1
00:02:23,190 --> 00:00:10,830
[Music]

2
00:02:28,150 --> 00:02:25,670
good morning and welcome back into the

3
00:02:31,270 --> 00:02:28,160
morning session we've got a great

4
00:02:32,949 --> 00:02:31,280
speaker for us after the break

5
00:02:34,550 --> 00:02:32,959
all the rowdy ones in the back the

6
00:02:37,030 --> 00:02:34,560
marines back there if you just sit down

7
00:02:39,670 --> 00:02:37,040
please we'll get started

8
00:02:42,630 --> 00:02:39,680
i have the distinct honor and real

9
00:02:44,869 --> 00:02:42,640
pleasure of introducing a friend of mine

10
00:02:46,630 --> 00:02:44,879
retired colonel pam melroy as our next

11
00:02:48,550 --> 00:02:46,640
speaker

12
00:02:50,309 --> 00:02:48,560
pam is not a stranger to most of you i

13
00:02:52,550 --> 00:02:50,319

know she is currently the deputy

14
00:02:54,309 --> 00:02:52,560
administrator of nasa and doing an

15
00:02:56,869 --> 00:02:54,319
amazing job keeping bill nelson a

16
00:02:57,910 --> 00:02:56,879
politician focused on technology right

17
00:02:59,270 --> 00:02:57,920
pam

18
00:03:01,350 --> 00:02:59,280
thank you

19
00:03:04,390 --> 00:03:01,360
she's had an amazing career serving her

20
00:03:06,949 --> 00:03:04,400
nation she's an air force officer combat

21
00:03:08,869 --> 00:03:06,959
veteran as a nasa astronaut

22
00:03:10,470 --> 00:03:08,879
she was one of only two female shuttle

23
00:03:12,949 --> 00:03:10,480
commanders

24
00:03:15,030 --> 00:03:12,959
in history and in fact was the commander

25
00:03:17,509 --> 00:03:15,040
of the shuttle that

26
00:03:19,430 --> 00:03:17,519
brought supplies to the commander peggy

27
00:03:21,110 --> 00:03:19,440
whitson where we had two female

28
00:03:22,949 --> 00:03:21,120
commanders on orbit at the same time a

29
00:03:24,390 --> 00:03:22,959
very historic moment

30
00:03:25,750 --> 00:03:24,400
and of course they both didn't care

31
00:03:27,670 --> 00:03:25,760
whether they were female or male and

32
00:03:31,350 --> 00:03:27,680
neither did their crews who were

33
00:03:36,149 --> 00:03:32,949
she's now helping manage the future

34
00:03:37,830 --> 00:03:36,159
efforts of nasa focusing on artemis uh

35
00:03:38,630 --> 00:03:37,840
as well as all the other challenges that

36
00:03:40,149 --> 00:03:38,640
we're

37
00:03:42,229 --> 00:03:40,159
facing in space

38
00:03:43,830 --> 00:03:42,239

it's a demanding position but she is the

39
00:03:47,430 --> 00:03:43,840
right person in the right place right

40
00:03:49,430 --> 00:03:47,440
now for nasa and i believe is going to

41
00:03:50,869 --> 00:03:49,440
have a very significant impact on where

42
00:03:52,470 --> 00:03:50,879
we go in human space flight in the

43
00:03:53,990 --> 00:03:52,480
future there are a lot of amazing things

44
00:03:54,869 --> 00:03:54,000
coming and she's going to tell you about

45
00:03:56,630 --> 00:03:54,879
them

46
00:03:58,869 --> 00:03:56,640
so it's a pleasure to have her back at

47
00:04:01,270 --> 00:03:58,879
the space symposia representing the men

48
00:04:02,149 --> 00:04:01,280
and women of nasa and

49
00:04:05,350 --> 00:04:02,159
pam

50
00:04:16,710 --> 00:04:05,360
please join me on the stage thank you

51
00:04:21,349 --> 00:04:18,789
thank you so much frank i appreciate

52
00:04:23,670 --> 00:04:21,359
that usually i'm the rowdy one in the

53
00:04:26,150 --> 00:04:23,680
back so

54
00:04:28,870 --> 00:04:26,160
on behalf of administrator nelson it's

55
00:04:30,870 --> 00:04:28,880
my pleasure to speak with you today in

56
00:04:33,030 --> 00:04:30,880
this wonderful venue

57
00:04:34,469 --> 00:04:33,040
at a very auspicious moment in our

58
00:04:36,070 --> 00:04:34,479
history

59
00:04:38,790 --> 00:04:36,080
i think it's fair to say

60
00:04:40,150 --> 00:04:38,800
nasa has never been busier or more

61
00:04:42,710 --> 00:04:40,160
productive

62
00:04:44,629 --> 00:04:42,720
we're firing on all cylinders in every

63
00:04:46,390 --> 00:04:44,639

single mission directorate

64
00:04:48,870 --> 00:04:46,400
bringing to reality major

65
00:04:50,469 --> 00:04:48,880
transformational milestones which are

66
00:04:52,629 --> 00:04:50,479
going to change

67
00:04:54,870 --> 00:04:52,639
the aerospace community

68
00:04:56,390 --> 00:04:54,880
and this is against a backdrop where

69
00:04:58,790 --> 00:04:56,400
space is increasing

70
00:05:01,189 --> 00:04:58,800
increasingly crucial to the lives of

71
00:05:03,510 --> 00:05:01,199
every citizen on earth

72
00:05:05,510 --> 00:05:03,520
you our partners see it too when you're

73
00:05:07,909 --> 00:05:05,520
making it happen

74
00:05:09,990 --> 00:05:07,919
today i'm going to give you an update on

75
00:05:12,710 --> 00:05:10,000
the impact of the recently announced

76
00:05:15,590 --> 00:05:12,720
president's 2023 budget on nasa's

77
00:05:18,790 --> 00:05:15,600
portfolio across human space flight

78
00:05:21,270 --> 00:05:18,800
science technology aeronautics

79
00:05:23,430 --> 00:05:21,280
and human space flight and i'm going to

80
00:05:24,950 --> 00:05:23,440
share our priorities and where we hope

81
00:05:26,870 --> 00:05:24,960
they will take us

82
00:05:29,350 --> 00:05:26,880
let me begin by saying we want that

83
00:05:32,230 --> 00:05:29,360
future to be inclusive and to be the

84
00:05:34,870 --> 00:05:32,240
strongest we can be by drawing talent

85
00:05:36,790 --> 00:05:34,880
innovation and inspiration from people

86
00:05:40,550 --> 00:05:36,800
of all backgrounds perspectives and

87
00:05:45,430 --> 00:05:43,029
so just last week president biden

88
00:05:50,070 --> 00:05:45,440

unveiled his budget request for fiscal

89
00:05:53,270 --> 00:05:50,080
year 2023 and the news is good for nasa

90
00:05:54,710 --> 00:05:53,280
the 26 billion dollar fiscal year 2023

91
00:05:57,670 --> 00:05:54,720
budget request

92
00:06:00,950 --> 00:05:57,680
is 8 percent more than enacted federal

93
00:06:03,270 --> 00:06:00,960
spending levels for fiscal year 2022

94
00:06:05,670 --> 00:06:03,280
affirming the importance of civil space

95
00:06:07,510 --> 00:06:05,680
to the biden-harris administration

96
00:06:09,749 --> 00:06:07,520
and to the strategic future of the

97
00:06:11,670 --> 00:06:09,759
united states

98
00:06:14,950 --> 00:06:11,680
it represents the largest overall

99
00:06:17,590 --> 00:06:14,960
request in current dollars for nasa and

100
00:06:19,749 --> 00:06:17,600
the largest request for science funding

101
00:06:21,909 --> 00:06:19,759
in agency history

102
00:06:23,749 --> 00:06:21,919
it's an investment in good-paying jobs

103
00:06:26,469 --> 00:06:23,759
and the businesses that partner with

104
00:06:28,550 --> 00:06:26,479
nasa across all 50 states

105
00:06:30,390 --> 00:06:28,560
it will help us address climate change

106
00:06:32,870 --> 00:06:30,400
and it helps nasa provide more

107
00:06:35,430 --> 00:06:32,880
opportunities in stem education and

108
00:06:39,110 --> 00:06:35,440
promotes our core values of diversity

109
00:06:44,150 --> 00:06:41,909
i'll start out with space operations

110
00:06:46,550 --> 00:06:44,160
together with our international partners

111
00:06:47,670 --> 00:06:46,560
and our astronauts in orbit above us

112
00:06:49,430 --> 00:06:47,680
right now

113
00:06:52,150 --> 00:06:49,440

on the international space station we

114
00:06:54,790 --> 00:06:52,160
continue to advance microgravity science

115
00:06:56,550 --> 00:06:54,800
and prepare us for missions to further

116
00:06:58,790 --> 00:06:56,560
destinations

117
00:07:01,550 --> 00:06:58,800
last week mark vande high returned to

118
00:07:04,710 --> 00:07:01,560
earth ending a record-setting journey of

119
00:07:05,589 --> 00:07:04,720
355 days thank you

120
00:07:08,629 --> 00:07:05,599
yes

121
00:07:11,270 --> 00:07:08,639
we're so excited

122
00:07:14,230 --> 00:07:11,280
so mark's long-duration flight

123
00:07:16,309 --> 00:07:14,240
actually is showing us how humans

124
00:07:18,629 --> 00:07:16,319
can leave this planet for extended

125
00:07:21,110 --> 00:07:18,639
periods of time and our congratulations

126
00:07:23,350 --> 00:07:21,120
to mark on this incredible milestone in

127
00:07:24,710 --> 00:07:23,360
human space flight

128
00:07:27,510 --> 00:07:24,720
this budget aligns with the

129
00:07:29,350 --> 00:07:27,520
administration's direction to extend the

130
00:07:32,230 --> 00:07:29,360
international space station operations

131
00:07:34,070 --> 00:07:32,240
to 2030 and we look forward to working

132
00:07:35,749 --> 00:07:34,080
with our international partners to

133
00:07:38,469 --> 00:07:35,759
achieve that

134
00:07:40,390 --> 00:07:38,479
with over 220 million dollars for

135
00:07:42,950 --> 00:07:40,400
commercial leo destinations in this

136
00:07:45,189 --> 00:07:42,960
budget request we will continue to work

137
00:07:47,670 --> 00:07:45,199
with our industry partners to lay the

138
00:07:50,869 --> 00:07:47,680

foundation for a follow-on commercial

139
00:07:54,790 --> 00:07:50,879
destination and continue to develop the

140
00:07:56,869 --> 00:07:54,800
commercial new space economy

141
00:07:59,029 --> 00:07:56,879
those kids today who are inspired by

142
00:08:00,869 --> 00:07:59,039
seeing experiments in microgravity or

143
00:08:02,790 --> 00:08:00,879
even just an astronaut doing a backflip

144
00:08:04,469 --> 00:08:02,800
in space they're going to be the ones

145
00:08:06,309 --> 00:08:04,479
who will be doing them

146
00:08:08,070 --> 00:08:06,319
on the next generation of commercial

147
00:08:10,469 --> 00:08:08,080
platforms

148
00:08:12,550 --> 00:08:10,479
they will be the next entrepreneurs and

149
00:08:15,909 --> 00:08:12,560
researchers in leo

150
00:08:17,589 --> 00:08:15,919
and potentially at the moon and beyond

151
00:08:19,589 --> 00:08:17,599
even to somebody who's been in the space

152
00:08:21,670 --> 00:08:19,599
business for a while it's pretty

153
00:08:23,670 --> 00:08:21,680
incredible to see how many milestones

154
00:08:26,390 --> 00:08:23,680
have occurred in commercial space flight

155
00:08:28,469 --> 00:08:26,400
in just the last couple of years the

156
00:08:30,309 --> 00:08:28,479
capabilities of our commercial partners

157
00:08:31,990 --> 00:08:30,319
are growing all the time

158
00:08:35,190 --> 00:08:32,000
i know all of you are aware that the

159
00:08:36,870 --> 00:08:35,200
axiom one mission the first private

160
00:08:39,750 --> 00:08:36,880
astronaut mission to the international

161
00:08:41,670 --> 00:08:39,760
space station will launch on friday

162
00:08:44,389 --> 00:08:41,680
and our congratulations to the axiom and

163
00:08:46,870 --> 00:08:44,399

nasa teams that help make that happen

164
00:08:48,949 --> 00:08:46,880
and just ahead of us is the fourth

165
00:08:51,430 --> 00:08:48,959
commercial crew launch to the

166
00:08:53,430 --> 00:08:51,440
international space station by spacex

167
00:08:55,430 --> 00:08:53,440
with boeing system for launching

168
00:08:57,670 --> 00:08:55,440
astronauts on the way

169
00:08:59,990 --> 00:08:57,680
not to mention all the suborbital human

170
00:09:02,389 --> 00:09:00,000
space flight capabilities that have been

171
00:09:04,790 --> 00:09:02,399
demonstrated and are being demonstrated

172
00:09:06,710 --> 00:09:04,800
on a routine basis

173
00:09:09,350 --> 00:09:06,720
the way i see this

174
00:09:10,949 --> 00:09:09,360
is just as nasa's investments in

175
00:09:14,150 --> 00:09:10,959
aeronautics

176
00:09:16,230 --> 00:09:14,160
ceded the golden age of aviation in the

177
00:09:18,150 --> 00:09:16,240
50s and the 60s

178
00:09:20,470 --> 00:09:18,160
nasa investments along with other

179
00:09:22,790 --> 00:09:20,480
government investments have seated where

180
00:09:25,350 --> 00:09:22,800
we are today

181
00:09:28,790 --> 00:09:25,360
i believe history will look back

182
00:09:30,230 --> 00:09:28,800
and say that we are in the golden age of

183
00:09:31,990 --> 00:09:30,240
commercial space

184
00:09:34,790 --> 00:09:32,000
and it's pretty exciting to be living in

185
00:09:38,310 --> 00:09:36,550
i'd like to switch gears and talk about

186
00:09:40,630 --> 00:09:38,320
science for a moment

187
00:09:44,389 --> 00:09:40,640
even with a pretty lofty and ambitious

188
00:09:46,949 --> 00:09:44,399

portfolio at nasa space science astounds

189
00:09:48,870 --> 00:09:46,959
us and inspires us

190
00:09:50,710 --> 00:09:48,880
in this sea of incredible space news

191
00:09:52,949 --> 00:09:50,720
that we're hearing every day i think

192
00:09:55,350 --> 00:09:52,959
none of us overlooked the amazing feat

193
00:09:57,590 --> 00:09:55,360
of launching the web telescope

194
00:10:00,070 --> 00:09:57,600
the world watched as we worked through

195
00:10:02,389 --> 00:10:00,080
hundreds of single point failures and

196
00:10:04,470 --> 00:10:02,399
now have come to the point where every

197
00:10:06,949 --> 00:10:04,480
optical parameter that has been checked

198
00:10:08,870 --> 00:10:06,959
and tested is performing at or above

199
00:10:10,949 --> 00:10:08,880
expectations

200
00:10:13,030 --> 00:10:10,959
the observatory is able to successfully

201
00:10:15,590 --> 00:10:13,040
gather and focus

202
00:10:17,430 --> 00:10:15,600
light from different distant objects and

203
00:10:18,949 --> 00:10:17,440
deliver it to its instruments without

204
00:10:21,590 --> 00:10:18,959
issue

205
00:10:25,350 --> 00:10:21,600
there's still work to go but prepare for

206
00:10:27,190 --> 00:10:25,360
webs amazing science this year

207
00:10:29,590 --> 00:10:27,200
i really want to congratulate the nasa

208
00:10:32,470 --> 00:10:29,600
team our industry partners northrop

209
00:10:35,509 --> 00:10:32,480
grumman ball aerospace and our esa and

210
00:10:37,430 --> 00:10:35,519
canadian partners on that success

211
00:10:39,829 --> 00:10:37,440
the world has joined us on the journey

212
00:10:42,150 --> 00:10:39,839
and we've just announced that 620

213
00:10:45,910 --> 00:10:42,160

community organizations are going to be

214
00:10:48,949 --> 00:10:45,920
hosting web first light events with us

215
00:10:51,829 --> 00:10:48,959
this is part of a strategy this strategy

216
00:10:54,389 --> 00:10:51,839
of sharing the ups and the downs and the

217
00:10:57,750 --> 00:10:54,399
drama of each step of the scientific

218
00:11:00,310 --> 00:10:57,760
journey is a strategy that we are hoping

219
00:11:02,870 --> 00:11:00,320
will help everyone understand how

220
00:11:04,550 --> 00:11:02,880
science works

221
00:11:07,430 --> 00:11:04,560
the budget

222
00:11:09,590 --> 00:11:07,440
proposal also allows us to continue to

223
00:11:10,790 --> 00:11:09,600
make progress with the nancy grace roman

224
00:11:14,470 --> 00:11:10,800
telescope

225
00:11:16,470 --> 00:11:14,480
which will complement webb's deep view

226
00:11:17,509 --> 00:11:16,480
into the cosmos

227
00:11:20,069 --> 00:11:17,519
by

228
00:11:22,550 --> 00:11:20,079
taking a survey view to help us

229
00:11:24,470 --> 00:11:22,560
understand galaxies and exoplanets in

230
00:11:26,470 --> 00:11:24,480
the universe

231
00:11:28,790 --> 00:11:26,480
asteroids also continue to be at the

232
00:11:31,269 --> 00:11:28,800
forefront of the world's consciousness

233
00:11:34,069 --> 00:11:31,279
this year we will launch psyche to study

234
00:11:36,150 --> 00:11:34,079
a very different kind of asteroid

235
00:11:37,910 --> 00:11:36,160
and we anticipate our planetary

236
00:11:38,870 --> 00:11:37,920
protection mission

237
00:11:41,269 --> 00:11:38,880
dart

238
00:11:42,389 --> 00:11:41,279

this fall will help us shed light on a

239
00:11:44,949 --> 00:11:42,399
potential

240
00:11:47,030 --> 00:11:44,959
deflection technology that perhaps we

241
00:11:50,949 --> 00:11:47,040
could use on a dangerous near-earth

242
00:11:58,230 --> 00:11:54,310
the president's budget will also

243
00:12:00,310 --> 00:11:58,240
enable our mars sample return whoop okay

244
00:12:02,550 --> 00:12:00,320
not quite the right did i oh can you go

245
00:12:04,790 --> 00:12:02,560
back one

246
00:12:05,990 --> 00:12:04,800
what am i showing no go go to the next

247
00:12:07,829 --> 00:12:06,000
one thank you

248
00:12:09,750 --> 00:12:07,839
mars sample return

249
00:12:11,269 --> 00:12:09,760
president's budget will also enable our

250
00:12:13,190 --> 00:12:11,279
mars sample return mission in

251
00:12:15,910 --> 00:12:13,200
partnership with esa which will

252
00:12:18,629 --> 00:12:15,920
revolutionize our understanding of mars

253
00:12:20,550 --> 00:12:18,639
by returning samples for study using the

254
00:12:22,389 --> 00:12:20,560
most sophisticated instruments on the

255
00:12:24,230 --> 00:12:22,399
around the world and that work is

256
00:12:26,870 --> 00:12:24,240
already underway with the perseverance

257
00:12:29,670 --> 00:12:26,880
rover collecting those samples even as

258
00:12:32,710 --> 00:12:29,680
the rover continues on-site search for

259
00:12:35,590 --> 00:12:32,720
signs of ancient life those samples

260
00:12:37,990 --> 00:12:35,600
could be the best opportunity to reveal

261
00:12:39,670 --> 00:12:38,000
mars's early evolution and potential for

262
00:12:43,190 --> 00:12:39,680
life

263
00:12:45,430 --> 00:12:43,200

this mission is a huge challenge it's an

264
00:12:47,350 --> 00:12:45,440
enormous technical challenge we'll have

265
00:12:49,269 --> 00:12:47,360
a lot of firsts on this mission

266
00:12:51,430 --> 00:12:49,279
including the first time several

267
00:12:55,030 --> 00:12:51,440
vehicles would land on the surface of

268
00:12:57,350 --> 00:12:55,040
mars orchestrated around the same time

269
00:12:59,829 --> 00:12:57,360
it will also be the first launch from

270
00:13:01,829 --> 00:12:59,839
the surface of another planet with the

271
00:13:03,550 --> 00:13:01,839
mars ascent vehicle

272
00:13:06,310 --> 00:13:03,560
and the first international

273
00:13:07,910 --> 00:13:06,320
interplanetary relay effort using

274
00:13:09,590 --> 00:13:07,920
multiple missions

275
00:13:13,350 --> 00:13:09,600
to bring back a sample from another

276
00:13:18,949 --> 00:13:15,990
this is also a very exciting year for

277
00:13:21,509 --> 00:13:18,959
aeronautics we are back in the x-plane

278
00:13:24,470 --> 00:13:21,519
business in a big way

279
00:13:27,910 --> 00:13:24,480
we intend to lead in green aerospace

280
00:13:30,069 --> 00:13:27,920
including our x-57 all-electric aircraft

281
00:13:33,110 --> 00:13:30,079
scheduled for flight tests this year

282
00:13:35,030 --> 00:13:33,120
and additionally the 2023 budget enables

283
00:13:36,230 --> 00:13:35,040
us to begin planning for the next

284
00:13:38,470 --> 00:13:36,240
x-plane

285
00:13:39,670 --> 00:13:38,480
through the sustainable flight national

286
00:13:41,990 --> 00:13:39,680
partnership

287
00:13:44,150 --> 00:13:42,000
which will demonstrate flight efficiency

288
00:13:48,230 --> 00:13:44,160

capabilities that can transition

289
00:13:50,470 --> 00:13:48,240
directly to narrow body civil aviation

290
00:13:53,829 --> 00:13:50,480
we also continue enthusiastically in the

291
00:13:55,990 --> 00:13:53,839
x-plane business with the x-59 later

292
00:13:59,030 --> 00:13:56,000
this year which will demonstrate how we

293
00:14:01,509 --> 00:13:59,040
can mitigate sonic booms and we hope

294
00:14:04,069 --> 00:14:01,519
lead to persistent supersonic commercial

295
00:14:08,790 --> 00:14:06,470
i'll go on to space technology

296
00:14:09,910 --> 00:14:08,800
our space technology work continues the

297
00:14:12,389 --> 00:14:09,920
tech mat

298
00:14:14,389 --> 00:14:12,399
early stage innovation and partnerships

299
00:14:16,230 --> 00:14:14,399
that are truly the seed corn of the

300
00:14:18,230 --> 00:14:16,240
agency

301
00:14:20,629 --> 00:14:18,240
these partnerships help us develop the

302
00:14:23,670 --> 00:14:20,639
technologies of tomorrow that will

303
00:14:26,310 --> 00:14:23,680
fulfill our vision of exploration

304
00:14:28,470 --> 00:14:26,320
satellite servicing fission surface

305
00:14:29,430 --> 00:14:28,480
power and a test of a new type of heat

306
00:14:31,509 --> 00:14:29,440
shield

307
00:14:33,910 --> 00:14:31,519
for atmospheric re-entry that will help

308
00:14:36,310 --> 00:14:33,920
us deliver much heavier payloads are

309
00:14:38,550 --> 00:14:36,320
just a few of the things on tap

310
00:14:41,269 --> 00:14:38,560
in this budget we're also demonstrating

311
00:14:43,430 --> 00:14:41,279
our commitment to nuclear propulsion

312
00:14:46,550 --> 00:14:43,440
which will enable enable greater

313
00:14:50,790 --> 00:14:46,560

capabilities across the science and the

314
00:14:54,949 --> 00:14:52,949
and of course

315
00:14:58,470 --> 00:14:54,959
artemis

316
00:15:01,509 --> 00:14:58,480
program

317
00:15:04,230 --> 00:15:01,519
helping us get to a sustained resilient

318
00:15:06,230 --> 00:15:04,240
cadence of missions in the future

319
00:15:07,110 --> 00:15:06,240
i was personally honored to see the roll

320
00:15:10,069 --> 00:15:07,120
out

321
00:15:13,110 --> 00:15:10,079
of the sls rocket in orion for artemis

322
00:15:14,550 --> 00:15:13,120
one it was very emotional and very

323
00:15:16,069 --> 00:15:14,560
historic

324
00:15:18,230 --> 00:15:16,079
we are working through wet dress

325
00:15:21,110 --> 00:15:18,240
rehearsal first time you do anything you

326
00:15:22,470 --> 00:15:21,120
learn a lot and uh we will continue to

327
00:15:25,110 --> 00:15:22,480
work through that

328
00:15:27,430 --> 00:15:25,120
to do all the testing the checks and a

329
00:15:29,189 --> 00:15:27,440
fuel test that we need and then that

330
00:15:30,949 --> 00:15:29,199
will allow the countdown to the moon

331
00:15:32,790 --> 00:15:30,959
beginning

332
00:15:35,990 --> 00:15:32,800
even before artemis one we have the

333
00:15:38,629 --> 00:15:36,000
capstone launching next month to explore

334
00:15:40,949 --> 00:15:38,639
the lunar orbit where our astronauts

335
00:15:43,990 --> 00:15:40,959
will live and work in space

336
00:15:46,230 --> 00:15:44,000
capstone is a 55 pound cubesat the size

337
00:15:49,590 --> 00:15:46,240
of a microwave oven that will serve as

338
00:15:51,749 --> 00:15:49,600

this first spacecraft to test a unique

339
00:15:54,629 --> 00:15:51,759
elliptical lunar orbit

340
00:15:57,269 --> 00:15:54,639
that same near rectilinear halo orbit is

341
00:15:59,990 --> 00:15:57,279
planned for nasa's gateway the moon

342
00:16:02,790 --> 00:16:00,000
orbiting outpost and logistics cache

343
00:16:05,269 --> 00:16:02,800
that's part of the artemis program

344
00:16:07,509 --> 00:16:05,279
capstone will validate the power and

345
00:16:10,069 --> 00:16:07,519
propulsion requirements for maintaining

346
00:16:12,629 --> 00:16:10,079
that unique orbit helping us refine our

347
00:16:17,590 --> 00:16:12,639
models and ensure that we will be able

348
00:16:22,629 --> 00:16:20,629
nasa also announced plans two weeks ago

349
00:16:24,629 --> 00:16:22,639
to create additional opportunities for

350
00:16:25,829 --> 00:16:24,639
industry to develop an astronaut moon

351
00:16:28,550 --> 00:16:25,839
lander

352
00:16:30,470 --> 00:16:28,560
this path enables resiliency

353
00:16:33,110 --> 00:16:30,480
and competition

354
00:16:35,189 --> 00:16:33,120
under this new approach nasa is asking

355
00:16:37,910 --> 00:16:35,199
american companies to propose lander

356
00:16:39,509 --> 00:16:37,920
concepts capable of ferrying astronauts

357
00:16:43,670 --> 00:16:39,519
between lunar orbit and the lunar

358
00:16:45,910 --> 00:16:43,680
surface for missions beyond artemis iii

359
00:16:48,629 --> 00:16:45,920
this path is in parallel to our work

360
00:16:51,749 --> 00:16:48,639
with spacex on the demonstration of its

361
00:16:54,470 --> 00:16:51,759
landing system to land the first humans

362
00:16:57,910 --> 00:16:54,480
on the moon in 50 years

363
00:17:01,990 --> 00:16:59,749

our next generation of science at the

364
00:17:04,949 --> 00:17:02,000
moon will get a big boost

365
00:17:08,069 --> 00:17:04,959
in preparation for astronaut science

366
00:17:10,470 --> 00:17:08,079
with u.s companies delivering scientific

367
00:17:12,069 --> 00:17:10,480
instruments and technology demos to the

368
00:17:14,630 --> 00:17:12,079
lunar surface

369
00:17:17,189 --> 00:17:14,640
we continue to select payloads

370
00:17:20,150 --> 00:17:17,199
delivery by industry through commercial

371
00:17:23,110 --> 00:17:20,160
lunar payload services or clips

372
00:17:25,590 --> 00:17:23,120
with nasa as just one of many customers

373
00:17:28,150 --> 00:17:25,600
and among those payloads is viper the

374
00:17:29,909 --> 00:17:28,160
rover that will develop a map

375
00:17:32,470 --> 00:17:29,919
at the south pole

376
00:17:34,549 --> 00:17:32,480
of the concentration and location of

377
00:17:36,870 --> 00:17:34,559
water ice that could eventually be

378
00:17:39,270 --> 00:17:36,880
harvested to sustain human exploration

379
00:17:42,390 --> 00:17:39,280
on the moon

380
00:17:45,029 --> 00:17:42,400
we are forging the artemis generation

381
00:17:46,870 --> 00:17:45,039
i myself was very inspired to follow my

382
00:17:49,350 --> 00:17:46,880
career path by the accomplishments of

383
00:17:51,750 --> 00:17:49,360
the apollo program but we're poised to

384
00:17:54,710 --> 00:17:51,760
do so much more than that

385
00:17:56,630 --> 00:17:54,720
to build on that legacy including also

386
00:17:58,390 --> 00:17:56,640
landing the first person of color on the

387
00:18:01,750 --> 00:17:58,400
moon

388
00:18:03,909 --> 00:18:01,760

we never forget we are standing on the

389
00:18:06,150 --> 00:18:03,919
shoulders of giants

390
00:18:18,230 --> 00:18:06,160
the men who landed on the moon

391
00:18:23,669 --> 00:18:20,870
i'd like to shift gear gears now and

392
00:18:25,430 --> 00:18:23,679
talk about the agency's priorities

393
00:18:28,390 --> 00:18:25,440
first and foremost

394
00:18:31,510 --> 00:18:28,400
we will continue to be a global leader

395
00:18:33,669 --> 00:18:31,520
in science aeronautics space technology

396
00:18:35,590 --> 00:18:33,679
and human space flight

397
00:18:39,029 --> 00:18:35,600
but in addition for the agency we have

398
00:18:43,110 --> 00:18:39,039
three cross-cutting priorities climate

399
00:18:45,350 --> 00:18:43,120
workforce and the moon to mars strategy

400
00:18:47,029 --> 00:18:45,360
our changing climate is creating an

401
00:18:49,590 --> 00:18:47,039
existential threat

402
00:18:50,390 --> 00:18:49,600
to all of us crew members of spaceship

403
00:18:52,470 --> 00:18:50,400
earth

404
00:18:55,029 --> 00:18:52,480
and nasa is uniquely positioned through

405
00:18:56,470 --> 00:18:55,039
our earth science program to contribute

406
00:18:59,029 --> 00:18:56,480
to one of the first

407
00:19:00,870 --> 00:18:59,039
key priorities of nasa understanding

408
00:19:02,390 --> 00:19:00,880
climate change

409
00:19:05,029 --> 00:19:02,400
this year with our international

410
00:19:07,830 --> 00:19:05,039
partners we initiate the earth system

411
00:19:09,750 --> 00:19:07,840
observatory a series of earth observing

412
00:19:11,590 --> 00:19:09,760
satellites that will measure key

413
00:19:14,070 --> 00:19:11,600

parameters to improve the world's

414
00:19:16,070 --> 00:19:14,080
understanding of climate change

415
00:19:18,789 --> 00:19:16,080
as we have measured earth in the past

416
00:19:20,549 --> 00:19:18,799
we've discovered that the most important

417
00:19:23,750 --> 00:19:20,559
thing to quantify

418
00:19:26,390 --> 00:19:23,760
is not just water or weather soil

419
00:19:29,190 --> 00:19:26,400
moisture or any individual thing but

420
00:19:31,190 --> 00:19:29,200
actually to study earth as a system

421
00:19:33,190 --> 00:19:31,200
and so nasa's work here in the earth

422
00:19:35,190 --> 00:19:33,200
system observatory is critical for the

423
00:19:36,870 --> 00:19:35,200
entire planet

424
00:19:39,190 --> 00:19:36,880
i've already mentioned our efforts in

425
00:19:41,430 --> 00:19:39,200
aeronautics around green aviation we

426
00:19:44,150 --> 00:19:41,440
will continue to integrate our climate

427
00:19:45,909 --> 00:19:44,160
efforts across the agency for maximum

428
00:19:47,990 --> 00:19:45,919
synergy

429
00:19:50,470 --> 00:19:48,000
and we will initiate the earth

430
00:19:53,590 --> 00:19:50,480
information center an effort to bring

431
00:19:56,789 --> 00:19:53,600
together our space-based climate data

432
00:20:00,150 --> 00:19:56,799
along with data from our interagency and

433
00:20:02,149 --> 00:20:00,160
international partners into one place

434
00:20:05,510 --> 00:20:02,159
this will help make it more accessible

435
00:20:07,669 --> 00:20:05,520
to scientists yes but we really intend

436
00:20:11,350 --> 00:20:07,679
to make it more accessible to decision

437
00:20:12,870 --> 00:20:11,360
makers and also all citizens especially

438
00:20:17,430 --> 00:20:12,880

in our communities that are most

439
00:20:22,230 --> 00:20:20,070
our next priority is our workforce

440
00:20:23,669 --> 00:20:22,240
because they're our backbone

441
00:20:25,590 --> 00:20:23,679
we've recently gone through an

442
00:20:27,909 --> 00:20:25,600
enterprise transformation in our mission

443
00:20:31,110 --> 00:20:27,919
support directorate and we will continue

444
00:20:34,390 --> 00:20:31,120
to encourage and facilitate a one nasa

445
00:20:36,230 --> 00:20:34,400
one team approach to everything we do

446
00:20:38,630 --> 00:20:36,240
we recognize that our investments in

447
00:20:41,190 --> 00:20:38,640
commercial space have broadened the pool

448
00:20:43,110 --> 00:20:41,200
of choices available to us for how we

449
00:20:45,029 --> 00:20:43,120
accomplish our work

450
00:20:47,669 --> 00:20:45,039
understanding the best practices in

451
00:20:49,990 --> 00:20:47,679
those kinds of partnerships and defining

452
00:20:52,149 --> 00:20:50,000
the unique and crucial role of the nasa

453
00:20:53,990 --> 00:20:52,159
workforce for the future is a key

454
00:20:55,750 --> 00:20:54,000
priority

455
00:20:57,590 --> 00:20:55,760
the future of work is something every

456
00:20:58,630 --> 00:20:57,600
single person in this room is wrestling

457
00:21:01,590 --> 00:20:58,640
with

458
00:21:03,270 --> 00:21:01,600
i think we all feel exhilarated

459
00:21:04,950 --> 00:21:03,280
maybe a little daunted to all be

460
00:21:07,110 --> 00:21:04,960
together again

461
00:21:09,590 --> 00:21:07,120
we believe that getting that right is

462
00:21:12,549 --> 00:21:09,600
absolutely essential to support a future

463
00:21:14,630 --> 00:21:12,559

where we're still the employer of choice

464
00:21:17,830 --> 00:21:14,640
and although this is mostly an inward

465
00:21:19,909 --> 00:21:17,840
facing priority we also intend to work

466
00:21:22,549 --> 00:21:19,919
with our industry and government

467
00:21:28,149 --> 00:21:22,559
partners to advance a diverse pipeline

468
00:21:32,789 --> 00:21:30,310
now i'd like to talk about our moon

469
00:21:35,029 --> 00:21:32,799
tomorrow strategy

470
00:21:37,590 --> 00:21:35,039
this is a special moment for us as we

471
00:21:40,950 --> 00:21:37,600
prepare to launch artemis one

472
00:21:42,549 --> 00:21:40,960
we have a pretty solid plan laid out

473
00:21:44,549 --> 00:21:42,559
through artemis iv

474
00:21:47,669 --> 00:21:44,559
we have hardware for each of those

475
00:21:48,870 --> 00:21:47,679
missions either fully completed or under

476
00:21:51,430 --> 00:21:48,880
construction

477
00:21:52,870 --> 00:21:51,440
we have clear goals for each of those

478
00:21:54,870 --> 00:21:52,880
missions

479
00:21:58,950 --> 00:21:54,880
but there's a lot of questions we have

480
00:22:01,510 --> 00:21:58,960
to answer about what comes next so as we

481
00:22:03,830 --> 00:22:01,520
prepare to launch artemis one this is a

482
00:22:06,710 --> 00:22:03,840
great time for us to stop and think

483
00:22:09,350 --> 00:22:06,720
about our moon to mars strategy

484
00:22:10,789 --> 00:22:09,360
this is a cross-cutting priority for the

485
00:22:12,789 --> 00:22:10,799
agency

486
00:22:15,110 --> 00:22:12,799
although the exploration systems

487
00:22:17,669 --> 00:22:15,120
directorate led by jim free

488
00:22:18,870 --> 00:22:17,679

is responsible for executing the artemis

489
00:22:21,830 --> 00:22:18,880
campaign

490
00:22:23,510 --> 00:22:21,840
the goal of solar system exploration

491
00:22:26,710 --> 00:22:23,520
actually spans all the mission

492
00:22:29,590 --> 00:22:26,720
directorates and yes i mean all

493
00:22:32,630 --> 00:22:29,600
aeronautics work in hypersonics directly

494
00:22:35,350 --> 00:22:32,640
supports entry descent and landing

495
00:22:38,149 --> 00:22:35,360
we see capabilities such as the current

496
00:22:40,470 --> 00:22:38,159
ingenuity helicopter on mars just

497
00:22:43,430 --> 00:22:40,480
completed its 22nd flight

498
00:22:44,950 --> 00:22:43,440
and the future dragonfly aerial vehicle

499
00:22:46,710 --> 00:22:44,960
on titan

500
00:22:51,110 --> 00:22:46,720
we're going to continue to see the

501
00:22:53,350 --> 00:22:51,120
scenes between air and space blur

502
00:22:56,710 --> 00:22:53,360
and science of course is front

503
00:22:57,990 --> 00:22:56,720
and center in exploration

504
00:23:00,950 --> 00:22:58,000
we have come

505
00:23:02,470 --> 00:23:00,960
so far since apollo

506
00:23:04,549 --> 00:23:02,480
so

507
00:23:06,549 --> 00:23:04,559
our astronauts on apollo

508
00:23:09,029 --> 00:23:06,559
had a scientific tool

509
00:23:11,590 --> 00:23:09,039
it was a scoop that allowed them to pick

510
00:23:13,430 --> 00:23:11,600
up rocks to put into a box and bring

511
00:23:14,310 --> 00:23:13,440
home

512
00:23:17,190 --> 00:23:14,320
those

513
00:23:18,950 --> 00:23:17,200

samples have proved to be a treasure for

514
00:23:21,110 --> 00:23:18,960
the whole world

515
00:23:22,549 --> 00:23:21,120
but think how far we've come in science

516
00:23:24,789 --> 00:23:22,559
since then

517
00:23:25,750 --> 00:23:24,799
the science we will be able to do in

518
00:23:28,230 --> 00:23:25,760
situ

519
00:23:30,710 --> 00:23:28,240
with more sophisticated instruments

520
00:23:33,909 --> 00:23:30,720
with maps of water ice and other

521
00:23:35,909 --> 00:23:33,919
resources available real time

522
00:23:37,590 --> 00:23:35,919
not to mention the advances we're making

523
00:23:39,110 --> 00:23:37,600
in communications

524
00:23:41,669 --> 00:23:39,120
so that we can

525
00:23:42,789 --> 00:23:41,679
have high-speed data returned to the

526
00:23:44,870 --> 00:23:42,799
earth

527
00:23:46,549 --> 00:23:44,880
surface transportation that will allow

528
00:23:48,310 --> 00:23:46,559
us to row further

529
00:23:49,669 --> 00:23:48,320
and human and machine teaming

530
00:23:51,909 --> 00:23:49,679
capabilities

531
00:23:54,950 --> 00:23:51,919
we think they're going to transform

532
00:23:56,950 --> 00:23:54,960
science on the moon and mars

533
00:23:59,190 --> 00:23:56,960
i referenced the mars sample return

534
00:24:01,750 --> 00:23:59,200
earlier that will be absolutely

535
00:24:04,789 --> 00:24:01,760
essential science to have it will help

536
00:24:07,590 --> 00:24:04,799
shape and guide our moon to mars science

537
00:24:11,510 --> 00:24:07,600
strategy particularly in the area of

538
00:24:13,510 --> 00:24:11,520

where we send humans in the future

539
00:24:14,630 --> 00:24:13,520
so now we're ready to move just beyond a

540
00:24:16,950 --> 00:24:14,640
visit

541
00:24:20,310 --> 00:24:16,960
in order to do that we need to build a

542
00:24:23,029 --> 00:24:20,320
scalable infrastructure capability to

543
00:24:25,190 --> 00:24:23,039
provide that foundation for living and

544
00:24:27,190 --> 00:24:25,200
working on another planet

545
00:24:29,510 --> 00:24:27,200
i'm talking about communications

546
00:24:30,470 --> 00:24:29,520
physician navigation and timing

547
00:24:33,190 --> 00:24:30,480
power

548
00:24:36,230 --> 00:24:33,200
in situ resource utilization prepared

549
00:24:38,230 --> 00:24:36,240
landing areas and other things

550
00:24:41,029 --> 00:24:38,240
so just as nasa has done with commercial

551
00:24:42,310 --> 00:24:41,039
crew and commercial cargo industry is

552
00:24:44,870 --> 00:24:42,320
looking to us

553
00:24:47,350 --> 00:24:44,880
to help us prove the business case for

554
00:24:49,909 --> 00:24:47,360
transportation and potentially these

555
00:24:52,070 --> 00:24:49,919
other infrastructure areas and to help

556
00:24:53,590 --> 00:24:52,080
shape the rule of law that guides a new

557
00:24:56,070 --> 00:24:53,600
frontier

558
00:24:59,110 --> 00:24:56,080
and to help create an environment where

559
00:25:03,350 --> 00:24:59,120
industries innovation and partnership

560
00:25:06,390 --> 00:25:03,360
can continue to advance what's possible

561
00:25:10,950 --> 00:25:09,430
is to create a blueprint

562
00:25:12,710 --> 00:25:10,960
a blueprint

563
00:25:14,230 --> 00:25:12,720

for sustained human presence and

564
00:25:17,029 --> 00:25:14,240
exploration

565
00:25:19,909 --> 00:25:17,039
throughout the solar system

566
00:25:22,470 --> 00:25:19,919
we will build objectives

567
00:25:25,269 --> 00:25:22,480
in these areas that i've mentioned

568
00:25:27,510 --> 00:25:25,279
they will act as our guidepost

569
00:25:29,990 --> 00:25:27,520
over the next two decades

570
00:25:31,909 --> 00:25:30,000
as individual programs advance

571
00:25:33,510 --> 00:25:31,919
and technologies advance

572
00:25:36,230 --> 00:25:33,520
to help ensure that the things that

573
00:25:39,750 --> 00:25:36,240
we're doing are integrated

574
00:25:42,390 --> 00:25:39,760
and stay focused on that goal

575
00:25:44,230 --> 00:25:42,400
we need to be very clear about what it

576
00:25:45,909 --> 00:25:44,240
is we are doing on the moon that gets us

577
00:25:47,510 --> 00:25:45,919
to mars

578
00:25:48,710 --> 00:25:47,520
we will practice

579
00:25:51,430 --> 00:25:48,720
developing

580
00:25:54,230 --> 00:25:51,440
this blueprint on the moon

581
00:25:58,070 --> 00:25:54,240
and then we will demonstrate it on mars

582
00:26:00,149 --> 00:25:58,080
in preparation for other destinations

583
00:26:01,830 --> 00:26:00,159
we don't undertake this responsibility

584
00:26:03,190 --> 00:26:01,840
lightly

585
00:26:04,789 --> 00:26:03,200
underpinning our approach is the

586
00:26:06,070 --> 00:26:04,799
essential belief that it's going to be a

587
00:26:07,590 --> 00:26:06,080
global effort

588
00:26:09,909 --> 00:26:07,600

and by that i mean

589
00:26:12,630 --> 00:26:09,919
not only worldwide in a geographic sense

590
00:26:15,269 --> 00:26:12,640
but also global in the sense that many

591
00:26:17,750 --> 00:26:15,279
fields partners and disciplines will

592
00:26:20,230 --> 00:26:17,760
have to be involved in this work

593
00:26:22,549 --> 00:26:20,240
yes we need scientists and engineers

594
00:26:24,630 --> 00:26:22,559
and we need artists

595
00:26:25,669 --> 00:26:24,640
we need partnership with nations of all

596
00:26:28,390 --> 00:26:25,679
sizes

597
00:26:29,750 --> 00:26:28,400
and companies both large and small

598
00:26:31,590 --> 00:26:29,760
academia

599
00:26:34,870 --> 00:26:31,600
citizen scientists

600
00:26:37,110 --> 00:26:34,880
the students just starting school today

601
00:26:40,549 --> 00:26:37,120
and those entering the workforce and of

602
00:26:42,710 --> 00:26:40,559
course our mentors who will help pass on

603
00:26:45,750 --> 00:26:42,720
the lessons that we have all fought to

604
00:26:48,070 --> 00:26:45,760
learn over these many decades

605
00:26:50,710 --> 00:26:48,080
nasa is kicking off an effort for

606
00:26:52,630 --> 00:26:50,720
consultation to define these objectives

607
00:26:54,789 --> 00:26:52,640
with our partners both industry and

608
00:26:58,149 --> 00:26:54,799
international so that we are addressing

609
00:27:01,909 --> 00:26:58,159
the priorities of nations and industry

610
00:27:04,390 --> 00:27:01,919
in developing this blueprint

611
00:27:06,630 --> 00:27:04,400
we recognize that the things that we do

612
00:27:08,470 --> 00:27:06,640
will carry precedence

613
00:27:12,390 --> 00:27:08,480

and that means how we go

614
00:27:15,190 --> 00:27:12,400
is just as important as what we do

615
00:27:17,350 --> 00:27:15,200
in the spirit of peaceful exploration it

616
00:27:20,230 --> 00:27:17,360
will mean adhering to our values of

617
00:27:22,230 --> 00:27:20,240
openness transparency shared data and a

618
00:27:23,909 --> 00:27:22,240
commitment to norms to help us work

619
00:27:25,990 --> 00:27:23,919
together

620
00:27:28,310 --> 00:27:26,000
we are helping to establish that playing

621
00:27:29,909 --> 00:27:28,320
field through the artemis accords

622
00:27:32,149 --> 00:27:29,919
i'm proud to say that

623
00:27:34,549 --> 00:27:32,159
singapore joined us last week as the

624
00:27:36,710 --> 00:27:34,559
18th signatory

625
00:27:38,870 --> 00:27:36,720
and more are on the way

626
00:27:40,870 --> 00:27:38,880
the artemis accords are fairly simple

627
00:27:43,830 --> 00:27:40,880
they're a set of principles grounded in

628
00:27:45,590 --> 00:27:43,840
the 1967 outer space treaty

629
00:27:48,389 --> 00:27:45,600
by which our signatories commit to

630
00:27:51,190 --> 00:27:48,399
behave in a rules-based responsible way

631
00:27:53,590 --> 00:27:51,200
in their space exploration activities

632
00:27:56,070 --> 00:27:53,600
they're based on universal principles

633
00:27:58,149 --> 00:27:56,080
that will enable the next generation of

634
00:28:00,230 --> 00:27:58,159
international partnerships for the

635
00:28:02,389 --> 00:28:00,240
exploration of the moon

636
00:28:04,070 --> 00:28:02,399
mars and beyond

637
00:28:06,149 --> 00:28:04,080
these principles

638
00:28:07,990 --> 00:28:06,159

encompass transparency

639
00:28:10,789 --> 00:28:08,000
interoperability

640
00:28:13,990 --> 00:28:10,799
deconflicting activities and tackling

641
00:28:16,070 --> 00:28:14,000
critical issues such as orbital debris

642
00:28:18,549 --> 00:28:16,080
today the accords don't answer every

643
00:28:20,710 --> 00:28:18,559
question and we know that but they do

644
00:28:21,750 --> 00:28:20,720
indicate each nation that has signed

645
00:28:23,510 --> 00:28:21,760
them

646
00:28:26,149 --> 00:28:23,520
they have a commitment

647
00:28:30,630 --> 00:28:26,159
to start this conversation and bring us

648
00:28:33,269 --> 00:28:30,640
down a path that is more rules-based

649
00:28:35,830 --> 00:28:33,279
we must be so mindful

650
00:28:39,190 --> 00:28:35,840
to bring the very best of humanity out

651
00:28:42,630 --> 00:28:40,710
everything that i've been talking about

652
00:28:44,630 --> 00:28:42,640
is a long game and that's the space

653
00:28:48,070 --> 00:28:44,640
business right you don't send a

654
00:28:50,230 --> 00:28:48,080
telescope a million miles away with 344

655
00:28:53,110 --> 00:28:50,240
points a single failure to work through

656
00:28:55,830 --> 00:28:53,120
or plan to send an aircraft to titan

657
00:28:57,669 --> 00:28:55,840
without a lot of planning

658
00:28:59,350 --> 00:28:57,679
that's what it takes to raise the bar of

659
00:29:00,630 --> 00:28:59,360
human achievement and it doesn't happen

660
00:29:02,549 --> 00:29:00,640
overnight

661
00:29:04,389 --> 00:29:02,559
i've covered a lot of ground today but i

662
00:29:06,950 --> 00:29:04,399
wanted to be sure that everyone was

663
00:29:08,789 --> 00:29:06,960

aware of the scope of the work that's

664
00:29:10,549 --> 00:29:08,799
going on in space and where we're

665
00:29:12,310 --> 00:29:10,559
focused

666
00:29:14,230 --> 00:29:12,320
just want to say if you work in industry

667
00:29:16,630 --> 00:29:14,240
you have a place in nasa's plans for the

668
00:29:20,070 --> 00:29:16,640
future it's a global plan if you're a

669
00:29:22,389 --> 00:29:20,080
student or early in your career wow

670
00:29:24,230 --> 00:29:22,399
there's a lot happening

671
00:29:26,389 --> 00:29:24,240
to our international and our

672
00:29:28,870 --> 00:29:26,399
intergovernmental partners current and

673
00:29:30,710 --> 00:29:28,880
yet to come i just say thank you

674
00:29:32,950 --> 00:29:30,720
your expertise perspective and

675
00:29:34,549 --> 00:29:32,960
friendship will help us do what we do in

676
00:29:36,549 --> 00:29:34,559
a better way

677
00:29:39,350 --> 00:29:36,559
if you've seen the pictures of the sls

678
00:29:41,669 --> 00:29:39,360
rocket stacked on the pad with orion you

679
00:29:44,310 --> 00:29:41,679
know that the dream of going beyond low

680
00:29:46,710 --> 00:29:44,320
earth ormonds orbit with humans is no

681
00:29:47,830 --> 00:29:46,720
longer deferred it's a dream we can all

682
00:29:49,510 --> 00:29:47,840
share

683
00:29:51,430 --> 00:29:49,520
and we at nasa look forward to working

684
00:30:02,260 --> 00:29:51,440
with all of you in the coming months and

685
00:30:02,270 --> 00:30:06,549
[Music]

686
00:30:11,750 --> 00:30:08,710
thank you pam melroy

687
00:30:13,830 --> 00:30:11,760
my name is shayna hume i'm a phd student

688
00:30:17,029 --> 00:30:13,840

at the university of colorado boulder

689
00:30:19,269 --> 00:30:17,039
doing my research in mars edl i'm also a

690
00:30:21,830 --> 00:30:19,279
member of the space generation advisory

691
00:30:24,310 --> 00:30:21,840
council and the deputy manager for our

692
00:30:26,789 --> 00:30:24,320
annual space generation congress which

693
00:30:29,510 --> 00:30:26,799
this year will be held in paris

694
00:30:31,430 --> 00:30:29,520
however most importantly today i am also

695
00:30:34,149 --> 00:30:31,440
an alumni of the matthew isackwoods