 --> 00:06:13,919
sts-103

126
00:06:25,189 --> 00:06:22,870
in october 1990 discovery launched the

127
00:06:27,990 --> 00:06:25,199
european space agency built ulysses

128
00:06:30,230 --> 00:06:28,000
spacecraft the robotic probe would make

129
00:06:35,270 --> 00:06:30,240
unprecedented observations of the sun's

130
00:06:37,029 --> 00:06:35,280
polar regions for the next 18 years

131
00:06:39,510 --> 00:06:37,039
when discovery was built in the early

132
00:06:41,590 --> 00:06:39,520
1980s few would have envisioned its

133
00:06:44,350 --> 00:06:41,600
crews or destinations including a

134
00:06:48,309 --> 00:06:44,360
program that began on its 18th flight

135
00:06:50,070 --> 00:06:48,319
sts-60 in february 1994.

136
00:06:52,309 --> 00:06:50,080
the mission was the first cooperative

137
00:06:54,790 --> 00:06:52,319
human space flight between nasa and the

138
00:06:56,950 --> 00:06:54,800

russian federal space agency of the

139
00:06:58,629 --> 00:06:56,960
shuttle mir program

140
00:07:01,029 --> 00:06:58,639
discovery's crew included russian

141
00:07:03,029 --> 00:07:01,039
cosmonauts sergey krikalov and the

142
00:07:05,350 --> 00:07:03,039
commander of the historic mission would

143
00:07:08,950 --> 00:07:05,360
go on to become nasa administrator

144
00:07:12,629 --> 00:07:10,390
almost a year to the day after

145
00:07:14,469 --> 00:07:12,639
krikalov's flight discovery would make

146
00:07:16,550 --> 00:07:14,479
history again as the international

147
00:07:20,150 --> 00:07:16,560
partnership progressed

148
00:07:23,270 --> 00:07:20,160
on mission sts 63 discovery's six-person

149
00:07:25,350 --> 00:07:23,280
crew included cosmonaut vladimir titov

150
00:07:27,510 --> 00:07:25,360
mission commander jim weatherby and

151
00:07:30,230 --> 00:07:27,520
first ever female shuttle pilot eileen

152
00:07:32,710 --> 00:07:30,240
collins guided discovery to within 40

153
00:07:34,870 --> 00:07:32,720
feet of the russian mir space station to

154
00:07:36,309 --> 00:07:34,880
certify procedures that would be used

155
00:07:38,230 --> 00:07:36,319
later for the first docking of the

156
00:07:41,029 --> 00:07:38,240
shuttle to a space station we are

157
00:07:42,950 --> 00:07:41,039
bringing our nations closer together

158
00:07:44,950 --> 00:07:42,960
the next time we approach we will shake

159
00:07:47,589 --> 00:07:44,960
your hand and together we will lead our

160
00:07:49,510 --> 00:07:47,599
world into the next millennium

161
00:07:51,029 --> 00:07:49,520
it was the first rendezvous of a space

162
00:07:53,110 --> 00:07:51,039
shuttle with mir

163
00:07:55,350 --> 00:07:53,120

the mission also saw astronaut bernard

164
00:08:11,430 --> 00:07:55,360
harris become the first african-american

165
00:08:17,589 --> 00:08:13,350
discovery would not visit mirror again

166
00:08:19,749 --> 00:08:17,599
until june 1998 on mission sts-91

167
00:08:22,070 --> 00:08:19,759
on that flight more than three years

168
00:08:23,589 --> 00:08:22,080
after its initial rendezvous discovery

169
00:08:25,830 --> 00:08:23,599
would make its first docking to the

170
00:08:27,230 --> 00:08:25,840
complex but would be the last shuttle to

171
00:08:29,350 --> 00:08:27,240
visit mir

172
00:08:31,029 --> 00:08:29,360
congratulations on an outstanding

173
00:08:34,149 --> 00:08:31,039
rendezvous and

174
00:08:36,230 --> 00:08:34,159
historical ninth docking with mir

175
00:08:38,870 --> 00:08:36,240
it was beautiful to watch from down here

176
00:08:40,310 --> 00:08:38,880
you have a very light touch

177
00:08:42,070 --> 00:08:40,320
we really enjoyed the whole thing

178
00:08:44,389 --> 00:08:42,080
congratulations

179
00:08:46,150 --> 00:08:44,399
as discovery undocked the shuttle mir

180
00:08:48,790 --> 00:08:46,160
program which had seen nine shuttle

181
00:08:50,470 --> 00:08:48,800
missions docked to the complex ended

182
00:08:52,470 --> 00:08:50,480
setting the stage for the start of the

183
00:08:55,350 --> 00:08:52,480
assembly of the international space

184
00:08:57,670 --> 00:08:55,360
station

185
00:09:00,070 --> 00:08:57,680
and liftoff of discovery with a crew of

186
00:09:01,110 --> 00:09:00,080
six astronaut heroes and one american

187
00:09:04,190 --> 00:09:01,120
legend

188
00:09:06,710 --> 00:09:04,200

the october 1998 flight of discovery on

189
00:09:09,190 --> 00:09:06,720
sts-95 was primarily a mission to

190
00:09:11,670 --> 00:09:09,200
conduct life science experiments

191
00:09:14,550 --> 00:09:11,680
but all eyes were on 77 year old

192
00:09:16,389 --> 00:09:14,560
astronaut and u.s senator john glenn who

193
00:09:18,470 --> 00:09:16,399
in 1962

194
00:09:19,509 --> 00:09:18,480
became the first american to orbit the

195
00:09:21,269 --> 00:09:19,519
earth

196
00:09:22,389 --> 00:09:21,279
glenn was a member of the crew and a

197
00:09:24,470 --> 00:09:22,399
test subject

198
00:09:25,590 --> 00:09:24,480
for a host of experiments that studied

199
00:09:28,310 --> 00:09:25,600
aging

200
00:09:30,870 --> 00:09:28,320
glenn's space flight on sts 95 made him

201
00:09:33,110 --> 00:09:30,880
the oldest person to fly in space

202
00:09:34,870 --> 00:09:33,120
hello houston this is ps2 and they let

203
00:09:36,630 --> 00:09:34,880
me get sprung out of the mid deck for a

204
00:09:39,430 --> 00:09:36,640
little while we're just going by hawaii

205
00:09:40,949 --> 00:09:39,440
and that is absolutely gorgeous the best

206
00:09:43,509 --> 00:09:40,959
part is a

207
00:09:48,389 --> 00:09:43,519
do a try to hold statement zero g and i

208
00:09:53,990 --> 00:09:51,590
two years later on october 11 2000 a

209
00:09:56,310 --> 00:09:54,000
magnificent night launch by discovery

210
00:09:58,389 --> 00:09:56,320
accented by a full moon marked the

211
00:10:00,070 --> 00:09:58,399
historic 100th flight of the space

212
00:10:02,550 --> 00:10:00,080
shuttle program

213
00:10:05,750 --> 00:10:02,560

sts 92 was a 12-day mission to the

214
00:10:07,430 --> 00:10:05,760
fledgling international space station

215
00:10:10,550 --> 00:10:07,440
discovery's crew completed four

216
00:10:14,710 --> 00:10:10,560
spacewalks to install the z1 truss and

217
00:10:17,110 --> 00:10:14,720
the pressurized mating adapter 3 or pma3

218
00:10:19,590 --> 00:10:17,120
z1 was eventually used as a temporary

219
00:10:21,110 --> 00:10:19,600
location for the station's first set of

220
00:10:23,829 --> 00:10:21,120
solar arrays

221
00:10:31,750 --> 00:10:23,839
pma-3 also would provide an available

222
00:10:37,030 --> 00:10:34,870
in february 2003 the world again mourned

223
00:10:40,310 --> 00:10:37,040
as the shuttle columbia and her seven

224
00:10:42,470 --> 00:10:40,320
crew members were lost during re-entry

225
00:10:44,870 --> 00:10:42,480
america resolved to continue the shuttle

226
00:10:47,350 --> 00:10:44,880
program and again improve the safety of

227
00:10:49,910 --> 00:10:47,360
flight and nasa again turned to

228
00:10:52,230 --> 00:10:49,920
discovery to return the nation to space

229
00:10:55,030 --> 00:10:52,240
on mission sts-114

230
00:10:57,590 --> 00:10:55,040
commanded by eileen collins discovery

231
00:11:00,069 --> 00:10:57,600
launch director

232
00:11:02,630 --> 00:11:00,079
scott here go ahead okay elaine our long

233
00:11:04,150 --> 00:11:02,640
wait may be over um so on behalf of the

234
00:11:05,829 --> 00:11:04,160
many millions of people who believe so

235
00:11:07,350 --> 00:11:05,839
deeply in what we do

236
00:11:08,389 --> 00:11:07,360
good luck godspeed and have a little fun

237
00:11:09,829 --> 00:11:08,399
up there

238
00:11:11,350 --> 00:11:09,839

well thanks to you to the launch team

239
00:11:14,069 --> 00:11:11,360
and everybody in the shuttle program the

240
00:11:16,710 --> 00:11:14,079
crew is go for launch

241
00:11:20,790 --> 00:11:16,720
and liftoff of space shuttle discovery

242
00:11:26,069 --> 00:11:23,350
the sts-114 mission to the international

243
00:11:28,069 --> 00:11:26,079
space station included new procedures to

244
00:11:30,710 --> 00:11:28,079
ensure the shuttle heat shield would be

245
00:11:33,110 --> 00:11:30,720
in good condition for the trip home

246
00:11:35,350 --> 00:11:33,120
among them a first of its kind backflip

247
00:11:37,350 --> 00:11:35,360
as discovery approached the station to

248
00:11:39,670 --> 00:11:37,360
enable the station crew to capture high

249
00:11:41,269 --> 00:11:39,680
resolution imagery of the shuttle's heat

250
00:11:43,990 --> 00:11:41,279
shield

251
00:11:45,990 --> 00:11:44,000
the crew conducted three spacewalks on

252
00:11:47,990 --> 00:11:46,000
one of those evas astronaut steve

253
00:11:50,470 --> 00:11:48,000
robinson made the first repair to the

254
00:11:52,389 --> 00:11:50,480
exterior of a spacecraft in flight

255
00:11:53,829 --> 00:11:52,399
removing two gap fillers which were

256
00:11:56,949 --> 00:11:53,839
protruding in between some of

257
00:11:58,790 --> 00:11:56,959
discovery's thermal tiles experts were

258
00:12:00,470 --> 00:11:58,800
concerned that the protruding material

259
00:12:04,710 --> 00:12:00,480
could have affected heat flow over the

260
00:12:08,829 --> 00:12:07,110
nasa's final mission of 2006 was

261
00:12:12,310 --> 00:12:08,839
expected to be one of its most

262
00:12:14,310 --> 00:12:12,320
challenging discoveries sts-116 flight

263
00:12:16,389 --> 00:12:14,320

to the international space station

264
00:12:17,590 --> 00:12:16,399
called for the installation of the p5

265
00:12:19,750 --> 00:12:17,600
truss segment

266
00:12:21,990 --> 00:12:19,760
and a major overhaul of the station's

267
00:12:23,990 --> 00:12:22,000
electrical power system

268
00:12:26,230 --> 00:12:24,000
problems arose while retracting one of

269
00:12:29,030 --> 00:12:26,240
the station's solar arrays which was to

270
00:12:31,990 --> 00:12:29,040
be relocated on a future flight

271
00:12:34,550 --> 00:12:32,000
during the retraction the array snagged

272
00:12:36,629 --> 00:12:34,560
during two spacewalks astronauts bob

273
00:12:39,190 --> 00:12:36,639
kerbeem suni williams and christopher

274
00:12:42,150 --> 00:12:39,200
fugelsang assisted in the retraction by

275
00:12:44,310 --> 00:12:42,160
hand using a combination of techniques

276
00:12:50,470 --> 00:12:44,320
the troubleshooting worked and the solar

277
00:12:54,470 --> 00:12:52,550
during the work kirby became the first

278
00:13:00,150 --> 00:12:54,480
person to complete four spacewalks

279
00:13:04,829 --> 00:13:03,110
in october 2007 discovery headed back to

280
00:13:07,350 --> 00:13:04,839
the space station

281
00:13:10,069 --> 00:13:07,360
sts-120 marked the first time the two

282
00:13:12,629 --> 00:13:10,079
female commanders were in space together

283
00:13:14,629 --> 00:13:12,639
discovery commander pam melroy and

284
00:13:17,590 --> 00:13:14,639
station commander peggy whitson the

285
00:13:19,430 --> 00:13:17,600
first woman to command the space station

286
00:13:21,750 --> 00:13:19,440
the mission included installation of the

287
00:13:24,150 --> 00:13:21,760
harmony module on the station and

288
00:13:27,430 --> 00:13:24,160

relocation of the truss and solar array

289
00:13:30,389 --> 00:13:27,440
that had been folded on sts-116

290
00:13:31,670 --> 00:13:30,399
the 105-foot long solar array tore while

291
00:13:34,069 --> 00:13:31,680
unfurling

292
00:13:35,990 --> 00:13:34,079
after studying the situation mission

293
00:13:37,670 --> 00:13:36,000
control devised a solution which called

294
00:13:40,310 --> 00:13:37,680
for the crew to make cufflink type

295
00:13:42,230 --> 00:13:40,320
devices out of wire straps to mend and

296
00:13:44,230 --> 00:13:42,240
stabilize the array

297
00:13:46,829 --> 00:13:44,240
scott parazinsky and doug wheelock

298
00:13:49,189 --> 00:13:46,839
installed the devices and the array was

299
00:13:51,350 --> 00:13:49,199
deployed we've got deployed discretes

300
00:13:52,870 --> 00:13:51,360
two deployed discrete

301
00:13:54,870 --> 00:13:52,880
all right

302
00:13:56,389 --> 00:13:54,880
great news

303
00:13:58,069 --> 00:13:56,399
what an accomplishment

304
00:14:00,310 --> 00:13:58,079
nice teamwork

305
00:14:02,310 --> 00:14:00,320
the 15-day mission was discovery's

306
00:14:06,310 --> 00:14:02,320
longest

307
00:14:07,910 --> 00:14:06,320
on sts-124 in may 2008 discovery headed

308
00:14:10,310 --> 00:14:07,920
back to the station to deliver the

309
00:14:12,150 --> 00:14:10,320
centerpiece of the japan aerospace

310
00:14:15,030 --> 00:14:12,160
exploration agency's experiment

311
00:14:16,910 --> 00:14:15,040
laboratory kibo which means hope in

312
00:14:19,509 --> 00:14:16,920
japanese

313
00:14:22,230 --> 00:14:19,519

sts-124 was the second of three shuttle

314
00:14:25,030 --> 00:14:22,240
flights to deliver elements of kibo the

315
00:14:27,990 --> 00:14:25,040
station's largest laboratory

316
00:14:29,990 --> 00:14:28,000
jaxa astronaut aki hoshide and nasa

317
00:14:32,150 --> 00:14:30,000
astronaut karen nyberg installed the

318
00:14:37,030 --> 00:14:32,160
module and also became the first to

319
00:14:42,470 --> 00:14:39,750
in march 2009 discovery traveled to the

320
00:14:44,389 --> 00:14:42,480
station on mission sts-119

321
00:14:46,710 --> 00:14:44,399
the flight installed the final set of

322
00:14:51,430 --> 00:14:46,720
solar arrays for the complex bringing it

323
00:14:56,550 --> 00:14:53,990
when its flights are completed 180

324
00:14:58,430 --> 00:14:56,560
people will have flown aboard discovery

325
00:15:01,110 --> 00:14:58,440
the fleet leader will have flown almost

326
00:15:02,870 --> 00:15:01,120
150 million miles

327
00:15:04,870 --> 00:15:02,880
the journeys of discovery enabled

328
00:15:06,150 --> 00:15:04,880
humanity to see the farthest reaches of

329
00:15:08,470 --> 00:15:06,160
the universe