



1

00:00:00,000 --> 00:00:03,550

Narrator: Pete Worden, the director of NASA Ames,

2

00:00:03,570 --> 00:00:06,360

welcomed NASA Administrator Charles Bolden and

3

00:00:06,380 --> 00:00:08,840

Congressman Mike Honda and showed them how the

4

00:00:08,860 --> 00:00:11,320

research center is using technology to bring down

5

00:00:11,340 --> 00:00:14,280

the cost of exploring space.

6

00:00:14,300 --> 00:00:15,650

(Researcher: So you can actually see here...)

7

00:00:15,670 --> 00:00:18,460

Inside one of Ames' machine shops, Bolden and

8

00:00:18,480 --> 00:00:21,470

Honda were introduced to the PhoneSat project,

9

00:00:21,490 --> 00:00:23,910

tiny satellites that carried off-the-shelf

10

00:00:23,930 --> 00:00:26,720

consumer smartphones into orbit last month.

11

00:00:26,740 --> 00:00:28,700

(Mission Control: Liftoff of the Antares A-1

12

00:00:28,720 --> 00:00:30,060

Test Mission from the...)

13

00:00:30,080 --> 00:00:32,410

Narrator: The 4-inch cubesats were sent into space

14

00:00:32,430 --> 00:00:35,760

aboard the Antares rocket on April 21.

15

00:00:35,780 --> 00:00:38,750

During the next six days, they orbited 155 miles

16

00:00:38,770 --> 00:00:40,960

above the Earth and successfully transmitted

17

00:00:40,980 --> 00:00:44,240

images back to ground stations around the world.

18

00:00:44,260 --> 00:00:45,750

Charles Bolden: The success of these miniature

19

00:00:45,770 --> 00:00:48,360

satellite projects shows that they're capable

20

00:00:48,380 --> 00:00:50,850

of conducting science and exploration missions

21

00:00:50,870 --> 00:00:52,570

at a small fraction of the cost

22

00:00:52,590 --> 00:00:54,430

of conventional satellites.

23

00:00:54,450 --> 00:00:56,770

In fact, if we can get the cost of launch down,

24

00:00:56,790 --> 00:00:58,700

they're really going to be cheap.

25

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

Narrator: During the tour, they were also shown

26  
00:01:00,610 --> 00:01:03,240  
how Ames engineers, students and interns are

27  
00:01:03,260 --> 00:01:06,400  
working with a prototype of a 3D printer.

28  
00:01:06,420 --> 00:01:09,180  
Also known as additive manufacturing, the team is

29  
00:01:09,200 --> 00:01:12,010  
learning how to etch circuit boards in-house using

30  
00:01:12,030 --> 00:01:14,220  
drops of plastic instead of sending them to

31  
00:01:14,240 --> 00:01:16,530  
outside contractors.

32  
00:01:16,550 --> 00:01:17,990  
Charles Bolden: As NASA ventures further into

33  
00:01:18,010 --> 00:01:20,750  
space, whether re-directing an asteroid or sending

34  
00:01:20,770 --> 00:01:23,280  
humans to Mars, we'll need transformative

35  
00:01:23,300 --> 00:01:26,960  
technology to reduce cargo weight and volume.

36  
00:01:26,980 --> 00:01:29,650  
In the future, perhaps astronauts will be able to

37  
00:01:29,670 --> 00:01:32,390  
print the tools or components they need

38  
00:01:32,410 --> 00:01:33,500

while in space.

39

00:01:33,520 --> 00:01:35,660

Narrator: Congressman Honda praised Ames' move to

40

00:01:35,680 --> 00:01:38,420

build less expensive and smaller devices and also

41

00:01:38,440 --> 00:01:40,860

provide an opportunity for the next generation of

42

00:01:40,880 --> 00:01:42,990

scientists and engineers.

43

00:01:43,010 --> 00:01:44,390

Rep. Mike Honda: Today helped me expand

44

00:01:44,410 --> 00:01:46,470

my understanding that we're not only looking at

45

00:01:46,490 --> 00:01:51,540

innovation, expansion of innovation on the ground,

46

00:01:51,560 --> 00:01:54,660

but also up in space, using the kind of technology

47

00:01:54,680 --> 00:01:58,190

so that we can be innovators and manufacturers and

48

00:01:58,210 --> 00:02:01,270

still be in the lead, globally,

49

00:02:01,290 --> 00:02:03,610

if we invest in our young people.

50

00:02:03,630 --> 00:02:05,790

Narrator: Before Bolden's departure, he said that

51

00:02:05,810 --> 00:02:08,520

Ames Research Center has unique capabilities and

52

00:02:08,540 --> 00:02:12,200

is a critical part of the NASA mission.