



1
00:00:00,000 --> 00:00:06,130
NASA Mission Control: 4...3...2...1...Liftoff!

2
00:00:06,130 --> 00:00:07,310
(Roar of rockets)

3
00:00:07,310 --> 00:00:09,380
NASA Mission Control: On the shoulders of Atlas,

4
00:00:09,380 --> 00:00:12,910
the "S.S. Deke Slayton II" Orbital ATK Cygnus

5
00:00:12,910 --> 00:00:14,970
spacecraft soars towards the

6
00:00:14,970 --> 00:00:17,680
International Space Station.

7
00:00:17,680 --> 00:00:20,770
Narrator: In December 2015, NASA's latest resupply

8
00:00:20,770 --> 00:00:23,000
mission to the International Space Station

9
00:00:23,000 --> 00:00:25,120
successfully launched from the Cape Canaveral

10
00:00:25,120 --> 00:00:27,610
Air Force Station in Florida.

11
00:00:27,610 --> 00:00:30,910
Two days later, the Orbital ATK Cygnus supply

12
00:00:30,910 --> 00:00:35,450
vessel docked with the ISS carrying tons of cargo.

13
00:00:35,450 --> 00:00:37,970

In that payload were two small satellites called

14

00:00:37,970 --> 00:00:40,150

Nodes that will be deployed into orbit

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00:00:40,150 --> 00:00:42,820

in early 2016.

16

00:00:42,820 --> 00:00:45,990

Built at NASA's Ames Research Center, Nodes is a

17

00:00:45,990 --> 00:00:48,160

technology demonstration mission that will launch

18

00:00:48,160 --> 00:00:49,990

from the ISS.

19

00:00:49,990 --> 00:00:52,060

It will demonstrate new capabilities that are

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00:00:52,060 --> 00:00:54,190

critical to future missions where multiple

21

00:00:54,190 --> 00:00:57,710

spacecraft are working together at the same time.

22

00:00:57,710 --> 00:00:59,380

Roger Hunter: We've got two small spacecraft

23

00:00:59,380 --> 00:01:01,670

that will each collect science, but they will

24

00:01:01,670 --> 00:01:03,550

negotiate with each other, which one is best

25

00:01:03,550 --> 00:01:05,890

capable of transmitting that science to a ground

26
00:01:05,890 --> 00:01:09,060
system based on three criteria: the health of each

27
00:01:09,060 --> 00:01:11,270
one, its relation to the ground system and

28
00:01:11,270 --> 00:01:13,340
how much data each one has collected.

29
00:01:13,340 --> 00:01:15,350
Narrator: Each of the two Nodes cubesats are

30
00:01:15,350 --> 00:01:18,820
identical, measuring 4 by 4 by 7 inches tall

31
00:01:18,820 --> 00:01:21,880
and weighing about 4 pounds.

32
00:01:21,880 --> 00:01:24,590
The Nodes mission duration is expected to be about

33
00:01:24,590 --> 00:01:27,060
two weeks, although they will continue to orbit

34
00:01:27,060 --> 00:01:29,580
for about six months.

35
00:01:29,580 --> 00:01:32,510
Nodes continues the legacy of the PhoneSat series

36
00:01:32,510 --> 00:01:35,050
of small satellites that first introduced and

37
00:01:35,050 --> 00:01:37,570
successfully implemented the use of Android

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00:01:37,570 --> 00:01:40,220

smartphone technology instead of components

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00:01:40,220 --> 00:01:42,850

that were custom developed and built.

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00:01:42,850 --> 00:01:44,220

Roger Hunter: NASA wants to use small spacecraft

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00:01:44,220 --> 00:01:45,530

because that's the future.

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00:01:45,530 --> 00:01:47,090

This is where the electronics and technology

43

00:01:47,090 --> 00:01:48,830

revolution are taking us.

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00:01:48,830 --> 00:01:51,330

And because that affords us an ability to build

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00:01:51,330 --> 00:01:53,220

small spacecraft that will allow us to do

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00:01:53,220 --> 00:01:55,390

even better science than the big spacecraft

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00:01:55,390 --> 00:01:57,750

we've used in the past.