



VOICE OF

Michelle Ham

U.S. Director, ISSET / Founder/President, Higher Orbits

1
00:00:05,290 --> 00:00:02,889
in addition to all the experiments that

2
00:00:07,210 --> 00:00:05,300
the astronauts take part in on board the

3
00:00:08,860 --> 00:00:07,220
International Space Station there are

4
00:00:10,150 --> 00:00:08,870
occasionally opportunities for students

5
00:00:12,610 --> 00:00:10,160
on the ground to take part in some of

6
00:00:14,530 --> 00:00:12,620
the space experiments as well one of the

7
00:00:17,560 --> 00:00:14,540
programs that does that is mission

8
00:00:19,390 --> 00:00:17,570
discovery it's sponsored by I set and

9
00:00:20,830 --> 00:00:19,400
higher orbits and we have Michelle ham

10
00:00:23,109 --> 00:00:20,840
the founder and president of higher

11
00:00:24,880 --> 00:00:23,119
orbits in the u.s. director for I set on

12
00:00:26,859 --> 00:00:24,890
the phone today to tell us more about

13
00:00:29,230 --> 00:00:26,869

that program thanks for joining us

14

00:00:31,510 --> 00:00:29,240

Michelle hi Brandi thanks for having me

15

00:00:34,149 --> 00:00:31,520

good morning thanks we really appreciate

16

00:00:35,590 --> 00:00:34,159

it why don't we start by having you tell

17

00:00:37,709 --> 00:00:35,600

us a little bit more about what a

18

00:00:40,809 --> 00:00:37,719

mission discovery is and what the

19

00:00:42,639 --> 00:00:40,819

organizations at sponsoring our I said

20

00:00:44,200 --> 00:00:42,649

and higher orbits are both non-profits

21

00:00:46,239 --> 00:00:44,210

that use space to get students

22

00:00:48,369 --> 00:00:46,249

interested in stem leadership and team

23

00:00:50,649 --> 00:00:48,379

building i said is a uk-based charity

24

00:00:52,899 --> 00:00:50,659

run by chris barber that i am proud to

25

00:00:54,610 --> 00:00:52,909

be the u.s. director for and higher

26

00:00:56,739 --> 00:00:54,620

orbits is something that i founded here

27

00:00:58,660 --> 00:00:56,749

in the US mission discovery is a

28

00:01:00,879 --> 00:00:58,670

five-day program for high school and

29

00:01:02,559 --> 00:01:00,889

university students where we use space

30

00:01:05,380 --> 00:01:02,569

to get students interested in stem

31

00:01:07,600 --> 00:01:05,390

frankly I think if we can't get someone

32

00:01:09,220 --> 00:01:07,610

excited about science using space we're

33

00:01:11,650 --> 00:01:09,230

doing something wrong it's a five-day

34

00:01:13,780 --> 00:01:11,660

program where they work in teams and the

35

00:01:16,320 --> 00:01:13,790

culmination of the week is that they

36

00:01:18,760 --> 00:01:16,330

have to design an experiment where the

37

00:01:20,110 --> 00:01:18,770

experiment can fly to space station and

38

00:01:23,020 --> 00:01:20,120

the winning teams experiment actually

39

00:01:25,170 --> 00:01:23,030

does fly to space station and I think

40

00:01:27,100 --> 00:01:25,180

y'all recently had some of the the first

41

00:01:29,470 --> 00:01:27,110

experiments from that program fly is

42

00:01:31,240 --> 00:01:29,480

that right that's correct we are so

43

00:01:33,280 --> 00:01:31,250

excited to say that our first

44

00:01:36,370 --> 00:01:33,290

experiments have flown to space station

45

00:01:38,470 --> 00:01:36,380

on orb one in January King's College

46

00:01:40,270 --> 00:01:38,480

London students while they're from

47

00:01:42,040 --> 00:01:40,280

London our mission discovery was held at

48

00:01:44,830 --> 00:01:42,050

king of college we have 12 students who

49

00:01:46,960 --> 00:01:44,840

participated in two experiments one to

50

00:01:48,730 --> 00:01:46,970

test the effectiveness of antibiotics in

51
00:01:50,800 --> 00:01:48,740
space and the other to determine whether

52
00:01:54,010 --> 00:01:50,810
slime mold will grow three-dimensionally

53
00:01:55,930 --> 00:01:54,020
through Aaron microgravity both of those

54
00:01:57,550 --> 00:01:55,940
experiments launched on orb one and

55
00:01:58,990 --> 00:01:57,560
we've gotten some data back that the

56
00:02:01,920 --> 00:01:59,000
students are very excited to start

57
00:02:04,870 --> 00:02:01,930
analyzing so how do you gather that data

58
00:02:06,610 --> 00:02:04,880
we were very lucky that coochie was kind

59
00:02:08,739 --> 00:02:06,620
enough to take a whole lot of pictures

60
00:02:11,319 --> 00:02:08,749
for us and so instead of the experiments

61
00:02:13,030 --> 00:02:11,329
being manifested back down they did come

62
00:02:13,750 --> 00:02:13,040
back with or one back through the

63
00:02:15,520 --> 00:02:13,760

atmosphere

64

00:02:17,710 --> 00:02:15,530

and we have a lot of pictures to go

65

00:02:19,690 --> 00:02:17,720

through and analyze and have the

66

00:02:20,710 --> 00:02:19,700

students begin you said you've gotten

67

00:02:22,059 --> 00:02:20,720

some of the data back but have the

68

00:02:23,589 --> 00:02:22,069

students been eight able to go through

69

00:02:26,110 --> 00:02:23,599

it yet have you have you seen their

70

00:02:27,759 --> 00:02:26,120

reactions so I have not seen their

71

00:02:29,589 --> 00:02:27,769

reactions as far as the data goes

72

00:02:31,300 --> 00:02:29,599

because our students are not all from

73

00:02:32,589 --> 00:02:31,310

the same school necessarily and so we

74

00:02:34,809 --> 00:02:32,599

haven't been able to gather them all

75

00:02:37,059 --> 00:02:34,819

together yet but I can tell you that

76

00:02:38,800 --> 00:02:37,069

after speaking at speaking with the

77

00:02:40,750 --> 00:02:38,810

students at launch and after launch they

78

00:02:42,610 --> 00:02:40,760

were so incredibly excited this was such

79

00:02:44,289 --> 00:02:42,620

a life-changing experience for them I

80

00:02:45,789 --> 00:02:44,299

mean I don't know about you Brandi but

81

00:02:48,190 --> 00:02:45,799

if I could have my experiment flown into

82

00:02:49,210 --> 00:02:48,200

space when I was 16 17 18 years old I'm

83

00:02:51,220 --> 00:02:49,220

pretty sure that would have been a game

84

00:02:53,530 --> 00:02:51,230

changer for me then yeah that's a big

85

00:02:55,270 --> 00:02:53,540

deal for students so how did they go

86

00:02:57,430 --> 00:02:55,280

about designing their experiments how

87

00:02:59,559 --> 00:02:57,440

did how did they get started well we

88

00:03:02,229 --> 00:02:59,569

give them very specific parameters sighs

89

00:03:03,910 --> 00:03:02,239

wait power draw but then we leave it

90

00:03:06,490 --> 00:03:03,920

open to them to come up with their own

91

00:03:08,259 --> 00:03:06,500

ideas our King's College experiments did

92

00:03:10,990 --> 00:03:08,269

have a biomed focus because King's

93

00:03:13,899 --> 00:03:11,000

College has a very very prominent

94

00:03:15,339 --> 00:03:13,909

aerospace med program and so they wanted

95

00:03:16,899 --> 00:03:15,349

to take that slant but with our other

96

00:03:21,069 --> 00:03:16,909

mission discoveries we leave it wide

97

00:03:22,659 --> 00:03:21,079

open Engineering crystals biology and so

98

00:03:24,970 --> 00:03:22,669

the students if this all comes out of

99

00:03:27,129 --> 00:03:24,980

their heads and I am continually amazed

100

00:03:28,629 --> 00:03:27,139

at the ideas that these students come up

101
00:03:31,390 --> 00:03:28,639
with honestly there are things that

102
00:03:32,890 --> 00:03:31,400
myself and the astronauts who are part

103
00:03:34,330 --> 00:03:32,900
of mission discovery for the entire week

104
00:03:36,939 --> 00:03:34,340
there are a lot of times where we will

105
00:03:38,050 --> 00:03:36,949
look at one another and say wow would

106
00:03:40,240 --> 00:03:38,060
you have thought of that when you were

107
00:03:41,920 --> 00:03:40,250
16 17 years old and a lot of times the

108
00:03:45,490 --> 00:03:41,930
answer is no we probably wouldn't have

109
00:03:47,830 --> 00:03:45,500
and sprain what are the one of the

110
00:03:50,500 --> 00:03:47,840
students do with them with the results

111
00:03:51,729 --> 00:03:50,510
what where does it go from there so our

112
00:03:54,339 --> 00:03:51,739
goal is for the students to work

113
00:03:57,129 --> 00:03:54,349

together to analyze the results to again

114

00:03:58,960 --> 00:03:57,139

foster that sense of teamwork and then

115

00:04:00,670 --> 00:03:58,970

to foster the leadership skills that

116

00:04:01,960 --> 00:04:00,680

we're trying to help instill in them we

117

00:04:04,149 --> 00:04:01,970

want them to take it back to other

118

00:04:05,559 --> 00:04:04,159

schools and present about it we're not

119

00:04:06,970 --> 00:04:05,569

necessarily expecting that they're going

120

00:04:09,159 --> 00:04:06,980

to get a Nobel Prize out of their

121

00:04:11,319 --> 00:04:09,169

experiment efforts but we do want them

122

00:04:14,020 --> 00:04:11,329

to help excite other youngsters about

123

00:04:15,399 --> 00:04:14,030

space and Science and Technology not

124

00:04:16,960 --> 00:04:15,409

trying to convince them all to be rocket

125

00:04:19,449 --> 00:04:16,970

scientists I just want to show them that

126

00:04:21,039 --> 00:04:19,459

there's a great bunch of opportunities

127

00:04:23,830 --> 00:04:21,049

for them at the other end of a stem

128

00:04:25,870 --> 00:04:23,840

education well good luck i hope that

129

00:04:26,660 --> 00:04:25,880

sounds really promising now that you've

130

00:04:30,080 --> 00:04:26,670

kind of gotten

131

00:04:31,370 --> 00:04:30,090

the first set of experiments flown and

132

00:04:33,350 --> 00:04:31,380

have gotten to some data back what

133

00:04:35,300 --> 00:04:33,360

what's next what is there going to be

134

00:04:38,090 --> 00:04:35,310

another set of experiments going up or

135

00:04:40,490 --> 00:04:38,100

well what's next is very exciting for us

136

00:04:43,490 --> 00:04:40,500

we will have more experiments launching

137

00:04:45,710 --> 00:04:43,500

on orb 3 in the fall and this summer we

138

00:04:47,210 --> 00:04:45,720

will run at least five different mission

139

00:04:49,040 --> 00:04:47,220

discoveries including mission

140

00:04:50,720 --> 00:04:49,050

discoveries at embry-riddle Aeronautical

141

00:04:53,420 --> 00:04:50,730

in Daytona Beach Valparaiso University

142

00:04:55,520 --> 00:04:53,430

in Indiana st. John's College in

143

00:04:56,750 --> 00:04:55,530

Annapolis one in renfrewshire Scotland

144

00:04:58,790 --> 00:04:56,760

and another at King's College in London

145

00:05:00,920 --> 00:04:58,800

and we have a couple others that that

146

00:05:02,330 --> 00:05:00,930

we're working on to bring to bring two

147

00:05:03,740 --> 00:05:02,340

different areas including potentially

148

00:05:05,720 --> 00:05:03,750

one in Houston so we're very excited

149

00:05:06,920 --> 00:05:05,730

about the number of students lives that

150

00:05:10,010 --> 00:05:06,930

we're going to be able to touch this

151

00:05:11,900 --> 00:05:10,020

year that's great if students were

152

00:05:14,240 --> 00:05:11,910

interested in getting involved in it

153

00:05:20,290 --> 00:05:14,250

what should they do they can check us

154

00:05:23,300 --> 00:05:20,300

out on ww mission discovery info and

155

00:05:25,910 --> 00:05:23,310

take a look we welcome students on a

156

00:05:27,440 --> 00:05:25,920

residential and non-residential basis so

157

00:05:30,260 --> 00:05:27,450

even if there's not one right in your

158

00:05:32,090 --> 00:05:30,270

backyard you can travel to one and stay

159

00:05:33,590 --> 00:05:32,100

with us for the week and it's unique

160

00:05:35,720 --> 00:05:33,600

because we do have an astronaut as a

161

00:05:38,120 --> 00:05:35,730

mentor all week and I can tell you

162

00:05:39,980 --> 00:05:38,130

firsthand that the students get a great

163

00:05:41,750 --> 00:05:39,990

kick out of meeting the astronauts but i

164

00:05:43,430 --> 00:05:41,760

think the astronauts enjoy getting to

165

00:05:45,950 --> 00:05:43,440

really know these students pretty well

166

00:05:47,900 --> 00:05:45,960

during the week as well I bet they do

167

00:05:49,640 --> 00:05:47,910

thank you again for joining us that

168

00:05:51,230 --> 00:05:49,650

sounds like a really awesome program and

169

00:05:53,540 --> 00:05:51,240

we're excited to learn more about it and

170

00:05:55,700 --> 00:05:53,550

let us know you will check back in I'm

171

00:05:57,140 --> 00:05:55,710

sure at some point and find out what the

172

00:05:58,970 --> 00:05:57,150

students learn from this first round of

173

00:06:01,010 --> 00:05:58,980

experiments and what what's coming up on

174

00:06:02,810 --> 00:06:01,020

the next round sounds great thank you so