
InSight carries a seismometer and could
detect Marsquakes for the first time.

1
00:00:00,250 --> 00:00:03,003
[■]

2
00:00:03,003 --> 00:00:05,005
The Mars Report
January 31, 2018

3
00:00:05,539 --> 00:00:08,375
Opportunity Rover

4
00:00:09,676 --> 00:00:11,678
NASA's longest running rover

5
00:00:11,678 --> 00:00:14,181
celebrated 14 years
on Mars this month.

6
00:00:15,983 --> 00:00:19,519
Since 2004, it has traveled
over 28 miles (45 km)

7
00:00:19,519 --> 00:00:22,589
and sent back more than
224,000 images.

8
00:00:23,524 --> 00:00:26,026
Now it's exploring
Perseverance Valley,

9
00:00:26,026 --> 00:00:28,528
a channel likely
carved by fluid.

10
00:00:28,528 --> 00:00:30,030
[■]

11
00:00:34,768 --> 00:00:37,905
Mars orbiters have observed
channels from a distance

12
00:00:37,905 --> 00:00:39,673
since 1971.

13
00:00:39,973 --> 00:00:43,043
Opportunity is the
first Mars mission

14
00:00:43,043 --> 00:00:45,245
to explore a channel up close.

15
00:00:45,245 --> 00:00:47,247
Curiosity Rover

16
00:00:49,800 --> 00:00:51,718
Curiosity continues trekking
higher on Mt. Sharp,

17
00:00:51,718 --> 00:00:53,053
reaching "Vera Rubin Ridge."

18
00:00:53,053 --> 00:00:56,056
From the ridge Curiosity sent
back this panoramic view.

19
00:00:57,524 --> 00:01:01,061
It spans more than
30 miles (48 km)

20
00:01:01,061 --> 00:01:04,564
and shows the route the rover
has taken since 2012

21
00:01:08,969 --> 00:01:11,972
past buttes, dunes
and other features.

22
00:01:11,972 --> 00:01:13,974
[■]

23
00:01:21,548 --> 00:01:24,217
Mars Reconnaissance Orbiter

24
00:01:26,119 --> 00:01:28,388
The orbiter's powerful
HiRISE camera

25
00:01:28,388 --> 00:01:30,757
revealed thick ice sheets.

26
00:01:31,091 --> 00:01:33,593
Exposed in the faces
of eroding slopes,

27
00:01:33,593 --> 00:01:36,129
the deposits extend
hundreds of feet deep

28
00:01:36,129 --> 00:01:38,131
providing layers of
recorded history

29
00:01:38,131 --> 00:01:40,634
and possible targets for
future human exploration.

30
00:01:40,634 --> 00:01:44,104
"Astronauts could essentially
just go there with a bucket and

31
00:01:44,104 --> 00:01:47,374
a shovel and get all the water
they need," said one researcher.

32
00:01:47,374 --> 00:01:50,110
Coming soon:
InSight

33

00:01:52,612 --> 00:01:55,615
Launching in May 2018, InSight
will be the first mission

34
00:01:55,615 --> 00:01:58,118
to study Mars'
interior structure.

35
00:01:58,485 --> 00:02:00,620
InSight carries a seismometer

36
00:02:00,620 --> 00:02:02,422
and could detect Marsquakes
for the first time.

37
00:02:02,422 --> 00:02:04,424
InSight will also use a heat
probe that will

38
00:02:04,424 --> 00:02:06,460
burrow up to 16 feet (5m)

39
00:02:06,460 --> 00:02:08,495
to measure Mars' interior
temperature.

40
00:02:09,863 --> 00:02:11,698
Lockheed Martin Space
is completing tests

41
00:02:11,698 --> 00:02:12,966
on the spacecraft
before it ships

42
00:02:12,966 --> 00:02:14,334
to Vandenberg AFB, Calif.

43
00:02:15,202 --> 00:02:18,138
InSight will be the first
interplanetary mission

44
00:02:18,138 --> 00:02:20,140
to launch from the West Coast.

45
00:02:21,174 --> 00:02:24,177
For more information on
all our Mars missions:

46
00:02:24,177 --> 00:02:27,014
https://mars.nasa.gov

47
00:02:27,014 --> 00:02:30,017
NASA Jet Propulsion Laboratory