
PAO

1
00:00:02,216 --> 00:00:04,196
>> Dan Huot: So on board the
International Space Station

2
00:00:04,196 --> 00:00:06,206
today some pretty
exciting stuff happening.

3
00:00:06,566 --> 00:00:09,826
Some small satellites,
microsatellites being deployed

4
00:00:09,826 --> 00:00:12,036
from one of the airlocks
on board the station.

5
00:00:12,426 --> 00:00:15,476
Here to tell me a little bit
more today is Masazumi Miyake.

6
00:00:15,476 --> 00:00:17,646
He's the International Space
Station Program Manager

7
00:00:17,646 --> 00:00:21,206
for JAXA, the Japanese
Aerospace Exploration Agency.

8
00:00:21,206 --> 00:00:23,556
Masazumi, thanks so much
for being here today.

9
00:00:23,746 --> 00:00:24,476
>> Masazumi Miyake:
It's my pleasure.

10
00:00:24,696 --> 00:00:27,106
>> Dan Huot: First off, tell me
a little bit about this program?

11
00:00:27,106 --> 00:00:29,926
It's the small satellite
orbital deployment program.

12
00:00:29,926 --> 00:00:34,336
Tell me a little bit
about it real quick?

13
00:00:34,336 --> 00:00:34,776
>> Masazumi Miyake: Okay.

14
00:00:34,776 --> 00:00:36,496
[inaudible] small
satellite department program.

15
00:00:37,056 --> 00:00:41,786
It's provided a good
opportunity for the potential.

16
00:00:42,356 --> 00:00:44,686
Cubesats use a wall

17
00:00:44,866 --> 00:00:51,156
to [inaudible] some
many launch capability

18
00:00:51,766 --> 00:00:55,806
into the [inaudible]
the ISS and compare

19
00:00:55,806 --> 00:00:59,196
with the other some
opportunity like [inaudible].

20
00:01:00,036 --> 00:01:06,866
It's very good condition,
like less vibration

21
00:01:06,866 --> 00:01:10,706

and also the many
satellite can be launched

22
00:01:10,886 --> 00:01:15,276
by the HTV transfer be cool or
other the commercial be cool

23
00:01:15,276 --> 00:01:20,996
like a dragon and
the [inaudible]

24
00:01:21,916 --> 00:01:25,886
and also the rough time
check out could be very easy

25
00:01:25,886 --> 00:01:27,886
by cool before they are --

26
00:01:27,886 --> 00:01:28,016
>> Dan Huot: Yeah.

27
00:01:28,016 --> 00:01:28,616
>> Masazumi Miyake:
-- deployment.

28
00:01:29,276 --> 00:01:33,196
So they very easy to
handle the satellite.

29
00:01:33,196 --> 00:01:38,326
So I hope that many people
can use this opportunity.

30
00:01:38,596 --> 00:01:38,806
>> Dan Huot: Yeah.

31
00:01:38,956 --> 00:01:41,726
So just a really unique way
to launch satellites basically

32
00:01:41,726 --> 00:01:43,266
as opposed to, you
know, launching them

33
00:01:43,266 --> 00:01:44,446
up on a launch vehicle like --

34
00:01:44,446 --> 00:01:44,516
>> Masazumi Miyake: Yeah.

35
00:01:44,516 --> 00:01:45,036
>> Dan Huot: -- a normal one.

36
00:01:45,036 --> 00:01:46,076
And they're very small.

37
00:01:46,306 --> 00:01:48,366
And one thing you mentioned
was, you know, the crew can kind

38
00:01:48,366 --> 00:01:49,876
of do a final checkout of it.

39
00:01:50,046 --> 00:01:51,106
What are some of the things?

40
00:01:51,106 --> 00:01:52,606
Because Koichi was
responsible --

41
00:01:52,606 --> 00:01:52,846
>> Masazumi Miyake: Okay.

42
00:01:52,846 --> 00:01:53,606
>> Dan Huot: -- for
all this on board.

43
00:01:53,606 --> 00:01:56,076

What are some of the things
he was doing to get it ready?

44
00:01:56,076 --> 00:01:56,143
>> Masazumi Miyake:

45
00:01:56,143 --> 00:01:59,076
Let me clarify the exact
spots we were doing

46
00:01:59,076 --> 00:02:04,426
that the robotics arm and
binary graphs for some

47
00:02:04,426 --> 00:02:07,976
of their deployment
mechanism for our airlock.

48
00:02:08,596 --> 00:02:11,416
And crew can do this
from [inaudible] back

49
00:02:11,456 --> 00:02:15,186
to the satellite and
set up the satellite

50
00:02:15,186 --> 00:02:17,476
onto our airlock pallet.

51
00:02:17,946 --> 00:02:20,946
[inaudible] that's -- the
crew can install the --

52
00:02:20,946 --> 00:02:24,876
or the cubesat to the --
our deployment mechanism

53
00:02:25,126 --> 00:02:27,426
and then set up the airlock.

54
00:02:27,426 --> 00:02:33,746
And we can crawl to the airlock,

55
00:02:34,016 --> 00:02:38,356
then our ground operator
can open the hutch

56
00:02:38,356 --> 00:02:41,306
and deploy the satellite.

57
00:02:41,906 --> 00:02:45,126
And he's a crew -- both crews

58
00:02:45,126 --> 00:02:50,006
and the ground team can
operate the robotic's arm

59
00:02:50,536 --> 00:02:53,316
and also the -- send a command,

60
00:02:53,436 --> 00:02:58,766
can be done by crew
or ground team.

61
00:02:59,026 --> 00:03:00,016
It's up to --

62
00:03:00,016 --> 00:03:00,596
>> Dan Huot: Okay.

63
00:03:00,646 --> 00:03:02,656
>> Masazumi Miyake: -- the
condition of the crew time.

64
00:03:02,656 --> 00:03:06,206
If crew is very busy,
our ground team can have

65

00:03:06,356 --> 00:03:09,036
to deploy by ground.

66
00:03:09,606 --> 00:03:14,486
But important things that
crew only can check out --

67
00:03:14,736 --> 00:03:14,966
>> Dan Huot: Yeah.

68
00:03:14,966 --> 00:03:17,986
>> Masazumi Miyake: -- and
also the -- set up the airlock.

69
00:03:18,106 --> 00:03:18,936
>> Dan Huot: Yeah.

70
00:03:19,456 --> 00:03:21,556
>> Masazumi Miyake: That's a
very important job by crew.

71
00:03:21,746 --> 00:03:22,886
>> Dan Huot: Well,
yeah, and, I mean,

72
00:03:22,886 --> 00:03:24,876
it's great when you can
have that kind of crew

73
00:03:24,876 --> 00:03:26,766
or ground interaction
with the device.

74
00:03:26,766 --> 00:03:27,896
I know we have some video

75
00:03:28,246 --> 00:03:30,696
from that deployment a
little bit earlier today.

76
00:03:30,696 --> 00:03:32,546
Just tell us a little bit
about what's happening here?

77
00:03:32,546 --> 00:03:34,196
So what -- I mean, what are
we looking at right here?

78
00:03:35,916 --> 00:03:36,376
>> Masazumi Miyake: Yes.

79
00:03:36,906 --> 00:03:39,896
Now the -- our robotic's
arm, we're waiting

80
00:03:39,896 --> 00:03:42,736
to open the airlock
outside door.

81
00:03:42,926 --> 00:03:48,776
Now just airlock the
table, just deployed

82
00:03:48,866 --> 00:03:50,886
from the inside to the outside.

83
00:03:51,336 --> 00:03:55,176
And crew have already
set up the --

84
00:03:55,246 --> 00:03:58,426
our deployment mechanism
on the airlock table

85
00:03:59,126 --> 00:04:02,966
and you can see there's
some graphs, the fixture.

86
00:04:03,736 --> 00:04:07,016

And now the -- our robotic's arm
[inaudible] our robotic's arm is

87
00:04:07,016 --> 00:04:12,126
just waiting to [inaudible]
to deploy the

88
00:04:12,126 --> 00:04:14,066
such deployment mechanisms.

89
00:04:14,606 --> 00:04:17,346
>> Dan Huot: And again, this
is all taking place on --

90
00:04:17,346 --> 00:04:17,576
>> Masazumi Miyake: Yeah.

91
00:04:17,606 --> 00:04:18,166
>> Dan Huot: -- kind

92
00:04:18,166 --> 00:04:19,856
of the exposed facility
outside [inaudible].

93
00:04:19,856 --> 00:04:20,046
>> Masazumi Miyake: Yes.

94
00:04:20,046 --> 00:04:23,966
Yes. It's a very
unique capability

95
00:04:23,966 --> 00:04:27,496
and only [inaudible]
provide this capability.

96
00:04:28,036 --> 00:04:33,326
And this is the -- our JSSO,
the deployment mechanism.

97

00:04:33,396 --> 00:04:39,966
And it's just big table with our
[inaudible] experiment platform.

98
00:04:40,516 --> 00:04:50,946
[Inaudible]

99
00:04:51,446 --> 00:04:54,536
>> Masazumi Miyake: And the
three, each of three cubesat,

100
00:04:54,536 --> 00:04:58,236
it's a 10 square
centimeters sides.

101
00:04:58,486 --> 00:05:00,176
Cubesats can be installed.

102
00:05:00,646 --> 00:05:05,096
So total, six cubesat could
be deployment, deployed.

103
00:05:05,096 --> 00:05:06,856
>> Dan Huot: So they
could do six at a time.

104
00:05:06,856 --> 00:05:07,426
They did three --

105
00:05:07,466 --> 00:05:07,546
>> Masazumi Miyake: Yeah.

106
00:05:07,546 --> 00:05:08,046
>> Dan Huot: -- today.

107
00:05:08,046 --> 00:05:08,116
The --

108
00:05:08,116 --> 00:05:08,736

>> Masazumi Miyake:
The next number --

109
00:05:08,736 --> 00:05:13,346
today three of them [inaudible]
can have already be deployed,

110
00:05:13,586 --> 00:05:18,976
and tomorrow that you -- we
have the big size, the cubesat.

111
00:05:19,031 --> 00:05:21,031
[Inaudible]

112
00:05:21,046 --> 00:05:23,676
>> Masazumi Miyake:
It's 10 centimeter

113
00:05:23,676 --> 00:05:27,316
and 30 centimeters,
big satellite.

114
00:05:27,356 --> 00:05:29,516
>> Dan Huot: So these cubes
can come in multiple sizes?

115
00:05:29,516 --> 00:05:29,976
>> Masazumi Miyake:
Yes, multiples.

116
00:05:30,516 --> 00:05:40,256
[Inaudible]

117
00:05:40,756 --> 00:05:40,976
>> Dan Huot: Okay.

118
00:05:41,016 --> 00:05:42,046
[Inaudible]

119

00:05:42,046 --> 00:05:43,376
>> Dan Huot: Can you tell me a
little bit about the satellites

120
00:05:43,376 --> 00:05:44,246
that were deployed this morning?

121
00:05:44,556 --> 00:05:44,946
>> Masazumi Miyake: Okay.

122
00:05:45,086 --> 00:05:49,226
That today the three cubesat
were deployed [inaudible].

123
00:05:50,076 --> 00:05:54,326
And one is Japanese satellite.

124
00:05:54,326 --> 00:05:55,476
It looks Japanese.

125
00:05:55,766 --> 00:05:57,326
But one satellite
was [inaudible]

126
00:05:57,466 --> 00:06:01,426
by the Vietnam National
Satellite Center,

127
00:06:01,996 --> 00:06:06,546
some Corporation
of Tokyo University

128
00:06:06,546 --> 00:06:09,256
in Japan, and do satellite.

129
00:06:09,256 --> 00:06:16,246
The -- it's kind of a skill
training and deployment

130

00:06:16,246 --> 00:06:19,656
for young engineer
in the Vietnam,

131
00:06:19,856 --> 00:06:24,796
the people to help to have.

132
00:06:24,796 --> 00:06:28,506
They could be trained to
develop the spacecraft --

133
00:06:28,506 --> 00:06:28,946
>> Dan Huot: Okay.

134
00:06:28,976 --> 00:06:30,776
>> Masazumi Miyake: --
using the small satellite.

135
00:06:31,196 --> 00:06:35,866
So it's a very honor for us
to cooperate with Vietnam,

136
00:06:35,866 --> 00:06:38,206
the people on the satellite.

137
00:06:38,796 --> 00:06:42,866
And the other two, [inaudible]
two satellite were developed

138
00:06:42,866 --> 00:06:46,176
by the commercial, US
commercial company.

139
00:06:46,386 --> 00:06:46,566
>> Dan Huot: Okay.

140
00:06:46,566 --> 00:06:47,786
>> Masazumi Miyake: And
[inaudible] company.

141
00:06:48,396 --> 00:06:50,806
And it's also unique capability,

142
00:06:50,806 --> 00:06:56,956
just they have some open
platform tied [inaudible]

143
00:06:57,116 --> 00:07:03,946
program which can be the
lighting by the public user.

144
00:07:04,156 --> 00:07:10,046
So any type of the
application, like [inaudible],

145
00:07:10,046 --> 00:07:14,886
show some picture or something.

146
00:07:14,986 --> 00:07:16,376
Very different [inaudible]
can be --

147
00:07:16,616 --> 00:07:16,936
>> Dan Huot: Yeah.

148
00:07:16,936 --> 00:07:18,696
>> Masazumi Miyake: --
applied for this satellite.

149
00:07:18,836 --> 00:07:20,326
>> Dan Huot: So really,
really diverse amount

150
00:07:20,326 --> 00:07:22,066
of options available
for the satellites.

151
00:07:22,206 --> 00:07:22,356
>> Masazumi Miyake: Yeah.

152
00:07:22,356 --> 00:07:24,326
>> Dan Huot: And a lot easier
to get into possibly --

153
00:07:24,326 --> 00:07:24,436
>> Masazumi Miyake: Yeah.

154
00:07:24,436 --> 00:07:25,086
>> Dan Huot: -- than just sort

155
00:07:25,086 --> 00:07:26,056
of traditional [multiple
speakers].

156
00:07:26,056 --> 00:07:26,826
>> Masazumi Miyake:
Many different.

157
00:07:26,826 --> 00:07:29,076
The user can use one satellite.

158
00:07:29,136 --> 00:07:29,596
That's very --

159
00:07:29,596 --> 00:07:29,756
>> Dan Huot: Yeah.

160
00:07:29,756 --> 00:07:30,086
>> Masazumi Miyake: -- unique.

161
00:07:30,216 --> 00:07:32,046
>> Dan Huot: And I know you
guys got some big plans,

162
00:07:32,326 --> 00:07:33,386
you know, kind of coming up --

163

00:07:33,446 --> 00:07:33,826
>> Masazumi Miyake: Yeah.

164
00:07:33,826 --> 00:07:37,676
>> Dan Huot: -- for what you're
hoping to do with this program.

165
00:07:37,676 --> 00:07:39,196
What are some of those?

166
00:07:39,196 --> 00:07:39,263
>> Masazumi Miyake: Yeah.

167
00:07:39,263 --> 00:07:41,046
[inaudible] is very
unique capability.

168
00:07:41,566 --> 00:07:46,766
And now we have done
two deployment mission,

169
00:07:46,846 --> 00:07:48,376
last year and this year.

170
00:07:49,066 --> 00:07:49,156
>> Dan Huot: Yep.

171
00:07:49,156 --> 00:07:53,356
>> Masazumi Miyake: And in
the future we have the other,

172
00:07:53,356 --> 00:08:00,416
some different deployment
mechanism developed by NASA

173
00:08:00,416 --> 00:08:03,296
or [inaudible] commercial
company.

174

00:08:03,366 --> 00:08:06,896
And so such, for example,

175
00:08:06,896 --> 00:08:10,686
there's some big size satellite
also can be deployed by --

176
00:08:10,686 --> 00:08:10,896
>> Dan Huot: Okay.

177
00:08:10,896 --> 00:08:11,246
>> Masazumi Miyake: -- NASA

178
00:08:11,246 --> 00:08:17,756
and you deployment mechanism
[inaudible] cyclops may be the

179
00:08:17,756 --> 00:08:19,966
next [multiple speakers].

180
00:08:20,516 --> 00:08:24,546
[Inaudible]

181
00:08:25,046 --> 00:08:26,016
>> Masazumi Miyake:
There's some big size,

182
00:08:26,016 --> 00:08:28,366
their own deployment mechanism.

183
00:08:28,976 --> 00:08:33,156
So our JAXA side can accommodate
to those, any different type

184
00:08:33,156 --> 00:08:36,186
of the deployment
mechanism into the --

185
00:08:36,186 --> 00:08:38,026

our airlock and the [inaudible].

186
00:08:38,786 --> 00:08:43,346
And also the other,
some aspect we also --

187
00:08:44,016 --> 00:08:46,936
the three [inaudible]
outside the equipment.

188
00:08:47,516 --> 00:08:57,646
[Inaudible]

189
00:08:58,146 --> 00:09:01,446
>> Masazumi Miyake: We can
[inaudible] the equipment

190
00:09:01,736 --> 00:09:02,706
through the airlock --

191
00:09:02,876 --> 00:09:03,136
>> Dan Huot: Oh.

192
00:09:03,136 --> 00:09:05,366
>> Masazumi Miyake: -- to
the inside and we can repair

193
00:09:05,476 --> 00:09:08,976
such equipment and
the [inaudible].

194
00:09:09,516 --> 00:09:25,546
[Inaudible]

195
00:09:26,046 --> 00:09:26,256
>> Dan Huot: Yeah.

196
00:09:26,256 --> 00:09:29,176
>> Masazumi Miyake:

-- joint operation,

197
00:09:29,176 --> 00:09:30,546
the transfer interface.

198
00:09:31,116 --> 00:09:35,556
So we hope to many
different type.

199
00:09:35,696 --> 00:09:38,056
The mission could be used --

200
00:09:39,226 --> 00:09:39,746
>> Dan Huot: Yeah.

201
00:09:39,746 --> 00:09:40,996
>> Masazumi Miyake: --

202
00:09:40,996 --> 00:09:47,086
by our very unique capability
[inaudible] and the airlock.

203
00:09:47,236 --> 00:09:47,426
>> Dan Huot: Yeah.

204
00:09:47,926 --> 00:09:49,876
Like you said, very
unique, very robust --

205
00:09:49,876 --> 00:09:49,996
>> Masazumi Miyake: Yeah.

206
00:09:49,996 --> 00:09:50,606
>> Dan Huot: -- capability

207
00:09:50,606 --> 00:09:52,466
on board the International
Space Station.

208
00:09:52,636 --> 00:09:54,356
And the cubes have
deployed this morning,

209
00:09:54,356 --> 00:09:55,716
just one of the projects.

210
00:09:55,716 --> 00:09:56,896
That is going to be let

211
00:09:56,896 --> 00:09:59,576
out of the Japanese module
on board the station.

212
00:09:59,966 --> 00:10:02,986
So again, Masazumi, thank
you so much for coming

213
00:10:02,986 --> 00:10:06,636
on International Space Station
Program Manager for JAXA.

214
00:10:07,116 --> 00:10:08,356
I really appreciate it.

215
00:10:08,356 --> 00:10:09,536
Again, really cool project.

216
00:10:09,536 --> 00:10:11,236
And I look forward to
some of the other projects

217
00:10:11,236 --> 00:10:12,966
that are going to
be operating outside

218
00:10:12,966 --> 00:10:15,026
of the Kibo airlock
in the future.

219
00:10:15,026 --> 00:10:15,093
Yeah.

220
00:10:15,093 --> 00:10:15,376
>> Masazumi Miyake: Thank you.

221
00:10:15,376 --> 00:10:15,996
It's my pleasure.