



1
00:01:33,540 --> 00:01:45,109
[Music]

2
00:01:48,550 --> 00:01:47,590
and lift off

3
00:01:49,590 --> 00:01:48,560
five

4
00:01:50,550 --> 00:01:49,600
four

5
00:01:51,590 --> 00:01:50,560
three

6
00:01:52,469 --> 00:01:51,600
two

7
00:01:56,730 --> 00:01:52,479
one

8
00:03:30,710 --> 00:02:12,810
[Music]

9
00:03:35,589 --> 00:03:32,710
well good afternoon and thank you for

10
00:03:38,390 --> 00:03:35,599
joining us here today at kennedy's space

11
00:03:40,550 --> 00:03:38,400
center america's spaceport

12
00:03:42,309 --> 00:03:40,560
you know 60 years ago kennedy was

13
00:03:44,229 --> 00:03:42,319

established to meet the challenge of

14

00:03:46,390 --> 00:03:44,239

landing a human on the moon and

15

00:03:49,030 --> 00:03:46,400

returning him safely to earth

16

00:03:51,670 --> 00:03:49,040

and for the last six decades kennedy has

17

00:03:54,630 --> 00:03:51,680

supported america's space program and

18

00:03:57,030 --> 00:03:54,640

launched the dreams of our nation

19

00:03:59,110 --> 00:03:57,040

today we look ahead to the future and

20

00:04:02,390 --> 00:03:59,120

the exciting work that nasa is carrying

21

00:04:04,949 --> 00:04:02,400

out as we explore our universe

22

00:04:07,870 --> 00:04:04,959

please join me now in welcoming our nasa

23

00:04:11,990 --> 00:04:07,880

administrator bill nelson

24

00:04:17,830 --> 00:04:15,670

good afternoon everybody

25

00:04:20,870 --> 00:04:17,840

everybody are you ready are you ready

26

00:04:21,830 --> 00:04:20,880

for this are you ready for that out

27

00:04:24,950 --> 00:04:21,840

there

28

00:04:28,230 --> 00:04:24,960

on pad 39b

29

00:04:31,350 --> 00:04:28,240

welcome to the kennedy space center

30

00:04:34,469 --> 00:04:31,360

two weeks ago it was that we were right

31

00:04:38,150 --> 00:04:34,479

here and our eyes were fixed on this

32

00:04:38,990 --> 00:04:38,160

iconic american building

33

00:04:42,950 --> 00:04:39,000

the

34

00:04:46,710 --> 00:04:42,960

322 foot mega moon rocket

35

00:04:49,350 --> 00:04:46,720

it began inching its way out of that big

36

00:04:51,909 --> 00:04:49,360

vehicle assembly building

37

00:04:52,629 --> 00:04:51,919

and from there the crawler transported

38

00:04:54,790 --> 00:04:52,639

it

39

00:04:57,110 --> 00:04:54,800

four miles out there

40

00:04:59,909 --> 00:04:57,120

to the launch pad

41

00:05:01,110 --> 00:04:59,919

and soon it will undergo the final

42

00:05:05,510 --> 00:05:01,120

testing

43

00:05:10,230 --> 00:05:05,520

before its first flight around the moon

44

00:05:14,469 --> 00:05:10,240

artemis one's journey from high bay 3 to

45

00:05:17,909 --> 00:05:14,479

the pad is symbolic of our work

46

00:05:20,710 --> 00:05:17,919

the meticulous planning the late nights

47

00:05:23,110 --> 00:05:20,720

the relentless spirit

48

00:05:26,469 --> 00:05:23,120

keep pushing forward

49

00:05:27,749 --> 00:05:26,479

and that's what nasa does best

50

00:05:30,310 --> 00:05:27,759

that's what

51

00:05:34,230 --> 00:05:30,320

we do best

52

00:05:40,150 --> 00:05:37,430

that opening video showed how our agency

53

00:05:43,909 --> 00:05:40,160

is inventing groundbreaking technology

54

00:05:48,230 --> 00:05:43,919

how it's igniting imaginations

55

00:05:50,150 --> 00:05:48,240

and it's inspiring future generations

56

00:05:52,469 --> 00:05:50,160

we're having this discussion today

57

00:05:54,070 --> 00:05:52,479

because president biden and his

58

00:05:57,510 --> 00:05:54,080

administration

59

00:05:59,670 --> 00:05:57,520

released this budget request and it came

60

00:06:03,189 --> 00:05:59,680

this morning

61

00:06:07,670 --> 00:06:03,199

and nasa's 26 billion dollar

62

00:06:10,710 --> 00:06:07,680

fiscal year budget for twenty three

63

00:06:12,550 --> 00:06:10,720

it's a request from the president

64

00:06:15,510 --> 00:06:12,560

from us

65

00:06:17,430 --> 00:06:15,520

and it is a significant increase over

66

00:06:20,710 --> 00:06:17,440

last year's budget

67

00:06:21,830 --> 00:06:20,720

in fact it's eight percent more than the

68

00:06:23,749 --> 00:06:21,840

enacted

69

00:06:25,590 --> 00:06:23,759

federal spending levels the

70

00:06:29,029 --> 00:06:25,600

appropriation bill

71

00:06:32,870 --> 00:06:29,039

from fiscal year 22.

72

00:06:35,670 --> 00:06:32,880

it's the largest request for science

73

00:06:38,950 --> 00:06:35,680

in nasa history

74

00:06:41,270 --> 00:06:38,960

but greater than any number or statistic

75

00:06:43,029 --> 00:06:41,280

or a fact

76

00:06:46,390 --> 00:06:43,039

is what this budget

77

00:06:48,790 --> 00:06:46,400

request represents

78

00:06:51,270 --> 00:06:48,800

it's a signal of support of our missions

79

00:06:53,749 --> 00:06:51,280

in a new era of exploration and

80

00:06:57,430 --> 00:06:53,759

discovery

81

00:07:00,309 --> 00:06:57,440

it's an investment in the business

82

00:07:03,270 --> 00:07:00,319

and the corporations

83

00:07:05,909 --> 00:07:03,280

and the universities

84

00:07:09,430 --> 00:07:05,919

that all partner with nasa

85

00:07:13,110 --> 00:07:09,440

in all 50 states

86

00:07:15,749 --> 00:07:13,120

and by the way good pay good paying jobs

87

00:07:17,830 --> 00:07:15,759

that they create

88

00:07:20,309 --> 00:07:17,840

it's going to help our nation

89

00:07:23,990 --> 00:07:20,319

it's going to help the world

90

00:07:27,350 --> 00:07:24,000

it's going to address climate change

91

00:07:28,830 --> 00:07:27,360

and it underscores stem education and it

92

00:07:32,230 --> 00:07:28,840

promotes

93

00:07:34,950 --> 00:07:32,240

diversity and equity

94

00:07:37,589 --> 00:07:34,960

and it expresses confidence

95

00:07:41,270 --> 00:07:37,599

in this extraordinary workforce that we

96

00:07:45,589 --> 00:07:42,629

you know it

97

00:07:48,309 --> 00:07:45,599

the best place in the federal government

98

00:07:52,710 --> 00:07:50,070

now the pandemic

99

00:07:54,710 --> 00:07:52,720

it really challenged us

100

00:07:55,909 --> 00:07:54,720

challenged us unlike anything ever

101
00:07:58,550 --> 00:07:55,919
before

102
00:08:00,230 --> 00:07:58,560
it challenged us personally with our

103
00:08:04,629 --> 00:08:00,240
families

104
00:08:08,550 --> 00:08:06,070
and during

105
00:08:11,830 --> 00:08:08,560
the period of covid

106
00:08:13,990 --> 00:08:11,840
the nasa family never

107
00:08:16,790 --> 00:08:14,000
missed a beat

108
00:08:18,309 --> 00:08:16,800
never stop giving hope to the country

109
00:08:22,550 --> 00:08:18,319
that we serve

110
00:08:28,629 --> 00:08:25,510
your relentless spirit to keep pushing

111
00:08:32,389 --> 00:08:28,639
forward your perseverance

112
00:08:34,949 --> 00:08:32,399
it inspired nasa's new vision statement

113
00:08:37,589 --> 00:08:34,959

this time we took it seriously what the

114

00:08:39,990 --> 00:08:37,599

vision statement is

115

00:08:43,029 --> 00:08:40,000

exploring the secrets of the universe

116

00:08:45,269 --> 00:08:43,039

for the benefit of all

117

00:08:49,509 --> 00:08:45,279

it's that vision that will guide our

118

00:08:55,269 --> 00:08:50,710

so

119

00:08:57,509 --> 00:08:55,279

what are we doing and what have we done

120

00:08:58,790 --> 00:08:57,519

we launched the most powerful telescope

121

00:09:01,350 --> 00:08:58,800

ever built

122

00:09:05,190 --> 00:09:01,360

the webb telescope had the world on the

123

00:09:05,200 --> 00:09:10,509

during the million-mile voyage

124

00:09:17,670 --> 00:09:14,870

344 single points of failure

125

00:09:20,470 --> 00:09:17,680

skeptics focused in on everything that

126
00:09:22,870 --> 00:09:20,480
could go wrong but oh what a science

127
00:09:26,710 --> 00:09:22,880
team we have nasa

128
00:09:29,030 --> 00:09:26,720
and they poured everything into it

129
00:09:30,949 --> 00:09:29,040
and it worked

130
00:09:34,550 --> 00:09:30,959
and it's worked so far

131
00:09:36,230 --> 00:09:34,560
even better than planned

132
00:09:38,070 --> 00:09:36,240
this summer we're going to see the first

133
00:09:40,790 --> 00:09:38,080
images i've seen

134
00:09:43,990 --> 00:09:40,800
and you all have as well

135
00:09:45,350 --> 00:09:44,000
the first target star

136
00:09:48,230 --> 00:09:45,360
and what we're going to see in the

137
00:09:51,750 --> 00:09:48,240
images that are coming is revealing the

138
00:09:55,350 --> 00:09:51,760

stars in the galaxies

139

00:09:59,030 --> 00:09:55,360

that happened to form the first galaxy

140

00:10:02,630 --> 00:09:59,040

thirteen and a half billion years ago

141

00:10:04,949 --> 00:10:02,640

just after the beginning

142

00:10:07,430 --> 00:10:04,959

think about that

143

00:10:09,670 --> 00:10:07,440

light traveling

144

00:10:15,509 --> 00:10:09,680

at the speed of light

145

00:10:15,519 --> 00:10:20,470

that's what we're going to capture

146

00:10:24,710 --> 00:10:22,630

look also what else we've done we've

147

00:10:27,190 --> 00:10:24,720

extended the commitment to the

148

00:10:30,230 --> 00:10:27,200

international space station operations

149

00:10:32,630 --> 00:10:30,240

through 2030

150

00:10:35,430 --> 00:10:32,640

and this decision empowers nasa to

151
00:10:36,710 --> 00:10:35,440
continue conducting groundbreaking

152
00:10:39,030 --> 00:10:36,720
research

153
00:10:41,509 --> 00:10:39,040
and collaborating with our international

154
00:10:45,350 --> 00:10:41,519
partners

155
00:10:48,550 --> 00:10:45,360
astronaut mark vande high is coming home

156
00:10:50,550 --> 00:10:48,560
wednesday day after tomorrow

157
00:10:52,470 --> 00:10:50,560
and he's coming home with his russian

158
00:10:57,150 --> 00:10:52,480
crew

159
00:11:02,150 --> 00:10:57,160
and we and he will celebrate a historic

160
00:11:07,590 --> 00:11:05,190
and for the safety of our astronauts

161
00:11:10,630 --> 00:11:07,600
the working relationship between nasa

162
00:11:13,110 --> 00:11:10,640
and our international partners continues

163
00:11:14,710 --> 00:11:13,120

and that includes the professional

164

00:11:17,110 --> 00:11:14,720

relationship

165

00:11:21,509 --> 00:11:17,120

between the cosmonauts and our

166

00:11:26,870 --> 00:11:22,790

and soon

167

00:11:29,750 --> 00:11:26,880

we're going back to the moon as artemis

168

00:11:31,829 --> 00:11:29,760

we're going to learn to live and work in

169

00:11:35,990 --> 00:11:31,839

a hostile environment then it's on to

170

00:11:41,910 --> 00:11:39,590

president biden's 26 billion proposed

171

00:11:43,269 --> 00:11:41,920

budget for nasa will begin to make this

172

00:11:46,470 --> 00:11:43,279

happen

173

00:11:47,750 --> 00:11:46,480

so let's take a look at how this is

174

00:11:53,880 --> 00:11:47,760

going to happen

175

00:12:32,629 --> 00:11:58,430

[Music]

176
00:12:46,050 --> 00:12:35,230
so

177
00:12:47,540 --> 00:12:46,060
[Music]

178
00:13:19,509 --> 00:12:47,550
[Applause]

179
00:13:24,310 --> 00:13:21,590
how about that

180
00:13:26,470 --> 00:13:24,320
for decades many of us have looked up at

181
00:13:27,750 --> 00:13:26,480
the moon every night and we wondered

182
00:13:31,990 --> 00:13:27,760
when

183
00:13:34,629 --> 00:13:32,000
would we touch the lunar surface again

184
00:13:39,069 --> 00:13:34,639
that day is coming soon because not long

185
00:13:42,710 --> 00:13:39,079
from now right out there on pad 39 b

186
00:13:44,870 --> 00:13:42,720
8.8 million pounds of thrust will propel

187
00:13:46,710 --> 00:13:44,880
and uncrewed artemis one into the

188
00:13:48,949 --> 00:13:46,720

heavens

189

00:13:51,750 --> 00:13:48,959

and after this three-week journey of

190

00:13:54,230 --> 00:13:51,760

over a million miles it'll come home

191

00:13:56,870 --> 00:13:54,240

faster and hotter than any spacecraft

192

00:13:58,949 --> 00:13:56,880

has before

193

00:14:03,350 --> 00:13:58,959

in two years

194

00:14:06,710 --> 00:14:03,360

then from artemis one for the first time

195

00:14:13,030 --> 00:14:10,310

artemis will fly astronauts around the

196

00:14:19,990 --> 00:14:17,509

it won't be a mormon level and anders

197

00:14:22,470 --> 00:14:20,000

it'll be a crew that will be announced

198

00:14:25,509 --> 00:14:22,480

later this year

199

00:14:28,150 --> 00:14:25,519

and it will take them farther into space

200

00:14:30,389 --> 00:14:28,160

than any humans have ever traveled

201
00:14:33,350 --> 00:14:30,399
before

202
00:14:36,230 --> 00:14:33,360
and when we land the first woman and a

203
00:14:39,030 --> 00:14:36,240
first person of color on the moon as

204
00:14:41,590 --> 00:14:39,040
part of the artemis program

205
00:14:44,550 --> 00:14:41,600
we will inspire the next generation of

206
00:14:47,189 --> 00:14:44,560
scientists and engineers and explorers

207
00:14:49,030 --> 00:14:47,199
remember what happened after the apollo

208
00:14:52,069 --> 00:14:49,040
program

209
00:14:54,069 --> 00:14:52,079
you had several generations

210
00:14:56,629 --> 00:14:54,079
of engineers and scientists and

211
00:14:59,509 --> 00:14:56,639
technicians

212
00:15:03,030 --> 00:14:59,519
that all came out as a result

213
00:15:04,790 --> 00:15:03,040

of the extraordinary work in apollo

214

00:15:07,670 --> 00:15:04,800

but now

215

00:15:10,069 --> 00:15:07,680

the apollo generation

216

00:15:13,670 --> 00:15:10,079

has passed the torch

217

00:15:16,230 --> 00:15:13,680

to the artemis generation

218

00:15:18,470 --> 00:15:16,240

and this new generation is preparing to

219

00:15:20,949 --> 00:15:18,480

push the boundaries of what we know to

220

00:15:23,590 --> 00:15:20,959

be possible

221

00:15:25,269 --> 00:15:23,600

it will not be a series of isolated

222

00:15:26,470 --> 00:15:25,279

missions

223

00:15:29,269 --> 00:15:26,480

instead

224

00:15:32,949 --> 00:15:29,279

each mission will be a groundbreaking

225

00:15:34,629 --> 00:15:32,959

component built on the last

226

00:15:37,269 --> 00:15:34,639

on the moon

227

00:15:40,389 --> 00:15:37,279

and beyond

228

00:15:43,030 --> 00:15:40,399

so let's turn our attention to artemis

229

00:15:46,069 --> 00:15:43,040

launch director charlie blackwell

230

00:15:47,990 --> 00:15:46,079

thompson to tell us more

231

00:15:49,749 --> 00:15:48,000

roll the video thank you i'm nasa's

232

00:15:51,590 --> 00:15:49,759

megan cruz and i am joined right now by

233

00:15:53,110 --> 00:15:51,600

artemis one launch director charlie

234

00:15:55,110 --> 00:15:53,120

blackwell thompson charlie thank you so

235

00:15:56,949 --> 00:15:55,120

much for being here thank you you know

236

00:15:58,949 --> 00:15:56,959

we see your rocket there on the pad how

237

00:16:01,189 --> 00:15:58,959

does it make you feel

238

00:16:03,590 --> 00:16:01,199

well

239

00:16:06,629 --> 00:16:03,600

when i look at that rocket on the pad

240

00:16:09,509 --> 00:16:06,639

it is a mix of emotions for me i it's

241

00:16:10,790 --> 00:16:09,519

it's excitement um i feel a sense of

242

00:16:12,710 --> 00:16:10,800

pride

243

00:16:14,470 --> 00:16:12,720

for the teams and for all the men and

244

00:16:17,030 --> 00:16:14,480

women who have worked on this rocket to

245

00:16:18,629 --> 00:16:17,040

make it possible i mean you think about

246

00:16:21,990 --> 00:16:18,639

it and you

247

00:16:24,389 --> 00:16:22,000

you see it it's it's amazing and and

248

00:16:27,430 --> 00:16:24,399

really it's made up of

249

00:16:30,069 --> 00:16:27,440

hardware software elements peace parts

250

00:16:32,230 --> 00:16:30,079

that come from across our country and it

251
00:16:34,790 --> 00:16:32,240
represents the the work and the

252
00:16:36,389 --> 00:16:34,800
dedication of men and women from all

253
00:16:37,910 --> 00:16:36,399
across our 50 states

254
00:16:40,870 --> 00:16:37,920
so what did it take for you and your

255
00:16:43,030 --> 00:16:40,880
team to get to this moment

256
00:16:46,550 --> 00:16:43,040
well i mean this team has been busy

257
00:16:48,470 --> 00:16:46,560
developing flight hardware the sls

258
00:16:51,189 --> 00:16:48,480
rocket the orion spacecraft the ground i

259
00:16:53,110 --> 00:16:51,199
system our big team has been working on

260
00:16:56,230 --> 00:16:53,120
this for a number of years

261
00:16:59,509 --> 00:16:56,240
it's gone from a clean sheet of paper to

262
00:17:01,670 --> 00:16:59,519
a concept to a design to cutting metal

263
00:17:03,910 --> 00:17:01,680

and manufacturing parts

264

00:17:06,230 --> 00:17:03,920

and then the integration and test to

265

00:17:07,909 --> 00:17:06,240

this vehicle that you see behind you so

266

00:17:10,549 --> 00:17:07,919

when you think about the effort what has

267

00:17:12,789 --> 00:17:10,559

it taken i mean it has taken dedication

268

00:17:15,990 --> 00:17:12,799

and support from a team of people from

269

00:17:19,189 --> 00:17:16,000

across our country most recently as part

270

00:17:21,669 --> 00:17:19,199

of the work here at launch complex 39b

271

00:17:24,309 --> 00:17:21,679

you know after rollout it is uh it's

272

00:17:25,990 --> 00:17:24,319

been all about getting those tests in uh

273

00:17:27,829 --> 00:17:26,000

prior to wet dress and so our team's

274

00:17:29,430 --> 00:17:27,839

been really busy with that but but

275

00:17:31,669 --> 00:17:29,440

certainly if you're looking back over

276

00:17:34,310 --> 00:17:31,679

time you know the the efforts on this

277

00:17:36,710 --> 00:17:34,320

rocket started some time ago and and

278

00:17:38,470 --> 00:17:36,720

and spanned many different teams and and

279

00:17:40,470 --> 00:17:38,480

many different programs so you mentioned

280

00:17:42,070 --> 00:17:40,480

wet dress that's the next critical step

281

00:17:44,070 --> 00:17:42,080

before we can declare a launch date

282

00:17:46,390 --> 00:17:44,080

right how do you feel about this test

283

00:17:49,029 --> 00:17:46,400

it's almost upon us

284

00:17:50,870 --> 00:17:49,039

i'm excited about it our team's excited

285

00:17:53,350 --> 00:17:50,880

about it um

286

00:17:55,029 --> 00:17:53,360

it is a big milestone and it is the last

287

00:17:58,630 --> 00:17:55,039

big test before

288

00:17:59,830 --> 00:17:58,640

launch and so when i say that even now

289

00:18:01,350 --> 00:17:59,840

you know i get a little bit of

290

00:18:03,669 --> 00:18:01,360

goosebumps

291

00:18:06,150 --> 00:18:03,679

because it is it's it's a big milestone

292

00:18:07,909 --> 00:18:06,160

it's a big deal um are we ready we we

293

00:18:10,150 --> 00:18:07,919

are ready our team has been training for

294

00:18:11,669 --> 00:18:10,160

this we've gone through our tabletops

295

00:18:13,990 --> 00:18:11,679

we've gone through our procedures we've

296

00:18:15,669 --> 00:18:14,000

gone through our training and

297

00:18:17,909 --> 00:18:15,679

and we're our pre-test briefing is

298

00:18:20,150 --> 00:18:17,919

scheduled uh just a couple of days from

299

00:18:22,070 --> 00:18:20,160

now so it is uh it's it's a very

300

00:18:23,350 --> 00:18:22,080

exciting time what are you most looking

301
00:18:25,830 --> 00:18:23,360
forward to

302
00:18:28,630 --> 00:18:25,840
for launch day

303
00:18:30,070 --> 00:18:28,640
i am looking forward to the team

304
00:18:32,070 --> 00:18:30,080
there's there's a bunch of things so the

305
00:18:34,310 --> 00:18:32,080
first one is i'm looking forward to our

306
00:18:36,870 --> 00:18:34,320
team having an opportunity to

307
00:18:38,549 --> 00:18:36,880
demonstrate all of the work all of the

308
00:18:40,470 --> 00:18:38,559
training that they've been putting in

309
00:18:42,950 --> 00:18:40,480
for a couple of years now and so i'm

310
00:18:44,870 --> 00:18:42,960
looking forward to that from a hardware

311
00:18:47,430 --> 00:18:44,880
and a firing room perspective i look

312
00:18:50,150 --> 00:18:47,440
forward to coming in on launch day

313
00:18:53,430 --> 00:18:50,160

driving into the lcc and stepping out of

314

00:18:54,950 --> 00:18:53,440

the car and and looking out at the pad

315

00:18:56,870 --> 00:18:54,960

and knowing

316

00:18:59,510 --> 00:18:56,880

that you know we're hours away from

317

00:19:00,710 --> 00:18:59,520

launch and and seeing that excitement in

318

00:19:02,390 --> 00:19:00,720

the team

319

00:19:04,470 --> 00:19:02,400

i look forward to getting into terminal

320

00:19:06,710 --> 00:19:04,480

count and seeing those last minutes and

321

00:19:09,430 --> 00:19:06,720

seconds tick off the countdown clock

322

00:19:11,990 --> 00:19:09,440

knowing that you know we are potentially

323

00:19:15,110 --> 00:19:12,000

once we get into terminal count you know

324

00:19:16,950 --> 00:19:15,120

very close to engine start and uh and so

325

00:19:19,430 --> 00:19:16,960

that's i look forward to that kind of

326

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

those last moments of launch countdown

327

00:19:23,110 --> 00:19:20,960

and charlie what would you like to say

328

00:19:25,590 --> 00:19:23,120

to all the people who have contributed

329

00:19:28,390 --> 00:19:25,600

their hard work and their dedication to

330

00:19:30,070 --> 00:19:28,400

get us here to this moment

331

00:19:32,310 --> 00:19:30,080

i would like to say thank you a

332

00:19:34,549 --> 00:19:32,320

heartfelt thank you

333

00:19:37,190 --> 00:19:34,559

this rocket sits on the pad ready for

334

00:19:39,190 --> 00:19:37,200

wet dress because of the dedication the

335

00:19:42,950 --> 00:19:39,200

support

336

00:19:45,029 --> 00:19:42,960

the excellent work by a team of people

337

00:19:47,350 --> 00:19:45,039

i would say thank you thank you for all

338

00:19:49,190 --> 00:19:47,360

that you have done to get us here and

339

00:19:50,150 --> 00:19:49,200

thank you charlie thanks so much thank

340

00:19:53,830 --> 00:19:50,160

you

341

00:19:58,310 --> 00:19:55,830

thanks charlie

342

00:19:59,510 --> 00:19:58,320

the exploration ground systems team

343

00:20:02,390 --> 00:19:59,520

thank you

344

00:20:05,270 --> 00:20:02,400

every member of the nasa family

345

00:20:08,789 --> 00:20:05,280

the progress that we have made was in

346

00:20:11,590 --> 00:20:08,799

big part because of you

347

00:20:13,590 --> 00:20:11,600

and through these artemis missions

348

00:20:15,590 --> 00:20:13,600

we will make new discoveries and

349

00:20:17,909 --> 00:20:15,600

advanced technologies

350

00:20:19,669 --> 00:20:17,919

you would expect that

351
00:20:22,470 --> 00:20:19,679
and we'll do it in a way that we've

352
00:20:25,190 --> 00:20:22,480
never done it before

353
00:20:27,669 --> 00:20:25,200
just last week we announced a plan for

354
00:20:30,710 --> 00:20:27,679
more competition to

355
00:20:33,990 --> 00:20:30,720
add additional landers to carry

356
00:20:36,070 --> 00:20:34,000
astronauts to the lunar surface

357
00:20:38,149 --> 00:20:36,080
we expect to land

358
00:20:41,190 --> 00:20:38,159
about once a year

359
00:20:43,590 --> 00:20:41,200
for more than a decade

360
00:20:46,149 --> 00:20:43,600
we're going to put an outpost or

361
00:20:49,270 --> 00:20:46,159
something like a station in lunar orbit

362
00:20:50,630 --> 00:20:49,280
it's going to be in a polar orbit of the

363
00:20:53,350 --> 00:20:50,640

moon

364

00:20:56,149 --> 00:20:53,360

and we're going to call it gateway

365

00:20:59,029 --> 00:20:56,159

and it will provide essential support

366

00:21:02,470 --> 00:20:59,039

for our return to the lunar surface but

367

00:21:05,510 --> 00:21:02,480

it'll also serve as a staging point for

368

00:21:07,830 --> 00:21:05,520

deep space exploration

369

00:21:10,870 --> 00:21:07,840

and our goal is to apply what we've

370

00:21:12,390 --> 00:21:10,880

learned living and operating on the moon

371

00:21:16,630 --> 00:21:12,400

and continue

372

00:21:19,750 --> 00:21:16,640

then out into the solar system

373

00:21:22,630 --> 00:21:19,760

our plan is for humans to walk on mars

374

00:21:24,149 --> 00:21:22,640

by 2040.

375

00:21:26,390 --> 00:21:24,159

we continue

376
00:21:29,990 --> 00:21:26,400
to search for life

377
00:21:32,470 --> 00:21:30,000
we have we're digging in mars right now

378
00:21:34,310 --> 00:21:32,480
as one of our

379
00:21:38,710 --> 00:21:34,320
targets

380
00:21:40,390 --> 00:21:38,720
we know rovers are critical components

381
00:21:43,590 --> 00:21:40,400
but when you get down to it you got to

382
00:21:45,750 --> 00:21:43,600
put a human in the loop

383
00:21:48,710 --> 00:21:45,760
they are essential

384
00:21:52,549 --> 00:21:48,720
for exploration

385
00:21:55,350 --> 00:21:52,559
the destiny of the human spirit is to

386
00:22:01,029 --> 00:21:58,390
this year a new inflatable heat shield

387
00:22:03,350 --> 00:22:01,039
is being developed that can

388
00:22:06,470 --> 00:22:03,360

that can actually slow down and survive

389

00:22:09,110 --> 00:22:06,480

reentry on mars

390

00:22:12,549 --> 00:22:09,120

it's in this budget

391

00:22:14,230 --> 00:22:12,559

so to sustain life on the moon and then

392

00:22:17,190 --> 00:22:14,240

on to mars

393

00:22:19,830 --> 00:22:17,200

we'll need surface power

394

00:22:23,669 --> 00:22:19,840

we secured additional funding to build

395

00:22:28,390 --> 00:22:23,679

that essential infrastructure

396

00:22:31,590 --> 00:22:28,400

mars of course is millions of miles away

397

00:22:32,950 --> 00:22:31,600

research into nuclear propulsion is

398

00:22:35,750 --> 00:22:32,960

important

399

00:22:40,470 --> 00:22:35,760

it will cut down the time it will take

400

00:22:41,830 --> 00:22:40,480

for our pioneers to travel to mars

401
00:22:46,630 --> 00:22:41,840
it too

402
00:22:52,470 --> 00:22:48,630
ladies and gentlemen

403
00:23:00,149 --> 00:22:55,669
last february the perseverance rover it

404
00:23:03,350 --> 00:23:00,159
arrived at jezreel crater on mars

405
00:23:04,870 --> 00:23:03,360
and the marsh sample return mission will

406
00:23:06,710 --> 00:23:04,880
and

407
00:23:09,909 --> 00:23:06,720
come back

408
00:23:11,750 --> 00:23:09,919
to earth bringing the samples gathered

409
00:23:14,549 --> 00:23:11,760
by perseverance

410
00:23:16,710 --> 00:23:14,559
from the crater floor perseverance is

411
00:23:18,230 --> 00:23:16,720
putting them at different locations in

412
00:23:21,430 --> 00:23:18,240
these

413
00:23:23,590 --> 00:23:21,440

vials that are about that long

414

00:23:26,390 --> 00:23:23,600

and they're putting a stash of them here

415

00:23:29,909 --> 00:23:26,400

and a stash of them there

416

00:23:31,830 --> 00:23:29,919

and a mars rover will go around with our

417

00:23:34,630 --> 00:23:31,840

european friends and pick them up and

418

00:23:36,549 --> 00:23:34,640

then we put it in a mars ascent vehicle

419

00:23:38,549 --> 00:23:36,559

and it goes up in it

420

00:23:41,590 --> 00:23:38,559

rendezvous

421

00:23:44,549 --> 00:23:41,600

with a spacecraft in martian orbit

422

00:23:46,149 --> 00:23:44,559

that'll bring it back to the moon

423

00:23:48,470 --> 00:23:46,159

just think what we're going to see in

424

00:23:50,950 --> 00:23:48,480

those samples

425

00:23:53,029 --> 00:23:50,960

they could possibly confirm the ultimate

426
00:23:57,669 --> 00:23:53,039
question

427
00:23:59,590 --> 00:23:57,679
did life exist on mars does it exist now

428
00:24:05,350 --> 00:23:59,600
if it does well

429
00:24:10,549 --> 00:24:07,990
you know at nasa we dream big and we're

430
00:24:12,950 --> 00:24:10,559
constantly pushing the limit of what we

431
00:24:15,029 --> 00:24:12,960
know to be possible

432
00:24:18,390 --> 00:24:15,039
and that's why it's critical to leverage

433
00:24:22,470 --> 00:24:18,400
the speed and invid in a innovation of

434
00:24:24,789 --> 00:24:22,480
the commercial sector as we move forward

435
00:24:26,390 --> 00:24:24,799
our partnership with industry has

436
00:24:29,350 --> 00:24:26,400
already allowed

437
00:24:31,350 --> 00:24:29,360
more scientific research

438
00:24:33,510 --> 00:24:31,360

and in december

439

00:24:36,070 --> 00:24:33,520

nasa signed agreements

440

00:24:38,470 --> 00:24:36,080

with three american companies to develop

441

00:24:41,430 --> 00:24:38,480

designs of space stations and other

442

00:24:43,669 --> 00:24:41,440

commercial destinations

443

00:24:45,190 --> 00:24:43,679

first in low earth orbit and then who

444

00:24:47,990 --> 00:24:45,200

knows what

445

00:24:52,230 --> 00:24:50,549

this budget provides funding for these

446

00:24:55,750 --> 00:24:52,240

efforts

447

00:24:57,430 --> 00:24:55,760

it enables a commercial economy in low

448

00:24:59,950 --> 00:24:57,440

earth orbit

449

00:25:02,470 --> 00:24:59,960

where the us will maintain an

450

00:25:08,310 --> 00:25:02,480

uninterrupted presence

451
00:25:11,750 --> 00:25:09,430
so

452
00:25:15,750 --> 00:25:11,760
part of nasa's commitment to lead in

453
00:25:17,750 --> 00:25:15,760
space means that we will also continue

454
00:25:19,750 --> 00:25:17,760
to lead

455
00:25:22,230 --> 00:25:19,760
right here

456
00:25:25,269 --> 00:25:22,240
on earth

457
00:25:27,990 --> 00:25:25,279
last january dr kate calvin joined the

458
00:25:30,070 --> 00:25:28,000
nasa family as the agency's chief

459
00:25:31,669 --> 00:25:30,080
scientist and first senior climate

460
00:25:34,789 --> 00:25:31,679
advisor

461
00:25:36,710 --> 00:25:34,799
and today she and the director of nasa's

462
00:25:39,110 --> 00:25:36,720
earth science division karen

463
00:25:42,710 --> 00:25:39,120

saint-germain

464

00:25:46,470 --> 00:25:42,720

are joining us from goddard to explain

465

00:25:49,510 --> 00:25:46,480

how nasa is at the point of the spear on

466

00:25:52,230 --> 00:25:49,520

climate research

467

00:26:00,710 --> 00:25:52,240

so let's turn it over to the team at the

468

00:26:04,549 --> 00:26:02,870

thank you administrator nelson as you

469

00:26:06,149 --> 00:26:04,559

just mentioned we're at nasa's goddard

470

00:26:08,230 --> 00:26:06,159

space flight center in greenbelt

471

00:26:10,310 --> 00:26:08,240

maryland one of nasa's hubs of earth

472

00:26:12,390 --> 00:26:10,320

science and climate change research and

473

00:26:15,029 --> 00:26:12,400

i'm here with karen and kate

474

00:26:17,190 --> 00:26:15,039

so kate what is on the horizon for nasa

475

00:26:19,190 --> 00:26:17,200

to continue to understand climate change

476
00:26:20,390 --> 00:26:19,200
and delivering that information to the

477
00:26:22,549 --> 00:26:20,400
public

478
00:26:24,470 --> 00:26:22,559
observing our planet how it's changed

479
00:26:26,870 --> 00:26:24,480
over time and how human activities

480
00:26:28,789 --> 00:26:26,880
impacted it is not new to nasa we've

481
00:26:30,070 --> 00:26:28,799
been doing that for decades now but

482
00:26:32,149 --> 00:26:30,080
we're at a point where we need to go

483
00:26:33,669 --> 00:26:32,159
beyond gathering information we need to

484
00:26:35,990 --> 00:26:33,679
make sure that people have what they

485
00:26:37,830 --> 00:26:36,000
need to make informed decisions

486
00:26:39,110 --> 00:26:37,840
we'll continue our climate research

487
00:26:41,590 --> 00:26:39,120
looking at things like surface

488
00:26:43,990 --> 00:26:41,600

temperature greenhouse gases sea level

489

00:26:45,909 --> 00:26:44,000

rise and other aspects of climate change

490

00:26:48,789 --> 00:26:45,919

but we need to take the next step and in

491

00:26:50,149 --> 00:26:48,799

that accessibility to data is critical

492

00:26:52,149 --> 00:26:50,159

while all of our data is freely

493

00:26:54,230 --> 00:26:52,159

available to the public now we're

494

00:26:57,029 --> 00:26:54,240

working in the future to make sure that

495

00:26:58,549 --> 00:26:57,039

it's easier to use and in good formats

496

00:27:00,470 --> 00:26:58,559

and that people have what they need as

497

00:27:03,269 --> 00:27:00,480

they're making decisions whether those

498

00:27:04,630 --> 00:27:03,279

are about climate mitigation adaptation

499

00:27:07,269 --> 00:27:04,640

or planning

500

00:27:09,269 --> 00:27:07,279

thanks kate and karen nasa is working to

501
00:27:11,190 --> 00:27:09,279
develop the next generation of earth

502
00:27:13,269 --> 00:27:11,200
observing satellites the earth system

503
00:27:15,990 --> 00:27:13,279
observatory how will that serve the

504
00:27:19,110 --> 00:27:16,000
science community and public at large

505
00:27:21,830 --> 00:27:19,120
well nasa's been a global leader in

506
00:27:23,750 --> 00:27:21,840
earth observation science and modeling

507
00:27:25,590 --> 00:27:23,760
for over 60 years

508
00:27:28,389 --> 00:27:25,600
but the challenges of climate change in

509
00:27:30,070 --> 00:27:28,399
particular mean we need more information

510
00:27:32,310 --> 00:27:30,080
and we need it faster and that's really

511
00:27:33,110 --> 00:27:32,320
where the earth system observatory comes

512
00:27:35,830 --> 00:27:33,120
in

513
00:27:38,630 --> 00:27:35,840

so the eso is the next generation of

514

00:27:40,870 --> 00:27:38,640

satellite missions that will launch by

515

00:27:43,750 --> 00:27:40,880

the end of this decade and they'll give

516

00:27:45,750 --> 00:27:43,760

us a 3d holistic view of our earth

517

00:27:48,549 --> 00:27:45,760

system at a level of precision and

518

00:27:50,070 --> 00:27:48,559

accuracy that we've never seen before

519

00:27:51,750 --> 00:27:50,080

and just as important as what we're

520

00:27:53,350 --> 00:27:51,760

doing is how we're doing it we're going

521

00:27:55,269 --> 00:27:53,360

to involve industry to bring in

522

00:27:57,029 --> 00:27:55,279

innovation we're working with

523

00:27:59,350 --> 00:27:57,039

international partners to leverage their

524

00:28:01,590 --> 00:27:59,360

capabilities and we're doing it all

525

00:28:04,470 --> 00:28:01,600

under open science principles to make

526

00:28:06,789 --> 00:28:04,480

sure that we get to the science and the

527

00:28:09,590 --> 00:28:06,799

information products uh that people need

528

00:28:11,430 --> 00:28:09,600

to make decisions as quickly as we can

529

00:28:13,830 --> 00:28:11,440

and this is a question to both of you

530

00:28:15,590 --> 00:28:13,840

how does nasa's climate change research

531

00:28:16,549 --> 00:28:15,600

help the average person let's start with

532

00:28:19,750 --> 00:28:16,559

you karen

533

00:28:22,070 --> 00:28:19,760

in most cases today people get access to

534

00:28:24,389 --> 00:28:22,080

nasa data through other agencies federal

535

00:28:27,110 --> 00:28:24,399

state and local as they manage things

536

00:28:29,269 --> 00:28:27,120

like coastal flooding and wildfires and

537

00:28:31,430 --> 00:28:29,279

even through the u.s drought monitor

538

00:28:33,590 --> 00:28:31,440

which supports the entire u.s

539

00:28:36,549 --> 00:28:33,600

agriculture industry and speaking of

540

00:28:39,430 --> 00:28:36,559

agriculture our nasa team just went to

541

00:28:41,590 --> 00:28:39,440

the major international major national

542

00:28:43,669 --> 00:28:41,600

agriculture commodities meeting to meet

543

00:28:45,350 --> 00:28:43,679

with farmers and

544

00:28:47,830 --> 00:28:45,360

agriculture producers and other key

545

00:28:49,909 --> 00:28:47,840

players to learn more about how they use

546

00:28:51,590 --> 00:28:49,919

nasa data today what they need in the

547

00:28:53,190 --> 00:28:51,600

future and how they need that

548

00:28:55,029 --> 00:28:53,200

information delivered

549

00:28:57,110 --> 00:28:55,039

karen makes some great points whether

550

00:28:59,110 --> 00:28:57,120

people may realize it or not nasa

551
00:29:01,350 --> 00:28:59,120
research has likely impacted things that

552
00:29:03,110 --> 00:29:01,360
affect their everyday lives or are used

553
00:29:05,190 --> 00:29:03,120
in long-term planning and we're working

554
00:29:07,269 --> 00:29:05,200
to make that easier in the future in

555
00:29:08,950 --> 00:29:07,279
addition we also develop technologies

556
00:29:10,470 --> 00:29:08,960
that can help people mitigate or adapt

557
00:29:12,710 --> 00:29:10,480
to climate change

558
00:29:15,590 --> 00:29:12,720
that's fantastic many thanks to you both

559
00:29:17,830 --> 00:29:15,600
administrator nelson back to you

560
00:29:20,549 --> 00:29:17,840
thanks you too

561
00:29:22,149 --> 00:29:20,559
what's clear is if we can measure this

562
00:29:24,870 --> 00:29:22,159
climate crisis

563
00:29:25,830 --> 00:29:24,880

we can mitigate it

564

00:29:28,710 --> 00:29:25,840

that's

565

00:29:31,909 --> 00:29:28,720

nasa's expertise

566

00:29:35,909 --> 00:29:31,919

eight of the top ten warmest years on

567

00:29:38,870 --> 00:29:35,919

our planet occurred in the last decade

568

00:29:41,269 --> 00:29:38,880

this is indisputable

569

00:29:45,669 --> 00:29:41,279

and it underscores the need for bold

570

00:29:48,630 --> 00:29:47,750

president's budget

571

00:29:51,750 --> 00:29:48,640

will

572

00:29:54,950 --> 00:29:51,760

empower nasa to launch an earth

573

00:29:57,269 --> 00:29:54,960

information center

574

00:29:58,549 --> 00:29:57,279

they won't let me call it

575

00:30:00,149 --> 00:29:58,559

a mission

576

00:30:02,389 --> 00:30:00,159

control center

577

00:30:05,830 --> 00:30:02,399

so they've gussied up the name it's a

578

00:30:08,789 --> 00:30:05,840

earth information center

579

00:30:12,870 --> 00:30:08,799

and we'll use it as a mission control to

580

00:30:15,350 --> 00:30:12,880

monitor operations during space flight

581

00:30:17,750 --> 00:30:15,360

we're embarking on this effort to

582

00:30:20,630 --> 00:30:17,760

monitor conditions here

583

00:30:23,590 --> 00:30:20,640

on our home planet

584

00:30:25,510 --> 00:30:23,600

and this effort will be implemented in

585

00:30:27,669 --> 00:30:25,520

coordination with other agencies and

586

00:30:30,310 --> 00:30:27,679

partners

587

00:30:34,149 --> 00:30:30,320

it'll monitor greenhouse gases it'll

588

00:30:36,870 --> 00:30:34,159

integrate data from a variety of sources

589

00:30:40,310 --> 00:30:36,880

and remember this is

590

00:30:42,070 --> 00:30:40,320

a whole complex of assets that are up

591

00:30:44,230 --> 00:30:42,080

there including

592

00:30:47,470 --> 00:30:44,240

the great observatories that we're going

593

00:30:50,789 --> 00:30:47,480

to put up over the next decade

594

00:30:52,389 --> 00:30:50,799

observatories that will give us precise

595

00:30:55,909 --> 00:30:52,399

data

596

00:30:57,990 --> 00:30:55,919

about what is happening to our planet

597

00:31:00,389 --> 00:30:58,000

and that will look and give us the

598

00:31:04,389 --> 00:31:00,399

precise measurements on what's happening

599

00:31:06,950 --> 00:31:04,399

to the water to the land to the ice into

600

00:31:09,190 --> 00:31:06,960

the atmosphere

601
00:31:12,470 --> 00:31:09,200
and the goal is simple

602
00:31:16,149 --> 00:31:12,480
to make nasa more dateable

603
00:31:19,990 --> 00:31:16,159
more nasa data more accessible

604
00:31:22,789 --> 00:31:20,000
and usable for federal state and local

605
00:31:25,509 --> 00:31:22,799
governments universities researchers as

606
00:31:28,070 --> 00:31:25,519
well as the public all of that the earth

607
00:31:29,590 --> 00:31:28,080
information center like a mission

608
00:31:33,110 --> 00:31:29,600
control

609
00:31:35,430 --> 00:31:33,120
but it'll be virtual as well we'll even

610
00:31:38,389 --> 00:31:35,440
have it in kiosk

611
00:31:41,269 --> 00:31:38,399
around the country

612
00:31:44,149 --> 00:31:41,279
this budget will give us the capacity to

613
00:31:48,549 --> 00:31:44,159

act more boldly and with greater urgency

614

00:31:52,710 --> 00:31:49,669

now

615

00:31:55,590 --> 00:31:52,720

this budget is also going to allow us to

616

00:31:58,310 --> 00:31:55,600

help mitigate the climate impacts

617

00:32:00,470 --> 00:31:58,320

in aviation

618

00:32:03,190 --> 00:32:00,480

the x-57

619

00:32:05,669 --> 00:32:03,200

and all-electric aircraft is going to

620

00:32:07,909 --> 00:32:05,679

fly this year

621

00:32:10,630 --> 00:32:07,919

it utilizes technology with the

622

00:32:13,269 --> 00:32:10,640

potential to make flying cleaner and

623

00:32:18,470 --> 00:32:16,070

i'm going to be out there at edwards to

624

00:32:20,470 --> 00:32:18,480

see it at the armstrong

625

00:32:22,630 --> 00:32:20,480

flight test center

626

00:32:24,950 --> 00:32:22,640

the president's funding request also

627

00:32:29,110 --> 00:32:24,960

supports a next generation highly

628

00:32:32,470 --> 00:32:29,120

efficient airliner proto prototype

629

00:32:35,990 --> 00:32:32,480

nasa investments will result in safer

630

00:32:39,669 --> 00:32:36,000

skies smoother passenger experiences

631

00:32:46,870 --> 00:32:42,710

and that includes the x-59

632

00:32:51,990 --> 00:32:46,880

which is going to fly this year as well

633

00:32:53,190 --> 00:32:52,000

a supersonic but low sonic boom

634

00:32:56,470 --> 00:32:53,200

flight

635

00:32:59,750 --> 00:32:56,480

that can fly over populated areas

636

00:33:02,149 --> 00:32:59,760

so let's hand it over to the armstrong

637

00:33:09,990 --> 00:33:02,159

flight research center who are joining

638

00:33:14,149 --> 00:33:12,149

you very much administrator nelson and

639

00:33:16,230 --> 00:33:14,159

welcome back to armstrong flight

640

00:33:18,950 --> 00:33:16,240

research center

641

00:33:21,029 --> 00:33:18,960

75 years ago the course of aviation was

642

00:33:22,789 --> 00:33:21,039

changed forever when the late chuck

643

00:33:26,710 --> 00:33:22,799

yeager broke the sound barrier in the

644

00:33:28,950 --> 00:33:26,720

first experimental aircraft the x1

645

00:33:30,230 --> 00:33:28,960

today nasa continues that tradition of

646

00:33:31,830 --> 00:33:30,240

pushing the envelope through

647

00:33:33,590 --> 00:33:31,840

experimental flight

648

00:33:35,669 --> 00:33:33,600

in pursuit of advancing sustainable

649

00:33:37,750 --> 00:33:35,679

aviation for all of us

650

00:33:39,789 --> 00:33:37,760

i'm standing in front of the x-57

651

00:33:42,789 --> 00:33:39,799

maxwell it's a technum

652

00:33:44,789 --> 00:33:42,799

p2006t that's been retrofitted as an

653

00:33:46,789 --> 00:33:44,799

all-electric aircraft

654

00:33:50,230 --> 00:33:46,799

i have with me here one of nasa's test

655

00:33:52,630 --> 00:33:50,240

pilots training to fly the x-57

656

00:33:55,430 --> 00:33:52,640

for the project mr tim williams

657

00:33:57,990 --> 00:33:55,440

hey tim so tim let's just start what is

658

00:34:00,549 --> 00:33:58,000

the x-57 and what makes this a unique

659

00:34:03,750 --> 00:34:00,559

aircraft well this is uh nasa's first

660

00:34:05,990 --> 00:34:03,760

all-electric crude aircraft uh it's been

661

00:34:08,550 --> 00:34:06,000

a couple years going but basically all

662

00:34:10,470 --> 00:34:08,560

electric electric motors and it has a

663

00:34:13,190 --> 00:34:10,480

battery as well so it's kind of cool

664

00:34:14,629 --> 00:34:13,200

stuff excellent we get a closer look

665

00:34:17,030 --> 00:34:14,639

absolutely i want to ask you you've

666

00:34:19,109 --> 00:34:17,040

flown so many different nasa aircraft in

667

00:34:21,270 --> 00:34:19,119

your career here

668

00:34:22,149 --> 00:34:21,280

what is it training what is it like

669

00:34:24,869 --> 00:34:22,159

training

670

00:34:27,430 --> 00:34:24,879

to fly a unique aircraft like the x57

671

00:34:30,149 --> 00:34:27,440

the key to any successful uh project

672

00:34:32,310 --> 00:34:30,159

like this is a is a simulator and it's

673

00:34:34,790 --> 00:34:32,320

part of the whole evolution when we go

674

00:34:36,310 --> 00:34:34,800

test i fly i go back to the simulator

675

00:34:37,909 --> 00:34:36,320

we've done a lot of work over the last

676

00:34:40,230 --> 00:34:37,919

couple years in building up that

677

00:34:42,230 --> 00:34:40,240

simulator to match it exactly what we

678

00:34:44,550 --> 00:34:42,240

have in this cockpit you know it's just

679

00:34:46,550 --> 00:34:44,560

me and this one now i have a normally

680

00:34:48,230 --> 00:34:46,560

four seats but we took out one seat put

681

00:34:50,550 --> 00:34:48,240

an instrument patient pallet and the

682

00:34:52,230 --> 00:34:50,560

rest of the airplane is all batteries

683

00:34:54,069 --> 00:34:52,240

so it's good i can't wait to fly this

684

00:34:55,430 --> 00:34:54,079

believe me appreciate it tim thank you

685

00:34:57,109 --> 00:34:55,440

looking forward to it

686

00:34:59,190 --> 00:34:57,119

i'm going to kick it up to my colleague

687

00:35:03,750 --> 00:34:59,200

sarah mann who's with heather up at the

688

00:35:06,230 --> 00:35:03,760

x-57 simulator sarah

689

00:35:08,710 --> 00:35:06,240

thanks matt we're here in the x-57

690

00:35:10,550 --> 00:35:08,720

simulator with heather maliska and sim

691

00:35:12,069 --> 00:35:10,560

engineer ryan wallace

692

00:35:14,550 --> 00:35:12,079

heather can you share with us the

693

00:35:17,670 --> 00:35:14,560

contributions the x-57 has given to

694

00:35:20,790 --> 00:35:17,680

industry sure the x-57 project has made

695

00:35:22,710 --> 00:35:20,800

significant contributions to industry

696

00:35:24,870 --> 00:35:22,720

as a reference platform we're able to

697

00:35:29,270 --> 00:35:24,880

influence industry influence standards

698

00:35:31,109 --> 00:35:29,280

and the future of electric aviation

699

00:35:33,349 --> 00:35:31,119

uh the industry is interested in

700

00:35:35,349 --> 00:35:33,359

distributed electric propulsion and with

701
00:35:37,190 --> 00:35:35,359
that the project started with leaptech

702
00:35:39,990 --> 00:35:37,200
and leaptech was a modified electric

703
00:35:42,390 --> 00:35:40,000
wing that we put on a semi truck that we

704
00:35:44,230 --> 00:35:42,400
drove on the the lake bed here at

705
00:35:46,630 --> 00:35:44,240
armstrong flight research center and we

706
00:35:48,870 --> 00:35:46,640
were able to prove and validate that our

707
00:35:51,109 --> 00:35:48,880
motors could produce 300 horsepower can

708
00:35:52,790 --> 00:35:51,119
you tell us about the batteries sure our

709
00:35:54,470 --> 00:35:52,800
nasa engineers

710
00:35:56,390 --> 00:35:54,480
design batteries they could cover the

711
00:35:58,069 --> 00:35:56,400
entire flight profile and we did this

712
00:35:59,990 --> 00:35:58,079
safely to make sure that

713
00:36:02,470 --> 00:36:00,000

there was no thermal runaways and so we

714

00:36:04,710 --> 00:36:02,480

were able to share this publicly great

715

00:36:09,270 --> 00:36:04,720

thanks for sharing all this heather matt

716

00:36:13,589 --> 00:36:11,670

thanks very much sarah i have sean clark

717

00:36:16,790 --> 00:36:13,599

here who's nasa's principal investigator

718

00:36:18,150 --> 00:36:16,800

for the x-57 project and sean i know it

719

00:36:20,230 --> 00:36:18,160

sounds like we have an important

720

00:36:22,390 --> 00:36:20,240

milestone coming up for this aircraft i

721

00:36:24,870 --> 00:36:22,400

want to ask you about that but also you

722

00:36:27,270 --> 00:36:24,880

and i know that nasa's goal is to share

723

00:36:29,910 --> 00:36:27,280

the electric propulsion design and air

724

00:36:31,589 --> 00:36:29,920

worthiness process with regulators but

725

00:36:33,510 --> 00:36:31,599

why is that important

726

00:36:36,390 --> 00:36:33,520

yeah thanks matt we're really excited to

727

00:36:37,829 --> 00:36:36,400

take all of the engineering uh lessons

728

00:36:39,270 --> 00:36:37,839

learned that we were putting into this

729

00:36:41,270 --> 00:36:39,280

aircraft and get it into flight this

730

00:36:43,190 --> 00:36:41,280

summer so we're all working toward that

731

00:36:46,550 --> 00:36:43,200

right now and what's really important is

732

00:36:47,750 --> 00:36:46,560

that we learn from the fabrication and

733

00:36:49,990 --> 00:36:47,760

engineering development and

734

00:36:52,950 --> 00:36:50,000

airworthiness process and share that

735

00:36:54,550 --> 00:36:52,960

back to regulators and standards riders

736

00:36:56,550 --> 00:36:54,560

so that the aircraft of the future can

737

00:36:58,710 --> 00:36:56,560

take advantage of all the research that

738

00:37:00,710 --> 00:36:58,720

nasa is doing here and put them into the

739

00:37:04,550 --> 00:37:00,720

next generation of electric aircraft it

740

00:37:06,950 --> 00:37:04,560

sounds so awesome thank you sean yeah

741

00:37:08,870 --> 00:37:06,960

so the value that the x57 project is

742

00:37:11,829 --> 00:37:08,880

already producing for the sustainable

743

00:37:13,750 --> 00:37:11,839

aviation industry is foundational and

744

00:37:17,109 --> 00:37:13,760

we're proud to be paving the way for

745

00:37:19,510 --> 00:37:17,119

nasa's new line of crude experimental

746

00:37:21,430 --> 00:37:19,520

aircraft also known as x-planes to

747

00:37:24,310 --> 00:37:21,440

include the trust grace wing which is

748

00:37:27,190 --> 00:37:24,320

coming soon as well as the x-59 which is

749

00:37:29,670 --> 00:37:27,200

nasa's quiet supersonic x-plane

750

00:37:31,670 --> 00:37:29,680

that could open the future to quiet

751

00:37:34,630 --> 00:37:31,680

supersonic flight over land cutting

752

00:37:38,069 --> 00:37:34,640

flight times commercially in half

753

00:37:40,710 --> 00:37:38,079

administrator nelson back to you sir

754

00:37:45,510 --> 00:37:40,720

thanks guys and uh let's remember that

755

00:37:46,390 --> 00:37:45,520

the first a in nasa is aeronautics

756

00:37:48,550 --> 00:37:46,400

so

757

00:37:51,990 --> 00:37:48,560

putting all of this together

758

00:37:54,310 --> 00:37:52,000

to chart america's pioneering course

759

00:37:57,349 --> 00:37:54,320

into the cosmos

760

00:37:59,589 --> 00:37:57,359

we must embrace and empower the whole of

761

00:38:01,750 --> 00:37:59,599

our nation here at home

762

00:38:04,550 --> 00:38:01,760

so we took the first steps with the

763

00:38:07,190 --> 00:38:04,560

launch of mission equity

764

00:38:09,829 --> 00:38:07,200

we broadened our reach

765

00:38:12,310 --> 00:38:09,839

out with nasa's first ever spanish

766

00:38:14,390 --> 00:38:12,320

language broadcast for the perseverance

767

00:38:17,910 --> 00:38:14,400

mars landing

768

00:38:19,589 --> 00:38:17,920

and with a 150 million dollar budget for

769

00:38:22,790 --> 00:38:19,599

stem

770

00:38:25,270 --> 00:38:22,800

for education and engagement

771

00:38:27,750 --> 00:38:25,280

that was a 10 percent increase over last

772

00:38:30,950 --> 00:38:27,760

year it's in the budget

773

00:38:37,109 --> 00:38:30,960

and this is our opportunity to make

774

00:38:42,870 --> 00:38:40,470

last september nasa released its first

775

00:38:46,069 --> 00:38:42,880

comic book

776

00:38:47,750 --> 00:38:46,079

titled first woman nasa's promise for

777

00:38:50,470 --> 00:38:47,760

humanity

778

00:38:52,790 --> 00:38:50,480

you think that's a hit

779

00:38:54,870 --> 00:38:52,800

in elementary schools

780

00:38:58,230 --> 00:38:54,880

do you think

781

00:39:01,190 --> 00:38:58,240

that that ignites the imaginations of

782

00:39:04,069 --> 00:39:01,200

those little minds

783

00:39:06,550 --> 00:39:04,079

it imagines the story of cali rodriguez

784

00:39:08,470 --> 00:39:06,560

the fictional first woman to explore the

785

00:39:12,710 --> 00:39:08,480

moon

786

00:39:15,750 --> 00:39:12,720

this is a new generation of explorers

787

00:39:19,270 --> 00:39:15,760

the artemis generation

788

00:39:21,670 --> 00:39:19,280

it's also a story of where we are going

789

00:39:25,109 --> 00:39:21,680

as a country

790

00:39:27,030 --> 00:39:25,119

we were in the very successful apollo

791

00:39:29,109 --> 00:39:27,040

generation

792

00:39:31,829 --> 00:39:29,119

now we're going to the artemis

793

00:39:37,910 --> 00:39:34,670

and i believe that this agency

794

00:39:40,550 --> 00:39:37,920

personifies the american story it's a

795

00:39:42,630 --> 00:39:40,560

story that is never ending because of

796

00:39:47,670 --> 00:39:42,640

the work to create

797

00:39:49,990 --> 00:39:47,680

a more perfect union does not end

798

00:39:52,069 --> 00:39:50,000

we have much work to do

799

00:39:55,109 --> 00:39:52,079

but this is the work

800

00:39:59,750 --> 00:39:55,119

we must do together

801
00:40:05,190 --> 00:39:59,760
and it's our leadership team's pledge

802
00:40:10,630 --> 00:40:07,190
let's recognize and bring down the

803
00:40:13,750 --> 00:40:10,640
barriers both visible and invisible that

804
00:40:16,470 --> 00:40:13,760
hinder fairness

805
00:40:18,390 --> 00:40:16,480
let's ensure underserved and

806
00:40:20,790 --> 00:40:18,400
underrepresented

807
00:40:22,069 --> 00:40:20,800
communities have access to nasa's

808
00:40:28,309 --> 00:40:22,079
programs

809
00:40:33,589 --> 00:40:30,150
ladies and gentlemen it's been a year

810
00:40:37,270 --> 00:40:33,599
since president biden asked me to rejoin

811
00:40:44,630 --> 00:40:39,990
i'm just constantly inspired by the

812
00:40:46,390 --> 00:40:44,640
can-do spirit that guides our agency

813
00:40:50,630 --> 00:40:46,400

and i'm proud to say

814

00:40:54,470 --> 00:40:50,640

that the state of nasa is strong

815

00:40:57,589 --> 00:40:54,480

it's strong because the nasa family

816

00:41:03,349 --> 00:41:00,390

over this past year we've achieved

817

00:41:05,349 --> 00:41:03,359

missions once thought impossible

818

00:41:07,670 --> 00:41:05,359

and we know this year is bound to be

819

00:41:11,510 --> 00:41:07,680

another banner year full of

820

00:41:18,470 --> 00:41:15,270

for the world's can do

821

00:41:25,589 --> 00:41:20,950

it's an honor of a lifetime to serve at

822

00:41:34,110 --> 00:41:29,840

onward and upward

823

00:41:36,150 --> 00:41:34,120

[Applause]

824

00:41:38,390 --> 00:41:36,160

[Music]

825

00:41:44,630 --> 00:41:38,400

space is for everyone we're all working

826
00:41:51,190 --> 00:41:47,190
just seeing people learn and grow and

827
00:41:52,950 --> 00:41:51,200
the community benefiting as a whole

828
00:41:55,589 --> 00:41:52,960
we have vendors from all around this

829
00:41:58,230 --> 00:41:55,599
country and all of that's bringing in

830
00:42:00,710 --> 00:41:58,240
a lot of jobs and getting to work in our

831
00:42:04,150 --> 00:42:00,720
community i give back by seeing

832
00:42:07,589 --> 00:42:04,160
companies grow my work means something

833
00:42:14,230 --> 00:42:07,599
it provides people with ability to feed

834
00:42:18,309 --> 00:42:15,750
not everyone who works on the space

835
00:42:20,550 --> 00:42:18,319
program is is an engineer or scientist

836
00:42:22,710 --> 00:42:20,560
in a white lab coat and there's vital

837
00:42:25,190 --> 00:42:22,720
roles

838
00:42:27,349 --> 00:42:25,200

everybody at nasa is very teamwork

839

00:42:29,990 --> 00:42:27,359

driven nothing that we do here is done

840

00:42:33,109 --> 00:42:30,000

by itself all successful missions come

841

00:42:35,430 --> 00:42:33,119

from a team that works together that is

842

00:42:37,510 --> 00:42:35,440

diverse and we each bring a different

843

00:42:39,190 --> 00:42:37,520

perspective to the team to help us

844

00:42:41,829 --> 00:42:39,200

achieve our goals

845

00:42:43,829 --> 00:42:41,839

there's literally an expert kind of

846

00:42:46,630 --> 00:42:43,839

within arm's reach that you can ask any

847

00:42:57,109 --> 00:42:46,640

question to and you'll probably get one

848

00:43:01,510 --> 00:42:59,510

we take a lot of ownership and what we

849

00:43:03,750 --> 00:43:01,520

do you get to see a lot of that passion

850

00:43:06,309 --> 00:43:03,760

you get to see a lot of that drive

851
00:43:08,790 --> 00:43:06,319
people want to do their best people want

852
00:43:10,309 --> 00:43:08,800
to pull together to be a part of this

853
00:43:15,270 --> 00:43:10,319
program that's bigger than what any of

854
00:43:18,230 --> 00:43:16,870
nasa does the trailblazing with

855
00:43:21,030 --> 00:43:18,240
technology

856
00:43:22,790 --> 00:43:21,040
the kind of work we do you can't rest on

857
00:43:24,630 --> 00:43:22,800
your laurels and say okay we're there

858
00:43:26,390 --> 00:43:24,640
there's no end to what we can achieve so

859
00:43:28,470 --> 00:43:26,400
we have to keep pushing ourselves

860
00:43:30,550 --> 00:43:28,480
and any airplane that i get on it's

861
00:43:32,470 --> 00:43:30,560
exciting to think about oh this airplane

862
00:43:34,790 --> 00:43:32,480
probably at some point passed through

863
00:43:37,430 --> 00:43:34,800

many of our centers we are with you when

864

00:43:39,829 --> 00:43:37,440

you fly we are coming up with safer

865

00:43:43,270 --> 00:43:39,839

newer technologies that are more silent

866

00:43:48,309 --> 00:43:46,230

just to be able to work here and

867

00:43:50,710 --> 00:43:48,319

be able to design and touch something

868

00:43:54,870 --> 00:43:50,720

that will one day travel to a new planet

869

00:43:58,069 --> 00:43:54,880

is amazing i mean it's indescribable

870

00:44:00,309 --> 00:43:58,079

nasa brings hope and inspiration by