1
00:00:00,400 --> 00:00:02,001
[■]

2
00:00:02,735 --> 00:00:04,704
The Mars Report
May 24, 2018

3
00:00:13,379 --> 00:00:07,006
InSight

4
00:00:13,412 --> 00:00:16,015
from Vandenberg Air Force Base
on May 5, 2018.

5
00:00:16,048 --> 00:00:17,517
[rocket roars]

6
00:00:18,617 --> 00:00:21,020
InSight is the first
interplanetary mission

7
00:00:21,053 --> 00:00:23,589
to launch from the West Coast.

8
00:00:26,459 --> 00:00:29,028
The spacecraft will reach Mars
on November 26, 2018

9
00:00:29,061 --> 00:00:31,531
and begin its study of the Red
Planet's interior.

10
00:00:41,274 --> 00:00:36,035
MarCO

11
00:00:41,307 --> 00:00:43,276
rode along with InSight.

12

00:00:43,309 --> 00:00:43,543
[■]

13
00:00:46,946 --> 00:00:49,582
The first image from
one of the CubeSats

14
00:00:49,615 --> 00:00:52,051
shows its unfolded
high-gain antenna...

15
00:00:54,753 --> 00:00:56,889
...and the Earth and its Moon.

16
00:00:56,922 --> 00:00:58,391
[■]

17
00:01:02,728 --> 00:01:05,064
They have already gone farther

18
00:01:05,097 --> 00:01:07,567
than any CubeSats
have gone before...

19
00:01:10,703 --> 00:01:12,672
If they make it to Mars,

20
00:01:12,705 --> 00:01:15,074
they'll attempt to transmit data
from InSight as it lands.

21
00:01:17,209 --> 00:01:19,178
Mars 2020 Helicopter

22
00:01:21,213 --> 00:01:23,182
NASA's Mars 2020 mission
will carry a stowaway -

23
00:01:23,215 --> 00:01:24,917

a small, autonomous helicopter.

24
00:01:26,018 --> 00:01:27,086
Designing a helicopter for
Mars' thin atmosphere

25
00:01:27,119 --> 00:01:28,855
was a significant
engineering challenge...

26
00:01:28,888 --> 00:01:31,357
...but recent testing in
a vacuum chamber

27
00:01:31,390 --> 00:01:34,093
showed the impossible
had become possible.

28
00:01:35,394 --> 00:01:38,097
It weighs just under 4 pounds
(1.8 kilograms)

29
00:01:38,130 --> 00:01:40,600
and has counter-rotating blades

30
00:01:40,633 --> 00:01:43,102
that move 10 times the rate of
helicopters on Earth.

31
00:01:45,070 --> 00:01:47,373
Curiosity Rover

32
00:01:49,642 --> 00:01:52,111
NASA's Curiosity rover drilled
through Mars' surface

33
00:01:52,144 --> 00:01:54,614
to produce the first rock sample
in over a year.

34
00:01:58,384 --> 00:02:01,120
Engineers have been
working to restore

35
00:02:01,153 --> 00:02:03,623
the rover's drill
since December 2016.

36
00:02:07,293 --> 00:02:09,762
Using a new percussive
drilling technique

37
00:02:09,795 --> 00:02:12,131
Curiosity bored a hole
about 2 inches deep.

38
00:02:13,599 --> 00:02:16,135
Now engineers will work on
getting the samples

39
00:02:16,168 --> 00:02:19,639
from the drill bit to the two
laboratories inside the rover.

40
00:02:22,374 --> 00:02:25,144
For more information on
all our Mars missions:

41
00:02:25,177 --> 00:02:28,147
https://mars.nasa.gov

42
00:02:31,183 --> 00:02:34,153
NASA Jet Propulsion Laboratory