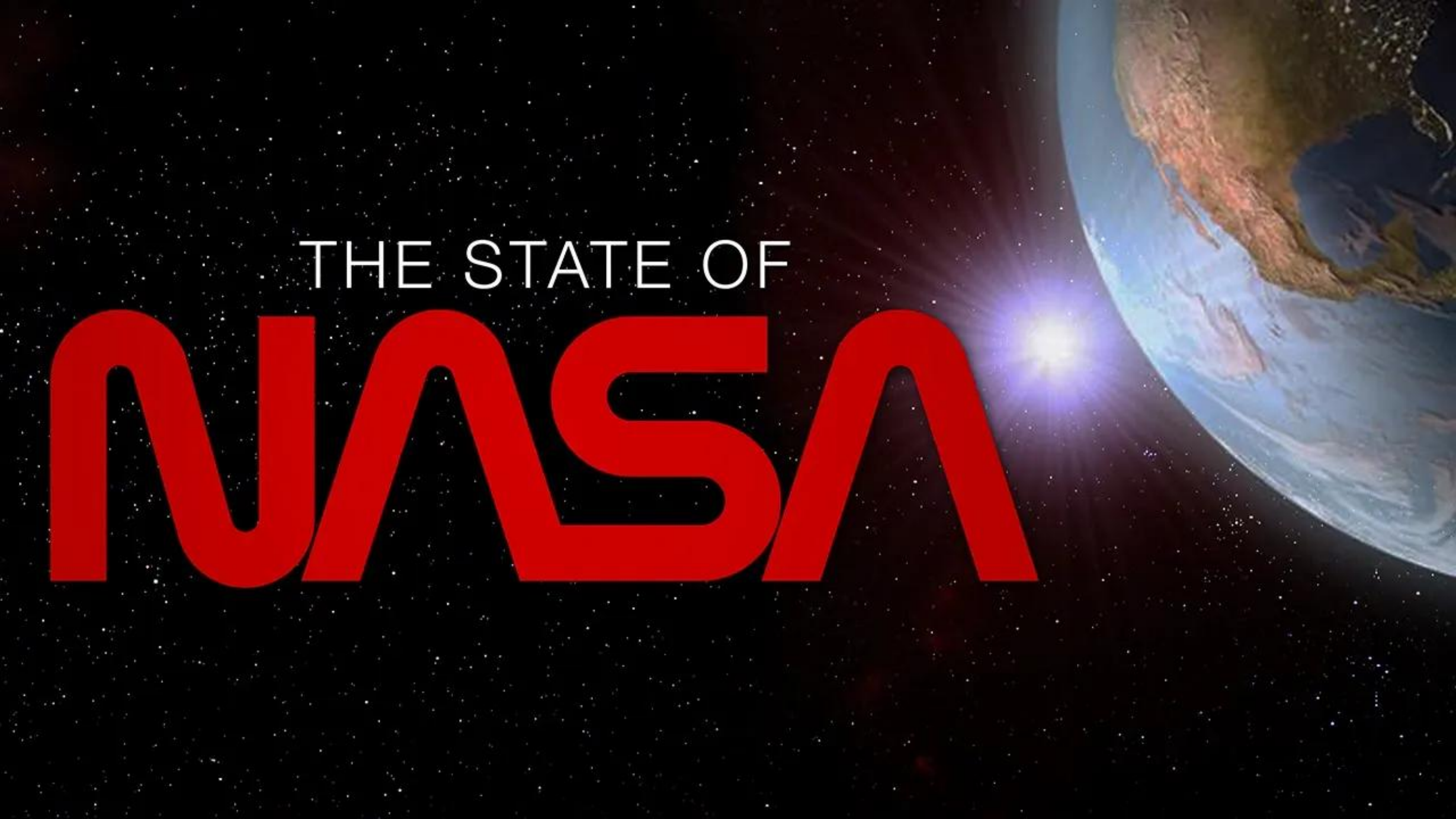


THE STATE OF

NASA



1
00:00:04,230 --> 00:00:02,070
50 miles above the earth conducting

2
00:00:06,230 --> 00:00:04,240
world-class research for the earth

3
00:00:07,269 --> 00:00:06,240
as astronauts we have the best jobs in

4
00:00:09,030 --> 00:00:07,279
the galaxy

5
00:00:11,030 --> 00:00:09,040
but the work we do on station wouldn't

6
00:00:13,030 --> 00:00:11,040
be possible without your support

7
00:00:14,629 --> 00:00:13,040
we're on a path to land the first woman

8
00:00:16,390 --> 00:00:14,639
and the first person of color

9
00:00:17,990 --> 00:00:16,400
on the moon as part of the artemis

10
00:00:19,990 --> 00:00:18,000
program

11
00:00:21,750 --> 00:00:20,000
it is our honor to introduce someone who

12
00:00:24,630 --> 00:00:21,760
knows exactly what it's like

13
00:00:25,910 --> 00:00:24,640

to live and work up here in orbit our

14

00:00:30,470 --> 00:00:25,920

new administrator

15

00:00:34,870 --> 00:00:30,480

the honorable senator bill nelson

16

00:00:38,150 --> 00:00:34,880

hi everybody thank you very much

17

00:00:40,310 --> 00:00:38,160

and thank you megan shane and mark for

18

00:00:42,549 --> 00:00:40,320

the introduction

19

00:00:43,990 --> 00:00:42,559

it's well known that nasa is the most

20

00:00:46,709 --> 00:00:44,000

popular agency or

21

00:00:47,910 --> 00:00:46,719

department of the federal government and

22

00:00:51,350 --> 00:00:47,920

that's because

23

00:00:54,389 --> 00:00:51,360

of you the nasa family

24

00:00:57,670 --> 00:00:54,399

and it's such an honor to serve

25

00:00:58,790 --> 00:00:57,680

and a leadership position in this

26

00:01:01,830 --> 00:00:58,800

extraordinary

27

00:01:04,469 --> 00:01:01,840

group of folks i'm so

28

00:01:05,910 --> 00:01:04,479

proud today to be joined by my wife

29

00:01:09,109 --> 00:01:05,920

grace

30

00:01:12,149 --> 00:01:09,119

and be joined virtually by our children

31

00:01:15,030 --> 00:01:12,159

bill jr and nan ellen

32

00:01:15,670 --> 00:01:15,040

and i'm so grateful for all of their

33

00:01:18,870 --> 00:01:15,680

support

34

00:01:22,550 --> 00:01:18,880

which has been over a lifetime

35

00:01:29,429 --> 00:01:26,310

i got a call from the president-elect

36

00:01:33,030 --> 00:01:29,439

right after the first of the year

37

00:01:36,550 --> 00:01:33,040

and he wanted he wanted me to serve here

38

00:01:40,710 --> 00:01:36,560

and it was a surprise because

39

00:01:44,230 --> 00:01:40,720

i had not sought this position

40

00:01:46,230 --> 00:01:44,240

but when the president calls you

41

00:01:47,749 --> 00:01:46,240

you know what you do you click your

42

00:01:51,749 --> 00:01:47,759

heels and you

43

00:01:55,350 --> 00:01:51,759

salute and you say yes sir

44

00:01:56,389 --> 00:01:55,360

and i am very glad that he gave me this

45

00:01:58,550 --> 00:01:56,399

opportunity

46

00:01:59,429 --> 00:01:58,560

and it's been an incredible month

47

00:02:01,910 --> 00:01:59,439

getting

48

00:02:03,429 --> 00:02:01,920

up to speed about the agency's goals and

49

00:02:05,350 --> 00:02:03,439

missions

50

00:02:07,190 --> 00:02:05,360

and i want you to know the truth be

51
00:02:10,630 --> 00:02:07,200
known i'm like a kid

52
00:02:17,830 --> 00:02:14,309
space has always been a passion for me

53
00:02:21,030 --> 00:02:17,840
i grew up in the shadow of the cape

54
00:02:25,270 --> 00:02:21,040
the names of the original seven were all

55
00:02:27,910 --> 00:02:25,280
known by our schoolmates

56
00:02:28,710 --> 00:02:27,920
and it's been a passion that has been

57
00:02:31,830 --> 00:02:28,720
fueled

58
00:02:35,270 --> 00:02:31,840
by my family history

59
00:02:37,750 --> 00:02:35,280
as a matter of fact on what was

60
00:02:41,190 --> 00:02:37,760
scrubbed land of rattlesnakes and

61
00:02:44,309 --> 00:02:41,200
mosquitoes and alligators

62
00:02:46,630 --> 00:02:44,319
in 1913

63
00:02:49,589 --> 00:02:46,640

my grandparents homesteaded under the

64

00:02:53,670 --> 00:02:49,599

homestead act

65

00:03:00,470 --> 00:02:53,680

on that 160 acres of land

66

00:03:06,070 --> 00:03:03,670

that 160 acres today

67

00:03:09,589 --> 00:03:06,080

is at the north end of the space shuttle

68

00:03:13,589 --> 00:03:12,869

when i went to the launch pad for the

69

00:03:17,750 --> 00:03:13,599

first time

70

00:03:18,070 --> 00:03:17,760

i was the seventh to crawl in and strap

71

00:03:20,550 --> 00:03:18,080

in

72

00:03:21,670 --> 00:03:20,560

and i wandered off on that launch tower

73

00:03:24,789 --> 00:03:21,680

by myself

74

00:03:27,110 --> 00:03:24,799

looking to the northwest in the

75

00:03:27,670 --> 00:03:27,120

direction of the old homestead and it

76

00:03:30,390 --> 00:03:27,680

was just

77

00:03:32,309 --> 00:03:30,400

hard for me to comprehend that

78

00:03:36,229 --> 00:03:32,319

three-quarters of a century

79

00:03:39,110 --> 00:03:36,239

earlier my grandparents had homesteaded

80

00:03:42,149 --> 00:03:39,120

there and they could have never believed

81

00:03:47,509 --> 00:03:42,159

that a grandson was literally going

82

00:03:53,350 --> 00:03:47,519

to leave the face of the earth

83

00:03:56,229 --> 00:03:53,360

and so on the space shuttle

84

00:03:58,390 --> 00:03:56,239

in between conducting 12 medical

85

00:04:02,550 --> 00:03:58,400

experiments

86

00:04:05,670 --> 00:04:02,560

enjoying the best crew ever

87

00:04:06,390 --> 00:04:05,680

whenever you would get a free moment and

88

00:04:09,910 --> 00:04:06,400

that was

89

00:04:13,589 --> 00:04:09,920

rare so often i had to cheat on

90

00:04:14,070 --> 00:04:13,599

my sleep and i'd float up to the flight

91

00:04:16,629 --> 00:04:14,080

deck

92

00:04:18,469 --> 00:04:16,639

and i'd just float there in front of the

93

00:04:22,550 --> 00:04:18,479

window

94

00:04:27,030 --> 00:04:25,590

it really has an impression on you and

95

00:04:30,070 --> 00:04:27,040

there's actually a term

96

00:04:33,590 --> 00:04:30,080

for it among space fliers it's called

97

00:04:41,350 --> 00:04:36,710

because in the window of your spacecraft

98

00:04:43,990 --> 00:04:41,360

you see our home the planet

99

00:04:45,270 --> 00:04:44,000

and it looks so beautiful such a

100

00:04:48,710 --> 00:04:45,280

creation

101
00:04:52,390 --> 00:04:48,720
in the middle of nothing and yet it also

102
00:04:59,189 --> 00:04:55,990
as a politician i was struck by the

103
00:05:01,670 --> 00:04:59,199
fact that as we orbited the earth every

104
00:05:04,790 --> 00:05:01,680
90 minutes

105
00:05:08,870 --> 00:05:04,800
i did not see political divisions

106
00:05:12,230 --> 00:05:08,880
i did not see racial divisions

107
00:05:15,270 --> 00:05:14,950
religious divisions i saw that we were

108
00:05:18,950 --> 00:05:15,280
all

109
00:05:26,150 --> 00:05:22,310
and this is the unique mission of

110
00:05:29,189 --> 00:05:26,160
nasa because we all come together

111
00:05:34,950 --> 00:05:29,199
as we push the frontier

112
00:05:42,230 --> 00:05:38,870
and we see our planet our home

113
00:05:46,150 --> 00:05:42,240

and we have a central mission

114

00:05:53,590 --> 00:05:49,590

as a result of that experience

115

00:05:57,670 --> 00:05:53,600

i became more of an environmentalist

116

00:06:01,909 --> 00:05:57,680

because i could see our ecosystem

117

00:06:05,510 --> 00:06:01,919

bob cabana is here anyone who has flown

118

00:06:08,870 --> 00:06:05,520

or you see these dramatic photos and

119

00:06:12,550 --> 00:06:08,880

and and videos and you look at the rim

120

00:06:13,189 --> 00:06:12,560

of the earth and you can actually see

121

00:06:15,749 --> 00:06:13,199

the thin

122

00:06:16,390 --> 00:06:15,759

film of the atmosphere and you realize

123

00:06:20,870 --> 00:06:16,400

that

124

00:06:23,350 --> 00:06:20,880

the naked eye you could see

125

00:06:24,550 --> 00:06:23,360

from that altitude how we're messing it

126

00:06:26,710 --> 00:06:24,560

up

127

00:06:27,990 --> 00:06:26,720

you could see the color contrast coming

128

00:06:31,029 --> 00:06:28,000

across brazil

129

00:06:33,110 --> 00:06:31,039

in the upper amazon region

130

00:06:35,510 --> 00:06:33,120

you can look to the east there's the

131

00:06:38,710 --> 00:06:35,520

mouth of the amazon you could see

132

00:06:41,590 --> 00:06:38,720

the silt for hundreds of miles out

133

00:06:42,629 --> 00:06:41,600

into the atlantic coming across

134

00:06:46,309 --> 00:06:42,639

madagascar

135

00:06:49,749 --> 00:06:46,319

back then 36 years ago they had cut down

136

00:06:53,189 --> 00:06:49,759

all the trees and so when the rains came

137

00:06:55,670 --> 00:06:53,199

there wasn't a top soil

138

00:06:57,670 --> 00:06:55,680

and all of that topsoil washed down the

139

00:06:58,550 --> 00:06:57,680

rivers and you could clearly see that

140

00:07:01,270 --> 00:06:58,560

from space

141

00:07:02,790 --> 00:07:01,280

in the mouths of all the rivers that

142

00:07:04,870 --> 00:07:02,800

silt flowing into

143

00:07:08,790 --> 00:07:04,880

the bright blue waters of the indian

144

00:07:16,950 --> 00:07:13,029

because of that environmental effect

145

00:07:20,629 --> 00:07:16,960

i was really excited last week

146

00:07:24,629 --> 00:07:20,639

to join the president in announcing

147

00:07:28,629 --> 00:07:24,639

a new development of a next generation

148

00:07:31,830 --> 00:07:28,639

of climate data systems at nasa

149

00:07:32,469 --> 00:07:31,840

it's the earth system observatory to

150

00:07:35,350 --> 00:07:32,479

help us

151
00:07:35,670 --> 00:07:35,360
understand and track how climate change

152
00:07:38,710 --> 00:07:35,680
is

153
00:07:42,309 --> 00:07:38,720
impacting communities across the country

154
00:07:51,110 --> 00:07:45,909
that meeting held at fema headquarters

155
00:07:57,510 --> 00:07:54,550
i underscored to the president

156
00:07:58,309 --> 00:07:57,520
how this earth system observatory will

157
00:08:00,790 --> 00:07:58,319
better help

158
00:08:01,990 --> 00:08:00,800
america and the world with better data

159
00:08:05,990 --> 00:08:02,000
to track

160
00:08:09,189 --> 00:08:06,000
natural hazards including hurricanes

161
00:08:10,230 --> 00:08:09,199
and be better prepared and to support

162
00:08:13,350 --> 00:08:10,240
our communities

163
00:08:14,070 --> 00:08:13,360

families and businesses before a

164

00:08:17,589 --> 00:08:14,080

disaster

165

00:08:21,430 --> 00:08:19,909

the earth system observatory will

166

00:08:24,150 --> 00:08:21,440

consist of five

167

00:08:26,230 --> 00:08:24,160

integrated satellites the first of which

168

00:08:29,749 --> 00:08:26,240

is scheduled to be launched

169

00:08:32,709 --> 00:08:29,759

in january of 23

170

00:08:33,829 --> 00:08:32,719

we need these investments because storms

171

00:08:36,870 --> 00:08:33,839

are getting stronger

172

00:08:37,909 --> 00:08:36,880

and more destructive and if we want to

173

00:08:40,469 --> 00:08:37,919

mitigate

174

00:08:44,070 --> 00:08:40,479

climate change we've got to measure it

175

00:08:48,870 --> 00:08:44,080

and that's what nasa does

176

00:08:51,190 --> 00:08:48,880

nasa designs builds launches

177

00:08:52,550 --> 00:08:51,200

all of those instruments in space to

178

00:08:55,750 --> 00:08:52,560

give us

179

00:08:59,110 --> 00:08:55,760

an unprecedented understanding

180

00:09:02,550 --> 00:08:59,120

of the earth it's a 3d

181

00:09:04,070 --> 00:09:02,560

holistic view from the bedrock to the

182

00:09:11,269 --> 00:09:04,080

atmosphere

183

00:09:15,430 --> 00:09:13,509

as nasa prepares to send humans to the

184

00:09:18,389 --> 00:09:15,440

moon and mars

185

00:09:19,190 --> 00:09:18,399

and pier even deeper into the universe

186

00:09:22,389 --> 00:09:19,200

we turn

187

00:09:27,110 --> 00:09:22,399

with a renewed focus to our home planet

188

00:09:30,790 --> 00:09:29,430

the next generation of earth science

189

00:09:33,829 --> 00:09:30,800

begins with the new

190

00:09:34,790 --> 00:09:33,839

earth system observatory the core of the

191

00:09:36,630 --> 00:09:34,800

observatory

192

00:09:39,030 --> 00:09:36,640

is an array of five new satellite

193

00:09:41,190 --> 00:09:39,040

missions that will study the atmosphere

194

00:09:42,710 --> 00:09:41,200

the ground and even what's happening

195

00:09:45,590 --> 00:09:42,720

underneath the surface

196

00:09:46,470 --> 00:09:45,600

these spacecraft will look at the earth

197

00:09:48,790 --> 00:09:46,480

each one of them

198

00:09:50,790 --> 00:09:48,800

their own way and will integrate all the

199

00:09:54,230 --> 00:09:50,800

data in a common approach

200

00:09:55,870 --> 00:09:54,240

taken together as a single observatory

201
00:09:58,070 --> 00:09:55,880
we will have a complete

202
00:09:59,350 --> 00:09:58,080
three-dimensional understanding of our

203
00:10:01,990 --> 00:09:59,360
earth systems

204
00:10:05,430 --> 00:10:02,000
how they work together how one change

205
00:10:08,470 --> 00:10:05,440
can influence another

206
00:10:11,030 --> 00:10:08,480
it will watch our planet change driving

207
00:10:11,590 --> 00:10:11,040
solutions for better living managing

208
00:10:14,389 --> 00:10:11,600
water

209
00:10:15,509 --> 00:10:14,399
and food resources predicting natural

210
00:10:17,990 --> 00:10:15,519
hazards

211
00:10:18,949 --> 00:10:18,000
coping with sea level rise in coastal

212
00:10:24,310 --> 00:10:18,959
communities

213
00:10:28,949 --> 00:10:27,350

every 10 years the best scientists in

214

00:10:30,710 --> 00:10:28,959

the united states and worldwide come

215

00:10:31,990 --> 00:10:30,720

together and create a strategy that the

216

00:10:34,630 --> 00:10:32,000

kl strategy

217

00:10:36,389 --> 00:10:34,640

and it recommended that we build

218

00:10:37,910 --> 00:10:36,399

missions that together form an earth

219

00:10:40,630 --> 00:10:37,920

system observatory

220

00:10:42,150 --> 00:10:40,640

we're going to be looking at processes

221

00:10:44,630 --> 00:10:42,160

at the microphysical

222

00:10:45,190 --> 00:10:44,640

scale at the large kind of convective

223

00:10:48,550 --> 00:10:45,200

scale

224

00:10:50,150 --> 00:10:48,560

oceans and we're going to be

225

00:10:52,470 --> 00:10:50,160

investigating those

226

00:10:53,750 --> 00:10:52,480

pulling that out encapsulating that

227

00:10:55,509 --> 00:10:53,760

putting that into

228

00:10:57,269 --> 00:10:55,519

weather models and climate models and

229

00:11:00,470 --> 00:10:57,279

those are going to allow us to

230

00:11:02,470 --> 00:11:00,480

predict and project the future with far

231

00:11:06,069 --> 00:11:02,480

more confidence

232

00:11:08,550 --> 00:11:06,079

we can from space help farmers we can

233

00:11:09,190 --> 00:11:08,560

help others that grow food around the

234

00:11:12,710 --> 00:11:09,200

earth

235

00:11:15,350 --> 00:11:12,720

models

236

00:11:17,110 --> 00:11:15,360

better and from there we can predict

237

00:11:19,430 --> 00:11:17,120

better also in the future

238

00:11:21,030 --> 00:11:19,440

we can monitor fresh water both on the

239

00:11:22,870 --> 00:11:21,040

surface and underground

240

00:11:27,670 --> 00:11:22,880

to help water managers both for

241

00:11:32,150 --> 00:11:30,389

to build the observatory we will expand

242

00:11:33,110 --> 00:11:32,160

our partnerships with commercial

243

00:11:35,910 --> 00:11:33,120

companies and

244

00:11:37,509 --> 00:11:35,920

international space agencies to take

245

00:11:39,990 --> 00:11:37,519

advantage of innovation

246

00:11:42,150 --> 00:11:40,000

and new technology we recognize because

247

00:11:43,030 --> 00:11:42,160

of the global nature of the issues at

248

00:11:44,870 --> 00:11:43,040

hand

249

00:11:46,550 --> 00:11:44,880

we want international partners to be

250

00:11:48,949 --> 00:11:46,560

part of that also

251
00:11:50,150 --> 00:11:48,959
we're working together and the science

252
00:11:53,430 --> 00:11:50,160
that we're doing

253
00:11:56,389 --> 00:11:53,440
has to serve all of us

254
00:11:58,389 --> 00:11:56,399
nysar is our first major partnership

255
00:11:59,110 --> 00:11:58,399
with the indian space agency in earth

256
00:12:02,150 --> 00:11:59,120
science

257
00:12:02,629 --> 00:12:02,160
it brings together two different kinds

258
00:12:06,550 --> 00:12:02,639
of

259
00:12:08,790 --> 00:12:06,560
radar systems that together we'll see

260
00:12:10,710 --> 00:12:08,800
changes in our earth's surface that will

261
00:12:11,190 --> 00:12:10,720
help us predict natural hazards in the

262
00:12:13,350 --> 00:12:11,200
future

263
00:12:14,710 --> 00:12:13,360

the nicer mission will measure changes

264

00:12:17,590 --> 00:12:14,720

in earth's surface

265

00:12:19,509 --> 00:12:17,600

less than a centimeter across it will

266

00:12:21,509 --> 00:12:19,519

measure the movement of glaciers

267

00:12:23,430 --> 00:12:21,519

and ice sheets the dynamics of

268

00:12:26,710 --> 00:12:23,440

earthquakes and volcanoes

269

00:12:29,750 --> 00:12:26,720

and changes in farmland we will

270

00:12:30,710 --> 00:12:29,760

observe the earth every 12 days exactly

271

00:12:33,750 --> 00:12:30,720

at the right

272

00:12:36,829 --> 00:12:33,760

repeat past orbit we can study

273

00:12:40,550 --> 00:12:36,839

small changes in the earth system

274

00:12:44,389 --> 00:12:42,790

the earth's climate is changing we have

275

00:12:46,949 --> 00:12:44,399

documented the changes

276

00:12:49,350 --> 00:12:46,959

that we're seeing over the last few

277

00:12:51,030 --> 00:12:49,360

decades we know that it's being driven

278

00:12:53,990 --> 00:12:51,040

by human activities

279

00:12:55,670 --> 00:12:54,000

and it's absolutely essential that we

280

00:12:57,990 --> 00:12:55,680

continue to understand

281

00:12:59,990 --> 00:12:58,000

what's happening what's changing in

282

00:13:00,550 --> 00:13:00,000

order to better predict what's going to

283

00:13:02,949 --> 00:13:00,560

happen

284

00:13:03,829 --> 00:13:02,959

and perhaps help people make better

285

00:13:05,670 --> 00:13:03,839

choices

286

00:13:07,110 --> 00:13:05,680

understanding how our planet and its

287

00:13:10,069 --> 00:13:07,120

climate are changing

288

00:13:11,910 --> 00:13:10,079

is the foundation for a more resilient

289

00:13:14,790 --> 00:13:11,920

and sustainable future

290

00:13:17,509 --> 00:13:14,800

nasa's earth system observatory is the

291

00:13:20,710 --> 00:13:17,519

next step in this ongoing mission

292

00:13:21,430 --> 00:13:20,720

a mission to the only planet you can

293

00:13:27,350 --> 00:13:21,440

call

294

00:13:32,069 --> 00:13:30,150

and you've just seen some of these great

295

00:13:35,829 --> 00:13:32,079

scientists

296

00:13:36,310 --> 00:13:35,839

and i believe dr z is almost as excited

297

00:13:40,230 --> 00:13:36,320

as i

298

00:13:43,350 --> 00:13:40,240

am uh and that's what he's leading and

299

00:13:46,389 --> 00:13:43,360

it's incredible and what you just saw

300

00:13:48,949 --> 00:13:46,399

is just the tip of the iceberg the earth

301
00:13:50,710 --> 00:13:48,959
system observatory is just one of the

302
00:13:52,550 --> 00:13:50,720
many missions that we have on the

303
00:13:55,350 --> 00:13:52,560
horizon

304
00:13:57,670 --> 00:13:55,360
and i'm excited to share more about the

305
00:13:59,350 --> 00:13:57,680
exciting future we have in store here at

306
00:14:01,430 --> 00:13:59,360
nasa

307
00:14:05,189 --> 00:14:01,440
but first i want to thank you for all

308
00:14:08,230 --> 00:14:05,199
the work you've done over the past year

309
00:14:10,470 --> 00:14:08,240
back in march 2020 many of you

310
00:14:12,470 --> 00:14:10,480
packed up your computers you went home

311
00:14:15,670 --> 00:14:12,480
to work from your kitchen table

312
00:14:15,990 --> 00:14:15,680
your living rooms your basements while

313
00:14:19,269 --> 00:14:16,000

some

314

00:14:20,629 --> 00:14:19,279

of you were mission critical and you had

315

00:14:22,710 --> 00:14:20,639

to continue working on

316

00:14:24,310 --> 00:14:22,720

site under strict guidelines to keep you

317

00:14:26,470 --> 00:14:24,320

healthy

318

00:14:27,750 --> 00:14:26,480

and to keep your colleagues and your

319

00:14:31,110 --> 00:14:27,760

families healthy too

320

00:14:34,069 --> 00:14:31,120

you did that and i thank you for that

321

00:14:34,550 --> 00:14:34,079

and despite all these hardships it's

322

00:14:37,829 --> 00:14:34,560

been an

323

00:14:41,269 --> 00:14:37,839

amazing year for nasa

324

00:14:44,470 --> 00:14:41,279

the agency has lost has launched

325

00:14:47,910 --> 00:14:44,480

10 astronauts from american rockets

326

00:14:50,870 --> 00:14:47,920

on american soil

327

00:14:51,829 --> 00:14:50,880

we've had all of america on the edge of

328

00:14:55,430 --> 00:14:51,839

their seats

329

00:14:58,550 --> 00:14:55,440

as perseverance came through those

330

00:14:59,509 --> 00:14:58,560

seven minutes of terror made a

331

00:15:03,269 --> 00:14:59,519

successful

332

00:15:03,829 --> 00:15:03,279

landing on mars and since then we've

333

00:15:07,269 --> 00:15:03,839

created

334

00:15:10,629 --> 00:15:07,279

oxygen on mars and we've seen ingenuity

335

00:15:14,310 --> 00:15:10,639

that little helicopter defeat the odds

336

00:15:18,310 --> 00:15:14,320

outliving its planned lifespan

337

00:15:22,790 --> 00:15:18,320

and it transitioned from a tech demo

338

00:15:30,310 --> 00:15:27,110

it's the first flight on another planet

339

00:15:33,269 --> 00:15:30,320

and here's jennifer trospen out at

340

00:15:40,230 --> 00:15:33,279

jpl to give us a live update on

341

00:15:42,949 --> 00:15:40,240

perseverance and ingenuity

342

00:15:44,150 --> 00:15:42,959

thank you well it's a privilege to be

343

00:15:46,550 --> 00:15:44,160

here

344

00:15:48,629 --> 00:15:46,560

to talk about the perseverance rover

345

00:15:51,670 --> 00:15:48,639

mission

346

00:15:55,269 --> 00:15:51,680

today is the 101st saw

347

00:15:57,030 --> 00:15:55,279

on mars for the perseverance rover 101

348

00:15:59,509 --> 00:15:57,040

martian days ago

349

00:16:01,749 --> 00:15:59,519

percy successfully landed on the red

350

00:16:04,150 --> 00:16:01,759

planet at jezreel crater

351
00:16:06,230 --> 00:16:04,160
jezreel crater is an ancient lake bed on

352
00:16:08,790 --> 00:16:06,240
mars and a great place

353
00:16:09,590 --> 00:16:08,800
for perseverance to to search for

354
00:16:13,030 --> 00:16:09,600
ancient

355
00:16:15,590 --> 00:16:13,040
microbial life now shortly after landing

356
00:16:16,069 --> 00:16:15,600
we started sending down images for the

357
00:16:19,189 --> 00:16:16,079
first

358
00:16:21,430 --> 00:16:19,199
time of the landing and

359
00:16:22,710 --> 00:16:21,440
and from the rover's perspective and

360
00:16:24,629 --> 00:16:22,720
then shortly after that

361
00:16:26,310 --> 00:16:24,639
perseverance quickly got to work on her

362
00:16:28,310 --> 00:16:26,320
commissioning activities

363
00:16:30,550 --> 00:16:28,320

commissioning is when we check out all

364

00:16:31,269 --> 00:16:30,560

the functions of the rover to make sure

365

00:16:33,670 --> 00:16:31,279

that

366

00:16:35,350 --> 00:16:33,680

during their flight to mars and their

367

00:16:38,949 --> 00:16:35,360

rather dramatic landing

368

00:16:42,629 --> 00:16:38,959

on mars the functions all still work

369

00:16:44,629 --> 00:16:42,639

just two days ago perseverance finished

370

00:16:45,910 --> 00:16:44,639

all of her commissioning activities

371

00:16:49,749 --> 00:16:45,920

during this time

372

00:16:51,430 --> 00:16:49,759

she sent down over 75 000 images

373

00:16:53,189 --> 00:16:51,440

of our landing site and some of those

374

00:16:54,389 --> 00:16:53,199

images were what i call the vacation

375

00:16:56,069 --> 00:16:54,399

photos of

376

00:16:58,150 --> 00:16:56,079

percy and ingenuity sitting there

377

00:17:01,509 --> 00:16:58,160

together on the surface of mars

378

00:17:02,470 --> 00:17:01,519

learning new things she also deployed

379

00:17:04,470 --> 00:17:02,480

ingenuity

380

00:17:06,390 --> 00:17:04,480

photographed the flights and relayed the

381

00:17:08,150 --> 00:17:06,400

data back to earth

382

00:17:10,069 --> 00:17:08,160

and now we are continuing with an

383

00:17:11,669 --> 00:17:10,079

operational demo where ingenuity is

384

00:17:13,510 --> 00:17:11,679

helping perseverance

385

00:17:15,110 --> 00:17:13,520

learn new things and figure out which

386

00:17:16,470 --> 00:17:15,120

directions to go for her science

387

00:17:18,549 --> 00:17:16,480

campaigns

388

00:17:19,829 --> 00:17:18,559

we've recorded the sounds on mars for

389

00:17:22,710 --> 00:17:19,839

the first time

390

00:17:23,990 --> 00:17:22,720

of the wheels interacting with the rocks

391

00:17:27,189 --> 00:17:24,000

of the winds

392

00:17:28,069 --> 00:17:27,199

of the helicopter flying but we've also

393

00:17:31,190 --> 00:17:28,079

checked out

394

00:17:33,190 --> 00:17:31,200

every instrument and the robotic arm and

395

00:17:34,630 --> 00:17:33,200

the sampling system and the vehicle is

396

00:17:36,630 --> 00:17:34,640

working phenomenally

397

00:17:38,230 --> 00:17:36,640

well and now since the end of

398

00:17:40,070 --> 00:17:38,240

commissioning has happened

399

00:17:42,070 --> 00:17:40,080

we are starting to drive south to a

400

00:17:44,390 --> 00:17:42,080

region called ceta

401
00:17:45,270 --> 00:17:44,400
seita is an area where we will look

402
00:17:47,190 --> 00:17:45,280
around and

403
00:17:48,710 --> 00:17:47,200
find a location that is the best place

404
00:17:51,750 --> 00:17:48,720
for our first sample

405
00:17:53,190 --> 00:17:51,760
so it's been a very exciting 100 days

406
00:17:55,750 --> 00:17:53,200
but we're looking forward to the

407
00:18:01,669 --> 00:17:55,760
beginning of this new science campaign

408
00:18:04,870 --> 00:18:01,679
back to you

409
00:18:07,110 --> 00:18:04,880
well thank you so much and i really

410
00:18:09,350 --> 00:18:07,120
believe that no other organization

411
00:18:10,390 --> 00:18:09,360
in the world can do what this amazing

412
00:18:13,350 --> 00:18:10,400
team has done

413
00:18:15,830 --> 00:18:13,360

and certainly not under such difficult

414

00:18:18,310 --> 00:18:15,840

circumstances

415

00:18:21,029 --> 00:18:18,320

in the nearly 15 months since the

416

00:18:24,230 --> 00:18:21,039

beginning of the pandemic

417

00:18:26,789 --> 00:18:24,240

you all have not only landed a rover on

418

00:18:28,070 --> 00:18:26,799

mars but also supported advancements

419

00:18:31,430 --> 00:18:28,080

getting us closer to

420

00:18:32,630 --> 00:18:31,440

launching the first artemis

421

00:18:35,510 --> 00:18:32,640

mission

422

00:18:36,870 --> 00:18:35,520

and in just a few months the launch of

423

00:18:40,549 --> 00:18:36,880

the james webb

424

00:18:43,830 --> 00:18:40,559

space telescope which will see the light

425

00:18:44,630 --> 00:18:43,840

from the first galaxies that formed in

426
00:18:47,350 --> 00:18:44,640
the early

427
00:18:48,549 --> 00:18:47,360
universe after the big bang think about

428
00:18:52,150 --> 00:18:48,559
that

429
00:18:56,870 --> 00:18:52,160
universe almost

430
00:19:00,070 --> 00:18:56,880
13 and a half billion years ago

431
00:19:03,510 --> 00:19:00,080
james webb will capture the light

432
00:19:07,270 --> 00:19:03,520
from about 150 million

433
00:19:12,390 --> 00:19:07,280
years after the big bang

434
00:19:21,990 --> 00:19:16,549
13 billion 350

435
00:19:26,150 --> 00:19:22,000
million years

436
00:19:31,510 --> 00:19:29,270
and so this is just a few of the things

437
00:19:32,310 --> 00:19:31,520
that you all have been working on and

438
00:19:36,070 --> 00:19:32,320

i'm

439

00:19:37,110 --> 00:19:36,080

thrilled now to have a special treat for

440

00:19:40,310 --> 00:19:37,120

you

441

00:19:44,230 --> 00:19:40,320

because it's a special guest

442

00:19:47,990 --> 00:19:44,240

captain kirk himself

443

00:19:51,190 --> 00:19:48,000

to inspire you all to boldly

444

00:19:54,310 --> 00:19:51,200

go into the future

445

00:19:55,190 --> 00:19:54,320

i want to congratulate uh bill nelson as

446

00:19:58,710 --> 00:19:55,200

nasa's new

447

00:20:01,909 --> 00:19:58,720

administrator we're all delighted

448

00:20:11,190 --> 00:20:07,430

why does nasa exist why do we exist

449

00:20:12,630 --> 00:20:11,200

why does life exist upon this strange

450

00:20:15,990 --> 00:20:12,640

and lonely planet

451
00:20:18,549 --> 00:20:16,000
how did we arrive and for what reason

452
00:20:20,310 --> 00:20:18,559
an age-old question one that each of us

453
00:20:23,350 --> 00:20:20,320
at one time or another

454
00:20:25,990 --> 00:20:23,360
has asked each time the universe

455
00:20:29,909 --> 00:20:26,000
responds with silence

456
00:20:33,029 --> 00:20:29,919
nasa stands before that silence

457
00:20:34,310 --> 00:20:33,039
and probes that mystery we stand with

458
00:20:37,510 --> 00:20:34,320
nasa in response

459
00:20:38,390 --> 00:20:37,520
to the incredible miracle of impossible

460
00:20:42,230 --> 00:20:38,400
life on

461
00:20:44,710 --> 00:20:42,240
an insensate world

462
00:20:45,909 --> 00:20:44,720
we move back to a moon that we wish we

463
00:20:48,549 --> 00:20:45,919

had never deserted

464

00:20:49,029 --> 00:20:48,559

we move onward to mars to establish a

465

00:20:52,070 --> 00:20:49,039

base

466

00:20:55,830 --> 00:20:52,080

and then a community and finally

467

00:20:59,430 --> 00:20:55,840

a miniature civilization on its

468

00:21:02,789 --> 00:20:59,440

enigmatic soil we do it

469

00:21:05,190 --> 00:21:02,799

because nasa has realized

470

00:21:06,470 --> 00:21:05,200

that the universe which extends for

471

00:21:12,070 --> 00:21:06,480

billions of light years

472

00:21:19,190 --> 00:21:16,310

unless what unless there are

473

00:21:19,830 --> 00:21:19,200

observers and caretakers of that

474

00:21:22,630 --> 00:21:19,840

stunning

475

00:21:24,549 --> 00:21:22,640

interstellar display the universe

476
00:21:28,230 --> 00:21:24,559
demands to be noticed

477
00:21:31,350 --> 00:21:28,240
to be seen and beautifully noted

478
00:21:34,789 --> 00:21:31,360
the purpose of life on earth

479
00:21:37,990 --> 00:21:34,799
is to see to know

480
00:21:41,430 --> 00:21:38,000
and to tell what the cosmos

481
00:21:42,230 --> 00:21:41,440
has to offer without us human beings

482
00:21:46,230 --> 00:21:42,240
without

483
00:21:49,270 --> 00:21:46,240
nasa the universe would be unseen

484
00:21:52,310 --> 00:21:49,280
unknown untouched so

485
00:21:53,110 --> 00:21:52,320
nasa in the coming years will be chief

486
00:21:56,549 --> 00:21:53,120
witness

487
00:21:57,510 --> 00:21:56,559
and we as fellow observers celebrate to

488
00:22:01,270 --> 00:21:57,520

the cause

489

00:22:05,270 --> 00:22:01,280

can nasa do this can we

490

00:22:08,070 --> 00:22:05,280

run tandem with nasa and live forever

491

00:22:10,230 --> 00:22:08,080

or a million years whichever comes first

492

00:22:17,750 --> 00:22:10,240

we can

493

00:22:24,149 --> 00:22:21,590

after a speech like that i'm ready to go

494

00:22:27,350 --> 00:22:24,159

what a wonderful tribute to all that

495

00:22:31,590 --> 00:22:27,360

nasa means to the world

496

00:22:33,830 --> 00:22:31,600

and we do have an exciting future ahead

497

00:22:36,149 --> 00:22:33,840

and as you can see on the screen behind

498

00:22:36,950 --> 00:22:36,159

me we're assembling the rocket at this

499

00:22:39,990 --> 00:22:36,960

very minute

500

00:22:42,230 --> 00:22:40,000

down at the kennedy space center it'll

501
00:22:46,470 --> 00:22:42,240
pave the way to return american

502
00:22:54,070 --> 00:22:50,230
that rocket is the space launch system

503
00:22:56,950 --> 00:22:54,080
it will launch our orion spacecraft

504
00:22:58,789 --> 00:22:56,960
and cargo on missions to lunar orbit and

505
00:23:02,870 --> 00:22:58,799
beyond

506
00:23:06,230 --> 00:23:02,880
and soon i mean like days

507
00:23:09,510 --> 00:23:06,240
we're starting to stack that massive

508
00:23:13,510 --> 00:23:09,520
core stage between its two boosters

509
00:23:16,549 --> 00:23:13,520
in the vehicle assembly building at ksc

510
00:23:18,350 --> 00:23:16,559
the sls will be the most powerful rocket

511
00:23:21,270 --> 00:23:18,360
in the world

512
00:23:25,909 --> 00:23:21,280
8.8 million pounds of thrust

513
00:23:27,750 --> 00:23:25,919

at launch all this means

514

00:23:29,510 --> 00:23:27,760

we're on our way to land the next

515

00:23:32,149 --> 00:23:29,520

americans on the moon

516

00:23:32,950 --> 00:23:32,159

and this time we're going to learn how

517

00:23:35,990 --> 00:23:32,960

to live

518

00:23:39,270 --> 00:23:36,000

and work on another world

519

00:23:42,710 --> 00:23:39,280

america's long-term presence at the moon

520

00:23:45,430 --> 00:23:42,720

both robotic and human will help develop

521

00:23:48,470 --> 00:23:45,440

the experience and capabilities we need

522

00:23:51,750 --> 00:23:48,480

to eventually send the first

523

00:23:56,390 --> 00:23:51,760

astronauts to mars

524

00:23:59,430 --> 00:23:56,400

artemis one the first uncrewed mission

525

00:24:02,549 --> 00:23:59,440

will launch from kennedy later this year

526
00:24:06,310 --> 00:24:02,559
it will spend 26 days in retrograde

527
00:24:09,430 --> 00:24:06,320
lunar orbit traveling to distances

528
00:24:10,950 --> 00:24:09,440
that no human rated spacecraft has ever

529
00:24:13,510 --> 00:24:10,960
been

530
00:24:14,149 --> 00:24:13,520
and america will also see our first

531
00:24:18,870 --> 00:24:14,159
robotic

532
00:24:22,630 --> 00:24:18,880
lander on the moon since 1968.

533
00:24:24,230 --> 00:24:22,640
ushering in a new era of a global

534
00:24:27,430 --> 00:24:24,240
science and exploration

535
00:24:28,390 --> 00:24:27,440
presence as more commercial moon

536
00:24:32,710 --> 00:24:28,400
deliveries

537
00:24:35,350 --> 00:24:32,720
will follow and landing the first

538
00:24:37,350 --> 00:24:35,360

woman and the first person of color on

539

00:24:40,870 --> 00:24:37,360

the lunar surface as a part

540

00:24:45,029 --> 00:24:40,880

of artemis is not a statement

541

00:24:47,430 --> 00:24:45,039

it is an action the united states

542

00:24:48,149 --> 00:24:47,440

must and will continue to lead the way

543

00:24:51,190 --> 00:24:48,159

globally

544

00:24:54,470 --> 00:24:51,200

not just in exploration but

545

00:24:56,950 --> 00:24:54,480

also in equity

546

00:24:59,430 --> 00:24:56,960

we can be proud that all this work is

547

00:25:01,590 --> 00:24:59,440

good for science and humanity and it

548

00:25:05,269 --> 00:25:01,600

also supports and creates

549

00:25:07,990 --> 00:25:05,279

good paying american jobs

550

00:25:10,230 --> 00:25:08,000

we're on track to do so many more

551
00:25:13,669 --> 00:25:10,240
amazing things

552
00:25:16,070 --> 00:25:13,679
for the country and the world

553
00:25:18,470 --> 00:25:16,080
because that's what nasa does it's just

554
00:25:22,390 --> 00:25:18,480
a little agency

555
00:25:28,390 --> 00:25:22,400
but its value is immense

556
00:25:33,190 --> 00:25:28,400
that total value is hard to quantify

557
00:25:37,269 --> 00:25:33,200
you can look at all the ways it helps

558
00:25:40,710 --> 00:25:37,279
stem education billions of dollars in

559
00:25:43,909 --> 00:25:40,720
partnerships with small businesses

560
00:25:45,909 --> 00:25:43,919
economic impact in all 50 states

561
00:25:47,750 --> 00:25:45,919
hundreds of thousands of good

562
00:25:51,909 --> 00:25:47,760
high-paying jobs

563
00:25:55,029 --> 00:25:51,919

incredible technology spin-offs

564

00:25:58,390 --> 00:25:55,039

like the in your pocket right now

565

00:26:01,750 --> 00:25:58,400

the camera in your cell phone

566

00:26:05,029 --> 00:26:01,760

and inspiration and investment

567

00:26:08,310 --> 00:26:05,039

in the workforce of the future

568

00:26:10,070 --> 00:26:08,320

as we educate our workforce for all

569

00:26:12,789 --> 00:26:10,080

these amazing things

570

00:26:13,990 --> 00:26:12,799

think of what apollo did for a

571

00:26:16,269 --> 00:26:14,000

generation

572

00:26:18,950 --> 00:26:16,279

of scientists and engineers and

573

00:26:21,830 --> 00:26:18,960

mathematicians

574

00:26:24,950 --> 00:26:21,840

we're going now to inspire a whole new

575

00:26:29,110 --> 00:26:24,960

generation of students

576

00:26:32,149 --> 00:26:29,120

the artemis generation

577

00:26:34,390 --> 00:26:32,159

and that's not all we will continue to

578

00:26:35,350 --> 00:26:34,400

be a catalyst for the growth of a

579

00:26:38,630 --> 00:26:35,360

healthy

580

00:26:41,190 --> 00:26:38,640

and vibrant commercial space industry

581

00:26:42,149 --> 00:26:41,200

expanding opportunities in low earth

582

00:26:44,789 --> 00:26:42,159

orbit

583

00:26:46,870 --> 00:26:44,799

and pushing further to the moon and

584

00:26:48,870 --> 00:26:46,880

beyond

585

00:26:50,070 --> 00:26:48,880

and we will continue to develop the

586

00:26:52,950 --> 00:26:50,080

cutting edge space

587

00:26:55,430 --> 00:26:52,960

technologies and transformative

588

00:26:57,830 --> 00:26:55,440

capabilities

589

00:26:59,990 --> 00:26:57,840

we continue to advance aviation

590

00:27:04,470 --> 00:27:00,000

technologies to make our skies

591

00:27:07,190 --> 00:27:04,480

safer our aircraft more sustainable

592

00:27:09,029 --> 00:27:07,200

and to get you to your destination

593

00:27:12,549 --> 00:27:09,039

faster

594

00:27:15,590 --> 00:27:12,559

and safer than ever before

595

00:27:17,909 --> 00:27:15,600

and we will continue to inspire and arm

596

00:27:22,710 --> 00:27:17,919

our workforce of the future through

597

00:27:24,950 --> 00:27:22,720

our stem engagement programs

598

00:27:26,789 --> 00:27:24,960

we will continue to push the boundaries

599

00:27:30,149 --> 00:27:26,799

of space exploration

600

00:27:34,470 --> 00:27:30,159

through science missions with spacecraft

601
00:27:34,789 --> 00:27:34,480
telescopes rovers and more and we will

602
00:27:38,789 --> 00:27:34,799
do

603
00:27:42,470 --> 00:27:38,799
all of this and more because that's

604
00:27:49,269 --> 00:27:42,480
what nasa does and no one

605
00:27:51,269 --> 00:27:49,279
does it better

606
00:27:52,549 --> 00:27:51,279
hi i'm lily and i'm from the exploration

607
00:27:54,789 --> 00:27:52,559
ground systems program

608
00:27:55,830 --> 00:27:54,799
i'm the egs flow manager and i'm here in

609
00:27:58,870 --> 00:27:55,840
the vab

610
00:28:00,310 --> 00:27:58,880
at kennedy space center 16 floors up so

611
00:28:02,310 --> 00:28:00,320
we're currently assembling all the

612
00:28:04,549 --> 00:28:02,320
flight components for the artemis one

613
00:28:06,789 --> 00:28:04,559

vehicle behind me you'll see the two

614

00:28:08,149 --> 00:28:06,799

boosters that are already fully stacked

615

00:28:09,909 --> 00:28:08,159

and the core charge is currently in the

616

00:28:10,389 --> 00:28:09,919

transfer aisle getting ready to be

617

00:28:12,470 --> 00:28:10,399

lifted

618

00:28:14,149 --> 00:28:12,480

and mated after that we'll install the

619

00:28:16,149 --> 00:28:14,159

rest of the flight hardware components

620

00:28:17,990 --> 00:28:16,159

and on top of that we'll put the orion

621

00:28:18,470 --> 00:28:18,000

vehicle and then we'll be ready for

622

00:28:20,549 --> 00:28:18,480

launch

623

00:28:26,549 --> 00:28:20,559

this is definitely an exciting time here

624

00:28:29,990 --> 00:28:29,590

this is the x-57 maxwell it's nasa's

625

00:28:32,389 --> 00:28:30,000

first

626

00:28:33,990 --> 00:28:32,399

all-electric piloted aircraft and it'll

627

00:28:36,630 --> 00:28:34,000

pave the way for the future of electric

628

00:28:38,630 --> 00:28:36,640

aircraft and create certifications

629

00:28:40,630 --> 00:28:38,640

nasa armstrong is also working on remote

630

00:28:42,630 --> 00:28:40,640

piloted and autonomous aircraft

631

00:28:44,230 --> 00:28:42,640

that will help set standards for air

632

00:28:50,630 --> 00:28:44,240

taxi package delivery

633

00:28:55,350 --> 00:28:52,789

we're sending the world's premier space

634

00:28:57,430 --> 00:28:55,360

science observatory the webb telescope

635

00:28:59,110 --> 00:28:57,440

one million miles from earth to explore

636

00:29:00,789 --> 00:28:59,120

every phase of cosmic history

637

00:29:02,870 --> 00:29:00,799

it'll study everything from the most

638

00:29:03,590 --> 00:29:02,880

distant observable galaxies in the early

639

00:29:05,510 --> 00:29:03,600

universe

640

00:29:07,190 --> 00:29:05,520

to planets in the habitable zones of

641

00:29:08,870 --> 00:29:07,200

nearby stars

642

00:29:10,710 --> 00:29:08,880

i'm standing in the astrobiology

643

00:29:12,630 --> 00:29:10,720

chemical laboratory where samples from

644

00:29:14,230 --> 00:29:12,640

the osiris-rex mission will be coming in

645

00:29:15,669 --> 00:29:14,240

2023.

646

00:29:17,350 --> 00:29:15,679

this is going to be an incredible year

647

00:29:18,070 --> 00:29:17,360

for ashford science when we launch the

648

00:29:19,430 --> 00:29:18,080

dart mission

649

00:29:20,950 --> 00:29:19,440

it will help us understand how to

650

00:29:21,669 --> 00:29:20,960

potentially deflect an asteroid from

651
00:29:22,870 --> 00:29:21,679
earth

652
00:29:24,870 --> 00:29:22,880
our lucy mission will study the

653
00:29:26,389 --> 00:29:24,880
mysterious trojan asteroids and the

654
00:29:27,990 --> 00:29:26,399
psyche mission will head to an asteroid

655
00:29:30,230 --> 00:29:28,000
that might harbor the metallic core

656
00:29:31,830 --> 00:29:30,240
of a planetoid we also have exciting new

657
00:29:33,269 --> 00:29:31,840
space communications missions

658
00:29:35,110 --> 00:29:33,279
and a robotic servicing mission that

659
00:29:35,830 --> 00:29:35,120
will refuel and relocate another

660
00:29:37,990 --> 00:29:35,840
satellite

661
00:29:44,310 --> 00:29:38,000
to extend its life a simple end antenna

662
00:29:47,909 --> 00:29:46,230
i guess we do a lot of the number

663
00:29:49,830 --> 00:29:47,919

crunching that nasa needs

664

00:29:52,149 --> 00:29:49,840

in order to develop its world-class

665

00:29:53,990 --> 00:29:52,159

climate modeling and projections

666

00:29:55,350 --> 00:29:54,000

we've got more than 20 satellites

667

00:29:57,190 --> 00:29:55,360

already up in orbit

668

00:29:58,789 --> 00:29:57,200

and in this decade alone we're adding

669

00:30:01,269 --> 00:29:58,799

another half a dozen

670

00:30:02,470 --> 00:30:01,279

here at goddard and across nasa you can

671

00:30:03,269 --> 00:30:02,480

bet that we're not going to stop

672

00:30:04,870 --> 00:30:03,279

innovating

673

00:30:12,230 --> 00:30:04,880

we're trying to learn everything we can

674

00:30:18,549 --> 00:30:15,990

america has always had a frontier

675

00:30:21,269 --> 00:30:18,559

at the beginning of our country that

676
00:30:24,070 --> 00:30:21,279
frontier was westward

677
00:30:26,549 --> 00:30:24,080
now that frontier is upward and it's out

678
00:30:30,190 --> 00:30:26,559
into the cosmos

679
00:30:34,230 --> 00:30:30,200
it is a part of our dna to be

680
00:30:37,669 --> 00:30:34,240
explorers adventurers

681
00:30:39,830 --> 00:30:37,679
that's in our dna as americans

682
00:30:43,430 --> 00:30:39,840
and we will continue to push the

683
00:30:46,950 --> 00:30:43,440
boundaries of space exploration

684
00:30:49,510 --> 00:30:46,960
in 1992 nasa established a new program

685
00:30:52,310 --> 00:30:49,520
within its science mission directorate

686
00:30:54,710 --> 00:30:52,320
the discovery program

687
00:30:56,389 --> 00:30:54,720
this program invites scientists and

688
00:30:59,990 --> 00:30:56,399

engineers to propose

689

00:31:00,630 --> 00:31:00,000

smaller focused planetary science

690

00:31:04,230 --> 00:31:00,640

missions

691

00:31:06,310 --> 00:31:04,240

that have the potential to achieve great

692

00:31:10,710 --> 00:31:06,320

things at lower cost

693

00:31:14,470 --> 00:31:10,720

than larger agency flagship missions

694

00:31:18,310 --> 00:31:14,480

to date nasa has launched 13

695

00:31:21,909 --> 00:31:18,320

discovery missions like the insight

696

00:31:23,750 --> 00:31:21,919

mars lander the lunar reconnaissance

697

00:31:27,029 --> 00:31:23,760

orbiter

698

00:31:29,029 --> 00:31:27,039

our lucy asteroid mission

699

00:31:30,870 --> 00:31:29,039

and that's scheduled for launch this

700

00:31:33,430 --> 00:31:30,880

fall

701
00:31:33,990 --> 00:31:33,440
lucy is just one of three discovery

702
00:31:36,549 --> 00:31:34,000
missions

703
00:31:38,789 --> 00:31:36,559
nasa is planning to launch in the next

704
00:31:41,669 --> 00:31:38,799
three years

705
00:31:43,430 --> 00:31:41,679
and i'm excited to break some big news

706
00:31:46,950 --> 00:31:43,440
today

707
00:32:05,780 --> 00:31:46,960
we have two new discovery missions

708
00:33:16,850 --> 00:32:12,250
[Music]

709
00:33:26,950 --> 00:33:22,389
[Applause]

710
00:33:31,029 --> 00:33:26,960
the truth of this clouded

711
00:33:31,590 --> 00:33:31,039
planet congratulations to the teams

712
00:33:35,190 --> 00:33:31,600
behind

713
00:33:40,950 --> 00:33:35,200

nasa's two planetary science missions

714

00:33:44,070 --> 00:33:40,960

veritas truth and da vinci plus

715

00:33:45,909 --> 00:33:44,080

these two sister missions both aim to

716

00:33:49,830 --> 00:33:45,919

understand how venus

717

00:33:53,669 --> 00:33:49,840

became an inferno-like world capable of

718

00:33:55,909 --> 00:33:53,679

melting lead at the surface

719

00:33:57,669 --> 00:33:55,919

they will offer the entire science

720

00:34:00,549 --> 00:33:57,679

community the chance to

721

00:34:02,950 --> 00:34:00,559

investigate a planet we haven't been to

722

00:34:05,990 --> 00:34:02,960

in more than 30 years

723

00:34:09,829 --> 00:34:06,000

in our solar system of the rocky

724

00:34:12,869 --> 00:34:09,839

planets there's mercury closest to the

725

00:34:20,629 --> 00:34:17,430

it has no atmosphere then there's venus

726

00:34:24,310 --> 00:34:20,639

with an incredibly dense atmosphere

727

00:34:28,149 --> 00:34:24,320

then there's earth with a habitable

728

00:34:30,389 --> 00:34:28,159

atmosphere and then there's mars

729

00:34:32,950 --> 00:34:30,399

with an atmosphere that is just one

730

00:34:35,589 --> 00:34:32,960

percent of earth

731

00:34:37,829 --> 00:34:35,599

we hope these missions will further our

732

00:34:41,109 --> 00:34:37,839

understanding of how earth evolved

733

00:34:45,109 --> 00:34:41,119

and why it's currently habitable when

734

00:34:47,349 --> 00:34:45,119

others in our solar system are not

735

00:34:49,669 --> 00:34:47,359

planetary science is critical in

736

00:34:51,190 --> 00:34:49,679

answering key questions that we have as

737

00:34:55,190 --> 00:34:51,200

humans like

738

00:34:57,190 --> 00:34:55,200

are we alone what implications beyond

739

00:34:59,510 --> 00:34:57,200

our solar system could these two

740

00:35:03,750 --> 00:34:59,520

missions have

741

00:35:06,470 --> 00:35:03,760

this is really exciting stuff

742

00:35:08,390 --> 00:35:06,480

and it's an emerging area of research

743

00:35:10,550 --> 00:35:08,400

for nasa

744

00:35:12,630 --> 00:35:10,560

and so before i leave you i want to

745

00:35:15,510 --> 00:35:12,640

thank you

746

00:35:16,230 --> 00:35:15,520

now there's no doubt that nasa is the

747

00:35:19,510 --> 00:35:16,240

premier

748

00:35:23,510 --> 00:35:19,520

space agency in the world but nasa

749

00:35:25,510 --> 00:35:23,520

is only as good as its people

750

00:35:27,430 --> 00:35:25,520

and we're lucky to have the best of the

751
00:35:30,310 --> 00:35:27,440
best

752
00:35:31,510 --> 00:35:30,320
i'm committed to leading nasa as our

753
00:35:33,910 --> 00:35:31,520
team

754
00:35:34,790 --> 00:35:33,920
with our soon-to-be senate confirmed

755
00:35:39,030 --> 00:35:34,800
deputy

756
00:35:43,829 --> 00:35:39,040
administrator colonel pam melroy

757
00:35:46,390 --> 00:35:43,839
and chief financial officer margaret voe

758
00:35:48,950 --> 00:35:46,400
and with associate administrator bob

759
00:35:52,710 --> 00:35:51,829
but it's crucial that this is not a

760
00:35:55,030 --> 00:35:52,720
top-down

761
00:35:56,470 --> 00:35:55,040
agency it's an agency where our

762
00:35:59,430 --> 00:35:56,480
workforce

763
00:36:00,950 --> 00:35:59,440

every single one of you is critical to

764

00:36:04,310 --> 00:36:00,960

the success

765

00:36:04,870 --> 00:36:04,320

of our missions and i know that and i

766

00:36:08,069 --> 00:36:04,880

know it

767

00:36:11,750 --> 00:36:08,079

from personal experience

768

00:36:14,870 --> 00:36:11,760

because of participating

769

00:36:18,550 --> 00:36:14,880

in one of the space shuttle missions

770

00:36:22,150 --> 00:36:18,560

it's you on the line that make this

771

00:36:26,069 --> 00:36:23,990

and another way of expressing that

772

00:36:28,790 --> 00:36:26,079

appreciation is to tell you

773

00:36:30,310 --> 00:36:28,800

a story that i've always heard around

774

00:36:33,750 --> 00:36:30,320

kennedy

775

00:36:35,990 --> 00:36:33,760

came out of the apollo program

776

00:36:38,230 --> 00:36:36,000

there was a nasa employee as they were

777

00:36:42,150 --> 00:36:38,240

developing the space center

778

00:36:46,710 --> 00:36:45,109

and a reporter went over to him and

779

00:36:49,349 --> 00:36:46,720

asked him what are you doing and he

780

00:36:55,190 --> 00:36:49,359

responded

781

00:36:59,030 --> 00:36:55,200

i'm helping to land a man on the moon

782

00:37:04,069 --> 00:36:59,040

so i hope to hear a lot of you

783

00:37:06,150 --> 00:37:04,079

all over nasa and especially on the line

784

00:37:07,270 --> 00:37:06,160

and when we're able to see each other

785

00:37:11,990 --> 00:37:07,280

again in person

786

00:37:15,750 --> 00:37:12,000

i hope you'll stop introduce yourself

787

00:37:18,470 --> 00:37:15,760

and i want to thank you so much

788

00:37:20,550 --> 00:37:18,480

thank you for what you're doing for nasa

789

00:37:24,000 --> 00:37:20,560

for our country

790

00:37:24,010 --> 00:37:36,550

[Applause]

791

00:37:39,910 --> 00:37:39,030

what motivates me is going outside at

792

00:37:42,310 --> 00:37:39,920

night

793

00:37:42,950 --> 00:37:42,320

looking up at the moon and thinking

794

00:37:45,190 --> 00:37:42,960

about how

795

00:37:46,710 --> 00:37:45,200

humans are going to be walking on the

796

00:37:50,069 --> 00:37:46,720

moon once again

797

00:37:52,390 --> 00:37:50,079

in the very near future it is a big idea

798

00:37:53,510 --> 00:37:52,400

but you know that's what we do at nasa

799

00:37:55,990 --> 00:37:53,520

i'm focused on

800

00:37:57,510 --> 00:37:56,000

you know taking those big ideas and

801
00:38:02,310 --> 00:37:57,520
making them into something that we can

802
00:38:05,829 --> 00:38:03,910
we want to make sure we have really

803
00:38:08,550 --> 00:38:05,839
accurate measurements of

804
00:38:09,670 --> 00:38:08,560
earth so that we can detect changes in

805
00:38:12,150 --> 00:38:09,680
climate over time

806
00:38:13,270 --> 00:38:12,160
i'm thankful it's not just me working on

807
00:38:15,510 --> 00:38:13,280
this mission

808
00:38:18,470 --> 00:38:15,520
because i so value what other folks

809
00:38:20,390 --> 00:38:18,480
bring to the table

810
00:38:21,670 --> 00:38:20,400
by developing this aircraft we're

811
00:38:24,150 --> 00:38:21,680
actually coming up with

812
00:38:27,030 --> 00:38:24,160
a lot of the standards that will be used

813
00:38:28,950 --> 00:38:27,040

to certify future electric aircraft

814

00:38:30,710 --> 00:38:28,960

nasa is leading and partnering with

815

00:38:31,510 --> 00:38:30,720

industries across the nation and the

816

00:38:33,750 --> 00:38:31,520

world

817

00:38:36,150 --> 00:38:33,760

employing thousands and tens of

818

00:38:38,390 --> 00:38:36,160

thousands of americans across the nation

819

00:38:39,270 --> 00:38:38,400

teamwork is the biggest thing of what

820

00:38:41,990 --> 00:38:39,280

has to work

821

00:38:42,870 --> 00:38:42,000

to do such a challenging thing as living

822

00:38:44,470 --> 00:38:42,880

around the moon

823

00:38:46,550 --> 00:38:44,480

and we're coming together to be able to

824

00:38:48,069 --> 00:38:46,560

really take human space exploration to

825

00:38:50,550 --> 00:38:48,079

the next step

826
00:38:52,390 --> 00:38:50,560
we're bringing this american ingenuity

827
00:38:55,510 --> 00:38:52,400
the collective greatness

828
00:38:58,390 --> 00:38:55,520
of all of the diverse minds that are

829
00:38:59,510 --> 00:38:58,400
in the united states on these grand

830
00:39:02,870 --> 00:38:59,520
challenges that

831
00:39:05,270 --> 00:39:02,880
we face every day

832
00:39:05,990 --> 00:39:05,280
i go to work and i know there is a is a

833
00:39:08,710 --> 00:39:06,000
big purpose

834
00:39:09,510 --> 00:39:08,720
it is high stakes high pressure but to

835
00:39:13,589 --> 00:39:09,520
be honest

836
00:39:17,190 --> 00:39:13,599
that's what we do that's what we do best

837
00:39:19,430 --> 00:39:17,200
i was a summer intern back in 2007

838
00:39:21,829 --> 00:39:19,440

the experience changed my life forever

839

00:39:23,510 --> 00:39:21,839

the people there were so inclusive

840

00:39:25,589 --> 00:39:23,520

and i want to be able to inspire the

841

00:39:27,030 --> 00:39:25,599

little kids out there to be like if he

842

00:39:30,550 --> 00:39:27,040

was able to do this

843

00:39:33,270 --> 00:39:30,560

then i can too i want the largest

844

00:39:34,150 --> 00:39:33,280

number of students to have access we

845

00:39:36,150 --> 00:39:34,160

work with

846

00:39:37,510 --> 00:39:36,160

schools and with students so that they

847

00:39:38,550 --> 00:39:37,520

see that they don't have to figure this

848

00:39:41,349 --> 00:39:38,560

out alone

849

00:39:42,069 --> 00:39:41,359

and it's always fascinating for me when

850

00:39:43,990 --> 00:39:42,079

a student

851

00:39:45,990 --> 00:39:44,000

literally has the proverbial light bulb

852

00:39:48,230 --> 00:39:46,000

go off that this is something they can

853

00:39:52,150 --> 00:39:50,870

orbital dynamics don't slow down during

854

00:39:54,790 --> 00:39:52,160

a pandemic

855

00:39:55,270 --> 00:39:54,800

we had to come up with ways to keep

856

00:39:57,910 --> 00:39:55,280

going

857

00:39:59,030 --> 00:39:57,920

right from the get-go because of all the

858

00:40:02,230 --> 00:39:59,040

safeguards that

859

00:40:05,109 --> 00:40:02,240

nasa and our team put in place

860

00:40:05,670 --> 00:40:05,119

we all felt very safe still being able

861

00:40:09,430 --> 00:40:05,680

to

862

00:40:11,430 --> 00:40:09,440

develop our flight hardware on center

863

00:40:13,270 --> 00:40:11,440

i have hope that the current vaccine

864

00:40:16,150 --> 00:40:13,280

rollout is going to help us

865

00:40:17,829 --> 00:40:16,160

as we continue to vaccinate our entire

866

00:40:20,309 --> 00:40:17,839

population we can come back

867

00:40:21,910 --> 00:40:20,319

to work in a way where we can continue

868

00:40:24,230 --> 00:40:21,920

to do the job that we have

869

00:40:25,349 --> 00:40:24,240

understanding now that the situation has

870

00:40:28,550 --> 00:40:25,359

changed

871

00:40:30,470 --> 00:40:28,560

i am inspired by my colleagues by

872

00:40:31,910 --> 00:40:30,480

the team members because of the

873

00:40:35,109 --> 00:40:31,920

diligence that

874

00:40:38,470 --> 00:40:35,119

people have had in continuing to make

875

00:40:40,309 --> 00:40:38,480

this mission move forward

876

00:40:41,670 --> 00:40:40,319

just some of the most phenomenal people

877

00:40:43,910 --> 00:40:41,680

in the world

878

00:40:45,030 --> 00:40:43,920

and the things that i get to work with

879

00:40:47,190 --> 00:40:45,040

are just

880

00:40:48,150 --> 00:40:47,200

on the cutting edge i will say the

881

00:40:50,150 --> 00:40:48,160

possibilities are

882

00:40:52,230 --> 00:40:50,160

endless working at nasa is something

883

00:40:53,910 --> 00:40:52,240

that not even on my wireless dream i

884

00:40:55,510 --> 00:40:53,920

thought i was going to end up doing and

885

00:40:58,870 --> 00:40:55,520

now that i'm doing it it is the right

886

00:41:03,990 --> 00:41:01,670

nasa is changing the future of space

887

00:41:06,870 --> 00:41:04,000

flight with the artemis program

888

00:41:08,790 --> 00:41:06,880

generations to come will look back at

889

00:41:10,790 --> 00:41:08,800

this moment in history