



1  
00:00:10,470 --> 00:00:09,270  
earth day is approaching on sunday april

2  
00:00:13,190 --> 00:00:10,480  
22nd

3  
00:00:15,270 --> 00:00:13,200  
and as we are

4  
00:00:17,990 --> 00:00:15,280  
ready to celebrate that day

5  
00:00:22,070 --> 00:00:18,000  
we have here today as a special guest we

6  
00:00:24,310 --> 00:00:22,080  
have dr cindy evans who is a uh

7  
00:00:26,230 --> 00:00:24,320  
the earth observation scientist i think

8  
00:00:28,150 --> 00:00:26,240  
your appropriate title is associate

9  
00:00:30,950 --> 00:00:28,160  
space station scientist for earth

10  
00:00:33,670 --> 00:00:30,960  
observations correct something like that

11  
00:00:35,110 --> 00:00:33,680  
it's a space station associate program

12  
00:00:37,030 --> 00:00:35,120  
scientist for earth observation thank

13  
00:00:38,549 --> 00:00:37,040

you so much for coming today and i can

14

00:00:40,790 --> 00:00:38,559

see you may not be able to see this on

15

00:00:43,030 --> 00:00:40,800

camera but she has earth earrings on and

16

00:00:45,510 --> 00:00:43,040

i like that that's very nice

17

00:00:46,790 --> 00:00:45,520

so um first of all let's just talk about

18

00:00:48,150 --> 00:00:46,800

um

19

00:00:49,670 --> 00:00:48,160

some of the things that are going first

20

00:00:51,430 --> 00:00:49,680

actually before i even get into earth

21

00:00:52,869 --> 00:00:51,440

observations let's talk about you so

22

00:00:54,549 --> 00:00:52,879

tell me how did you become an earth

23

00:00:56,229 --> 00:00:54,559

observation scientist

24

00:00:59,590 --> 00:00:56,239

well i'm a geologist that my training is

25

00:01:02,069 --> 00:00:59,600

in geology and like many geologists went

26

00:01:04,950 --> 00:01:02,079

to school and started taking all sorts

27

00:01:07,109 --> 00:01:04,960

of sciences chemistry physics math and

28

00:01:09,590 --> 00:01:07,119

none of them quite fit and i think the

29

00:01:11,270 --> 00:01:09,600

beauty of geology and earth science is

30

00:01:12,469 --> 00:01:11,280

that it takes all of those sciences and

31

00:01:13,510 --> 00:01:12,479

brings them together

32

00:01:14,789 --> 00:01:13,520

plus

33

00:01:16,310 --> 00:01:14,799

we do a lot of field work and it's

34

00:01:17,749 --> 00:01:16,320

really fun to be outside and observe the

35

00:01:19,830 --> 00:01:17,759

earth firsthand

36

00:01:21,350 --> 00:01:19,840

very interesting and so when was it that

37

00:01:22,870 --> 00:01:21,360

you came to nasa and how did you come

38

00:01:27,190 --> 00:01:22,880

about getting here

39

00:01:29,990 --> 00:01:27,200

okay i've been at nasa now since 1980

40

00:01:32,789 --> 00:01:30,000

and so a long time and of course my

41

00:01:34,870 --> 00:01:32,799

initial interest in nasa uh well i had

42

00:01:36,950 --> 00:01:34,880

i grew up during the time frame i

43

00:01:38,630 --> 00:01:36,960

remember seeing the apollo missions but

44

00:01:42,230 --> 00:01:38,640

i did apply to be an astronaut like many

45

00:01:43,429 --> 00:01:42,240

people here and and so i had interest in

46

00:01:45,910 --> 00:01:43,439

pursuing

47

00:01:47,510 --> 00:01:45,920

some uh way to support the space program

48

00:01:49,270 --> 00:01:47,520

and ended up here working with the earth

49

00:01:50,550 --> 00:01:49,280

observations program for many years

50

00:01:52,069 --> 00:01:50,560

great and you do

51  
00:01:54,389 --> 00:01:52,079  
definitely do a good job i'm sure of

52  
00:01:56,469 --> 00:01:54,399  
supporting the space program and being

53  
00:01:58,149 --> 00:01:56,479  
here since 1989 that's a that's a long

54  
00:02:00,709 --> 00:01:58,159  
time so i know that you're very well

55  
00:02:02,709 --> 00:02:00,719  
versed on what is going on on on some of

56  
00:02:03,749 --> 00:02:02,719  
those earth observation there are

57  
00:02:05,670 --> 00:02:03,759  
you know

58  
00:02:07,190 --> 00:02:05,680  
many different studies and we're going

59  
00:02:09,109 --> 00:02:07,200  
to get into some of those the first one

60  
00:02:11,510 --> 00:02:09,119  
i want to go ahead and just talk first

61  
00:02:13,030 --> 00:02:11,520  
about one of the newest studies that is

62  
00:02:14,869 --> 00:02:13,040  
called i serve

63  
00:02:17,510 --> 00:02:14,879

and i understand it's the study natural

64

00:02:18,710 --> 00:02:17,520

disasters and climate change and that

65

00:02:21,510 --> 00:02:18,720

sort of thing you want to talk to me

66

00:02:22,869 --> 00:02:21,520

about that right and and and

67

00:02:24,710 --> 00:02:22,879

stepping back a little bit there's kind

68

00:02:27,110 --> 00:02:24,720

of three things about the space station

69

00:02:28,869 --> 00:02:27,120

that are really nice um synergies with

70

00:02:31,190 --> 00:02:28,879

earth day number one is that the space

71

00:02:32,869 --> 00:02:31,200

station itself as a platform is coming

72

00:02:35,589 --> 00:02:32,879

into its own as an earth observing

73

00:02:37,190 --> 00:02:35,599

platform and we have experiments right

74

00:02:38,630 --> 00:02:37,200

now on the outside of the space station

75

00:02:40,949 --> 00:02:38,640

and on inside of the space station

76  
00:02:43,430 --> 00:02:40,959  
collecting data every single day and the

77  
00:02:44,550 --> 00:02:43,440  
newest payload that will be launched at

78  
00:02:54,949 --> 00:02:44,560  
the

79  
00:02:56,630 --> 00:02:54,959  
earth day is that it supports this

80  
00:02:58,309 --> 00:02:56,640  
legacy program called crew earth

81  
00:03:00,309 --> 00:02:58,319  
observations so the crew was really

82  
00:03:01,990 --> 00:03:00,319  
invested in observing the earth and then

83  
00:03:03,750 --> 00:03:02,000  
the third thing is that the space

84  
00:03:06,229 --> 00:03:03,760  
station is participating and all the

85  
00:03:08,229 --> 00:03:06,239  
international partners are participating

86  
00:03:09,350 --> 00:03:08,239  
in this program called iss benefits

87  
00:03:11,430 --> 00:03:09,360  
humanity

88  
00:03:14,710 --> 00:03:11,440

and earth observations is one of the

89

00:03:16,070 --> 00:03:14,720

three nodes of the iss benefits humanity

90

00:03:17,670 --> 00:03:16,080

program

91

00:03:19,910 --> 00:03:17,680

and it we're working with the united

92

00:03:22,070 --> 00:03:19,920

nations on this as well and the earth

93

00:03:24,149 --> 00:03:22,080

observations participation is specific

94

00:03:26,229 --> 00:03:24,159

to collecting data that may be useful

95

00:03:27,830 --> 00:03:26,239

for disaster response recognizing that

96

00:03:29,830 --> 00:03:27,840

the space station may be in the right

97

00:03:32,149 --> 00:03:29,840

place at the right time to take some

98

00:03:33,830 --> 00:03:32,159

observations that may be useful for

99

00:03:35,910 --> 00:03:33,840

first responders or even just

100

00:03:37,110 --> 00:03:35,920

communicating anything that's happening

101  
00:03:39,910 --> 00:03:37,120  
on the ground

102  
00:03:42,149 --> 00:03:39,920  
so um so our newest payload which is

103  
00:03:43,670 --> 00:03:42,159  
helping build the space station as an

104  
00:03:47,270 --> 00:03:43,680  
earth observing platform is going to be

105  
00:03:50,070 --> 00:03:47,280  
iserv and it specific purpose is to

106  
00:03:51,830 --> 00:03:50,080  
collect data for humanitarian purposes

107  
00:03:55,030 --> 00:03:51,840  
okay

108  
00:03:57,110 --> 00:03:55,040  
and it's it's a high resolution imager

109  
00:03:59,270 --> 00:03:57,120  
and it's going to be mounted in the

110  
00:04:01,110 --> 00:03:59,280  
wharf which is the window observational

111  
00:04:03,270 --> 00:04:01,120  
research facility which is the rack that

112  
00:04:04,309 --> 00:04:03,280  
sits right in front of the destiny's

113  
00:04:06,470 --> 00:04:04,319

window

114

00:04:08,070 --> 00:04:06,480

and so it'll have which points right

115

00:04:10,789 --> 00:04:08,080

directly down at the surface of the

116

00:04:12,390 --> 00:04:10,799

earth so it'll have the bird's eye view

117

00:04:14,710 --> 00:04:12,400

of the earth it's a high resolution

118

00:04:16,390 --> 00:04:14,720

camera and it ties into this program

119

00:04:18,310 --> 00:04:16,400

called server

120

00:04:19,990 --> 00:04:18,320

and servire is a program out of the

121

00:04:23,030 --> 00:04:20,000

marshall space flight center which is a

122

00:04:24,550 --> 00:04:23,040

collaboration between nasa and u.s

123

00:04:26,710 --> 00:04:24,560

agency for international developer or

124

00:04:29,990 --> 00:04:26,720

usaid

125

00:04:33,110 --> 00:04:30,000

to provide remote sensing data to

126  
00:04:34,870 --> 00:04:33,120  
developing nations around the world that

127  
00:04:38,150 --> 00:04:34,880  
can use these data for

128  
00:04:40,150 --> 00:04:38,160  
a variety of purposes wow so um and i

129  
00:04:41,430 --> 00:04:40,160  
understand you mentioned htv3 that is

130  
00:04:43,270 --> 00:04:41,440  
the japanese

131  
00:04:45,990 --> 00:04:43,280  
cargo ship and it is scheduled to be

132  
00:04:47,350 --> 00:04:46,000  
launched on july 21st so it'll go up on

133  
00:04:50,469 --> 00:04:47,360  
that

134  
00:04:52,150 --> 00:04:50,479  
cargo ship and when exactly will the

135  
00:04:54,629 --> 00:04:52,160  
operations on that

136  
00:04:57,189 --> 00:04:54,639  
particular payload begin

137  
00:04:59,749 --> 00:04:57,199  
i believe it's set up now for november

138  
00:05:01,350 --> 00:04:59,759

for the i serve to come online okay and

139

00:05:03,189 --> 00:05:01,360

so i i assumed that they were going to

140

00:05:04,469 --> 00:05:03,199

be the crew members who are scheduled to

141

00:05:05,909 --> 00:05:04,479

go aboard the international space

142

00:05:08,070 --> 00:05:05,919

station there will be some

143

00:05:10,150 --> 00:05:08,080

they've had some sort of training or

144

00:05:12,310 --> 00:05:10,160

how do they learn to use this piece of

145

00:05:14,950 --> 00:05:12,320

equipment or is it a

146

00:05:16,310 --> 00:05:14,960

right now actually i believe our good

147

00:05:18,870 --> 00:05:16,320

colleagues at marshall are putting

148

00:05:20,550 --> 00:05:18,880

together the the training materials so

149

00:05:21,909 --> 00:05:20,560

that the space station crew members can

150

00:05:23,430 --> 00:05:21,919

install it in the window they've had

151

00:05:24,469 --> 00:05:23,440

some training in that to begin with as

152

00:05:26,550 --> 00:05:24,479

well okay

153

00:05:29,110 --> 00:05:26,560

and um and so that they will know what

154

00:05:31,029 --> 00:05:29,120

to do um when they to install the

155

00:05:32,390 --> 00:05:31,039

instrument and to

156

00:05:34,390 --> 00:05:32,400

have it go through its pace as its

157

00:05:36,830 --> 00:05:34,400

checkout

158

00:05:39,510 --> 00:05:36,840

in addition we do train the crew members

159

00:05:40,950 --> 00:05:39,520

in earth observation so that they know

160

00:05:42,150 --> 00:05:40,960

what they're looking for on the surface

161

00:05:43,909 --> 00:05:42,160

of the earth i don't know if you want to

162

00:05:46,550 --> 00:05:43,919

talk about that we can talk about that

163

00:05:48,550 --> 00:05:46,560

sure okay so so that's in the other part

164

00:05:49,909 --> 00:05:48,560

is that the crew members are in fact

165

00:05:51,749 --> 00:05:49,919

involved in looking at the earth and

166

00:05:54,310 --> 00:05:51,759

knowing what they're seeing and so we do

167

00:05:56,150 --> 00:05:54,320

train them to understand the basic earth

168

00:05:58,710 --> 00:05:56,160

processes and also understand something

169

00:06:01,590 --> 00:05:58,720

about the dynamicism of the earth the um

170

00:06:03,830 --> 00:06:01,600

so that so that when volcanoes erupt or

171

00:06:07,510 --> 00:06:03,840

tropical storm systems

172

00:06:09,510 --> 00:06:07,520

occur over certain areas or

173

00:06:11,029 --> 00:06:09,520

or watching the seasons change watching

174

00:06:13,830 --> 00:06:11,039

the ice melt right now in the northern

175

00:06:16,150 --> 00:06:13,840

hemisphere or the snow buildup

176

00:06:17,909 --> 00:06:16,160

in the southern hemisphere they they

177

00:06:19,430 --> 00:06:17,919

understand the kinds of things that they

178

00:06:21,590 --> 00:06:19,440

need to look for and they can take they

179

00:06:24,790 --> 00:06:21,600

can they can support their observations

180

00:06:27,110 --> 00:06:24,800

that way okay great so um

181

00:06:28,870 --> 00:06:27,120

i want to go into the longest running

182

00:06:32,390 --> 00:06:28,880

study that we've had and it's it's one

183

00:06:34,150 --> 00:06:32,400

of the most popular ones i believe um of

184

00:06:35,909 --> 00:06:34,160

the crew earth observations and you

185

00:06:37,830 --> 00:06:35,919

mentioned that in the earlier but before

186

00:06:39,749 --> 00:06:37,840

we go into that i want to go ahead and

187

00:06:40,870 --> 00:06:39,759

ask you a question that came to us from

188

00:06:46,070 --> 00:06:40,880

twitter

189

00:06:49,510 --> 00:06:46,080

is comes to us from

190

00:06:51,430 --> 00:06:49,520

jay skiers jim he asked what exactly do

191

00:06:54,870 --> 00:06:51,440

they study i guess they don't just

192

00:06:56,390 --> 00:06:54,880

admire the planet although it is lovely

193

00:06:58,870 --> 00:06:56,400

okay so yeah i started to talk about

194

00:07:02,790 --> 00:06:58,880

that a little bit um yeah so so that the

195

00:07:04,469 --> 00:07:02,800

crew members they study specifically

196

00:07:05,990 --> 00:07:04,479

human impacts on the surface of the

197

00:07:08,150 --> 00:07:06,000

earth that they might be able to observe

198

00:07:09,909 --> 00:07:08,160

for example what does a city print look

199

00:07:12,469 --> 00:07:09,919

like and what

200

00:07:15,430 --> 00:07:12,479

kinds of infrastructures can be observed

201  
00:07:17,270 --> 00:07:15,440  
they study specific types of dynamic

202  
00:07:18,469 --> 00:07:17,280  
events and the impacts of those dynamic

203  
00:07:21,270 --> 00:07:18,479  
events

204  
00:07:23,189 --> 00:07:21,280  
for example coastlines change after

205  
00:07:24,230 --> 00:07:23,199  
storm systems or after floods and so

206  
00:07:29,749 --> 00:07:24,240  
they

207  
00:07:31,990 --> 00:07:29,759  
what what kinds of features to look for

208  
00:07:35,029 --> 00:07:32,000  
they study something about

209  
00:07:36,390 --> 00:07:35,039  
the world's climate and where the

210  
00:07:41,909 --> 00:07:36,400  
glaciers

211  
00:07:43,830 --> 00:07:41,919  
and and they study camera techniques so

212  
00:07:45,430 --> 00:07:43,840  
that they know how to most appropriately

213  
00:07:47,430 --> 00:07:45,440

capture the kinds of data that we

214

00:07:48,629 --> 00:07:47,440

request of them and then we help them

215

00:07:51,270 --> 00:07:48,639

every day from the ground by sending

216

00:07:53,990 --> 00:07:51,280

them some information and and you guys

217

00:07:55,430 --> 00:07:54,000

and i i know actually identify areas

218

00:07:57,189 --> 00:07:55,440

because i have today's crew earth

219

00:07:59,189 --> 00:07:57,199

observations that were given to the crew

220

00:08:00,150 --> 00:07:59,199

and so as they have time they go on and

221

00:08:01,830 --> 00:08:00,160

i understand there are different

222

00:08:03,990 --> 00:08:01,840

collection or areas that you guys are

223

00:08:05,350 --> 00:08:04,000

interested in and so for today we have

224

00:08:06,869 --> 00:08:05,360

the capital cities collection do you

225

00:08:08,469 --> 00:08:06,879

want to go through these real quick and

226

00:08:10,869 --> 00:08:08,479

just tell us what what we're looking at

227

00:08:12,790 --> 00:08:10,879

today okay so today um and of course all

228

00:08:13,909 --> 00:08:12,800

the requests are based on where the

229

00:08:15,430 --> 00:08:13,919

space station is going to be at a

230

00:08:17,029 --> 00:08:15,440

certain time we can't ask them to

231

00:08:18,390 --> 00:08:17,039

photograph something that that's on the

232

00:08:21,830 --> 00:08:18,400

other side of the world for where they

233

00:08:24,550 --> 00:08:21,840

are um so today we've got um we one of

234

00:08:26,790 --> 00:08:24,560

our campaigns is to collect imagery of

235

00:08:28,230 --> 00:08:26,800

all of the major cities of the world

236

00:08:35,190 --> 00:08:28,240

and

237

00:08:38,630 --> 00:08:35,200

india's capital is one of the um the

238

00:08:39,990 --> 00:08:38,640

targets for them and some of the in some

239

00:08:42,550 --> 00:08:40,000

areas they get very good about

240

00:08:44,710 --> 00:08:42,560

recognizing patterns cultural patterns

241

00:08:46,310 --> 00:08:44,720

over different countries in the world in

242

00:08:48,070 --> 00:08:46,320

india many of the cities are built out

243

00:08:50,230 --> 00:08:48,080

of materials that are similar to the

244

00:08:52,070 --> 00:08:50,240

countryside so that the cities don't pop

245

00:08:53,829 --> 00:08:52,080

out the same way that they might in the

246

00:08:56,310 --> 00:08:53,839

united states for example where we use

247

00:08:58,230 --> 00:08:56,320

exotic materials and so so we describe

248

00:09:00,630 --> 00:08:58,240

to them what delhi might look like it's

249

00:09:02,710 --> 00:09:00,640

not going to be it'll it'll kind it'll

250

00:09:04,630 --> 00:09:02,720

be a difficult target for them because

251

00:09:05,910 --> 00:09:04,640

of the the building materials and we

252

00:09:07,430 --> 00:09:05,920

asked them to photograph the whole of

253

00:09:11,829 --> 00:09:07,440

the city

254

00:09:13,990 --> 00:09:11,839

kampala which is the capital of uganda

255

00:09:16,310 --> 00:09:14,000

it sits right on

256

00:09:18,389 --> 00:09:16,320

lake victoria and this is one of the

257

00:09:21,030 --> 00:09:18,399

areas that has the fastest growing

258

00:09:23,030 --> 00:09:21,040

populations in the world and and because

259

00:09:25,269 --> 00:09:23,040

it's a tropical region sometimes it's

260

00:09:27,590 --> 00:09:25,279

hard to take photographs of these cities

261

00:09:30,230 --> 00:09:27,600

because it's covered in cloud cover

262

00:09:32,070 --> 00:09:30,240

so some from from these um images that

263

00:09:34,949 --> 00:09:32,080

you are getting when you said it is

264

00:09:36,630 --> 00:09:34,959

becoming quick rapidly populated are you

265

00:09:38,790 --> 00:09:36,640

able to see that population take place

266

00:09:40,550 --> 00:09:38,800

from these views that we get

267

00:09:42,470 --> 00:09:40,560

well actually that's the beauty of

268

00:09:45,829 --> 00:09:42,480

having this long-standing program which

269

00:09:47,670 --> 00:09:45,839

in fact goes back to john glenn in 1962

270

00:09:48,949 --> 00:09:47,680

on his very first orbital flight was he

271

00:09:50,870 --> 00:09:48,959

was the first person to take a camera

272

00:09:52,150 --> 00:09:50,880

into space so we have 50 years of

273

00:09:53,670 --> 00:09:52,160

looking at the earth and some of these

274

00:09:55,590 --> 00:09:53,680

places we do have

275

00:09:57,670 --> 00:09:55,600

decades of data so that we can look at

276

00:09:59,509 --> 00:09:57,680

an image that was taken today and we can

277

00:10:01,430 --> 00:09:59,519

look at an image that was taken 20 years

278

00:10:02,949 --> 00:10:01,440

ago 30 years ago and we can compare

279

00:10:05,110 --> 00:10:02,959

those two and be able to document the

280

00:10:10,389 --> 00:10:05,120

changes in the growth yes fascinating

281

00:10:14,389 --> 00:10:11,990

okay the third thing that we're actually

282

00:10:16,710 --> 00:10:14,399

asking the crew members to um look at

283

00:10:19,110 --> 00:10:16,720

today is a dynamic event it's a dust

284

00:10:21,269 --> 00:10:19,120

storm over the arabian peninsula

285

00:10:22,949 --> 00:10:21,279

they're called haboobs they're seasonal

286

00:10:25,509 --> 00:10:22,959

dust storms you may have heard this word

287

00:10:27,430 --> 00:10:25,519

last summer when arizona was having big

288

00:10:29,990 --> 00:10:27,440

dust storms it was introduced into the

289

00:10:32,310 --> 00:10:30,000

north american weather lingo

290

00:10:34,069 --> 00:10:32,320

and these dust storms can be huge and

291

00:10:36,150 --> 00:10:34,079

the dust can travel many hundreds of

292

00:10:37,670 --> 00:10:36,160

miles and so it's a pretty spectacular

293

00:10:40,069 --> 00:10:37,680

view for the space station crew members

294

00:10:42,389 --> 00:10:40,079

and so why might we be interested in

295

00:10:44,470 --> 00:10:42,399

viewing these types of uh is this again

296

00:10:46,230 --> 00:10:44,480

the natural disaster

297

00:10:49,269 --> 00:10:46,240

and this is uh well this is kind of

298

00:10:52,230 --> 00:10:49,279

understanding how the planet breathes

299

00:10:54,389 --> 00:10:52,240

um and uh this is a swing season that is

300

00:10:56,470 --> 00:10:54,399

a spring or a fall kind of phenomenon so

301  
00:10:57,990 --> 00:10:56,480  
being able to understand where the dust

302  
00:11:00,310 --> 00:10:58,000  
storms you know where the source of the

303  
00:11:02,389 --> 00:11:00,320  
dust is how it gets picked up how thick

304  
00:11:04,230 --> 00:11:02,399  
it is how far it travels does it travel

305  
00:11:05,829 --> 00:11:04,240  
over the city of riyadh for example is

306  
00:11:07,110 --> 00:11:05,839  
it going to impact people on the surface

307  
00:11:09,269 --> 00:11:07,120  
of the earth and just kind of

308  
00:11:11,590 --> 00:11:09,279  
understanding the basic dynamics of

309  
00:11:13,910 --> 00:11:11,600  
these kinds of features because dynamic

310  
00:11:15,590 --> 00:11:13,920  
events are harder to capture from the

311  
00:11:21,430 --> 00:11:15,600  
unmanned satellites

312  
00:11:24,790 --> 00:11:23,430  
and the last

313  
00:11:26,949 --> 00:11:24,800

city that we're asking the crew members

314

00:11:28,790 --> 00:11:26,959

to collect is damascus the capital of

315

00:11:30,069 --> 00:11:28,800

syria of course syria's been in the news

316

00:11:31,030 --> 00:11:30,079

a lot lately

317

00:11:32,790 --> 00:11:31,040

and

318

00:11:34,870 --> 00:11:32,800

but again it's a city

319

00:11:37,030 --> 00:11:34,880

in an area that has rapid population

320

00:11:38,550 --> 00:11:37,040

growth and so we are asking the crew

321

00:11:39,910 --> 00:11:38,560

members to take a photograph of the

322

00:11:42,230 --> 00:11:39,920

urban area

323

00:11:44,389 --> 00:11:42,240

okay great so share with me real quick

324

00:11:46,550 --> 00:11:44,399

what um any views that you have seen

325

00:11:47,990 --> 00:11:46,560

what are your favorites that you've seen

326  
00:11:49,829 --> 00:11:48,000  
from

327  
00:11:52,310 --> 00:11:49,839  
well um

328  
00:11:54,230 --> 00:11:52,320  
one of my very favorite views

329  
00:11:56,230 --> 00:11:54,240  
as a geologist i like volcanoes and i

330  
00:11:58,069 --> 00:11:56,240  
love volcanic eruptions and so we've the

331  
00:12:00,629 --> 00:11:58,079  
crew members have actually sometimes

332  
00:12:02,150 --> 00:12:00,639  
been the first to observe eruptions and

333  
00:12:03,990 --> 00:12:02,160  
in particular one of the most

334  
00:12:06,230 --> 00:12:04,000  
spectacular images that was first

335  
00:12:10,310 --> 00:12:06,240  
collected on the space station uh back

336  
00:12:13,110 --> 00:12:10,320  
in iss 5 as a as a view of mount aetna

337  
00:12:16,150 --> 00:12:13,120  
with a huge eruption plume over the top

338  
00:12:17,990 --> 00:12:16,160

and of course today um popocatepetl the

339

00:12:20,470 --> 00:12:18,000

volcano that's near mexico city is

340

00:12:21,590 --> 00:12:20,480

beginning to show signs of unrest and so

341

00:12:22,949 --> 00:12:21,600

so those are some of my favorite

342

00:12:24,150 --> 00:12:22,959

pictures are the pictures of volcanoes

343

00:12:26,550 --> 00:12:24,160

erupting so i bet you're getting ready

344

00:12:29,030 --> 00:12:26,560

to see that other photo of the

345

00:12:31,910 --> 00:12:29,040

of another volcano active that's right

346

00:12:33,829 --> 00:12:31,920

if if the space station orbits um allow

347

00:12:35,750 --> 00:12:33,839

the crew members to look at that great

348

00:12:40,069 --> 00:12:35,760

well and so these images are very very

349

00:12:43,030 --> 00:12:40,079

popular among the the public and uh

350

00:12:45,509 --> 00:12:43,040

we also we actually have a list um

351  
00:12:47,110 --> 00:12:45,519  
a whole website that a repository if you

352  
00:12:49,030 --> 00:12:47,120  
will of these images that we're taking

353  
00:12:51,110 --> 00:12:49,040  
aboard the international space station

354  
00:12:55,110 --> 00:12:51,120  
and um the public can go and look at

355  
00:12:57,350 --> 00:12:56,470  
also

356  
00:12:59,590 --> 00:12:57,360  
we

357  
00:13:00,790 --> 00:12:59,600  
nasa is has put together an earth day

358  
00:13:06,069 --> 00:13:00,800  
website

359  
00:13:07,509 --> 00:13:06,079  
[www.nasa.gov](http://www.nasa.gov)

360  
00:13:09,590 --> 00:13:07,519  
the um

361  
00:13:12,230 --> 00:13:09,600  
on that we have a list of the top 10

362  
00:13:14,710 --> 00:13:12,240  
requested images as well as the top 10

363  
00:13:17,030 --> 00:13:14,720

most downloaded images from that

364

00:13:18,790 --> 00:13:17,040

particular website the top 10 most

365

00:13:20,230 --> 00:13:18,800

requested images i actually am wearing a

366

00:13:22,790 --> 00:13:20,240

shirt with one of the photos it's the

367

00:13:24,550 --> 00:13:22,800

number one photo it's the apollo 17

368

00:13:26,949 --> 00:13:24,560

earth view

369

00:13:29,110 --> 00:13:26,959

but we are conducting a twitter poll for

370

00:13:30,790 --> 00:13:29,120

the public so you can get your vote in

371

00:13:33,509 --> 00:13:30,800

go to that website and vote for your

372

00:13:36,870 --> 00:13:33,519

favorite of the top ten again you can go

373

00:13:38,710 --> 00:13:36,880

to that at [www.nasa.gov](http://www.nasa.gov)

374

00:13:39,990 --> 00:13:38,720

and we really appreciate your time do

375

00:13:41,430 --> 00:13:40,000

you have any other

376

00:13:43,189 --> 00:13:41,440

things to you want to share with us

377

00:13:45,829 --> 00:13:43,199

about what's going on as far as you know

378

00:13:47,189 --> 00:13:45,839

how we are helping or how iss is

379

00:13:49,269 --> 00:13:47,199

actually helping

380

00:13:51,030 --> 00:13:49,279

with earth day and and

381

00:13:52,230 --> 00:13:51,040

giving back to the earth

382

00:13:53,910 --> 00:13:52,240

well the crew members of course are

383

00:13:56,230 --> 00:13:53,920

tuned in and you've already seen some

384

00:13:59,269 --> 00:13:56,240

some really spectacular images

385

00:14:01,990 --> 00:13:59,279

especially one of the new the new

386

00:14:03,910 --> 00:14:02,000

modes of imagery is taking time lapse

387

00:14:05,269 --> 00:14:03,920

images at night time to show what the

388

00:14:06,629 --> 00:14:05,279

earth looks like at night and that's

389

00:14:08,870 --> 00:14:06,639

actually a very unique contribution that

390

00:14:11,350 --> 00:14:08,880

the space station astronauts can make so

391

00:14:14,310 --> 00:14:11,360

um so they're excited to participate in

392

00:14:17,670 --> 00:14:14,320

an earth day by observing the earth and

393

00:14:19,750 --> 00:14:17,680

and we have um data coming down to the

394

00:14:21,350 --> 00:14:19,760

surface of the earth every day great and

395

00:14:23,189 --> 00:14:21,360

again you can find those time lapse

396

00:14:24,750 --> 00:14:23,199

videos as well on that website correct

397

00:14:26,710 --> 00:14:24,760

at

398

00:14:28,829 --> 00:14:26,720

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