



1
00:00:00,790 --> 00:00:07,320

[Music]

2
00:00:14,010 --> 00:00:10,430

[Applause]

3
00:00:17,820 --> 00:00:14,020

we want to welcome everyone to apps icon

4
00:00:19,890 --> 00:00:17,830

2019 this year's theme is understanding

5
00:00:22,650 --> 00:00:19,900

and enabling to search for life on the

6
00:00:24,410 --> 00:00:22,660

worlds near and far which is a critical

7
00:00:28,260 --> 00:00:24,420

step in answering the age-old question

8
00:00:31,050 --> 00:00:28,270

are we alone in the universe on our

9
00:00:34,560 --> 00:00:31,060

planet we've discovered microbes deep

10
00:00:37,350 --> 00:00:34,570

under the ice in Antarctica in extremely

11
00:00:39,750 --> 00:00:37,360

hot environments at hydrothermal vents

12
00:00:42,840 --> 00:00:39,760

under the ocean and in the driest

13
00:00:44,910 --> 00:00:42,850

deserts we could imagine it's incredibly

14

00:00:47,970 --> 00:00:44,920

difficult to find a place on earth where

15

00:00:50,210 --> 00:00:47,980

life cannot survive but that's just one

16

00:00:53,430 --> 00:00:50,220

data point and were headed to another

17

00:00:55,709 --> 00:00:53,440

the newly announced Artemis program lead

18

00:00:59,060 --> 00:00:55,719

us back to the moon as a stepping stone

19

00:01:01,560 --> 00:00:59,070

to a critical astrobiology target Mars

20

00:01:04,280 --> 00:01:01,570

NASA's search for life in the solar

21

00:01:06,480 --> 00:01:04,290

system wouldn't exist without you our

22

00:01:09,300 --> 00:01:06,490

incredibly diverse and hard-working

23

00:01:11,249 --> 00:01:09,310

community of astrobiologists the

24

00:01:14,010 --> 00:01:11,259

important science you all do on our

25

00:01:15,780 --> 00:01:14,020

planet helps look for life on Mars and

26

00:01:18,690 --> 00:01:15,790

other worlds like Jupiter's moon Europa

27

00:01:22,140 --> 00:01:18,700

or Saturn's moons and Calisto and Titan

28

00:01:25,230 --> 00:01:22,150

it takes everyone from all over with

29

00:01:27,600 --> 00:01:25,240

diverse backgrounds working together to

30

00:01:30,600 --> 00:01:27,610

bring new questions insights and

31

00:01:32,719 --> 00:01:30,610

discoveries NASA writes itself on

32

00:01:37,440 --> 00:01:32,729

celebrating inclusion and diversity and

33

00:01:40,109 --> 00:01:37,450

speaking of pride during Pride Month in

34

00:01:42,330 --> 00:01:40,119

honor of Pride Month we especially want

35

00:01:46,980 --> 00:01:42,340

to recognize the extraordinary work of

36

00:01:49,469 --> 00:01:46,990

our LGBTQIA scientists again thank you

37

00:01:52,859 --> 00:01:49,479

for all the hard work you do have a

38

00:01:56,219 --> 00:01:52,869

great week I just want to let you know

39

00:01:57,899 --> 00:01:56,229

that both Thomas and Laurie actually

40

00:01:59,069 --> 00:01:57,909

really wanted to be here this year they

41

00:02:01,310 --> 00:01:59,079

realized that there was going to be an

42

00:02:04,260 --> 00:02:01,320

exciting meeting with lots of important

43

00:02:05,760 --> 00:02:04,270

discoveries and they spent the time and

44

00:02:08,340 --> 00:02:05,770

their busy schedules to make this

45

00:02:10,280 --> 00:02:08,350

introductory video to welcome you to the

46

00:02:15,210 --> 00:02:10,290

meeting and and show their appreciation

47

00:02:17,180 --> 00:02:15,220

so anyway that's starting us off we have

48

00:02:19,010 --> 00:02:17,190

a really tightly packed hour

49

00:02:21,740 --> 00:02:19,020

the agenda kept getting filled even more

50

00:02:25,100 --> 00:02:21,750

and more in the last few hours but we're

51
00:02:27,200 --> 00:02:25,110
gonna start out with a report from the

52
00:02:28,970 --> 00:02:27,210
principal investigator for the Sam

53
00:02:30,950 --> 00:02:28,980
instrument on curiosity

54
00:02:33,320 --> 00:02:30,960
everybody's been hearing the buzz about

55
00:02:36,620 --> 00:02:33,330
methane did they measure it is it high

56
00:02:41,000 --> 00:02:36,630
is there life what's the story and so we

57
00:02:51,050 --> 00:02:41,010
have Paul Mahaffey here to tell us what

58
00:02:53,270 --> 00:02:51,060
what exactly is going on thanks Mary

59
00:02:56,750 --> 00:02:53,280
it's been a pretty exciting last few

60
00:02:58,280 --> 00:02:56,760
days I must say in five minutes I'm

61
00:03:01,340 --> 00:02:58,290
gonna give you the history of methane on

62
00:03:05,900 --> 00:03:01,350
Mars which started off a few years ago

63
00:03:08,290 --> 00:03:05,910

actually with earth-based sensing when

64

00:03:11,930 --> 00:03:08,300

plumes were reported from mauna kea

65

00:03:15,260 --> 00:03:11,940

infrared spectroscopy and so when we

66

00:03:17,240 --> 00:03:15,270

proposed the sam experiment on the on

67

00:03:20,650 --> 00:03:17,250

the Curiosity rover the mass

68

00:03:25,310 --> 00:03:20,660

spectrometer down in that region has

69

00:03:27,140 --> 00:03:25,320

noise background contamination and so we

70

00:03:29,300 --> 00:03:27,150

invited Chris Webster to put a tunable

71

00:03:30,740 --> 00:03:29,310

laser spectrometer on Sam tunable laser

72

00:03:32,630 --> 00:03:30,750

spectrometer is a nice small device

73

00:03:35,120 --> 00:03:32,640

where light bounces back between two

74

00:03:37,460 --> 00:03:35,130

mirrors and for a very small device you

75

00:03:39,860 --> 00:03:37,470

get like many meters of path length and

76

00:03:41,960 --> 00:03:39,870

great sensitivity so we got to the

77

00:03:45,229 --> 00:03:41,970

surface of Mars the ground-based

78

00:03:47,570 --> 00:03:45,239

observations had been controversial to

79

00:03:50,750 --> 00:03:47,580

say the least and so we were gonna go to

80

00:03:52,190 --> 00:03:50,760

Mars and and understand whether it was

81

00:03:55,250 --> 00:03:52,200

really there or not it turned out it was

82

00:03:59,420 --> 00:03:55,260

still controversial but remember the

83

00:04:00,949 --> 00:03:59,430

date June 15 2013 it was after we landed

84

00:04:04,190 --> 00:04:00,959

after we'd made a few measurements and

85

00:04:06,830 --> 00:04:04,200

they were kind of close to zero within

86

00:04:11,630 --> 00:04:06,840

the within the noise of being 0 on June

87

00:04:13,280 --> 00:04:11,640

15 2013 we saw a higher value six parts

88

00:04:14,060 --> 00:04:13,290

per billion that was interesting it

89

00:04:17,750 --> 00:04:14,070

rapidly went away

90

00:04:21,349 --> 00:04:17,760

that was Mars year 31 you start Mars

91

00:04:23,450 --> 00:04:21,359

here counting from 1955 I guess Mars

92

00:04:26,029 --> 00:04:23,460

year 32 in the northern spring something

93

00:04:27,770 --> 00:04:26,039

really interesting we saw a period of

94

00:04:30,240 --> 00:04:27,780

about four months where methane came up

95

00:04:32,880 --> 00:04:30,250

kind of between six and nine

96

00:04:35,430 --> 00:04:32,890

each parts-per-billion we made four

97

00:04:39,090 --> 00:04:35,440

measurements over two months and then it

98

00:04:41,760 --> 00:04:39,100

went away again Marcy our 33 in northern

99

00:04:43,980 --> 00:04:41,770

autumn going into winter again we saw

100

00:04:47,550 --> 00:04:43,990

another value six parts per billion

101
00:04:50,760 --> 00:04:47,560
which went away and then really nothing

102
00:04:52,830 --> 00:04:50,770
in direct measurements in Mars year 34

103
00:04:56,130 --> 00:04:52,840
but in the meantime what we had

104
00:04:59,160 --> 00:04:56,140
developed was basically using a device

105
00:05:02,220 --> 00:04:59,170
we had developed to enrich noble gases

106
00:05:04,650 --> 00:05:02,230
on Mars to pull out xenon and such we

107
00:05:06,960 --> 00:05:04,660
use that basically Charles molestin

108
00:05:09,120 --> 00:05:06,970
who's here spent days in the lab

109
00:05:11,490 --> 00:05:09,130
developing it basically sucking the

110
00:05:13,200 --> 00:05:11,500
atmosphere through these enrichment

111
00:05:15,900 --> 00:05:13,210
cells scrubbing out the carbon dioxide

112
00:05:18,180 --> 00:05:15,910
and basically enriching the methane and

113
00:05:20,430 --> 00:05:18,190

the tunable laser spectrometer by factor

114

00:05:22,560 --> 00:05:20,440
of about 25 and we did that over

115

00:05:23,130 --> 00:05:22,570
multiple Mars years we have about 10

116

00:05:28,140 --> 00:05:23,140
points

117

00:05:30,390 --> 00:05:28,150
Mars years 31 32 33 and 34 and those

118

00:05:33,000 --> 00:05:30,400
measurements were all below one part per

119

00:05:34,620 --> 00:05:33,010
billion between point two and point six

120

00:05:39,300 --> 00:05:34,630
and they kind of showed a seasonal

121

00:05:41,310 --> 00:05:39,310
variation but we had never seen enhanced

122

00:05:43,140 --> 00:05:41,320
methane or a methane flew more spiked or

123

00:05:47,070 --> 00:05:43,150
whatever you want to call it with the

124

00:05:51,210 --> 00:05:47,080
enrichment experiment until last week so

125

00:05:53,010 --> 00:05:51,220
the this run was run Wednesday in the

126
00:05:56,550 --> 00:05:53,020
middle of the night and then on Thursday

127
00:05:58,290 --> 00:05:56,560
we got the data back and Chris Webster's

128
00:06:01,650 --> 00:05:58,300
words were incredible and dumbfounded

129
00:06:03,659 --> 00:06:01,660
and we were surprised we saw 21 parts

130
00:06:07,050 --> 00:06:03,669
per billion the highest we've ever seen

131
00:06:11,280 --> 00:06:07,060
in the enrichment mode which was really

132
00:06:13,590 --> 00:06:11,290
interesting so that's a story which

133
00:06:17,909 --> 00:06:13,600
rapidly somehow made its way to the New

134
00:06:20,100 --> 00:06:17,919
York Times and we decided anyway with

135
00:06:22,740 --> 00:06:20,110
great help from Ashwin we would scrap

136
00:06:24,870 --> 00:06:22,750
the weekend plan and make that run again

137
00:06:27,750 --> 00:06:24,880
and we did make the run again the data

138
00:06:30,210 --> 00:06:27,760

cane just came back and in fact the

139

00:06:32,100 --> 00:06:30,220

methane plume went away it's we measured

140

00:06:34,890 --> 00:06:32,110

it both with direct and with enrichment

141

00:06:37,440 --> 00:06:34,900

it's back down now to below one part per

142

00:06:39,360 --> 00:06:37,450

billion so kind of consistent with with

143

00:06:40,830 --> 00:06:39,370

what we've seen all along but just a

144

00:06:44,390 --> 00:06:40,840

couple things to note

145

00:06:49,409 --> 00:06:44,400

I have to remember that date June 15

146

00:06:51,719 --> 00:06:49,419

because the day after their Mars Express

147

00:06:54,060 --> 00:06:51,729

planetary Fourier spectrometer had flown

148

00:06:55,800 --> 00:06:54,070

over Gale Crater and they were using in

149

00:06:58,469 --> 00:06:55,810

a mode where basically they stared at

150

00:07:00,900 --> 00:06:58,479

Gale Crater quite complicated but

151
00:07:04,140 --> 00:07:00,910
basically summing up hundreds of spectra

152
00:07:07,260 --> 00:07:04,150
and they found what amounted to in their

153
00:07:09,870 --> 00:07:07,270
paper forty six tons of methane in a

154
00:07:12,360 --> 00:07:09,880
area that was kind of 250 kilometers by

155
00:07:14,790 --> 00:07:12,370
250 kilometres including Gale Crater and

156
00:07:16,469 --> 00:07:14,800
so that was really fascinating and other

157
00:07:20,280 --> 00:07:16,479
measurements before and after that were

158
00:07:22,850 --> 00:07:20,290
we had seen zero methane they didn't see

159
00:07:26,219 --> 00:07:22,860
any as well so that was very interesting

160
00:07:28,530 --> 00:07:26,229
and they published that on April 1

161
00:07:34,820 --> 00:07:28,540
you should never publish a methane paper

162
00:07:37,560 --> 00:07:34,830
and April 1 I guess so that's the story

163
00:07:39,629 --> 00:07:37,570

plume came and a plume went we're very

164

00:07:42,270 --> 00:07:39,639

confident of the measurement and I

165

00:07:44,610 --> 00:07:42,280

should say that both Mars Express and

166

00:07:46,770 --> 00:07:44,620

trace gas orbiter which to date has not

167

00:07:48,120 --> 00:07:46,780

seen methane although it only senses

168

00:07:50,640 --> 00:07:48,130

down to a few kilometers above the

169

00:07:53,490 --> 00:07:50,650

surface we're coordinating with them and

170

00:07:55,260 --> 00:07:53,500

we're very happy to make coordinated

171

00:07:57,120 --> 00:07:55,270

measurements and so on so that's the

172

00:08:00,240 --> 00:07:57,130

long of the short story the history of

173

00:08:02,879 --> 00:08:00,250

methane on Mars so don't leave just yet

174

00:08:03,960 --> 00:08:02,889

so um we're willing to entertain maybe a

175

00:08:08,700 --> 00:08:03,970

couple of questions just for

176

00:08:09,270 --> 00:08:08,710

clarification otherwise find it buy you

177

00:08:11,219 --> 00:08:09,280

a drink

178

00:08:12,420 --> 00:08:11,229

maybe phone call if the poster session

179

00:08:13,529 --> 00:08:12,430

and buy him a drink

180

00:08:17,850 --> 00:08:13,539

does anybody have any quick

181

00:08:29,960 --> 00:08:17,860

clarification questions okay thank you

182

00:08:36,329 --> 00:08:33,870

okay okay so we're gonna take the first

183

00:08:38,670 --> 00:08:36,339

part of tonight's Town Hall to talk a

184

00:08:41,719 --> 00:08:38,680

little bit about all of the programs and

185

00:08:44,250 --> 00:08:41,729

the astrobiology program that have

186

00:08:46,470 --> 00:08:44,260

solicitation calls out and one for the

187

00:08:48,510 --> 00:08:46,480

future to let you guys know a little bit

188

00:08:50,340 --> 00:08:48,520

about the history in terms of what have

189

00:08:54,360 --> 00:08:50,350

been the selection rates what have been

190

00:08:56,040 --> 00:08:54,370

the proposal pressures and and what sort

191

00:08:58,500 --> 00:08:56,050

of things that we've been funding and

192

00:09:00,269 --> 00:08:58,510

fortunately all the program officers for

193

00:09:03,470 --> 00:09:00,279

all of those programs are here tonight

194

00:09:05,640 --> 00:09:03,480

with the exception of Becky McCauley

195

00:09:08,970 --> 00:09:05,650

she's home working on the next

196

00:09:11,040 --> 00:09:08,980

generation of astrobiologist and could

197

00:09:14,310 --> 00:09:11,050

not travel to the meeting so we're gonna

198

00:09:16,530 --> 00:09:14,320

start off with talking about exobiology

199

00:09:25,740 --> 00:09:16,540

their granddaddy of the astrobiology

200

00:09:27,600 --> 00:09:25,750

program hi I'm Lindsay Hays I am now the

201
00:09:29,340 --> 00:09:27,610
the lead the caucus lead for the

202
00:09:32,850 --> 00:09:29,350
exobiology program

203
00:09:35,220 --> 00:09:32,860
so for in Rose's 18 a couple changes

204
00:09:37,199 --> 00:09:35,230
that we had in the exobiology program we

205
00:09:40,890 --> 00:09:37,209
moved from the sort of step 1 step 2

206
00:09:42,300 --> 00:09:40,900
process to the NOI step 2 process and

207
00:09:44,070 --> 00:09:42,310
we've also moved the due date from

208
00:09:47,880 --> 00:09:44,080
October to May so this is in the last

209
00:09:49,199 --> 00:09:47,890
round of roses in that round we had a

210
00:09:52,050 --> 00:09:49,209
hundred and fifty six proposals

211
00:09:53,940 --> 00:09:52,060
submitted 24 were selected for funding

212
00:09:55,620 --> 00:09:53,950
21 of those were fully selected we had a

213
00:09:57,870 --> 00:09:55,630

partially selected one a conditionally

214

00:09:59,760 --> 00:09:57,880

funded one as well as one that was

215

00:10:01,590 --> 00:09:59,770

funded through sort of general RNA funds

216

00:10:03,240 --> 00:10:01,600

because it was sort of between the

217

00:10:05,610 --> 00:10:03,250

exobiology and the emerging worlds

218

00:10:07,769 --> 00:10:05,620

programs we had a selection rate of

219

00:10:11,340 --> 00:10:07,779

fifteen point three for this program for

220

00:10:13,800 --> 00:10:11,350

last year this year for roses 19 we had

221

00:10:16,590 --> 00:10:13,810

to move the the the due date for the

222

00:10:19,110 --> 00:10:16,600

selection or for the submission the due

223

00:10:21,329 --> 00:10:19,120

date was six was June 13th so a little

224

00:10:22,500 --> 00:10:21,339

bit more than a week ago and we received

225

00:10:25,710 --> 00:10:22,510

one hundred and fifty eight proposals

226

00:10:27,829 --> 00:10:25,720

good job in consistent community I'm

227

00:10:30,840 --> 00:10:27,839

looking forward to working through those

228

00:10:33,090 --> 00:10:30,850

there will be a bit of a delay in terms

229

00:10:35,890 --> 00:10:33,100

of when we're able to get the selections

230

00:10:39,280 --> 00:10:35,900

out because of a sort of pileup

231

00:10:40,810 --> 00:10:39,290

of of reviews due to the the shutdown

232

00:10:42,970 --> 00:10:40,820

and the moving of due dates across a

233

00:10:45,190 --> 00:10:42,980

number of different roses programs so

234

00:10:47,230 --> 00:10:45,200

we're committed to getting responses to

235

00:10:50,940 --> 00:10:47,240

you guys as soon as we can but we

236

00:10:54,190 --> 00:10:50,950

appreciate your patience ahead of time

237

00:10:55,660 --> 00:10:54,200

so in terms of the sort of history you

238

00:10:58,150 --> 00:10:55,670

may be familiar with a slide that looks

239

00:10:59,410 --> 00:10:58,160

a lot like this being presented by by

240

00:11:01,270 --> 00:10:59,420

Michael in the past

241

00:11:03,670 --> 00:11:01,280

this one's been of course updated for

242

00:11:05,260 --> 00:11:03,680

the last two selections you can see the

243

00:11:07,060 --> 00:11:05,270

number of proposals has sort of gone up

244

00:11:09,700 --> 00:11:07,070

over the years it's sort of remaining

245

00:11:12,220 --> 00:11:09,710

very consistent the selection rate we've

246

00:11:13,720 --> 00:11:12,230

had our ups and downs and so this is

247

00:11:15,940 --> 00:11:13,730

sort of how we've gone over the next

248

00:11:19,180 --> 00:11:15,950

couple of the past couple years remember

249

00:11:21,400 --> 00:11:19,190

in 2012 we did not have a call so that's

250

00:11:24,940 --> 00:11:21,410

where that missing data point or set of

251
00:11:26,290 --> 00:11:24,950
data points are and then finally to give

252
00:11:28,330 --> 00:11:26,300
you just a little bit of an idea of the

253
00:11:30,430 --> 00:11:28,340
distribution of funded tasks this is how

254
00:11:33,820 --> 00:11:30,440
they breaks down in sort of the

255
00:11:36,610 --> 00:11:33,830
different aspects of of the exobiology

256
00:11:38,710 --> 00:11:36,620
program so this is sort of based on the

257
00:11:40,900 --> 00:11:38,720
award amounts not necessarily just this

258
00:11:43,390 --> 00:11:40,910
the total number of awards within each

259
00:11:45,390 --> 00:11:43,400
of those this is bio signatures and life

260
00:11:47,650 --> 00:11:45,400
elsewhere in this sort of dark blue

261
00:11:50,080 --> 00:11:47,660
evolution of advanced life in the

262
00:11:52,090 --> 00:11:50,090
whitish early evolution of life in the

263
00:11:54,910 --> 00:11:52,100

biosphere and that sort of dark black

264

00:11:56,860 --> 00:11:54,920

dark purple large-scale environmental

265

00:11:59,260 --> 00:11:56,870

change and macro-evolution is the small

266

00:12:00,940 --> 00:11:59,270

purple wedge and prebiotic evolution is

267

00:12:02,200 --> 00:12:00,950

that teal wedge you can see the

268

00:12:04,300 --> 00:12:02,210

difference between the sort of awards

269

00:12:06,130 --> 00:12:04,310

that we're continuing this year which is

270

00:12:08,710 --> 00:12:06,140

roughly two years of funding and the new

271

00:12:11,350 --> 00:12:08,720

awards we currently also fund eight

272

00:12:13,750 --> 00:12:11,360

nesic awards which will this year be

273

00:12:15,130 --> 00:12:13,760

replaced by the future investigators in

274

00:12:18,160 --> 00:12:15,140

NASA Earth and space science and

275

00:12:20,740 --> 00:12:18,170

technology or finest program and we also

276

00:12:23,710 --> 00:12:20,750

cover one early career fellow who has

277

00:12:26,140 --> 00:12:23,720

received startup funding we note there

278

00:12:29,200 --> 00:12:26,150

is no early career fellowship program in

279

00:12:31,560 --> 00:12:29,210

groves of 17 or 18 that is planned to be

280

00:12:35,640 --> 00:12:31,570

replaced by the early career Awards

281

00:12:38,980 --> 00:12:35,650

program which will come out this year so

282

00:12:41,020 --> 00:12:38,990

sure the major difference between the

283

00:12:42,970 --> 00:12:41,030

early career fellowship and the early

284

00:12:45,250 --> 00:12:42,980

career Awards is that for the early

285

00:12:46,960 --> 00:12:45,260

career Awards you will be asked to it

286

00:12:49,360 --> 00:12:46,970

will be limited to folks who have

287

00:12:52,030 --> 00:12:49,370

already received an award from a rose's

288

00:12:54,610 --> 00:12:52,040

program so almost any of the roses

289

00:12:56,680 --> 00:12:54,620

programs are eligible once you have

290

00:12:58,570 --> 00:12:56,690

received the award you are then eligible

291

00:13:01,000 --> 00:12:58,580

to apply for the early career Awards

292

00:13:03,400 --> 00:13:01,010

program we have extended the period that

293

00:13:06,340 --> 00:13:03,410

is considered early career from seven

294

00:13:09,640 --> 00:13:06,350

years to ten years post PhD and we've

295

00:13:13,270 --> 00:13:09,650

allowed for with permission certain

296

00:13:14,830 --> 00:13:13,280

things or considered certain things

297

00:13:16,390 --> 00:13:14,840

involving family problems or you know

298

00:13:17,650 --> 00:13:16,400

other things like that are considered

299

00:13:19,510 --> 00:13:17,660

reasons for sort of extending that a

300

00:13:22,690 --> 00:13:19,520

little bit beyond you can find all that

301

00:13:24,400 --> 00:13:22,700

information in roses and and find out

302

00:13:27,310 --> 00:13:24,410

also the contact for that is Shoshana

303

00:13:29,220 --> 00:13:27,320

rather and you can contact her for more

304

00:13:35,440 --> 00:13:29,230

information about that kind of thing so

305

00:13:36,910 --> 00:13:35,450

any questions okay you guys there's a

306

00:13:38,590 --> 00:13:36,920

lot coming up so I'm glad you guys are

307

00:13:41,290 --> 00:13:38,600

with us and moving through quickly yeah

308

00:13:47,620 --> 00:13:45,100

the with the I think the the what sorry

309

00:13:50,260 --> 00:13:47,630

when is finest going to be announced the

310

00:13:53,920 --> 00:13:50,270

goal I believe is at the end of this

311

00:13:57,040 --> 00:13:53,930

month or early next month so June 27

312

00:13:59,470 --> 00:13:57,050

okay June 27th is a current target date

313

00:14:01,120 --> 00:13:59,480

even though the selections or the

314

00:14:02,590 --> 00:14:01,130

submissions were due late this year or

315

00:14:04,750 --> 00:14:02,600

we you know we gave some some leniency

316

00:14:06,910 --> 00:14:04,760

because of the shutdown our goal is

317

00:14:08,980 --> 00:14:06,920

still to get them out in in time to get

318

00:14:13,990 --> 00:14:08,990

funding for the fall semester for

319

00:14:21,440 --> 00:14:14,000

students any other questions okay thank

320

00:14:27,630 --> 00:14:24,600

okay I am Matt Schulte I'm the lead of

321

00:14:29,310 --> 00:14:27,640

the caucus for habitable worlds so just

322

00:14:32,340 --> 00:14:29,320

a couple of quick slides on habitable

323

00:14:34,410 --> 00:14:32,350

worlds the most recent call that we have

324

00:14:37,290 --> 00:14:34,420

data for for habitable worlds is from

325

00:14:40,800 --> 00:14:37,300

roses 2018 as many of you know it's

326

00:14:44,000 --> 00:14:40,810

project I think it's the last call for

327

00:14:45,810 --> 00:14:44,010

the roses cycle in planetary science so

328

00:14:49,770 --> 00:14:45,820

everything is sort of a little bit

329

00:14:51,660 --> 00:14:49,780

lagged for habitable worlds for the most

330

00:14:54,900 --> 00:14:51,670

recent one which was 18 the step ones

331

00:14:56,970 --> 00:14:54,910

were due in November the step twos were

332

00:14:59,310 --> 00:14:56,980

originally due in the middle of the

333

00:15:02,340 --> 00:14:59,320

government shutdown and so because of

334

00:15:05,100 --> 00:15:02,350

the shutdown the due date for the full

335

00:15:07,620 --> 00:15:05,110

proposals was moved until the earliest

336

00:15:11,490 --> 00:15:07,630

possible date allowed by Thomas reppuken

337

00:15:14,040 --> 00:15:11,500

which was the 29th of March so we got on

338

00:15:16,110 --> 00:15:14,050

the order of 65 proposals I don't

339

00:15:17,820 --> 00:15:16,120

remember the exact number that it's

340

00:15:19,290 --> 00:15:17,830

somewhere between 60 and 70 I don't

341

00:15:25,050 --> 00:15:19,300

remember the exact number off the top of

342

00:15:27,330 --> 00:15:25,060

my head which is why 65 is there and so

343

00:15:29,630 --> 00:15:27,340

we are currently working on the

344

00:15:32,010 --> 00:15:29,640

evaluation process for those proposals

345

00:15:34,680 --> 00:15:32,020

we're targeting to have announcements

346

00:15:36,750 --> 00:15:34,690

for those sometime late summer early

347

00:15:41,130 --> 00:15:36,760

fall I don't know the exact date yet

348

00:15:44,010 --> 00:15:41,140

but stay tuned for that so for the roses

349

00:15:46,980 --> 00:15:44,020

2017 again which is the most recent year

350

00:15:48,510 --> 00:15:46,990

we have data for there were 46 proposals

351
00:15:52,530 --> 00:15:48,520
so we've had an increase in the number

352
00:15:55,640 --> 00:15:52,540
of submissions out of the 46 we selected

353
00:15:58,050 --> 00:15:55,650
eight which is a 17.4% selection rate

354
00:16:00,870 --> 00:15:58,060
seven were fully selected one was

355
00:16:03,180 --> 00:16:00,880
partially selected and one we selected

356
00:16:05,460 --> 00:16:03,190
that was actually funded by the

357
00:16:07,200 --> 00:16:05,470
heliophysics division as many of you

358
00:16:08,910 --> 00:16:07,210
know habitable worlds is what's

359
00:16:11,850 --> 00:16:08,920
considered to be a cross-disciplinary

360
00:16:14,280 --> 00:16:11,860
program so we involve astrophysics and

361
00:16:16,410 --> 00:16:14,290
heliophysics in that process and they

362
00:16:18,690 --> 00:16:16,420
were actually excited about one of the

363
00:16:20,370 --> 00:16:18,700

proposals that we got in hab worlds and

364

00:16:23,010 --> 00:16:20,380

so they select they were actually able

365

00:16:25,980 --> 00:16:23,020

to fund that so great thanks to them for

366

00:16:28,560 --> 00:16:25,990

doing that currently we have 21 active

367

00:16:30,660 --> 00:16:28,570

grants in the program three of those are

368

00:16:32,129 --> 00:16:30,670

nesaf Awards which are soon to be the

369

00:16:35,619 --> 00:16:32,139

finest awards

370

00:16:38,619 --> 00:16:35,629

and we expect to be able to select maybe

371

00:16:40,059 --> 00:16:38,629

one or two finest from the recent batch

372

00:16:45,219 --> 00:16:40,069

of them that will be announced

373

00:16:47,799 --> 00:16:45,229

apparently next week so here are the

374

00:16:51,009 --> 00:16:47,809

data for habitable worlds as you all

375

00:16:54,939 --> 00:16:51,019

know this program just began in Rose's

376
00:16:57,219 --> 00:16:54,949
year 2014 and so you see by solicitation

377
00:17:00,399 --> 00:16:57,229
here on the x-axis with the number of

378
00:17:02,529 --> 00:17:00,409
proposals on the y-axis on the left-hand

379
00:17:05,079 --> 00:17:02,539
side and the selection rate on the

380
00:17:07,210 --> 00:17:05,089
y-axis on the right-hand side so a

381
00:17:08,649 --> 00:17:07,220
number of proposals has gone down over

382
00:17:11,559 --> 00:17:08,659
the years although it's come back up

383
00:17:14,049 --> 00:17:11,569
again this year so great for you guys

384
00:17:15,789 --> 00:17:14,059
for submitting more proposals and then

385
00:17:17,919 --> 00:17:15,799
the selection rate has remained fairly

386
00:17:19,659 --> 00:17:17,929
steady somewhere between 15 and 20

387
00:17:22,149 --> 00:17:19,669
percent and we expect that to continue

388
00:17:29,740 --> 00:17:22,159

and I think that's the last slide I have

389

00:17:32,499 --> 00:17:29,750

oh and we are always looking for

390

00:17:35,440 --> 00:17:32,509

reviewers for the program so if anyone

391

00:17:38,110 --> 00:17:35,450

would like to volunteer for exobiology -

392

00:17:39,580 --> 00:17:38,120

and Lindsay's raising your hand so if

393

00:17:42,279 --> 00:17:39,590

you are interested in volunteering

394

00:17:44,169 --> 00:17:42,289

please send me an email you can find my

395

00:17:45,970 --> 00:17:44,179

contact information on all the NASA web

396

00:17:49,060 --> 00:17:45,980

pages that have information about the

397

00:17:51,279 --> 00:17:49,070

program it does build character as

398

00:17:53,049 --> 00:17:51,289

Michael's pointed out so and it is a

399

00:17:55,419 --> 00:17:53,059

very good experience especially for

400

00:17:57,159 --> 00:17:55,429

early career people who like to get some

401
00:18:00,279 --> 00:17:57,169
practice and understand what reviewers

402
00:18:03,090 --> 00:18:00,289
look for in proposals so a great idea to

403
00:18:08,540 --> 00:18:03,100
sign up to volunteer so let us know

404
00:18:19,050 --> 00:18:11,010
they're stunned into silence I love it

405
00:18:20,310 --> 00:18:19,060
okay I think well I think you were very

406
00:18:21,870 --> 00:18:20,320
nice snitch I was going to say if you

407
00:18:26,550 --> 00:18:21,880
want to ask us any questions we're

408
00:18:28,800 --> 00:18:26,560
taking names for reviewers all right I'm

409
00:18:30,570 --> 00:18:28,810
going to wrap up with well I'm going to

410
00:18:32,430 --> 00:18:30,580
talk about two remaining programs that

411
00:18:34,980 --> 00:18:32,440
are related to astrobiology and then

412
00:18:36,570 --> 00:18:34,990
discuss our new program so I'm one of

413
00:18:38,220 --> 00:18:36,580

the leads for the Planetary Science and

414

00:18:42,290 --> 00:18:38,230

Technology through analog research

415

00:18:45,690 --> 00:18:42,300

program P star it was as you may

416

00:18:46,380 --> 00:18:45,700

remember before it's the follow-on to a

417

00:18:49,410 --> 00:18:46,390

step

418

00:18:51,180 --> 00:18:49,420

NASA is always evolving in terms of the

419

00:18:53,550 --> 00:18:51,190

research that we solicited in response

420

00:18:56,910 --> 00:18:53,560

to what we need for our missions and how

421

00:19:00,480 --> 00:18:56,920

the the science and the fields evolve

422

00:19:03,450 --> 00:19:00,490

and so P star came out around the same

423

00:19:06,000 --> 00:19:03,460

time as the reorganization and looks for

424

00:19:08,010 --> 00:19:06,010

as it describes taking science and

425

00:19:11,730 --> 00:19:08,020

technology out into the field and analog

426
00:19:13,680 --> 00:19:11,740
environments and preparing for the as a

427
00:19:16,950 --> 00:19:13,690
step did the exploration of planetary

428
00:19:19,620 --> 00:19:16,960
environments so N'Roses 18 it was not

429
00:19:22,770 --> 00:19:19,630
solicited due to a lack of funding I'm

430
00:19:24,390 --> 00:19:22,780
sure your lip mate perhaps you may be a

431
00:19:27,240 --> 00:19:24,400
little alarmed by the low selection

432
00:19:29,670 --> 00:19:27,250
rates we have a lot of really great

433
00:19:32,910 --> 00:19:29,680
things that are going on in planetary

434
00:19:35,040 --> 00:19:32,920
wonderful missions lots of continuing

435
00:19:39,840 --> 00:19:35,050
Rovers that don't seem to ever want to

436
00:19:41,850 --> 00:19:39,850
break and which is fantastic

437
00:19:43,260 --> 00:19:41,860
and of course the cost of science is

438
00:19:44,700 --> 00:19:43,270

going up and that's not being

439

00:19:46,950 --> 00:19:44,710

necessarily matched by the amount of

440

00:19:48,000 --> 00:19:46,960

funding that we're getting and so we're

441

00:19:50,010 --> 00:19:48,010

doing that we just want you to know

442

00:19:52,320 --> 00:19:50,020

we're doing the best job that we can we

443

00:19:53,880 --> 00:19:52,330

don't want to waste anybody's time so P

444

00:19:56,610 --> 00:19:53,890

Star decided when there really wasn't

445

00:19:58,890 --> 00:19:56,620

enough funding to make more than maybe

446

00:20:02,070 --> 00:19:58,900

an eight percent selection rate that it

447

00:20:03,930 --> 00:20:02,080

wasn't even worth soliciting so the year

448

00:20:04,980 --> 00:20:03,940

before that and it is solicited this

449

00:20:07,800 --> 00:20:04,990

year so we're back

450

00:20:11,250 --> 00:20:07,810

but in roses 17 we got 61 step1

451
00:20:13,530 --> 00:20:11,260
proposals 11 of them were discouraged

452
00:20:14,550 --> 00:20:13,540
it's a program that is really important

453
00:20:15,960 --> 00:20:14,560
to understand and that's why I'm

454
00:20:17,250 --> 00:20:15,970
describing a little bit more than the

455
00:20:18,690 --> 00:20:17,260
other ones and that is

456
00:20:20,639 --> 00:20:18,700
there are three components to

457
00:20:23,909 --> 00:20:20,649
it's--there's science technology and

458
00:20:26,430 --> 00:20:23,919
science operations and you must be show

459
00:20:29,519 --> 00:20:26,440
fidelity to two of those in order to be

460
00:20:31,259 --> 00:20:29,529
relevant and so if it's just taking an

461
00:20:32,940 --> 00:20:31,269
instrument out to kind of test it that

462
00:20:34,769 --> 00:20:32,950
doesn't belong there if it's developing

463
00:20:37,680 --> 00:20:34,779

an instrument we have other programs for

464

00:20:41,850 --> 00:20:37,690

that and so it's actually a very feels a

465

00:20:43,529 --> 00:20:41,860

very special niche we had six proposals

466

00:20:45,840 --> 00:20:43,539

that were selected that year four were

467

00:20:48,600 --> 00:20:45,850

related to Mars exploration two related

468

00:20:50,549 --> 00:20:48,610

to icy worlds and one was selected both

469

00:20:54,600 --> 00:20:50,559

the Mars exploration program is very

470

00:20:56,129 --> 00:20:54,610

much related to testing an aspect of an

471

00:20:59,039 --> 00:20:56,139

instrument that's going to be flown on

472

00:21:00,480 --> 00:20:59,049

Mars 2020 but in the end we didn't have

473

00:21:01,919 --> 00:21:00,490

funds to select it and the selection

474

00:21:05,669 --> 00:21:01,929

rate for this program is twelve point

475

00:21:07,680 --> 00:21:05,679

eight percent you can see basically what

476

00:21:10,470 --> 00:21:07,690

our portfolio looks like we have 17

477

00:21:12,000 --> 00:21:10,480

active grants we have an SF Award which

478

00:21:14,549 --> 00:21:12,010

is really great we had a graduate

479

00:21:15,750 --> 00:21:14,559

student associated with some of the work

480

00:21:18,450 --> 00:21:15,760

that's being done in these analog

481

00:21:20,159 --> 00:21:18,460

environments and as lindsay mentioned

482

00:21:22,350 --> 00:21:20,169

that's being replaced by finest so all

483

00:21:24,620 --> 00:21:22,360

of you that have successfully and i must

484

00:21:27,990 --> 00:21:24,630

say we are probably one of the most

485

00:21:30,570 --> 00:21:28,000

engaged and proactive of the disciplines

486

00:21:32,250 --> 00:21:30,580

in planetary in submitting proposals to

487

00:21:35,240 --> 00:21:32,260

get support for your graduate students

488

00:21:38,600 --> 00:21:35,250

so keep it up that's really great

489

00:21:42,000 --> 00:21:38,610

all right here's the history of p star

490

00:21:43,620 --> 00:21:42,010

it's been sort of pretty steady and

491

00:21:45,840 --> 00:21:43,630

again it started right around the time

492

00:21:49,080 --> 00:21:45,850

of the major reorganization and

493

00:21:51,000 --> 00:21:49,090

planetary sciences i also want to

494

00:21:54,680 --> 00:21:51,010

mention planetary protection research

495

00:21:56,850 --> 00:21:54,690

program has had kind of a unsteady or

496

00:21:58,860 --> 00:21:56,860

inconsistent past we're trying to get

497

00:22:00,299 --> 00:21:58,870

that on track that's being led by Becky

498

00:22:03,649 --> 00:22:00,309

McCauley who I mentioned couldn't make

499

00:22:06,600 --> 00:22:03,659

it here today or this week unfortunately

500

00:22:09,240 --> 00:22:06,610

so roses 17 selections were made last

501
00:22:11,669 --> 00:22:09,250
September and they're basically going to

502
00:22:14,879 --> 00:22:11,679
be solicited on a biannual trends with

503
00:22:16,320 --> 00:22:14,889
um a due date again I report on this

504
00:22:19,480 --> 00:22:16,330
even though it's a separate program

505
00:22:21,910 --> 00:22:19,490
because many of you that are involved in

506
00:22:23,710 --> 00:22:21,920
an astrobiology are interested in the

507
00:22:27,610 --> 00:22:23,720
technology and research that needs to be

508
00:22:30,220 --> 00:22:27,620
done to prepare missions to to be clean

509
00:22:32,500 --> 00:22:30,230
enough and to make on the least

510
00:22:34,810 --> 00:22:32,510
ambiguous measurements possible as we

511
00:22:36,610 --> 00:22:34,820
search for life on other planets and so

512
00:22:38,560 --> 00:22:36,620
this is definitely related to our

513
00:22:39,970 --> 00:22:38,570

community and we hope that all of you

514

00:22:42,430 --> 00:22:39,980

now that it's gotten back on a regular

515

00:22:46,570 --> 00:22:42,440

schedule we'll consider proposing to

516

00:22:49,120 --> 00:22:46,580

this this program in roses 1714

517

00:22:51,400 --> 00:22:49,130

proposals were submitted five proposals

518

00:22:53,440 --> 00:22:51,410

were selected for funding to fully and

519

00:22:56,500 --> 00:22:53,450

three partial funding and the selection

520

00:22:58,810 --> 00:22:56,510

rate was 35 percent or 36 percent so

521

00:23:01,290 --> 00:22:58,820

this is a good place to go if this is a

522

00:23:03,370 --> 00:23:01,300

place if this is the kind of research

523

00:23:05,280 --> 00:23:03,380

that you're interested in it's a little

524

00:23:07,510 --> 00:23:05,290

bit more applied or it has it has an

525

00:23:12,300 --> 00:23:07,520

application that's important to

526
00:23:15,820 --> 00:23:12,310
exploration so consider that alright and

527
00:23:18,820 --> 00:23:15,830
this is the wild up and downs of

528
00:23:21,570 --> 00:23:18,830
planetary protection research and so

529
00:23:26,430 --> 00:23:21,580
we're hoping to to show in the future a

530
00:23:30,880 --> 00:23:26,440
steadier cadence for the program and a

531
00:23:32,200 --> 00:23:30,890
consistent investment in the research so

532
00:23:34,660 --> 00:23:32,210
many of you are really interested I'm

533
00:23:37,900 --> 00:23:34,670
hoping and well first so I just want to

534
00:23:40,030 --> 00:23:37,910
put it have a shout out for the NASA

535
00:23:42,280 --> 00:23:40,040
Astrobiology Institute and the fact that

536
00:23:44,190 --> 00:23:42,290
we're celebrating 20 years of amazing

537
00:23:49,990 --> 00:23:44,200
science

538
00:23:54,920 --> 00:23:52,730

that organization is completely

539

00:23:57,440 --> 00:23:54,930

responsible for us being here today for

540

00:23:59,870 --> 00:23:57,450

building the community for having one of

541

00:24:02,540 --> 00:23:59,880

the most vibrant early career community

542

00:24:04,550 --> 00:24:02,550

I've ever seen in my entire life that

543

00:24:08,150 --> 00:24:04,560

makes the the excitement at this meeting

544

00:24:10,070 --> 00:24:08,160

so amazing and and attendance so

545

00:24:12,020 --> 00:24:10,080

desirable I think by many people anybody

546

00:24:14,360 --> 00:24:12,030

that's introduced to this comes back

547

00:24:16,280 --> 00:24:14,370

always the next time and so we have two

548

00:24:17,810 --> 00:24:16,290

sessions to my full sessions tomorrow

549

00:24:21,050 --> 00:24:17,820

and make sure that you guys know about

550

00:24:24,440 --> 00:24:21,060

that to celebrate the accomplishments it

551
00:24:26,450 --> 00:24:24,450
was originally established to start to

552
00:24:28,730 --> 00:24:26,460
really bring researchers together to do

553
00:24:29,150 --> 00:24:28,740
interdisciplinary research and after 20

554
00:24:32,150 --> 00:24:29,160
years

555
00:24:33,860 --> 00:24:32,160
it's a resounding success as I mentioned

556
00:24:35,930 --> 00:24:33,870
we have a fantastic community we get

557
00:24:38,360 --> 00:24:35,940
amazing proposals we're really moving

558
00:24:42,020 --> 00:24:38,370
things forward and so then we're looking

559
00:24:44,300 --> 00:24:42,030
forward to the the next step and what's

560
00:24:46,880 --> 00:24:44,310
going to follow on the success of the

561
00:24:49,070 --> 00:24:46,890
nei are the astrobiology program

562
00:24:50,390 --> 00:24:49,080
research coordination networks which

563
00:24:56,300 --> 00:24:50,400

you're going to hear about in a second

564

00:24:58,370 --> 00:24:56,310

but I would say that the nei did many

565

00:25:01,850 --> 00:24:58,380

many important things and I want to

566

00:25:03,500 --> 00:25:01,860

assure you that we're where the plans in

567

00:25:05,300 --> 00:25:03,510

the future to take care of all of those

568

00:25:08,000 --> 00:25:05,310

of course they were tremendous in

569

00:25:09,920 --> 00:25:08,010

supporting early career researchers that

570

00:25:11,480 --> 00:25:09,930

will continue but two very important

571

00:25:14,150 --> 00:25:11,490

things where one was coordinating the

572

00:25:17,300 --> 00:25:14,160

community as I said I think before the

573

00:25:19,730 --> 00:25:17,310

beginning of the nei 20 years ago there

574

00:25:21,290 --> 00:25:19,740

were many disciplines that were involved

575

00:25:24,170 --> 00:25:21,300

in astrobiology research and they were

576

00:25:26,450 --> 00:25:24,180

multidisciplinary in nature to describe

577

00:25:28,220 --> 00:25:26,460

our program so there was some biologists

578

00:25:29,630 --> 00:25:28,230

working here some astronomers that had

579

00:25:31,370 --> 00:25:29,640

something to contribute but the

580

00:25:33,470 --> 00:25:31,380

astrobiology Institute brought these

581

00:25:36,290 --> 00:25:33,480

people together and we started having

582

00:25:39,230 --> 00:25:36,300

truly interdisciplinary research

583

00:25:41,420 --> 00:25:39,240

programs come out of that so that

584

00:25:43,760 --> 00:25:41,430

coordination of researchers is essential

585

00:25:46,790 --> 00:25:43,770

and the job isn't done that needs to be

586

00:25:48,470 --> 00:25:46,800

continued and so what what is happening

587

00:25:50,330 --> 00:25:48,480

in the future with the RC ends as we're

588

00:25:52,190 --> 00:25:50,340

looking to not only coordinate ourselves

589

00:25:55,310 --> 00:25:52,200

because that's basically took 20 years I

590

00:25:57,200 --> 00:25:55,320

think for us to get well coordinated and

591

00:26:00,470 --> 00:25:57,210

now we need to start reaching out and

592

00:26:02,580 --> 00:26:00,480

interacting with the sister divisions in

593

00:26:04,450 --> 00:26:02,590

SMD because

594

00:26:07,330 --> 00:26:04,460

astrobiology and the search for life

595

00:26:09,610 --> 00:26:07,340

beyond Earth really encompasses all

596

00:26:13,389 --> 00:26:09,620

division it's it's actually one of the

597

00:26:15,039 --> 00:26:13,399

three focuses for the all of the science

598

00:26:16,749 --> 00:26:15,049

Mission Directorate and in order to

599

00:26:18,730 --> 00:26:16,759

really accomplish that we have to start

600

00:26:20,139 --> 00:26:18,740

working with researchers from those

601
00:26:21,970 --> 00:26:20,149
other divisions and that's one of the

602
00:26:24,100 --> 00:26:21,980
reasons at least one of our colleagues

603
00:26:25,659 --> 00:26:24,110
Doug Hudgens is here he's down here in

604
00:26:28,570 --> 00:26:25,669
the front and the red very easy to spot

605
00:26:32,560 --> 00:26:28,580
an astrophysicist that is responsible

606
00:26:34,720 --> 00:26:32,570
for exoplanet research in the agency and

607
00:26:36,039 --> 00:26:34,730
so to facilitate that we have the our

608
00:26:38,259 --> 00:26:36,049
sensors we're going to talk about in a

609
00:26:40,480 --> 00:26:38,269
second but most people most people are

610
00:26:41,799 --> 00:26:40,490
most important to them is thinking about

611
00:26:44,860 --> 00:26:41,809
where the funding is going to come from

612
00:26:47,110 --> 00:26:44,870
and so the other thing that the nei did

613
00:26:50,740 --> 00:26:47,120

it was it provides stable support for

614

00:26:52,779 --> 00:26:50,750

five years for large teams with fairly

615

00:26:55,629 --> 00:26:52,789

large budgets so between a million to

616

00:26:57,490 --> 00:26:55,639

two million a year for five years I

617

00:26:59,619 --> 00:26:57,500

think that it's it's very clear that

618

00:27:02,289 --> 00:26:59,629

that's kind of funding is essential for

619

00:27:05,019 --> 00:27:02,299

some research prob problems in

620

00:27:08,230 --> 00:27:05,029

astrobiology and so the portfolio

621

00:27:10,749 --> 00:27:08,240

funding will continue to be the there'll

622

00:27:13,600 --> 00:27:10,759

be opportunities for single researchers

623

00:27:15,990 --> 00:27:13,610

to get single investigator Awards as

624

00:27:18,249 --> 00:27:16,000

well as these multi or interdisciplinary

625

00:27:20,860 --> 00:27:18,259

projects that can be funded at a larger

626

00:27:23,379 --> 00:27:20,870

scale so the new program is called I car

627

00:27:26,070 --> 00:27:23,389

I wanted it to be I care but people

628

00:27:28,830 --> 00:27:26,080

thought that was too corny but I do care

629

00:27:31,680 --> 00:27:28,840

and it stands for interdisciplinary

630

00:27:33,820 --> 00:27:31,690

consortium for us to biology research

631

00:27:35,470 --> 00:27:33,830

the details are here and I should

632

00:27:37,060 --> 00:27:35,480

actually mention to you the slides that

633

00:27:40,269 --> 00:27:37,070

were showing tonight were part of a

634

00:27:42,009 --> 00:27:40,279

presentation that was made to caps the

635

00:27:44,080 --> 00:27:42,019

Committee on astrobiology and Planetary

636

00:27:46,600 --> 00:27:44,090

Science it's the standing subcommittee

637

00:27:48,009 --> 00:27:46,610

of the Space Studies board the national

638

00:27:50,860 --> 00:27:48,019

academy of science engineering and

639

00:27:53,259 --> 00:27:50,870

medicine it's featured online so you can

640

00:27:55,749 --> 00:27:53,269

actually find it if you go to their past

641

00:27:57,730 --> 00:27:55,759

meetings and look for presentations so

642

00:27:59,289 --> 00:27:57,740

any of this stuff you can find if you

643

00:28:00,940 --> 00:27:59,299

want to consult it for any of the

644

00:28:04,869 --> 00:28:00,950

information about the programs or this

645

00:28:07,060 --> 00:28:04,879

description so the the proposals that

646

00:28:08,499 --> 00:28:07,070

are we're looking for in i-car should

647

00:28:10,600 --> 00:28:08,509

describe an interdisciplinary approach

648

00:28:13,269 --> 00:28:10,610

to a single compelling question and ask

649

00:28:15,249 --> 00:28:13,279

to biology it can address a single

650

00:28:15,520 --> 00:28:15,259

science strategy goal or several science

651
00:28:21,070 --> 00:28:15,530
strat

652
00:28:23,890 --> 00:28:21,080
giggles together a step one proposal is

653
00:28:27,340 --> 00:28:23,900
required and that step one proposal is

654
00:28:30,520 --> 00:28:27,350
binding we do this again I'm very much

655
00:28:31,840 --> 00:28:30,530
in favor of not wasting your time

656
00:28:34,180 --> 00:28:31,850
letting you know if it's what we're

657
00:28:37,030 --> 00:28:34,190
looking for if you hit the mark and so

658
00:28:39,300 --> 00:28:37,040
there'll be a five page proposal pre

659
00:28:42,130 --> 00:28:39,310
proposal basically do for the step one

660
00:28:46,000 --> 00:28:42,140
and we will make a decision to encourage

661
00:28:47,980 --> 00:28:46,010
or discourage those proposals just that

662
00:28:51,460 --> 00:28:47,990
you know there's no ideal size of an IKE

663
00:28:53,140 --> 00:28:51,470

our team the scope but the key to the to

664

00:28:54,940 --> 00:28:53,150

these proposals are the scope of the

665

00:28:57,130 --> 00:28:54,950

research and the resources that you

666

00:29:01,960 --> 00:28:57,140

request whether it be people or money

667

00:29:03,280 --> 00:29:01,970

should-should in general be larger than

668

00:29:05,590 --> 00:29:03,290

what is typically considered in a

669

00:29:08,110 --> 00:29:05,600

research up a roses call for the other

670

00:29:10,390 --> 00:29:08,120

program elements otherwise you should go

671

00:29:12,700 --> 00:29:10,400

to exobiology or you should go to

672

00:29:14,800 --> 00:29:12,710

habitable worlds so we expect them to be

673

00:29:16,510 --> 00:29:14,810

larger than that and as always you know

674

00:29:20,950 --> 00:29:16,520

for those of you that have reviewed you

675

00:29:22,930 --> 00:29:20,960

ask for what you need and and and if it

676

00:29:26,020 --> 00:29:22,940

long as it match it's the right size

677

00:29:29,950 --> 00:29:26,030

it's the right amount they're expected

678

00:29:32,890 --> 00:29:29,960

to cost about six hundred thousand to a

679

00:29:35,170 --> 00:29:32,900

thousand or to up well six hundred

680

00:29:38,110 --> 00:29:35,180

thousand to a million dollars per year

681

00:29:41,470 --> 00:29:38,120

they'll last for five years and the

682

00:29:44,830 --> 00:29:41,480

whole point of i-car is to feed into the

683

00:29:46,810 --> 00:29:44,840

RC ends so proposals to this program

684

00:29:48,400 --> 00:29:46,820

element that are awarded and funding

685

00:29:51,460 --> 00:29:48,410

will become automatically become members

686

00:29:54,520 --> 00:29:51,470

of the newly established astrobiology RC

687

00:29:58,180 --> 00:29:54,530

ends in terms of membership beyond that

688

00:30:00,760 --> 00:29:58,190

so the RC ends are now not just teams

689

00:30:03,190 --> 00:30:00,770

that are selected from this solicitation

690

00:30:05,500 --> 00:30:03,200

but teams are so that are selected or

691

00:30:08,050 --> 00:30:05,510

proposals that are selected from all

692

00:30:11,050 --> 00:30:08,060

participating programs so that's every

693

00:30:13,960 --> 00:30:11,060

single program in astrobiology

694

00:30:15,250 --> 00:30:13,970

it's Picasso and Matisse which are you

695

00:30:18,310 --> 00:30:15,260

know so it's what you've just heard from

696

00:30:22,050 --> 00:30:18,320

its planetary protection P star XO have

697

00:30:26,020 --> 00:30:22,060

worlds it's going to be open to

698

00:30:28,720 --> 00:30:26,030

technologies so Picasso and Matisse it's

699

00:30:31,570 --> 00:30:28,730

going to include calls from other

700

00:30:34,200 --> 00:30:31,580

divisions as well and you'll have the

701

00:30:39,400 --> 00:30:34,210

opportunity to self-select for

702

00:30:44,830 --> 00:30:39,410

membership to the to these networks so

703

00:30:47,620 --> 00:30:44,840

that's the funding part of it the four

704

00:30:52,210 --> 00:30:47,630

this year the areas that we're gonna

705

00:30:54,780 --> 00:30:52,220

solicit for our three of the are CNS one

706

00:30:57,880 --> 00:30:54,790

is nexus for exoplanet system science

707

00:30:59,470 --> 00:30:57,890

that's the oldest of the RCN the second

708

00:31:02,289 --> 00:30:59,480

one is prebiotic chemistry and early

709

00:31:03,760 --> 00:31:02,299

Earth environments PCE three and the

710

00:31:06,490 --> 00:31:03,770

third one is from early cells to

711

00:31:08,049 --> 00:31:06,500

multicellularity this RCN has not been

712

00:31:09,310 --> 00:31:08,059

established yet but part of the

713

00:31:12,010 --> 00:31:09,320

establishment is going to be the

714

00:31:15,700 --> 00:31:12,020

solicitation of proposals in this

715

00:31:17,230 --> 00:31:15,710

particular area for the other RC ends

716

00:31:19,840 --> 00:31:17,240

you'll notice that people are wearing

717

00:31:24,370 --> 00:31:19,850

ribbons asked me about Nexus asked me

718

00:31:26,590 --> 00:31:24,380

about PC e3 next this is yellow yeah is

719

00:31:30,730 --> 00:31:26,600

yellow PC three is orange

720

00:31:34,750 --> 00:31:30,740

now the ocean worlds is blue and unfold

721

00:31:36,580 --> 00:31:34,760

is green for life and so please after

722

00:31:38,080 --> 00:31:36,590

you're gonna hear from them now in fact

723

00:31:41,799 --> 00:31:38,090

actually you guys want to think about

724

00:31:44,740 --> 00:31:41,809

coming on up here soon but you can be

725

00:31:46,299 --> 00:31:44,750

sure that please feel free to ask them

726

00:31:50,500 --> 00:31:46,309

anytime you see them during the rest of

727

00:31:52,060 --> 00:31:50,510

the week this is the timeline the nm so

728

00:31:53,680 --> 00:31:52,070

there's a placeholder that came out to

729

00:31:55,360 --> 00:31:53,690

let people know that this was coming you

730

00:31:56,950 --> 00:31:55,370

may have gotten that if you didn't get

731

00:31:59,140 --> 00:31:56,960

the notification then you're not signed

732

00:32:02,260 --> 00:31:59,150

up for notifications and inspires and

733

00:32:03,549 --> 00:32:02,270

you should because that's where that's

734

00:32:07,440 --> 00:32:03,559

the way people learn about the latest

735

00:32:10,060 --> 00:32:07,450

greatest that's happening in roses calls

736

00:32:13,060 --> 00:32:10,070

the actual official announcement will

737

00:32:15,370 --> 00:32:13,070

come out July 30th on or about the step1

738

00:32:17,980 --> 00:32:15,380

proposals will be due September 26th and

739

00:32:20,440 --> 00:32:17,990

the step two proposals we do January 7th

740

00:32:23,470 --> 00:32:20,450

and 2020 and then we hope to process

741

00:32:29,560 --> 00:32:23,480

them relatively quickly and make awards

742

00:32:32,049 --> 00:32:29,570

very in that first quarter of 2020 if

743

00:32:34,090 --> 00:32:32,059

you want more information about anything

744

00:32:36,669 --> 00:32:34,100

that we've talked about here or about a

745

00:32:38,830 --> 00:32:36,679

car in particular we spent a lot of time

746

00:32:40,539 --> 00:32:38,840

last fall and this was being decided and

747

00:32:43,329 --> 00:32:40,549

we were transitioning and

748

00:32:45,969 --> 00:32:43,339

the arsons so there's an astrobiology

749

00:32:48,489 --> 00:32:45,979

program FAQ it's about 23 pages of

750

00:32:50,469 --> 00:32:48,499

frequently asked questions that you

751
00:32:53,529 --> 00:32:50,479
asked that we asked that everyone asked

752
00:32:55,810 --> 00:32:53,539
us if you don't find your answer there

753
00:32:58,449 --> 00:32:55,820
please contact us and you'll likely get

754
00:33:00,159 --> 00:32:58,459
your name on the hall-of-fame of new fa

755
00:33:03,219 --> 00:33:00,169
Q's because we want to keep letting

756
00:33:04,899 --> 00:33:03,229
people know what's going on and so again

757
00:33:06,940 --> 00:33:04,909
you can look there for some of this I

758
00:33:08,949 --> 00:33:06,950
also just want to before I talk about

759
00:33:10,779 --> 00:33:08,959
the arsons in particular just want to

760
00:33:12,430 --> 00:33:10,789
call out the astrobiology postdoctoral

761
00:33:14,560 --> 00:33:12,440
program I said we're still committed to

762
00:33:17,889 --> 00:33:14,570
early career development and training

763
00:33:21,599 --> 00:33:17,899

and it will continue it has it's part of

764

00:33:24,729 --> 00:33:21,609

the program and it's related to any

765

00:33:28,749 --> 00:33:24,739

funded proposal in any of the programs

766

00:33:32,440 --> 00:33:28,759

that astrobiology supports and so it's

767

00:33:34,959 --> 00:33:32,450

available to ppis that want that receive

768

00:33:38,709 --> 00:33:34,969

proposals are before funded proposals

769

00:33:41,289 --> 00:33:38,719

from have worlds from exobiology from

770

00:33:45,249 --> 00:33:41,299

ike are those will be the opportunities

771

00:33:46,989 --> 00:33:45,259

that postdocs can apply to and that will

772

00:33:50,709 --> 00:33:46,999

continue and just to let you know since

773

00:33:53,129 --> 00:33:50,719

2000 we've had 108 PhDs or postdoc

774

00:33:57,009 --> 00:33:53,139

scientists and engineers that have been

775

00:33:58,810 --> 00:33:57,019

supported and there's a little bit about

776

00:34:02,139 --> 00:33:58,820

the history of it began and then it

777

00:34:04,779 --> 00:34:02,149

expanded in 2010 and it will continue to

778

00:34:08,680 --> 00:34:04,789

go on it's a very important part of our

779

00:34:11,470 --> 00:34:08,690

program and keeps it really vibrant ok

780

00:34:15,399 --> 00:34:11,480

so before I actually get into this I'm

781

00:34:17,339 --> 00:34:15,409

just going to ask Michael so come up

782

00:34:21,490 --> 00:34:17,349

come up

783

00:34:23,349 --> 00:34:21,500

so I listed him as an emeritus so this

784

00:34:24,849 --> 00:34:23,359

is an opportunity for y'all to say bye

785

00:34:26,019 --> 00:34:24,859

we missed you but you're glad we're

786

00:34:32,669 --> 00:34:26,029

you're glad you're he's here at this

787

00:34:38,940 --> 00:34:34,490

[Applause]

788

00:34:42,720 --> 00:34:38,950

my new role yes so hi some of you may

789

00:34:44,460 --> 00:34:42,730

remember me not too long ago I was the

790

00:34:46,710 --> 00:34:44,470

program officer for exobiology and

791

00:34:52,440 --> 00:34:46,720

longer ago than that I was the firm

792

00:34:55,560 --> 00:34:52,450

officer for Ystad I have moved on not

793

00:34:57,060 --> 00:34:55,570

very far though so I'm currently the

794

00:34:59,430 --> 00:34:57,070

deputy associate administrator for

795

00:35:04,490 --> 00:34:59,440

research in science Mission Directorate

796

00:35:07,620 --> 00:35:04,500

that means I'm broadly responsible for

797

00:35:14,010 --> 00:35:07,630

policies and processes for all

798

00:35:16,770 --> 00:35:14,020

SMD solicitations both grants and AOS so

799

00:35:18,840 --> 00:35:16,780

if you see me at a review or something

800

00:35:24,270 --> 00:35:18,850

like that that means something's gone

801
00:35:26,940 --> 00:35:24,280
really pear-shaped now the subtitle of

802
00:35:29,550 --> 00:35:26,950
my job is my is keeping Thomas turbo

803
00:35:34,010 --> 00:35:29,560
from the SMD so she administrator out of

804
00:35:36,600 --> 00:35:34,020
jail so now you know what I do most days

805
00:35:39,750 --> 00:35:36,610
I just wanted to mention three things

806
00:35:42,060 --> 00:35:39,760
that are going on at the SMD level above

807
00:35:43,650 --> 00:35:42,070
the astrobiology program level about the

808
00:35:46,200 --> 00:35:43,660
planetary science or astrophysics

809
00:35:50,370 --> 00:35:46,210
Division level that I think will be

810
00:35:51,900 --> 00:35:50,380
interesting to you so the first is some

811
00:35:53,660 --> 00:35:51,910
of you may know that a couple of you

812
00:35:57,870 --> 00:35:53,670
like two years ago a year and a half ago

813
00:35:59,310 --> 00:35:57,880

we started asking our reviewers to

814

00:36:02,460 --> 00:35:59,320

comment on whether they thought the

815

00:36:05,430 --> 00:36:02,470

proposals they were seeing constituted

816

00:36:08,640 --> 00:36:05,440

proposals of high intellectual risk and

817

00:36:10,280 --> 00:36:08,650

high potential impact now by

818

00:36:12,690 --> 00:36:10,290

intellectual risk we were talking about

819

00:36:16,350 --> 00:36:12,700

we weren't talking about whether the

820

00:36:17,550 --> 00:36:16,360

experiments would work or not Thomas and

821

00:36:21,170 --> 00:36:17,560

serve often likes to describe

822

00:36:24,810 --> 00:36:21,180

intellectual risk as reputational risk

823

00:36:26,300 --> 00:36:24,820

you know you submit a idea that could

824

00:36:30,540 --> 00:36:26,310

get you laughed out of your job

825

00:36:32,610 --> 00:36:30,550

basically what we found was surprisingly

826

00:36:34,200 --> 00:36:32,620

I have to admit about 10% of our

827

00:36:35,940 --> 00:36:34,210

proposals that we were getting across

828

00:36:39,780 --> 00:36:35,950

all of SMD were considered high risk

829

00:36:42,600 --> 00:36:39,790

high impact more interestingly and more

830

00:36:44,760 --> 00:36:42,610

surprisingly high impact high risk

831

00:36:48,120 --> 00:36:44,770

proposals were selected at a rate of

832

00:36:51,480 --> 00:36:48,130

about 35% the selection rate across all

833

00:36:56,850 --> 00:36:51,490

of SMD for all of the roses programs is

834

00:37:00,180 --> 00:36:56,860

about 24% so clearly the culture of our

835

00:37:03,990 --> 00:37:00,190

reviewers is such that we are evaluating

836

00:37:07,350 --> 00:37:04,000

well and solicited and sorry selecting

837

00:37:08,880 --> 00:37:07,360

high-impact high-risk proposals but we

838

00:37:11,880 --> 00:37:08,890

can't just pat ourselves on the back

839

00:37:13,470 --> 00:37:11,890

because as I said only about 10% of the

840

00:37:15,600 --> 00:37:13,480

proposals we receive are high risk and

841

00:37:18,210 --> 00:37:15,610

high impact which means that there are

842

00:37:20,850 --> 00:37:18,220

probably a lot more high risk high

843

00:37:24,480 --> 00:37:20,860

impact ideas germinating in your heads

844

00:37:26,310 --> 00:37:24,490

out there than we ever see so one of the

845

00:37:29,460 --> 00:37:26,320

things we are working on at the SMD

846

00:37:32,190 --> 00:37:29,470

level is to try to fix that not fix it

847

00:37:35,720 --> 00:37:32,200

but improve it so we are right now I

848

00:37:39,570 --> 00:37:35,730

mean literally like last week discussing

849

00:37:41,790 --> 00:37:39,580

how to encourage more high risk

850

00:37:45,420 --> 00:37:41,800

high-impact proposals to be submitted

851
00:37:49,160 --> 00:37:45,430
how to better evaluate them and how to

852
00:37:52,470 --> 00:37:49,170
encourage their selection so stay tuned

853
00:37:55,050 --> 00:37:52,480
nothing has been set in stone yet the

854
00:37:57,390 --> 00:37:55,060
some of the considerations though are we

855
00:38:01,860 --> 00:37:57,400
don't want to increase the workload on

856
00:38:05,550 --> 00:38:01,870
you proposers on you reviewers and on

857
00:38:09,300 --> 00:38:05,560
ourselves as program officers so don't

858
00:38:13,230 --> 00:38:09,310
expect some giant new thing it will most

859
00:38:15,330 --> 00:38:13,240
likely be an adaptation of current

860
00:38:16,680 --> 00:38:15,340
processes but stay tuned we'll be

861
00:38:18,450 --> 00:38:16,690
talking a lot more about it once we

862
00:38:23,070 --> 00:38:18,460
figure out what we're gonna be talking

863
00:38:25,200 --> 00:38:23,080

about so the second thing I'd like to

864

00:38:27,420 --> 00:38:25,210

talk a little bit about is something

865

00:38:29,400 --> 00:38:27,430

that astrobiology the astrobiology

866

00:38:32,310 --> 00:38:29,410

community has down which is

867

00:38:34,080 --> 00:38:32,320

interdisciplinary research so

868

00:38:35,670 --> 00:38:34,090

astrobiology is fundamentally

869

00:38:40,650 --> 00:38:35,680

interdisciplinary it's been called the

870

00:38:42,660 --> 00:38:40,660

trans discipline a lot of the rest of

871

00:38:44,660 --> 00:38:42,670

what SMD has done historically has not

872

00:38:47,280 --> 00:38:44,670

been so interdisciplinary

873

00:38:51,020 --> 00:38:47,290

Thomas sir Brooklyn is very interested

874

00:38:54,010 --> 00:38:51,030

in both interdisciplinary research and

875

00:38:59,020 --> 00:38:54,020

research that cuts across

876

00:39:01,780 --> 00:38:59,030

visional stovepipes so the recent meant

877

00:39:04,660 --> 00:39:01,790

toward an all SMD version of the

878

00:39:06,730 --> 00:39:04,670

exoplanet research program led by Doug

879

00:39:12,610 --> 00:39:06,740

and Steve Reinhart and Melissa Morris

880

00:39:14,740 --> 00:39:12,620

and Martin still is part of that the Hat

881

00:39:17,470 --> 00:39:14,750

will be cutting across ultimately all

882

00:39:19,570 --> 00:39:17,480

four divisions trying to find the best

883

00:39:24,150 --> 00:39:19,580

proposals related to exoplanet science

884

00:39:29,080 --> 00:39:24,160

that also satisfy other divisional goals

885

00:39:31,510 --> 00:39:29,090

but that's only like one thing right so

886

00:39:33,700 --> 00:39:31,520

we are in the process of beginning of

887

00:39:35,520 --> 00:39:33,710

talking about other opportunities

888

00:39:38,980 --> 00:39:35,530

sometimes there are cross-cutting

889

00:39:41,530 --> 00:39:38,990

science goals so the maven mission which

890

00:39:45,580 --> 00:39:41,540

was looking at atmospheric escape from

891

00:39:48,280 --> 00:39:45,590

Mars has direct implications for some

892

00:39:50,170 --> 00:39:48,290

exoplanet science and also addresses

893

00:39:52,210 --> 00:39:50,180

some goals that the heliophysics

894

00:39:55,780 --> 00:39:52,220

division would have liked to have seen

895

00:39:58,210 --> 00:39:55,790

done on earth and elsewhere so there are

896

00:40:01,300 --> 00:39:58,220

those kinds of cross-cutting synergies

897

00:40:02,920 --> 00:40:01,310

but then there's also an instances where

898

00:40:05,530 --> 00:40:02,930

you just want to throw an instrument on

899

00:40:07,570 --> 00:40:05,540

somebody else's spacecraft so if you

900

00:40:09,700 --> 00:40:07,580

were here on sunday and went through the

901
00:40:12,430 --> 00:40:09,710
EXO pag you might have heard somebody

902
00:40:14,620 --> 00:40:12,440
talking about wanting to put a telescope

903
00:40:17,230 --> 00:40:14,630
on the back of some planetary spacecraft

904
00:40:18,640 --> 00:40:17,240
that's going pretty far out there in

905
00:40:20,950 --> 00:40:18,650
order to turn around take a look and

906
00:40:23,560 --> 00:40:20,960
measure the diag alike our own zodiacal

907
00:40:26,200 --> 00:40:23,570
light so that's another category of

908
00:40:29,350 --> 00:40:26,210
interdivisional work over the next year

909
00:40:32,190 --> 00:40:29,360
or so we're going to be at SMD thinking

910
00:40:35,500 --> 00:40:32,200
really hard about how to do this and

911
00:40:40,900 --> 00:40:35,510
probably asking a lot of questions

912
00:40:42,640 --> 00:40:40,910
this may culminate in trying to get the

913
00:40:46,300 --> 00:40:42,650

National Academies to do a sort of

914

00:40:49,690 --> 00:40:46,310

decade-old survey of dakedo surveys kind

915

00:40:53,410 --> 00:40:49,700

of thing looking for these synergies and

916

00:40:55,390 --> 00:40:53,420

cross-cutting themes that's not set in

917

00:40:58,390 --> 00:40:55,400

stone yet but it is something we are

918

00:41:02,070 --> 00:40:58,400

talking about the third and final thing

919

00:41:06,010 --> 00:41:02,080

I'd like to talk about briefly is issu

920

00:41:07,359 --> 00:41:06,020

efforts we're making at SMD for to

921

00:41:10,029 --> 00:41:07,369

increase our diverse

922

00:41:12,730 --> 00:41:10,039

the inclusion and accessibility of our

923

00:41:14,859 --> 00:41:12,740

programs and the flip side of that of

924

00:41:18,249 --> 00:41:14,869

course is unfortunately anti harassment

925

00:41:21,069 --> 00:41:18,259

and anti-discrimination we've been doing

926

00:41:23,859 --> 00:41:21,079

a lot of that work in the last two years

927

00:41:25,960 --> 00:41:23,869

and I talked to me if you'd like to hear

928

00:41:27,640 --> 00:41:25,970

more details the one thing I do want to

929

00:41:30,220 --> 00:41:27,650

say is we've one of the things we've

930

00:41:33,400 --> 00:41:30,230

looked at is the composition of compete

931

00:41:37,660 --> 00:41:33,410

admission science teams over the last 10

932

00:41:41,680 --> 00:41:37,670

or 15 years and we are trying to make

933

00:41:44,819 --> 00:41:41,690

that easier to broaden participation so

934

00:41:48,730 --> 00:41:44,829

we had in November last year we had a

935

00:41:52,660 --> 00:41:48,740

initial toe dip we had a workshop on p.i

936

00:41:55,210 --> 00:41:52,670

diversity which surfaced a number of

937

00:41:58,450 --> 00:41:55,220

issues that led to some of the actions

938

00:42:00,339 --> 00:41:58,460

we've taken another one of the things

939

00:42:02,920 --> 00:42:00,349

we've discovered is that unless you're

940

00:42:07,690 --> 00:42:02,930

at a gateway institution so a NASA

941

00:42:10,480 --> 00:42:07,700

Center JPL APL query last places like

942

00:42:13,749 --> 00:42:10,490

that you may never have been exposed to

943

00:42:16,599 --> 00:42:13,759

Mission culture to Mission terminology

944

00:42:18,789 --> 00:42:16,609

you may have no idea what takes to go

945

00:42:21,870 --> 00:42:18,799

from a cocktail napkin to a piece of

946

00:42:25,089 --> 00:42:21,880

metal flying in orbit around Jupiter and

947

00:42:27,729 --> 00:42:25,099

so we've started developing training

948

00:42:31,539 --> 00:42:27,739

programs for people the first thing we

949

00:42:33,609 --> 00:42:31,549

did was mmm I guess it was like four

950

00:42:36,630 --> 00:42:33,619

weeks ago we did a two-and-a-half-hour

951
00:42:39,839 --> 00:42:36,640
Telekom til 20 half-hour telecast

952
00:42:42,640 --> 00:42:39,849
webcast from University of Colorado

953
00:42:45,870 --> 00:42:42,650
where most of it was Thomas or Brooklyn

954
00:42:49,259 --> 00:42:45,880
and a little bit of me talking about

955
00:42:52,960 --> 00:42:49,269
statistically what we know about our

956
00:42:55,210 --> 00:42:52,970
RPI's and their teams and anecdotally

957
00:43:01,779 --> 00:42:55,220
what we know from Thomas's experience on

958
00:43:03,670 --> 00:43:01,789
five proposals I think it's online and I

959
00:43:05,710 --> 00:43:03,680
recommend if you're interested in maybe

960
00:43:08,620 --> 00:43:05,720
one day becoming a PI of a mission you

961
00:43:10,509 --> 00:43:08,630
take a look at it the other thing we're

962
00:43:13,210 --> 00:43:10,519
next thing we're doing is we are working

963
00:43:15,720 --> 00:43:13,220

with dr. Erica Hamden

964

00:43:17,830 --> 00:43:15,730
from University of Arizona and the

965

00:43:19,000 --> 00:43:17,840
heisting Science Foundation and we're

966

00:43:23,200 --> 00:43:19,010
going to be putting on a two and a half

967

00:43:24,150 --> 00:43:23,210
day workshop in I think it's it's in the

968

00:43:27,940 --> 00:43:24,160
fall

969

00:43:31,030 --> 00:43:27,950
October November two and a half days to

970

00:43:33,430 --> 00:43:31,040
talk about going from a basic science

971

00:43:35,349 --> 00:43:33,440
question to what the next steps are

972

00:43:37,900 --> 00:43:35,359
it'll be more interactive there'll be

973

00:43:41,620 --> 00:43:37,910
some networking opportunities and so on

974

00:43:45,640 --> 00:43:41,630
we have a mailing list that's been set

975

00:43:49,030 --> 00:43:45,650
up and we'll be announcing when and

976
00:43:52,810 --> 00:43:49,040
where and how and what soon we're not

977
00:43:54,910 --> 00:43:52,820
opening up applications for this yet

978
00:43:58,780 --> 00:43:54,920
because we are in the process of hiring

979
00:44:01,480 --> 00:43:58,790
a stem equity expert to help us make

980
00:44:04,089 --> 00:44:01,490
sure we have a deep and broad reach into

981
00:44:05,530 --> 00:44:04,099
the science community so those are some

982
00:44:08,740 --> 00:44:05,540
things that we're working on at the SMD

983
00:44:12,970 --> 00:44:08,750
level I'm really happy to be back

984
00:44:15,160 --> 00:44:12,980
amongst my people if you have questions

985
00:44:16,720 --> 00:44:15,170
just either ask them now or bother me

986
00:44:25,390 --> 00:44:16,730
later today or the rest of the week I

987
00:44:30,620 --> 00:44:26,950
[Applause]

988
00:44:32,630 --> 00:44:30,630

okay we're gonna take some time to have

989

00:44:34,339 --> 00:44:32,640

the one of the leads from each of the

990

00:44:36,019 --> 00:44:34,349

arsons that have been established to

991

00:44:39,349 --> 00:44:36,029

talk about exactly what they are

992

00:44:40,849 --> 00:44:39,359

here the RCN Olympic rings and we're

993

00:44:50,870 --> 00:44:40,859

going to start it off with Nexus the

994

00:44:52,130 --> 00:44:50,880

oldest of the RC ends all right so Nexus

995

00:44:53,479 --> 00:44:52,140

is going first because we were kind of

996

00:44:54,950 --> 00:44:53,489

the prototype of this research

997

00:44:57,440 --> 00:44:54,960

coordination network and we've been

998

00:44:58,670 --> 00:44:57,450

around for over three years so I will go

999

00:45:01,729 --> 00:44:58,680

very quickly because we don't have a lot

1000

00:45:03,049 --> 00:45:01,739

of time left but what is Nexus we're an

1001
00:45:04,729 --> 00:45:03,059
interdisciplinary research coordination

1002
00:45:08,180 --> 00:45:04,739
network we're specifically put together

1003
00:45:09,979 --> 00:45:08,190
to have an interdisciplinary focus on

1004
00:45:11,599 --> 00:45:09,989
exoplanets and understanding what we can

1005
00:45:14,329 --> 00:45:11,609
do when we get different disciplines

1006
00:45:16,910 --> 00:45:14,339
across SMD to work together on

1007
00:45:18,829 --> 00:45:16,920
understanding the planet obviously the

1008
00:45:20,029 --> 00:45:18,839
planet forms it evolves and interacts

1009
00:45:22,309 --> 00:45:20,039
with its star interacts with other

1010
00:45:23,989 --> 00:45:22,319
planets in the system very much to

1011
00:45:26,710 --> 00:45:23,999
understand that you need to understand a

1012
00:45:30,079 --> 00:45:26,720
lot from the different divisions of SMD

1013
00:45:32,150 --> 00:45:30,089

we have about 34 pis at the moment in

1014

00:45:34,190 --> 00:45:32,160

Nexus and they are selected from a range

1015

00:45:37,549 --> 00:45:34,200

of programs going from the former nai

1016

00:45:39,499 --> 00:45:37,559

all the way through to sort of XR p-type

1017

00:45:41,930 --> 00:45:39,509

proposals smaller proposals so small and

1018

00:45:45,079 --> 00:45:41,940

large mix together but all working

1019

00:45:47,209 --> 00:45:45,089

together so what we do in Nexus is we

1020

00:45:49,370 --> 00:45:47,219

you know a group of PI's

1021

00:45:51,109 --> 00:45:49,380

we do our own research that's funded

1022

00:45:52,880 --> 00:45:51,119

under our respective programs but we

1023

00:45:54,709 --> 00:45:52,890

also come together to try and think of

1024

00:45:57,380 --> 00:45:54,719

really important things that we can do

1025

00:45:59,989 --> 00:45:57,390

as a community of researchers to advance

1026

00:46:01,279 --> 00:45:59,999

our science and to potentially put

1027

00:46:03,140 --> 00:46:01,289

products and things out there that we

1028

00:46:04,849 --> 00:46:03,150

need so I won't go through these slides

1029

00:46:06,739 --> 00:46:04,859

in detail but just to say that we have

1030

00:46:08,359 --> 00:46:06,749

sort of a series of goals on which we

1031

00:46:09,859 --> 00:46:08,369

try to meet and I'll try and highlight

1032

00:46:11,989 --> 00:46:09,869

specific things that we've done there

1033

00:46:14,180 --> 00:46:11,999

that our Nexus activities so if we go to

1034

00:46:16,459 --> 00:46:14,190

to develop programs for existing space

1035

00:46:17,930 --> 00:46:16,469

telescopes and for NASA facilities that

1036

00:46:20,890 --> 00:46:17,940

something we obviously want to do tying

1037

00:46:23,329 --> 00:46:20,900

into to the NASA missions one of our

1038

00:46:24,709 --> 00:46:23,339

activities was to put together an early

1039

00:46:26,650 --> 00:46:24,719

release science proposal by the

1040

00:46:29,299 --> 00:46:26,660

community I had massive participation

1041

00:46:31,670 --> 00:46:29,309

from the Nexus consortium and also from

1042

00:46:33,979 --> 00:46:31,680

international collaborators we were able

1043

00:46:36,950 --> 00:46:33,989

to win about 23% of the total allotted

1044

00:46:37,710 --> 00:46:36,960

early release science time from JWST

1045

00:46:39,300 --> 00:46:37,720

with that

1046

00:46:41,820 --> 00:46:39,310

collaborative effort that was sparked

1047

00:46:45,480 --> 00:46:41,830

and organized by Nexus

1048

00:46:47,070 --> 00:46:45,490

we've also our our team members you know

1049

00:46:49,710 --> 00:46:47,080

work on their science and have input to

1050

00:46:51,990 --> 00:46:49,720

the the mission concept so we impact it

1051

00:46:53,490 --> 00:46:52,000

there and I think one of the the most

1052

00:46:55,020 --> 00:46:53,500

important activities that we've done is

1053

00:46:58,770 --> 00:46:55,030

something that was led by Sean and Nicky

1054

00:47:00,330 --> 00:46:58,780

and Nancy King is this biosignatures

1055

00:47:02,400 --> 00:47:00,340

workshop that we put together where we

1056

00:47:04,950 --> 00:47:02,410

again brought disciplines together in an

1057

00:47:06,390 --> 00:47:04,960

in-person and remote workshop it we put

1058

00:47:09,390 --> 00:47:06,400

the work back into workshop and that

1059

00:47:11,280 --> 00:47:09,400

workshop resulted in six seminal papers

1060

00:47:13,290 --> 00:47:11,290

that sort of surveyed the entire field

1061

00:47:16,170 --> 00:47:13,300

and thought about new directions and

1062

00:47:19,290 --> 00:47:16,180

those biosignatures then fed into the

1063

00:47:21,570 --> 00:47:19,300

NES Takeda reviews and also had an

1064

00:47:23,160 --> 00:47:21,580

impact there as well so that's kind of

1065

00:47:26,190 --> 00:47:23,170

an example of the sort of things that we

1066

00:47:28,080 --> 00:47:26,200

can do as a community when we take the

1067

00:47:29,970 --> 00:47:28,090

time to not only do our research but

1068

00:47:32,160 --> 00:47:29,980

also look out to the community and think

1069

00:47:34,349 --> 00:47:32,170

about community focused activities that

1070

00:47:36,450 --> 00:47:34,359

we can do to advance our research so I

1071

00:47:40,020 --> 00:47:36,460

will hand over to earn one of our

1072

00:47:42,060 --> 00:47:40,030

siblings oh yes sorry

1073

00:47:43,680 --> 00:47:42,070

there's also posters on all of the RC

1074

00:47:45,540 --> 00:47:43,690

ends and they're at the back of the

1075

00:47:47,190 --> 00:47:45,550

poster hall so if you want to learn more

1076
00:47:48,839 --> 00:47:47,200
about the individual icn's or what we're

1077
00:47:50,400 --> 00:47:48,849
doing there's loads more stats and info

1078
00:47:52,710 --> 00:47:50,410
on those posters and you have time to

1079
00:47:54,180 --> 00:47:52,720
look at those at leisure if you want to

1080
00:47:55,800 --> 00:47:54,190
learn anything about Nexus just find

1081
00:48:08,630 --> 00:47:55,810
someone with the yellow ribbon and ask

1082
00:48:14,030 --> 00:48:11,750
all right so enfold in three minutes the

1083
00:48:16,630 --> 00:48:14,040
network for life detection this is the

1084
00:48:19,460 --> 00:48:16,640
second RCN that's been rolled out their

1085
00:48:21,500 --> 00:48:19,470
ideas to be a multi institution research

1086
00:48:23,840 --> 00:48:21,510
coordination network focused on

1087
00:48:26,990 --> 00:48:23,850
developing technologies and techniques

1088
00:48:29,120 --> 00:48:27,000

for life detection on other worlds I'm

1089

00:48:31,120 --> 00:48:29,130

speaking on behalf of my co leads Torre

1090

00:48:34,820 --> 00:48:31,130

Jolla and Brittany Schmidt who are here

1091

00:48:37,040 --> 00:48:34,830

we have Lindsay who is somewhere who's

1092

00:48:39,290 --> 00:48:37,050

our NASA headquarters representative on

1093

00:48:42,920 --> 00:48:39,300

enfold we have a steering committee

1094

00:48:45,680 --> 00:48:42,930

these RPI's of relevant roses proposals

1095

00:48:47,630 --> 00:48:45,690

XO have worlds P star Matisse and

1096

00:48:49,730 --> 00:48:47,640

Picasso that have been invited by

1097

00:48:52,040 --> 00:48:49,740

headquarters to to join the steering

1098

00:48:54,140 --> 00:48:52,050

committee the membership is involving

1099

00:48:55,660 --> 00:48:54,150

that Co investigators and collaborators

1100

00:48:58,760 --> 00:48:55,670

on the lead in steering committee

1101
00:49:01,010 --> 00:48:58,770
projects and participation is active

1102
00:49:02,360 --> 00:49:01,020
engagement with the broader community of

1103
00:49:04,130 --> 00:49:02,370
life detection researchers and

1104
00:49:06,980 --> 00:49:04,140
technologists and I'll talk about some

1105
00:49:09,710 --> 00:49:06,990
of our activities here in a second but

1106
00:49:12,320 --> 00:49:09,720
first wanted to recognize our steering

1107
00:49:14,840 --> 00:49:12,330
committee members so these were folks

1108
00:49:17,090 --> 00:49:14,850
that were invited to join shortly after

1109
00:49:19,130 --> 00:49:17,100
the shutdown we've had two in persons

1110
00:49:21,230 --> 00:49:19,140
during a sorry to virtual steering

1111
00:49:24,650 --> 00:49:21,240
committee meetings and we'll have an

1112
00:49:26,650 --> 00:49:24,660
in-person one tomorrow 23 members and

1113
00:49:29,000 --> 00:49:26,660

you can see we cover this wide array of

1114

00:49:32,000 --> 00:49:29,010

different disciplines folks working on

1115

00:49:34,130 --> 00:49:32,010

exoplanets Mars Earth ocean worlds a lot

1116

00:49:36,470 --> 00:49:34,140

of mission participants as well as well

1117

00:49:41,060 --> 00:49:36,480

as this whole array of different you

1118

00:49:43,400 --> 00:49:41,070

know specific disciplines of study the

1119

00:49:46,310 --> 00:49:43,410

core objectives that we've outlined so

1120

00:49:48,410 --> 00:49:46,320

far first to collaborate to investigate

1121

00:49:50,500 --> 00:49:48,420

life detection strategies including bio

1122

00:49:52,760 --> 00:49:50,510

signature creation and preservation

1123

00:49:54,820 --> 00:49:52,770

second to facilitate work between

1124

00:49:57,950 --> 00:49:54,830

scientists and engineers to develop

1125

00:50:00,320 --> 00:49:57,960

technologies and tools third to actively

1126
00:50:02,840 --> 00:50:00,330
and inclusively engage the scientific

1127
00:50:04,790 --> 00:50:02,850
community next to cultivate

1128
00:50:07,190 --> 00:50:04,800
interdisciplinary multi-organizational

1129
00:50:09,410 --> 00:50:07,200
initiatives this I think is also really

1130
00:50:11,720 --> 00:50:09,420
important organizing reference standards

1131
00:50:14,420 --> 00:50:11,730
and helping define life detection

1132
00:50:15,830 --> 00:50:14,430
standards coordinating community

1133
00:50:17,810 --> 00:50:15,840
engagement with the ladder of life

1134
00:50:19,670 --> 00:50:17,820
detection incorporating ideas of

1135
00:50:20,750 --> 00:50:19,680
agnostic bio signatures and different

1136
00:50:23,030 --> 00:50:20,760
features of

1137
00:50:24,950 --> 00:50:23,040
Smita incompetence working with missions

1138
00:50:26,930 --> 00:50:24,960

because of course we want to translate

1139

00:50:29,180 --> 00:50:26,940

all of these great concepts to actual

1140

00:50:32,260 --> 00:50:29,190

missions for life detection and then

1141

00:50:34,520 --> 00:50:32,270

cross-cutting training and education and

1142

00:50:36,470 --> 00:50:34,530

just want to say we've these just

1143

00:50:38,630 --> 00:50:36,480

outlined some of our early activities

1144

00:50:41,180 --> 00:50:38,640

we've got a website you should visit it

1145

00:50:45,470 --> 00:50:41,190

early and often it's quickly evolving

1146

00:50:47,210 --> 00:50:45,480

it's wwm fol org you can find the

1147

00:50:48,830 --> 00:50:47,220

steering committee and project profiles

1148

00:50:51,320 --> 00:50:48,840

there this is a place we hope to be able

1149

00:50:53,210 --> 00:50:51,330

to post a lot of upcoming events we've

1150

00:50:56,570 --> 00:50:53,220

got a Twitter handle haven't tweeted yet

1151
00:50:58,400 --> 00:50:56,580
but it will be at life detection and

1152
00:51:00,350 --> 00:50:58,410
also we've got a Contact Us page and

1153
00:51:02,060 --> 00:51:00,360
we've been taking that really seriously

1154
00:51:04,430 --> 00:51:02,070
we've had dozens of people indicate an

1155
00:51:06,050 --> 00:51:04,440
interest in becoming involved in info

1156
00:51:07,880 --> 00:51:06,060
white papers and working groups and

1157
00:51:09,830 --> 00:51:07,890
we're keeping tabs of all of that so if

1158
00:51:11,450 --> 00:51:09,840
you're whether you're an early career

1159
00:51:13,190 --> 00:51:11,460
person or somebody who's been working in

1160
00:51:15,830 --> 00:51:13,200
life detection for 30 years you know

1161
00:51:17,480 --> 00:51:15,840
please don't hesitate to fill out that

1162
00:51:20,390 --> 00:51:17,490
form so we know that you're interested

1163
00:51:22,490 --> 00:51:20,400

in becoming engaged we've also got it's

1164

00:51:25,130 --> 00:51:22,500

a very beta version at this point but a

1165

00:51:27,800 --> 00:51:25,140

map of field work locations to help

1166

00:51:29,510 --> 00:51:27,810

facilitate coordination and sample

1167

00:51:32,570 --> 00:51:29,520

sharing open to everybody in the

1168

00:51:34,160 --> 00:51:32,580

community at job posting forum that

1169

00:51:35,780 --> 00:51:34,170

we've already started up so if you've

1170

00:51:37,460 --> 00:51:35,790

got jobs that are related to life

1171

00:51:39,790 --> 00:51:37,470

detection please just let us know we'd

1172

00:51:42,530 --> 00:51:39,800

be more than happy to advertise them

1173

00:51:43,730 --> 00:51:42,540

we've been working on as workshops and

1174

00:51:46,700 --> 00:51:43,740

working groups that are going to be

1175

00:51:49,090 --> 00:51:46,710

important for us the grayness of life

1176
00:51:51,710 --> 00:51:49,100
workshop this idea of looking between

1177
00:51:53,540 --> 00:51:51,720
prebiotic bio signatures and what we

1178
00:51:55,340 --> 00:51:53,550
think of as traditional bio signatures

1179
00:51:58,220 --> 00:51:55,350
is going to be one of our first enfold

1180
00:52:01,010 --> 00:51:58,230
workshops looking at October time lane

1181
00:52:02,390 --> 00:52:01,020
hosted by the Santa Fe Institute will

1182
00:52:04,910 --> 00:52:02,400
have other virtual and in-person

1183
00:52:06,650 --> 00:52:04,920
workshops to follow we're spending up a

1184
00:52:09,980 --> 00:52:06,660
few working groups here you can see some

1185
00:52:10,880 --> 00:52:09,990
of the early ones listed something not

1186
00:52:13,310 --> 00:52:10,890
to be missed

1187
00:52:15,320 --> 00:52:13,320
Tory Ola and everybody else that's been

1188
00:52:17,300 --> 00:52:15,330

involved in the life detection forum

1189

00:52:19,790 --> 00:52:17,310

project will be having an event on

1190

00:52:22,580 --> 00:52:19,800

Thursday night 5:30 in the large room

1191

00:52:24,050 --> 00:52:22,590

please don't don't don't hesitate to

1192

00:52:25,880 --> 00:52:24,060

come along we're gonna actually be

1193

00:52:29,210 --> 00:52:25,890

engaging with the demo of how this new

1194

00:52:31,730 --> 00:52:29,220

web-based platform can work and finally

1195

00:52:32,260 --> 00:52:31,740

an enfold social activity please come

1196

00:52:34,180 --> 00:52:32,270

any

1197

00:52:36,220 --> 00:52:34,190

that's interested in becoming involved

1198

00:52:38,620 --> 00:52:36,230

and enfold in our activities will be at

1199

00:52:40,780 --> 00:52:38,630

Henry's bar and tavern across the street

1200

00:52:54,700 --> 00:52:40,790

right after the life detection forum

1201

00:52:56,800 --> 00:52:54,710

event thanks great so I'm the third

1202

00:52:58,450 --> 00:52:56,810

child and also the third RCN I don't

1203

00:53:00,640 --> 00:52:58,460

know if you guys did that on purpose

1204

00:53:02,500 --> 00:53:00,650

this is prebiotic chemistry in early

1205

00:53:05,590 --> 00:53:02,510

Earth environments consortium it's a

1206

00:53:07,210 --> 00:53:05,600

mouthful we have recently gotten started

1207

00:53:09,850 --> 00:53:07,220

we just a couple of months ago put our

1208

00:53:12,520 --> 00:53:09,860

steering committee together let me tell

1209

00:53:14,950 --> 00:53:12,530

you first what our science goal is and

1210

00:53:16,870 --> 00:53:14,960

we spent about three months on this and

1211

00:53:18,580 --> 00:53:16,880

I think we debate it every other day so

1212

00:53:20,560 --> 00:53:18,590

feel free to change it it's to

1213

00:53:22,480 --> 00:53:20,570

investigate the delivery synthesis and

1214

00:53:24,670 --> 00:53:22,490

fate of small molecules under the

1215

00:53:26,860 --> 00:53:24,680

conditions of the early Earth which we

1216

00:53:29,250 --> 00:53:26,870

probably still need to figure out and

1217

00:53:31,750 --> 00:53:29,260

the subsequent or maybe concomittant

1218

00:53:33,190 --> 00:53:31,760

formation of proto biological molecules

1219

00:53:36,250 --> 00:53:33,200

and pathways that lead to systems

1220

00:53:40,930 --> 00:53:36,260

harboring the potential for life how we

1221

00:53:43,060 --> 00:53:40,940

do that is to sort of break ourselves up

1222

00:53:45,120 --> 00:53:43,070

or at least overlap ourselves into

1223

00:53:47,740 --> 00:53:45,130

several several seven different themes

1224

00:53:49,330 --> 00:53:47,750

so to sort of get to that particular

1225

00:53:51,340 --> 00:53:49,340

particular goal we're looking at

1226

00:53:54,090 --> 00:53:51,350

planetary evolution surface evolution

1227

00:53:57,160 --> 00:53:54,100

chemical constraints inventories

1228

00:53:59,680 --> 00:53:57,170

specific environments right because not

1229

00:54:01,840 --> 00:53:59,690

every single piece of the planet looks

1230

00:54:04,170 --> 00:54:01,850

the same all the time and then the

1231

00:54:07,750 --> 00:54:04,180

stability of small molecules in their

1232

00:54:09,040 --> 00:54:07,760

evolution into prebiotic complexity if

1233

00:54:11,200 --> 00:54:09,050

you would like to learn a little more

1234

00:54:13,360 --> 00:54:11,210

about how we break these seven themes

1235

00:54:15,520 --> 00:54:13,370

down into sort of specific disciplines

1236

00:54:17,590 --> 00:54:15,530

and topics and who's working on what

1237

00:54:19,750 --> 00:54:17,600

that's all on our poster so come see our

1238

00:54:23,920 --> 00:54:19,760

poster has this lovely purple and orange

1239

00:54:25,660 --> 00:54:23,930

theme so you can't miss it and I won't

1240

00:54:28,350 --> 00:54:25,670

take a lot of time going through the

1241

00:54:30,910 --> 00:54:28,360

objectives but how we get to this goal

1242

00:54:33,280 --> 00:54:30,920

is not just to look at those science

1243

00:54:35,710 --> 00:54:33,290

themes but also sort of start to break

1244

00:54:37,270 --> 00:54:35,720

down some of the barriers and and get

1245

00:54:40,480 --> 00:54:37,280

the group talking right and so

1246

00:54:41,920 --> 00:54:40,490

theme number one is to integrate and the

1247

00:54:43,450 --> 00:54:41,930

early Earth and prebiotic chemistry

1248

00:54:44,890 --> 00:54:43,460

community so we're going to bring

1249

00:54:45,700 --> 00:54:44,900

everyone together and make sure we all

1250

00:54:48,310 --> 00:54:45,710

speak the same

1251
00:54:49,960 --> 00:54:48,320
language we'd like to develop a robust

1252
00:54:51,849 --> 00:54:49,970
and fully parameterize model of the

1253
00:54:53,980 --> 00:54:51,859
early Earth so you know give us 30 years

1254
00:54:57,099 --> 00:54:53,990
and several more zeroes and commas after

1255
00:54:58,990 --> 00:54:57,109
the funding we can probably do that but

1256
00:55:00,690 --> 00:54:59,000
once we do that I think we'll be able to

1257
00:55:02,500 --> 00:55:00,700
really conduct some novel and innovative

1258
00:55:05,950 --> 00:55:02,510
experiments and sort of theoretical

1259
00:55:07,420 --> 00:55:05,960
models of how prebiotic chemistry could

1260
00:55:09,760 --> 00:55:07,430
and could not have worked on the early

1261
00:55:11,890 --> 00:55:09,770
Earth that will help us to identify the

1262
00:55:13,780 --> 00:55:11,900
conditions not just on earth but maybe

1263
00:55:15,849 --> 00:55:13,790

elsewhere where prebiotic chemistry can

1264

00:55:18,550 --> 00:55:15,859

happen and where it might should not

1265

00:55:20,290 --> 00:55:18,560

happen where it can't happen that might

1266

00:55:23,290 --> 00:55:20,300

save us from looking in places that are

1267

00:55:24,609 --> 00:55:23,300

not sort of worth looking at and then to

1268

00:55:26,500 --> 00:55:24,619

characterize the geochemical and

1269

00:55:29,230 --> 00:55:26,510

geophysical constraints of early Earth

1270

00:55:31,180 --> 00:55:29,240

and by environments so we can sort of

1271

00:55:32,950 --> 00:55:31,190

move on with future experimental and

1272

00:55:35,710 --> 00:55:32,960

theoretical prebiotic chemistry

1273

00:55:37,329 --> 00:55:35,720

so that's the objectives I have like

1274

00:55:38,770 --> 00:55:37,339

three minutes total and I think I'm

1275

00:55:41,440 --> 00:55:38,780

probably over so I want to get to the

1276

00:55:44,890 --> 00:55:41,450

good stuff on the left of your stream

1277

00:55:47,560 --> 00:55:44,900

screen you see the cat herders that's my

1278

00:55:49,990 --> 00:55:47,570

Coley's myself Lauren Williams Rama

1279

00:55:52,900 --> 00:55:50,000

Krishna Murthy and Tim Lyons Lauren and

1280

00:55:54,010 --> 00:55:52,910

Tim are here and then on the right our

1281

00:55:55,720 --> 00:55:54,020

steering committee

1282

00:55:58,060 --> 00:55:55,730

sometimes the cats and together we all

1283

00:56:00,190 --> 00:55:58,070

we get together and try and sort of

1284

00:56:02,770 --> 00:56:00,200

build this community but I would suggest

1285

00:56:04,690 --> 00:56:02,780

that a lot of you in the audience are

1286

00:56:07,060 --> 00:56:04,700

really part of this community so we

1287

00:56:10,359 --> 00:56:07,070

encourage you to come and join us and

1288

00:56:12,339 --> 00:56:10,369

build on our ideas if you're on the

1289

00:56:15,910 --> 00:56:12,349

right-hand side of this by the way and

1290

00:56:18,490 --> 00:56:15,920

you don't still understand what PC III

1291

00:56:21,190 --> 00:56:18,500

is I suggest you come to 13 coins on

1292

00:56:22,210 --> 00:56:21,200

Tuesday for happy hour if any of you out

1293

00:56:24,190 --> 00:56:22,220

there are not on the steering committee

1294

00:56:25,690 --> 00:56:24,200

and you want to come have great ideas

1295

00:56:27,970 --> 00:56:25,700

and tell us what we should and shouldn't

1296

00:56:29,740 --> 00:56:27,980

do as part of PC e3 you should come

1297

00:56:32,650 --> 00:56:29,750

write it on a napkin at happy hour on

1298

00:56:34,810 --> 00:56:32,660

Tuesday if you would like to be put to

1299

00:56:37,450 --> 00:56:34,820

work on any of those you can come on

1300

00:56:39,790 --> 00:56:37,460

come to our Wednesday brown bag lunch in

1301
00:56:41,380 --> 00:56:39,800
the madrone room at 12:15 bring your

1302
00:56:47,240 --> 00:56:41,390
lunch and we will see you there

1303
00:56:47,250 --> 00:56:53,650
[Applause]

1304
00:57:00,260 --> 00:56:57,500
representing the fourth and very new

1305
00:57:01,940 --> 00:57:00,270
ocean worlds is the network for ocean

1306
00:57:06,650 --> 00:57:01,950
worlds and that the time for this

1307
00:57:09,920 --> 00:57:06,660
network is now the I'm one of the co

1308
00:57:13,360 --> 00:57:09,930
leads with ELISA Roden and Chris German

1309
00:57:16,040 --> 00:57:13,370
we have been working on the concept for

1310
00:57:20,870 --> 00:57:16,050
this network in the last couple of

1311
00:57:22,190 --> 00:57:20,880
months and the overarching theme is

1312
00:57:24,730 --> 00:57:22,200
developing science and technology

1313
00:57:28,010 --> 00:57:24,740

research for exploring ocean worlds and

1314

00:57:29,330 --> 00:57:28,020

we think that ocean worlds research is

1315

00:57:31,880 --> 00:57:29,340

really guiding the search for life

1316

00:57:35,090 --> 00:57:31,890

beyond Earth and particularly in three

1317

00:57:40,850 --> 00:57:35,100

key areas geophysics ocean systems and

1318

00:57:42,440 --> 00:57:40,860

life and the geophysics is focused on

1319

00:57:44,870 --> 00:57:42,450

looking at evolution of ice-covered

1320

00:57:46,670 --> 00:57:44,880

ocean worlds and processes that are

1321

00:57:50,330 --> 00:57:46,680

occurring at the boundaries ocean

1322

00:57:53,930 --> 00:57:50,340

systems are focused and habitability and

1323

00:57:56,840 --> 00:57:53,940

the sustenance of life through time the

1324

00:58:00,610 --> 00:57:56,850

life areas are in resource exchange

1325

00:58:05,360 --> 00:58:00,620

energy generation and the signs of life

1326

00:58:07,430 --> 00:58:05,370

all three of these have a theme and that

1327

00:58:10,700 --> 00:58:07,440

we are emphasizing in terms of looking

1328

00:58:12,920 --> 00:58:10,710

at comparative studies between amongst

1329

00:58:17,290 --> 00:58:12,930

the ocean worlds and including earth and

1330

00:58:19,160 --> 00:58:17,300

there is a real emphasis in in this

1331

00:58:20,900 --> 00:58:19,170

research coordination network on

1332

00:58:22,550 --> 00:58:20,910

integrating scientists and cross

1333

00:58:26,390 --> 00:58:22,560

fertilizing between earth sciences

1334

00:58:29,030 --> 00:58:26,400

division and the planetary sciences and

1335

00:58:30,920 --> 00:58:29,040

in all three areas here looking at the

1336

00:58:32,810 --> 00:58:30,930

different boundaries between the ice

1337

00:58:35,180 --> 00:58:32,820

ocean interface in the ocean sediment

1338

00:58:37,430 --> 00:58:35,190

interface we think are relevant for

1339

00:58:39,470 --> 00:58:37,440

geophysics understanding what's

1340

00:58:43,340 --> 00:58:39,480

happening for the ocean dynamics and

1341

00:58:46,850 --> 00:58:43,350

life the objectives that we have are

1342

00:58:48,620 --> 00:58:46,860

five which are to identify and stimulate

1343

00:58:51,740 --> 00:58:48,630

novel directions of inquiry through

1344

00:58:53,390 --> 00:58:51,750

enhanced communication within the PI

1345

00:58:55,430 --> 00:58:53,400

community of scientists that are

1346

00:58:56,490 --> 00:58:55,440

involved and engaged in ocean worlds

1347

00:58:59,220 --> 00:58:56,500

both

1348

00:59:00,720 --> 00:58:59,230

in Earth and Planetary Sciences pursuing

1349

00:59:02,579 --> 00:59:00,730

activities of both reveal and address

1350

00:59:05,970 --> 00:59:02,589

critical knowledge gaps in ocean worlds

1351

00:59:08,490 --> 00:59:05,980

research and workshops around this we're

1352

00:59:09,720 --> 00:59:08,500

planning to organize stimulating and

1353

00:59:11,359 --> 00:59:09,730

facilitating new ocean world's

1354

00:59:14,790 --> 00:59:11,369

collaborations to undertake high-impact

1355

00:59:16,500 --> 00:59:14,800

transdisciplinary research also

1356

00:59:18,750 --> 00:59:16,510

identifying and integrating research on

1357

00:59:21,000 --> 00:59:18,760

earth and other ocean worlds to really

1358

00:59:22,260 --> 00:59:21,010

catalyze synergistic studies that

1359

00:59:24,300 --> 00:59:22,270

identify the conditions and the

1360

00:59:26,010 --> 00:59:24,310

potential for life to exist and if you

1361

00:59:29,250 --> 00:59:26,020

saw Chris Germans talk I think that's a

1362

00:59:31,230 --> 00:59:29,260

strong emphasis there the last is to

1363

00:59:33,089 --> 00:59:31,240

cultivate and augment the training of

1364

00:59:37,950 --> 00:59:33,099

the next generation of both generals

1365

00:59:41,609 --> 00:59:37,960

researchers the metrics of success that

1366

00:59:43,380 --> 00:59:41,619

we have are for one is really evidence

1367

00:59:45,240 --> 00:59:43,390

that we have stimulated new research

1368

00:59:46,950 --> 00:59:45,250

coordination zazz result in new

1369

00:59:49,050 --> 00:59:46,960

proposals being submitted that are

1370

00:59:51,500 --> 00:59:49,060

traceable to the activities that we've

1371

00:59:53,940 --> 00:59:51,510

organized the second is influencing now

1372

00:59:56,400 --> 00:59:53,950

the influence of now disseminated

1373

00:59:59,069 --> 00:59:56,410

information to things like the planning

1374

01:00:00,359 --> 00:59:59,079

of the next decade old survey the third

1375

01:00:03,000 --> 01:00:00,369

is expansion of the ocean world's

1376

01:00:04,829 --> 01:00:03,010

community we really want to engage the

1377

01:00:07,680 --> 01:00:04,839

people who are doing remote sensing on

1378

01:00:10,170 --> 01:00:07,690

earth and studying the cryosphere on

1379

01:00:11,880 --> 01:00:10,180

earth and and see if we can bring and

1380

01:00:13,319 --> 01:00:11,890

engage and train this community to

1381

01:00:13,950 --> 01:00:13,329

thinking about ocean worlds out in the

1382

01:00:16,020 --> 01:00:13,960

solar system

1383

01:00:17,490 --> 01:00:16,030

and the fourth is the incorporation of

1384

01:00:22,230 --> 01:00:17,500

now expertise into future flight

1385

01:00:24,960 --> 01:00:22,240

missions such as the Europa clipper the

1386

01:00:27,480 --> 01:00:24,970

who's invited you you might be going hey

1387

01:00:30,750 --> 01:00:27,490

they haven't invited me yet and that is

1388

01:00:34,859 --> 01:00:30,760

because we are sort of that are coming

1389

01:00:37,170 --> 01:00:34,869

out is today and the we we haven't

1390

01:00:40,319 --> 01:00:37,180

extended really many invitations at all

1391

01:00:42,059 --> 01:00:40,329

yet but those people teams that are

1392

01:00:44,700 --> 01:00:42,069

funded and engaged in ocean world's

1393

01:00:47,099 --> 01:00:44,710

research are going to be invited and

1394

01:00:49,319 --> 01:00:47,109

those are in programs that have been

1395

01:00:51,240 --> 01:00:49,329

introduced this evening but include the

1396

01:00:54,599 --> 01:00:51,250

habitable world solar system workings

1397

01:00:58,260 --> 01:00:54,609

Cassini data and data analysis program P

1398

01:00:59,700 --> 01:00:58,270

star exobiology Picasso Matisse and at

1399

01:01:00,690 --> 01:00:59,710

the bottom we have the Earth Sciences

1400

01:01:02,240 --> 01:01:00,700

Division where there are several

1401

01:01:07,499 --> 01:01:02,250

programs in cryosphere science

1402

01:01:07,499 --> 01:01:07,509

oceanography ocean biology biochemistry

1403

01:01:12,329 --> 01:01:09,929

and really together we hope that this

1404

01:01:14,219 --> 01:01:12,339

program will really wind up developing a

1405

01:01:15,779 --> 01:01:14,229

vision for the future in future of what

1406

01:01:18,089 --> 01:01:15,789

ocean worlds research will really look

1407

01:01:21,150 --> 01:01:18,099

like and we have a new website that just

1408

01:01:23,849 --> 01:01:21,160

that is active as of early this morning

1409

01:01:35,579 --> 01:01:23,859

it is ocean world's dot space so please

1410

01:01:37,319 --> 01:01:35,589

come and visit it and often thanks so

1411

01:01:38,459 --> 01:01:37,329

I'm sorry for the packed evening but I

1412

01:01:41,579 --> 01:01:38,469

would like to spend a little bit time

1413

01:01:43,169 --> 01:01:41,589

letting people ask questions so the

1414

01:01:45,150 --> 01:01:43,179

leads are staying up here I'm up here

1415

01:01:46,589 --> 01:01:45,160

they're also the program officers that

1416

01:01:48,630 --> 01:01:46,599

are sitting at the table down in front

1417

01:01:58,249 --> 01:01:48,640

so are there any questions there are

1418

01:02:07,519 --> 01:02:03,439

Kevin had JPL this is this is great

1419

01:02:12,209 --> 01:02:07,529

but ultimately when it comes to missions

1420

01:02:17,630 --> 01:02:12,219

we've got all of the eggs around NASA

1421

01:02:21,569 --> 01:02:17,640

the the OPAC the meatbag the vex AG x AG

1422

01:02:24,390 --> 01:02:21,579

XO pad everybody here know right so so

1423

01:02:28,890 --> 01:02:24,400

we all sort of divide up geographically

1424

01:02:30,809 --> 01:02:28,900

and these eggs then generate their white

1425

01:02:33,839 --> 01:02:30,819

papers and their priorities for the de

1426
01:02:35,449 --> 01:02:33,849
kado surveys astrobiology in my opinion

1427
01:02:39,239 --> 01:02:35,459
in the opinion of many of the folks here

1428
01:02:43,079 --> 01:02:39,249
really got hit hard in the last decade

1429
01:02:46,049 --> 01:02:43,089
old survey in terms of being spread

1430
01:02:49,439 --> 01:02:46,059
across this sort of geography of the way

1431
01:02:51,559 --> 01:02:49,449
nasa does its planning to that end i

1432
01:02:54,120 --> 01:02:51,569
think looking forward we need an

1433
01:02:55,829 --> 01:02:54,130
astrobiology assessment group we've got

1434
01:02:58,229 --> 01:02:55,839
to break the mold on how we're actually

1435
01:03:00,299 --> 01:02:58,239
doing our planning for the de kado

1436
01:03:05,809 --> 01:03:00,309
survey and our prioritization of

1437
01:03:12,989 --> 01:03:08,429
if you want mission zags are the way to

1438
01:03:15,089 --> 01:03:12,999

get them done and and if you want

1439

01:03:17,429 --> 01:03:15,099

missions the ads feed into the decadal

1440

01:03:19,949 --> 01:03:17,439

survey and that's if you want to learn

1441

01:03:21,749 --> 01:03:19,959

more about that I'm happy to let you buy

1442

01:03:26,909 --> 01:03:21,759

me a beer so I can cry into it about the

1443

01:03:28,529 --> 01:03:26,919

Europa Lander so in a case marry you and

1444

01:03:30,630 --> 01:03:28,539

I have talked about this in the past can

1445

01:03:38,750 --> 01:03:30,640

we get an astrobiology assessment group

1446

01:03:45,060 --> 01:03:38,760

going Michael it was at you

1447

01:03:50,760 --> 01:03:47,790

so you and I have chatted about this and

1448

01:03:52,890 --> 01:03:50,770

I don't think it's a good idea and it's

1449

01:03:55,200 --> 01:03:52,900

because I think we need to be integrated

1450

01:03:56,790 --> 01:03:55,210

into the planetary science and I think

1451
01:03:58,410 --> 01:03:56,800
we need to be integrated into all these

1452
01:04:01,190 --> 01:03:58,420
eggs and I don't think we need to be

1453
01:04:03,570 --> 01:04:01,200
isolated on you know we don't need to

1454
01:04:06,090 --> 01:04:03,580
take it out back

1455
01:04:07,710 --> 01:04:06,100
I am really concerned that in the past

1456
01:04:09,570 --> 01:04:07,720
we've done two Keadle surveys and that

1457
01:04:12,690 --> 01:04:09,580
wasn't integrated and it was its own

1458
01:04:14,700 --> 01:04:12,700
little section there ended up being a

1459
01:04:16,320 --> 01:04:14,710
chapter on astrobiology and not a

1460
01:04:18,840 --> 01:04:16,330
discussion of astrobiology and

1461
01:04:21,480 --> 01:04:18,850
relationship to missions and so I'm

1462
01:04:25,110 --> 01:04:21,490
concerned I would like to see and I've

1463
01:04:27,690 --> 01:04:25,120

been trying to work towards infiltrating

1464

01:04:30,860 --> 01:04:27,700

and integrating and making sure that

1465

01:04:34,020 --> 01:04:30,870

astrobiologists actually won't attend AG

1466

01:04:37,860 --> 01:04:34,030

meetings get their voices heard one of

1467

01:04:40,530 --> 01:04:37,870

the requirements for the new RC ends is

1468

01:04:42,990 --> 01:04:40,540

well a requirement a request is to

1469

01:04:46,410 --> 01:04:43,000

ensure that members from these RCN

1470

01:04:48,900 --> 01:04:46,420

actually attend AG meetings and play a

1471

01:04:51,720 --> 01:04:48,910

more active role I think that that's

1472

01:04:53,640 --> 01:04:51,730

again working together to get the

1473

01:04:56,700 --> 01:04:53,650

missions that you want seem much better

1474

01:04:58,920 --> 01:04:56,710

to me than the antagonism that I would

1475

01:05:02,670 --> 01:04:58,930

say the current AG sometimes had again

1476

01:05:05,550 --> 01:05:02,680

with outer planets versus Mars versus

1477

01:05:07,440 --> 01:05:05,560

Venus versus things to the moon I think

1478

01:05:09,330 --> 01:05:07,450

that we actually transcend almost all of

1479

01:05:12,330 --> 01:05:09,340

those groups and that's the way I think

1480

01:05:14,640 --> 01:05:12,340

we should should do it so I would say

1481

01:05:17,250 --> 01:05:14,650

that I think we need to all work harder

1482

01:05:20,160 --> 01:05:17,260

to get our voices heard in the in the

1483

01:05:22,110 --> 01:05:20,170

strongest groups that develop actually

1484

01:05:25,200 --> 01:05:22,120

full-on missions because there's a lot

1485

01:05:28,650 --> 01:05:25,210

of people in astrobiology that aren't at

1486

01:05:30,720 --> 01:05:28,660

Institute's that are developing missions

1487

01:05:33,720 --> 01:05:30,730

that aren't part of current missions

1488

01:05:36,000 --> 01:05:33,730

that have a lot to contribute and so I

1489

01:05:38,910 --> 01:05:36,010

worry that that they need to be included

1490

01:05:45,510 --> 01:05:38,920

as well when's the last time you went to

1491

01:05:47,070 --> 01:05:45,520

OPEC I went two years ago you know I'm

1492

01:05:48,600 --> 01:05:47,080

not the one that should be speaking for

1493

01:05:53,400 --> 01:05:48,610

it but when was the last time

1494

01:05:57,120 --> 01:05:53,410

and went September I mean it's you guys

1495

01:06:00,630 --> 01:05:57,130

that need to be talking at that and so

1496

01:06:03,450 --> 01:06:00,640

and and again I can't travel everywhere

1497

01:06:05,430 --> 01:06:03,460

but I'd be happy to I think we're doing

1498

01:06:08,970 --> 01:06:05,440

this community a real disservice by not

1499

01:06:10,770 --> 01:06:08,980

having a mechanism to better feed into

1500

01:06:12,990 --> 01:06:10,780

these eggs even if we do not have our

1501

01:06:14,580 --> 01:06:13,000

own eyes I agree entirely that we need a

1502

01:06:16,260 --> 01:06:14,590

better mechanism for feeding and I don't

1503

01:06:18,000 --> 01:06:16,270

think actually letting us meet and

1504

01:06:19,410 --> 01:06:18,010

talking to ourselves is the way to do it

1505

01:06:21,090 --> 01:06:19,420

I guess is what I and so I'd like

1506

01:06:23,190 --> 01:06:21,100

there's got to be something in between

1507

01:06:24,660 --> 01:06:23,200

what we have now and separating

1508

01:06:26,880 --> 01:06:24,670

ourselves out and coming up with their

1509

01:06:29,850 --> 01:06:26,890

own white papers so I think this is a

1510

01:06:32,370 --> 01:06:29,860

really good discussion for the RC ends

1511

01:06:33,900 --> 01:06:32,380

for other people in the community to

1512

01:06:35,700 --> 01:06:33,910

find a better way I don't think anybody

1513

01:06:42,330 --> 01:06:35,710

disagrees that we're not feeding in well

1514

01:06:43,800 --> 01:06:42,340

enough thanks um so on a similar note I

1515

01:06:45,630 --> 01:06:43,810

just want to remind everyone that in

1516

01:06:48,510 --> 01:06:45,640

addition to the eggs these decadal

1517

01:06:50,790 --> 01:06:48,520

surveys are ongoing the astrophysics one

1518

01:06:53,820 --> 01:06:50,800

is still taking white papers for the

1519

01:06:55,110 --> 01:06:53,830

Astro 2020 programs part of their calls

1520

01:06:57,090 --> 01:06:55,120

and not the science white papers by the

1521

01:06:59,790 --> 01:06:57,100

programs and and to follow up on

1522

01:07:02,550 --> 01:06:59,800

something I just heard Mary saying if we

1523

01:07:04,380 --> 01:07:02,560

want our sciences astrobiologist

1524

01:07:07,110 --> 01:07:04,390

included in these missions especially

1525

01:07:09,450 --> 01:07:07,120

the the cattle survey prioritized level

1526

01:07:11,310 --> 01:07:09,460

it's incumbent upon us as individuals to

1527

01:07:12,840 --> 01:07:11,320

write white papers participate in those

1528

01:07:16,650 --> 01:07:12,850

white papers get involved in the eggs

1529

01:07:18,210 --> 01:07:16,660

where appropriate and when asked to

1530

01:07:19,770 --> 01:07:18,220

serve on the panel serve on the panels

1531

01:07:21,990 --> 01:07:19,780

for the dakedo surveys that's how it's

1532

01:07:23,520 --> 01:07:22,000

going to happen you know we we have to

1533

01:07:26,970 --> 01:07:23,530

prioritize our science just like every

1534

01:07:30,440 --> 01:07:26,980

other community so you know get after it

1535

01:07:32,610 --> 01:07:30,450

I guess is what I'm trying to say

1536

01:07:37,010 --> 01:07:32,620

there's not a question there I'm just

1537

01:07:43,850 --> 01:07:40,940

I just wanted to follow up the National

1538

01:07:47,900 --> 01:07:43,860

Academies goodness the committee that

1539

01:07:49,700 --> 01:07:47,910

had astrobiology strategy it was like 17

1540

01:07:51,440 --> 01:07:49,710

words long I could never remember it but

1541

01:07:53,800 --> 01:07:51,450

we did just come out with a bunch of

1542

01:07:55,670 --> 01:07:53,810

recommendations and one of them was that

1543

01:07:57,590 --> 01:07:55,680

everyone should always consider that

1544

01:07:59,480 --> 01:07:57,600

astrobiology should be incorporated into

1545

01:08:01,120 --> 01:07:59,490

every mission sort of that's how NASA

1546

01:08:03,020 --> 01:08:01,130

should go forward is thinking that

1547

01:08:04,460 --> 01:08:03,030

astrobiology should be one of the

1548

01:08:06,470 --> 01:08:04,470

fundamental things that gets thought

1549

01:08:08,540 --> 01:08:06,480

about when developing missions and so

1550

01:08:10,430 --> 01:08:08,550

that's that's sort of already there how

1551

01:08:14,090 --> 01:08:10,440

we do it in or outside of an AG I'm

1552

01:08:15,560 --> 01:08:14,100

agnostic on but I think it's it's out

1553

01:08:22,480 --> 01:08:15,570

there and the community came together

1554

01:08:27,860 --> 01:08:24,620

apparently it's like hot potato chairs

1555

01:08:30,710 --> 01:08:27,870

up here no no dancer questions he's

1556

01:08:31,789 --> 01:08:30,720

going next what's up I'm wondering he's

1557

01:08:33,620 --> 01:08:31,799

going next

1558

01:08:34,849 --> 01:08:33,630

mine was related to eggs if yours isn't

1559

01:08:37,490 --> 01:08:34,859

related to actually could say it very

1560

01:08:39,710 --> 01:08:37,500

quickly go ahead okay I was just gonna

1561

01:08:40,940 --> 01:08:39,720

also follow up on that so for those

1562

01:08:42,380 --> 01:08:40,950

people who aren't aware of the

1563

01:08:44,510 --> 01:08:42,390

assessment group structure that

1564

01:08:47,150 --> 01:08:44,520

generally informs NASA about mission

1565

01:08:50,210 --> 01:08:47,160

priorities right now there's a growing

1566

01:08:53,240 --> 01:08:50,220

number of them there's probably going to

1567

01:08:55,539 --> 01:08:53,250

be a new mercury one potentially so

1568

01:08:58,960 --> 01:08:55,549

there's a lot of questions as to how

1569

01:09:01,640 --> 01:08:58,970

whether it's better to divide or or to

1570

01:09:03,980 --> 01:09:01,650

get together as different parts of the

1571

01:09:06,170 --> 01:09:03,990

community in terms of advising NASA

1572

01:09:10,099 --> 01:09:06,180

directly but right now there's me pag

1573

01:09:11,960 --> 01:09:10,109

vex AG and Oh peg and s peg that all

1574

01:09:15,920 --> 01:09:11,970

operate in the planetary science

1575

01:09:18,200 --> 01:09:15,930

division to offer strategies I know XO

1576

01:09:21,860 --> 01:09:18,210

pag as well kind of operates between

1577

01:09:24,950 --> 01:09:21,870

both astrophysics I think more inside of

1578

01:09:27,380 --> 01:09:24,960

astrophysics but two things to take note

1579

01:09:29,690 --> 01:09:27,390

of is that the a stroke and the o pad

1580

01:09:31,700 --> 01:09:29,700

committee we worked very very hard to

1581

01:09:34,430 --> 01:09:31,710

make sure that we got astrobiologist

1582

01:09:37,490 --> 01:09:34,440

card-carrying astrobiologists onto the

1583

01:09:39,980 --> 01:09:37,500

organizing committee for Oh peg and so

1584

01:09:41,570 --> 01:09:39,990

that now includes people who I will

1585

01:09:43,790 --> 01:09:41,580

probably figure it as well as Morgan

1586

01:09:45,290 --> 01:09:43,800

cable and Jeff Bowman

1587

01:09:48,140 --> 01:09:45,300

Morgan news national biologist right

1588

01:09:50,270 --> 01:09:48,150

here Jeff who's an oceanographer and a

1589

01:09:52,400 --> 01:09:50,280

microbiologist and so that represented

1590

01:09:54,290 --> 01:09:52,410

OPEC actually making an investment in

1591

01:09:56,210 --> 01:09:54,300

this direction the roadmap for ocean

1592

01:09:58,790 --> 01:09:56,220

world's is another place where we have

1593

01:10:01,610 --> 01:09:58,800

tried to help prioritize outer planets

1594

01:10:03,110 --> 01:10:01,620

missions or at least this synergizing

1595

01:10:05,240 --> 01:10:03,120

ocean world science into those

1596

01:10:07,220 --> 01:10:05,250

priorities but these are examples of

1597

01:10:09,200 --> 01:10:07,230

mission of meetings that everyone should

1598

01:10:11,600 --> 01:10:09,210

participate in if you can't come in

1599

01:10:14,420 --> 01:10:11,610

person they're available over the phone

1600

01:10:16,670 --> 01:10:14,430

you can participate in the telecoms and

1601

01:10:18,110 --> 01:10:16,680

in the activities and they're very very

1602

01:10:20,120 --> 01:10:18,120

important because they're where we

1603

01:10:22,400 --> 01:10:20,130

discuss priorities as different parts of

1604

01:10:24,380 --> 01:10:22,410

the community and advise NASA on

1605

01:10:25,550 --> 01:10:24,390

directions and for forward motion and

1606

01:10:28,010 --> 01:10:25,560

the other thing I wanted to highlight

1607

01:10:30,560 --> 01:10:28,020

that in the XO peg meeting that Vickie

1608

01:10:33,860 --> 01:10:30,570

ran this afternoon or sorry Sunday

1609

01:10:36,230 --> 01:10:33,870

afternoon there was a discussion of a

1610

01:10:38,530 --> 01:10:36,240

joint meeting between XO peg vex AG and

1611

01:10:40,820 --> 01:10:38,540

Oh peg that may happen in the future

1612

01:10:43,040 --> 01:10:40,830

that's really important because it's an

1613

01:10:45,290 --> 01:10:43,050

example of ABS working together to

1614

01:10:47,630 --> 01:10:45,300

synergize and to make the group smaller

1615

01:10:49,550 --> 01:10:47,640

rather than more divisive and so I would

1616

01:10:51,530 --> 01:10:49,560

highly suggest that everyone becomes a

1617

01:10:53,780 --> 01:10:51,540

participant in that an n-fold will be

1618

01:10:55,460 --> 01:10:53,790

really focusing on white papers to

1619

01:10:58,490 --> 01:10:55,470

contribute to the planetary de Cadle I

1620

01:11:00,620 --> 01:10:58,500

know I showed up sorry I also want to

1621

01:11:02,330 --> 01:11:00,630

just add something that there's the

1622

01:11:04,880 --> 01:11:02,340

Committee on astrobiology and Planetary

1623

01:11:07,400 --> 01:11:04,890

Sciences that's an advisory committee

1624

01:11:08,540 --> 01:11:07,410

that's at the National Academy and they

1625

01:11:10,580 --> 01:11:08,550

are responsible for making

1626
01:11:13,190 --> 01:11:10,590
recommendations of the organization of

1627
01:11:14,810 --> 01:11:13,200
the next two Kadel survey the co-chair

1628
01:11:18,770 --> 01:11:14,820
is Chris house who's here at this

1629
01:11:20,420 --> 01:11:18,780
meeting I can't think of other members

1630
01:11:23,060 --> 01:11:20,430
that might be here but that's a good

1631
01:11:26,890 --> 01:11:23,070
place for you to voice your concerns too

1632
01:11:32,540 --> 01:11:26,900
about how astrobiology is considered in

1633
01:11:34,700 --> 01:11:32,550
indicate all surveys Mary you mentioned

1634
01:11:37,430 --> 01:11:34,710
this is general your bro can it Ellery

1635
01:11:41,420 --> 01:11:37,440
sorry I just just one other thing to

1636
01:11:43,880 --> 01:11:41,430
speak about the XO peg I'm sorry I'm

1637
01:11:45,500 --> 01:11:43,890
guttled I am the program scientist for

1638
01:11:47,120 --> 01:11:45,510

the exoplanet program at NASA

1639

01:11:48,860 --> 01:11:47,130

headquarters and in the astrophysics

1640

01:11:51,050 --> 01:11:48,870

division and I just wanted to jump on

1641

01:11:52,730 --> 01:11:51,060

you you mentioned the XO peg which does

1642

01:11:53,889 --> 01:11:52,740

which is coordinated out of the

1643

01:11:56,080 --> 01:11:53,899

astrophysics division

1644

01:11:58,270 --> 01:11:56,090

so it might be sometimes transparent to

1645

01:12:01,989 --> 01:11:58,280

y'all here in this community I want to

1646

01:12:03,609 --> 01:12:01,999

encourage you to to if you google XO peg

1647

01:12:04,989 --> 01:12:03,619

and go to the XO peg page you can sign

1648

01:12:07,029 --> 01:12:04,999

up for our e-mail exploder that

1649

01:12:09,100 --> 01:12:07,039

announces things in particular talking

1650

01:12:11,709 --> 01:12:09,110

about the executive committee of the XO

1651
01:12:13,689 --> 01:12:11,719
peg every year round about January we

1652
01:12:17,020 --> 01:12:13,699
put out a call a Dear Colleague letter

1653
01:12:18,699 --> 01:12:17,030
to the community soliciting people to

1654
01:12:20,909 --> 01:12:18,709
nominate themselves or nominate others

1655
01:12:25,259 --> 01:12:20,919
to serve on the executive committee of

1656
01:12:28,029 --> 01:12:25,269
of the XO peg and we would welcome

1657
01:12:29,919 --> 01:12:28,039
welcome nominations from from this

1658
01:12:32,639 --> 01:12:29,929
community we certainly are trying to

1659
01:12:35,199 --> 01:12:32,649
represent the breath of the exoplanet

1660
01:12:37,449 --> 01:12:35,209
exploration stakeholder community which

1661
01:12:40,000 --> 01:12:37,459
certainly includes astrobiology so I

1662
01:12:41,859 --> 01:12:40,010
encourage you to to try and link in

1663
01:12:47,919 --> 01:12:41,869

because we would welcome your

1664

01:12:50,729 --> 01:12:47,929

contribution oh sorry

1665

01:12:52,889 --> 01:12:50,739

our current chair is right here Vicky

1666

01:12:58,750 --> 01:12:52,899

sorry about that

1667

01:13:02,129 --> 01:12:58,760

astrobiologist Jenna Eichenberg NASA

1668

01:13:05,830 --> 01:13:02,139

Goddard Space Flight Center I wanted to

1669

01:13:07,600 --> 01:13:05,840

kind of add another element to the

1670

01:13:09,819 --> 01:13:07,610

discussion that's going on and marry you

1671

01:13:12,909 --> 01:13:09,829

you mentioned a very important word and

1672

01:13:15,609 --> 01:13:12,919

that was integration essentially we've

1673

01:13:17,679 --> 01:13:15,619

got two communities and they've kind of

1674

01:13:19,750 --> 01:13:17,689

evolved in their own pathways the agz

1675

01:13:22,299 --> 01:13:19,760

representing more of the mission related

1676

01:13:24,159 --> 01:13:22,309

people doing what they've done and then

1677

01:13:26,709 --> 01:13:24,169

we've got the astrobiology which is

1678

01:13:29,290 --> 01:13:26,719

really got a foundation in a lot of

1679

01:13:30,969 --> 01:13:29,300

academic research and we need to blend

1680

01:13:34,119 --> 01:13:30,979

the two together that's what we're

1681

01:13:36,279 --> 01:13:34,129

talking about doing so you've heard the

1682

01:13:38,350 --> 01:13:36,289

folks from the mission side saying hey

1683

01:13:41,290 --> 01:13:38,360

we want you all to get involved in the

1684

01:13:44,259 --> 01:13:41,300

acts you do you need to do that if you

1685

01:13:48,819 --> 01:13:44,269

want to see the the science that you

1686

01:13:52,010 --> 01:13:48,829

have you developed here on earth take

1687

01:13:54,990 --> 01:13:52,020

foot in a mission somewhere else

1688

01:13:57,839 --> 01:13:55,000

but the same token we need to reach out

1689

01:14:00,030 --> 01:13:57,849

to the planetary scientists and other

1690

01:14:02,430 --> 01:14:00,040

people who are in SMD doing mission work

1691

01:14:06,930 --> 01:14:02,440

and get them involved in all of these

1692

01:14:10,290 --> 01:14:06,940

groups so some of us aren't necessarily

1693

01:14:12,689 --> 01:14:10,300

on one of the proposals on they aren't

1694

01:14:14,970 --> 01:14:12,699

actually funded through astrobiology but

1695

01:14:18,000 --> 01:14:14,980

we might be doing it so I'm not sure

1696

01:14:19,950 --> 01:14:18,010

what the Avenue is for that but I would

1697

01:14:22,109 --> 01:14:19,960

just encourage that all of these groups

1698

01:14:24,959 --> 01:14:22,119

reach out to as many of the people that

1699

01:14:27,379 --> 01:14:24,969

they can who are involved in missions to

1700

01:14:29,220 --> 01:14:27,389

get involved and share their knowledge

1701

01:14:31,760 --> 01:14:29,230

so though we can all work together

1702

01:14:34,080 --> 01:14:31,770

because ultimately the missions need the

1703

01:14:36,000 --> 01:14:34,090

astrobiologists and the astrobiologists

1704

01:14:38,430 --> 01:14:36,010

need the missions they go hand in hand

1705

01:14:40,500 --> 01:14:38,440

so the integration has to come from both

1706

01:14:47,910 --> 01:14:40,510

directions not just this we're doing

1707

01:14:50,010 --> 01:14:47,920

something else hi this is Bill diamond

1708

01:14:52,859 --> 01:14:50,020

from the SETI Institute so at the risk

1709

01:14:56,220 --> 01:14:52,869

of taking on too much intellectual risk

1710

01:14:57,720 --> 01:14:56,230

I have a question about the RCS and and

1711

01:14:59,910 --> 01:14:57,730

how they're going to work or how they do

1712

01:15:03,169 --> 01:14:59,920

work one of the attributes as I

1713

01:15:05,370 --> 01:15:03,179

understand it of the NA I was was a core

1714

01:15:07,950 --> 01:15:05,380

administrative function if you will that

1715

01:15:11,100 --> 01:15:07,960

whose purpose was to kind of bring

1716

01:15:12,959 --> 01:15:11,110

together the different nai teams and do

1717

01:15:16,020 --> 01:15:12,969

the cross-pollination of ideas and

1718

01:15:18,479 --> 01:15:16,030

exchanges of information etc in the new

1719

01:15:20,430 --> 01:15:18,489

structure with the AI cars how is that

1720

01:15:22,169 --> 01:15:20,440

going to work in terms of you'll have

1721

01:15:24,720 --> 01:15:22,179

different teams is there going to be a

1722

01:15:25,919 --> 01:15:24,730

mechanism or infrastructure for sort of

1723

01:15:32,089 --> 01:15:25,929

the coordination and communication

1724

01:15:35,990 --> 01:15:34,189

so sorry bill just to clarify do you

1725

01:15:38,379 --> 01:15:36,000

mean the constituent teens of a given

1726

01:15:41,390 --> 01:15:38,389

asean or do you mean between the RC ends

1727

01:15:45,050 --> 01:15:41,400

within an RC and so yeah for example the

1728

01:15:47,300 --> 01:15:45,060

the astrobiology what is going to take

1729

01:15:48,919 --> 01:15:47,310

the place now the nai so for Nexus we

1730

01:15:50,870 --> 01:15:48,929

have some experience with this yeah we

1731

01:15:53,180 --> 01:15:50,880

have you know all of our P is from these

1732

01:15:56,300 --> 01:15:53,190

different programs it's very much it's

1733

01:15:57,919 --> 01:15:56,310

very much bottom-up so so the management

1734

01:15:59,780 --> 01:15:57,929

at the top of which I'm one of the

1735

01:16:01,990 --> 01:15:59,790

members with sort of the cat herders but

1736

01:16:04,339 --> 01:16:02,000

we hold meetings for the steering group

1737

01:16:05,600 --> 01:16:04,349

to come together and to decide what's

1738

01:16:06,859 --> 01:16:05,610

important to them or what activities

1739

01:16:08,479 --> 01:16:06,869

they would like to support and to have

1740

01:16:11,720 --> 01:16:08,489

that discussion and so the ideas really

1741

01:16:12,740 --> 01:16:11,730

do come grassroots from the pis and from

1742

01:16:15,200 --> 01:16:12,750

the people who are interested in that

1743

01:16:17,569 --> 01:16:15,210

science and then we help enable whatever

1744

01:16:19,010 --> 01:16:17,579

they come up with so so that is the way

1745

01:16:20,810 --> 01:16:19,020

that works so instead of a sort of more

1746

01:16:21,830 --> 01:16:20,820

top-down structure it's very much the

1747

01:16:23,510 --> 01:16:21,840

community figuring out what the

1748

01:16:25,040 --> 01:16:23,520

community wants then making sure there's

1749

01:16:26,510 --> 01:16:25,050

enough infrastructure there to actually

1750

01:16:28,430 --> 01:16:26,520

enable it and make it happen

1751

01:16:30,050 --> 01:16:28,440

and in terms of that student committee

1752

01:16:32,450 --> 01:16:30,060

facilitating that process is this

1753

01:16:35,720 --> 01:16:32,460

something you do on a annual basis or

1754

01:16:37,669 --> 01:16:35,730

quarterly basis or is there a steering

1755

01:16:40,189 --> 01:16:37,679

group meetings I mean depends on the RCN

1756

01:16:41,750 --> 01:16:40,199

it can be on a monthly basis so you know

1757

01:16:43,160 --> 01:16:41,760

and that sort of a timescale it's not

1758

01:16:45,589 --> 01:16:43,170

it's not annual because it's more

1759

01:16:49,160 --> 01:16:45,599

frequently than that leaves me weekly

1760

01:16:50,720 --> 01:16:49,170

get we meet weekly to hope to go over

1761

01:16:54,020 --> 01:16:50,730

issues for them for the group and they

1762

01:16:57,260 --> 01:16:54,030

meet monthly with the point of contact

1763

01:17:01,609 --> 01:16:57,270

at headquarters so Nexus meets with me

1764

01:17:04,459 --> 01:17:01,619

and Doug agendas and then there's a plan

1765

01:17:07,129 --> 01:17:04,469

so you know Nexus is the oldest one then

1766

01:17:10,040 --> 01:17:07,139

enfoque came on about a year ago and the

1767

01:17:12,770 --> 01:17:10,050

last two just happened starting before

1768

01:17:15,229 --> 01:17:12,780

the shutdown slowed down a bit and then

1769

01:17:17,000 --> 01:17:15,239

picked up again and so the plan too is

1770

01:17:18,649 --> 01:17:17,010

when all of them are online and the

1771

01:17:20,350 --> 01:17:18,659

steering committee knows everybody knows

1772

01:17:24,800 --> 01:17:20,360

what's going on there's going to be

1773

01:17:27,900 --> 01:17:24,810

quarterly to buy semiannual meetings of

1774

01:17:29,880 --> 01:17:27,910

all of the leads and then an an you

1775

01:17:31,110 --> 01:17:29,890

meeting of all of the people that are

1776

01:17:33,780 --> 01:17:31,120

part of the air sea ends either at

1777

01:17:35,850 --> 01:17:33,790

something like as taps icon or another

1778

01:17:37,920 --> 01:17:35,860

alternate meeting so those things that

1779

01:17:40,760 --> 01:17:37,930

kind of bubble up bottoms up then still

1780

01:17:45,660 --> 01:17:40,770

get disseminated you know ultimately

1781

01:17:47,790 --> 01:17:45,670

kind of by the steering committees part

1782

01:17:49,770 --> 01:17:47,800

they bubble up and do what well if so so

1783

01:17:51,330 --> 01:17:49,780

you've got this the coordination

1784

01:17:52,890 --> 01:17:51,340

communication you've talked about it

1785

01:17:54,750 --> 01:17:52,900

happening you know bottoms up instead of

1786

01:17:57,000 --> 01:17:54,760

top down but then ultimately this

1787

01:17:58,320 --> 01:17:57,010

information is is getting to the

1788

01:18:00,840 --> 01:17:58,330

steering committee it's discussed on

1789

01:18:02,610 --> 01:18:00,850

these monthly meetings etc and then you

1790

01:18:06,030 --> 01:18:02,620

know sort of the outcome of that or the

1791

01:18:07,980 --> 01:18:06,040

output they're coming up with ideas of

1792

01:18:11,640 --> 01:18:07,990

activities for the community beyond

1793

01:18:14,370 --> 01:18:11,650

themselves and they're a larger

1794

01:18:18,120 --> 01:18:14,380

representation so instead of maybe one

1795

01:18:21,330 --> 01:18:18,130

geophysicist on a small committee there

1796

01:18:23,340 --> 01:18:21,340

are 34 people that study exoplanets that

1797

01:18:24,420 --> 01:18:23,350

are coming up with ideas or

1798

01:18:25,650 --> 01:18:24,430

representatives from the community

1799

01:18:28,890 --> 01:18:25,660

because they also have their team

1800

01:18:30,570 --> 01:18:28,900

members to bring forward ideas for I

1801

01:18:33,120 --> 01:18:30,580

mean they talked about organizing white

1802

01:18:37,230 --> 01:18:33,130

papers they talked about Nexus has had

1803

01:18:39,630 --> 01:18:37,240

five four four workshops since it

1804

01:18:42,120 --> 01:18:39,640

started these are all activities that

1805

01:18:44,100 --> 01:18:42,130

serve the rest of the community so the

1806

01:18:46,220 --> 01:18:44,110

ideas and stuff coming from me or coming

1807

01:18:50,120 --> 01:18:46,230

or Lindsey are coming from the community

1808

01:18:52,560 --> 01:18:50,130

great thank you that's helpful Thanks

1809

01:18:53,640 --> 01:18:52,570

hi this is Dave Dima right here I just

1810

01:18:55,950 --> 01:18:53,650

want to make a little bit of a

1811

01:18:58,710 --> 01:18:55,960

historical comment about the importance

1812

01:19:01,500 --> 01:18:58,720

of Nai the importance of the emag eggs

1813

01:19:03,120 --> 01:19:01,510

in this case me peg and starting back in

1814

01:19:05,520 --> 01:19:03,130

the 90s course the astrobiology

1815

01:19:07,920 --> 01:19:05,530

Institute started in 1997 the meet peg

1816

01:19:11,040 --> 01:19:07,930

effort really got going in the 90s also

1817

01:19:13,890 --> 01:19:11,050

and this was an important period where

1818

01:19:16,080 --> 01:19:13,900

the Mars exploration Rovers are being

1819

01:19:19,920 --> 01:19:16,090

developed but hadn't landed yet and we

1820

01:19:21,570 --> 01:19:19,930

had to decide just what this Mars

1821

01:19:24,980 --> 01:19:21,580

Science Laboratory mission was going to

1822

01:19:27,750 --> 01:19:24,990

be all about the Curiosity rover and

1823

01:19:32,220 --> 01:19:27,760

that was about that in the 90s was when

1824

01:19:34,170 --> 01:19:32,230

I was involved with me peg and because

1825

01:19:36,600 --> 01:19:34,180

of the astrobiology Institute several of

1826

01:19:38,730 --> 01:19:36,610

us in the astrobiology community made a

1827

01:19:40,310 --> 01:19:38,740

point of attending these me pag meetings

1828

01:19:43,760 --> 01:19:40,320

which are quite frequent at that

1829

01:19:45,560 --> 01:19:43,770

and frankly led up to determining who

1830

01:19:48,050 --> 01:19:45,570

would be selected for science definition

1831

01:19:51,430 --> 01:19:48,060

teams and to make a long story short

1832

01:19:54,109 --> 01:19:51,440

because of our participation and me pag

1833

01:19:56,240 --> 01:19:54,119

curiosity became a rover instead of a

1834

01:19:59,180 --> 01:19:56,250

fixed Lander it was the astrobiology

1835

01:20:02,149 --> 01:19:59,190

input through me pag to those teams that

1836

01:20:04,370 --> 01:20:02,159

made it a rover and we had to win that

1837

01:20:06,109 --> 01:20:04,380

argument before the Mars rovers landed

1838

01:20:08,000 --> 01:20:06,119

the Spirit and Opportunity lanta so we

1839

01:20:10,280 --> 01:20:08,010

hadn't seen the wonderful things yet and

1840

01:20:12,020 --> 01:20:10,290

we still had to win that argument so

1841

01:20:15,589 --> 01:20:12,030

this is a real impact and I would

1842

01:20:17,319 --> 01:20:15,599

suggest in the as nai is now being

1843

01:20:19,640 --> 01:20:17,329

succeeded by these new organizations

1844

01:20:21,740 --> 01:20:19,650

that there be travel fund that these

1845

01:20:24,229 --> 01:20:21,750

groups make sure that they support

1846

01:20:26,540 --> 01:20:24,239

travel to these eggs because you just

1847

01:20:28,819 --> 01:20:26,550

have to be there too and then you make a

1848

01:20:30,500 --> 01:20:28,829

difference astrobiology is important the

1849

01:20:33,080 --> 01:20:30,510

first few of you who go to these are

1850

01:20:34,520 --> 01:20:33,090

going to be really standouts because

1851
01:20:36,649 --> 01:20:34,530
there's not you're not well represented

1852
01:20:37,870 --> 01:20:36,659
which means they want you to be involved

1853
01:20:39,740 --> 01:20:37,880
in things because they know that

1854
01:20:41,990 --> 01:20:39,750
astrobiology is part of what sells

1855
01:20:44,240 --> 01:20:42,000
missions and so I would just want to say

1856
01:20:45,950 --> 01:20:44,250
there's demonstrated impact in the past

1857
01:20:47,750 --> 01:20:45,960
there's good reason to expect that if

1858
01:20:49,370 --> 01:20:47,760
there's a mechanism for supporting

1859
01:20:57,530 --> 01:20:49,380
attendance at these things that you're

1860
01:20:58,939 --> 01:20:57,540
going to have impact in the future say

1861
01:21:01,459 --> 01:20:58,949
thank you so much for that comment I

1862
01:21:03,560 --> 01:21:01,469
also say that the strategy that that was

1863
01:21:05,780 --> 01:21:03,570

delivered from the study that the

1864

01:21:07,970 --> 01:21:05,790

National Academy did pointed out that

1865

01:21:10,850 --> 01:21:07,980

the mechanism for getting astrobiology

1866

01:21:14,959 --> 01:21:10,860

into these missions needed help and

1867

01:21:18,109 --> 01:21:14,969

needed some creative energy put towards

1868

01:21:20,750 --> 01:21:18,119

figuring out how to do that best so it's

1869

01:21:23,060 --> 01:21:20,760

a recognized issue and we certainly know

1870

01:21:24,740 --> 01:21:23,070

thank you for your hard work as any pag

1871

01:21:29,629 --> 01:21:24,750

and all of you that attend these acts

1872

01:21:32,120 --> 01:21:29,639

it's really important good evening San

1873

01:21:35,000 --> 01:21:32,130

Jose on Blue Marble space so the DNA I

1874

01:21:37,939 --> 01:21:35,010

fostered a community of foreign

1875

01:21:39,709 --> 01:21:37,949

institutions that enabled and validated

1876

01:21:42,979 --> 01:21:39,719

astrobiology research in foreign

1877

01:21:45,379 --> 01:21:42,989

countries particularly South America and

1878

01:21:47,970 --> 01:21:45,389

Asia and I was wondering how these this

1879

01:21:50,990 --> 01:21:47,980

network will continue in the RCN if you

1880

01:21:55,350 --> 01:21:51,000

astrobiology so the arrange the

1881

01:22:00,740 --> 01:21:55,360

partnerships between foreign entities

1882

01:22:05,370 --> 01:22:03,840

curated by the NAI the actual agreements

1883

01:22:10,110 --> 01:22:05,380

are between headquarters and these

1884

01:22:16,560 --> 01:22:10,120

entities and particularly for the ones

1885

01:22:19,890 --> 01:22:16,570

that resulted in tangible activities

1886

01:22:26,160 --> 01:22:19,900

that supported the research for NASA and

1887

01:22:28,710 --> 01:22:26,170

the education for for training continued

1888

01:22:30,660 --> 01:22:28,720

beyond that initial impetus and there is

1889

01:22:32,460 --> 01:22:30,670

no reason why they won't continue

1890

01:22:33,990 --> 01:22:32,470

afterwards I think they're gonna be

1891

01:22:35,870 --> 01:22:34,000

handled a little bit differently I think

1892

01:22:39,630 --> 01:22:35,880

there's going to be more rigorous

1893

01:22:41,100 --> 01:22:39,640

evaluation of who we enter into an

1894

01:22:44,070 --> 01:22:41,110

agreement that's a request from the

1895

01:22:47,790 --> 01:22:44,080

office of interagency and international

1896

01:22:50,070 --> 01:22:47,800

relations and they'll be established and

1897

01:22:53,190 --> 01:22:50,080

review on a regular basis so they don't

1898

01:22:59,220 --> 01:22:53,200

you know they sunset so that that's the

1899

01:23:02,580 --> 01:22:59,230

intent for the future thank you Jason

1900

01:23:05,580 --> 01:23:02,590

work in NASA Goddard just as uh so I

1901

01:23:09,140 --> 01:23:05,590

know scheduling is really hard and so

1902

01:23:12,810 --> 01:23:09,150

but we need to do a better job of of

1903

01:23:17,580 --> 01:23:12,820

trying to inform the agz of when they

1904

01:23:19,800 --> 01:23:17,590

can meet so for example today was s back

1905

01:23:21,450 --> 01:23:19,810

and tomorrow so I'll bet you that there

1906

01:23:31,259 --> 01:23:21,460

won't be a whole lot of astrobiology

1907

01:23:36,489 --> 01:23:34,299

okay I'm Ron Turner I'm the senior

1908

01:23:37,899 --> 01:23:36,499

science advisor to the NASA innovative

1909

01:23:39,250 --> 01:23:37,909

advanced concepts program and I just

1910

01:23:40,989 --> 01:23:39,260

wanted everybody to be aware that

1911

01:23:43,479 --> 01:23:40,999

there's another way that you can explore

1912

01:23:45,850 --> 01:23:43,489

you know these creative ideas that may

1913

01:23:48,040 --> 01:23:45,860

have make a difference in astrobiology

1914

01:23:50,410 --> 01:23:48,050

and it's a program run out of the space

1915

01:23:52,810 --> 01:23:50,420

technology Mission Directorate Nayak I'm

1916

01:23:55,149 --> 01:23:52,820

gonna be around most of the week if you

1917

01:23:59,890 --> 01:23:55,159

have any questions please feel free to

1918

01:24:02,319 --> 01:23:59,900

catch me thanks hello Justin Lawrence

1919

01:24:03,669 --> 01:24:02,329

Georgia Tech I had a sort of specific

1920

01:24:04,989 --> 01:24:03,679

question about roses there was an email

1921

01:24:06,310 --> 01:24:04,999

that went out a couple weeks ago about

1922

01:24:08,919 --> 01:24:06,320

the inclusion of Antarctic field work

1923

01:24:10,359 --> 01:24:08,929

back in solar systems workings solar

1924

01:24:11,620 --> 01:24:10,369

system workings and I was wondering if

1925

01:24:13,989 --> 01:24:11,630

that would apply to other programs like

1926

01:24:15,879 --> 01:24:13,999

P star etc or sort of what the nature of

1927

01:24:19,569 --> 01:24:15,889

the NSF NASA relationship is currently

1928

01:24:21,969 --> 01:24:19,579

down south actually didn't get what you

1929

01:24:24,549 --> 01:24:21,979

were what did you say good there's an

1930

01:24:26,229 --> 01:24:24,559

email about three weeks ago about

1931

01:24:28,089 --> 01:24:26,239

Antarctic field work being included back

1932

01:24:30,609 --> 01:24:28,099

in solar systems workings and we're

1933

01:24:33,879 --> 01:24:30,619

actually testing that the relationship

1934

01:24:35,859 --> 01:24:33,889

between actually Michael can even speak

1935

01:24:40,390 --> 01:24:35,869

to this the relationship between NASA

1936

01:24:42,129 --> 01:24:40,400

and NSF has had some issues about who's

1937

01:24:45,129 --> 01:24:42,139

you know fortunately we're not one

1938

01:24:47,979 --> 01:24:45,139

government and we operate very

1939

01:24:52,390 --> 01:24:47,989

differently and so we're waiting to see

1940

01:24:54,759 --> 01:24:52,400

if this new new the most recent run at

1941

01:24:57,850 --> 01:24:54,769

collaboration with NSF actually will

1942

01:25:01,180 --> 01:24:57,860

work for solar system workings and then

1943

01:25:03,180 --> 01:25:01,190

we'll consider they're happy yeah we'll

1944

01:25:06,729 --> 01:25:03,190

consider expanding it to other programs

1945

01:25:11,170 --> 01:25:09,430

okay can can I make one last final

1946

01:25:13,060 --> 01:25:11,180

comment if people want to get more

1947

01:25:15,940 --> 01:25:13,070

involved as astrobiologists in the Astro

1948

01:25:18,970 --> 01:25:15,950

2020 effort just be aware that on the XO

1949

01:25:20,770 --> 01:25:18,980

peg website we have a spreadsheet where

1950

01:25:22,150 --> 01:25:20,780

people can put the ideas and things

1951

01:25:25,630 --> 01:25:22,160

they're interested in working on and

1952

01:25:26,950 --> 01:25:25,640

solicit co-signers and co-authors so if

1953

01:25:28,570 --> 01:25:26,960

you as an astrobiologist would like to

1954

01:25:29,650 --> 01:25:28,580

contribute to something or even come up

1955

01:25:32,260 --> 01:25:29,660

with your own white paper that is

1956

01:25:33,130 --> 01:25:32,270

totally fine that resources there if

1957

01:25:39,610 --> 01:25:33,140

you'd like to go shopping for