



1
00:00:08,990 --> 00:00:05,570
can opportunity weather a gigantic dust

2
00:00:11,419 --> 00:00:09,000
storm on Mars mega storms roar across

3
00:00:15,230 --> 00:00:11,429
the Red Planet every five to six years

4
00:00:19,670 --> 00:00:15,240
Mariner 9 caught one in 1971 as did

5
00:00:20,029 --> 00:00:19,680
Viking five years later dust terms on

6
00:00:21,650 --> 00:00:20,039
Mars

7
00:00:23,540 --> 00:00:21,660
aren't the same as desc terms on earth

8
00:00:25,400 --> 00:00:23,550
if you're at the rover for instance

9
00:00:27,560 --> 00:00:25,410
sitting on the surface and you're

10
00:00:30,380 --> 00:00:27,570
looking up at the sky you're not going

11
00:00:32,810 --> 00:00:30,390
to see the sun's disk even during the

12
00:00:35,840 --> 00:00:32,820
day because the cloud the dust haze is

13
00:00:38,420 --> 00:00:35,850

thick enough that the sunlight has been

14

00:00:40,459 --> 00:00:38,430

either absorbed or scattered opportunity

15

00:00:43,400 --> 00:00:40,469

snapped these pictures over several

16

00:00:46,340 --> 00:00:43,410

Martian days recently darkened skies

17

00:00:48,740 --> 00:00:46,350

indicate the amount of dust blocking the

18

00:00:51,049 --> 00:00:48,750

sun's energy there is a possibility that

19

00:00:53,510 --> 00:00:51,059

if the dust haze continues to thicken

20

00:00:55,459 --> 00:00:53,520

and the solar power is reduced at the

21

00:00:57,650 --> 00:00:55,469

surface that we could lose the

22

00:00:59,420 --> 00:00:57,660

opportunity Rover there's a certain

23

00:01:02,389 --> 00:00:59,430

point where it doesn't have enough

24

00:01:05,359 --> 00:01:02,399

energy to maintain all of its systems

25

00:01:08,120 --> 00:01:05,369

and once they shut down we won't be able

26
00:01:10,789 --> 00:01:08,130
to revive them we're not at that point

27
00:01:12,440 --> 00:01:10,799
yet and we have some margin to that but

28
00:01:20,179 --> 00:01:12,450
we're close enough that we're a little

29
00:01:22,219 --> 00:01:20,189
worried about the rover team at NASA's

30
00:01:24,740 --> 00:01:22,229
Jet Propulsion Laboratory sent a command

31
00:01:27,399 --> 00:01:24,750
asking opportunity to skip phoning home

32
00:01:29,710 --> 00:01:27,409
for a while to conserve energy

33
00:01:31,630 --> 00:01:29,720
Opportunity is hunkered down

34
00:01:33,370 --> 00:01:31,640
and so it's only doing the various such

35
00:01:36,580 --> 00:01:33,380
of things that are needed to keep the

36
00:01:37,810 --> 00:01:36,590
spacecraft to Mars winds can give it and

37
00:01:40,300 --> 00:01:37,820
taketh away

38
00:01:42,730 --> 00:01:40,310

Mars dust devils gave the rover's new

39

00:01:45,940 --> 00:01:42,740

leaves on life by blowing the dust off

40

00:01:47,380 --> 00:01:45,950

their solar panels this windstorm is a

41

00:01:49,690 --> 00:01:47,390

different story

42

00:01:51,190 --> 00:01:49,700

dust storms on Mars aren't local the way

43

00:01:52,750 --> 00:01:51,200

they are on earth these things could

44

00:01:55,210 --> 00:01:52,760

take over the whole planet they can

45

00:01:56,530 --> 00:01:55,220

perhaps carry pulled the pole all the

46

00:02:00,580 --> 00:01:56,540

way wrapped around the planet the

47

00:02:02,200 --> 00:02:00,590

Odyssey spacecraft can see both were

48

00:02:04,720 --> 00:02:02,210

dust is in the atmosphere and our

49

00:02:06,580 --> 00:02:04,730

constancy of the temperature effect on

50

00:02:08,950 --> 00:02:06,590

the Mars Reconnaissance work there gets

51
00:02:12,250 --> 00:02:08,960
an almost complete global view of the

52
00:02:22,830 --> 00:02:12,260
planet scientists hope this Martian dust

53
00:02:27,130 --> 00:02:25,270
opportunity's twin spirit is on the

54
00:02:29,619 --> 00:02:27,140
other side of Mars where the dust storm

55
00:02:32,410 --> 00:02:29,629
is less severe the team is still

56
00:02:34,600 --> 00:02:32,420
limiting its activity to conserve power

57
00:02:36,910 --> 00:02:34,610
in the mean time scientists and

58
00:02:40,420 --> 00:02:36,920
engineers hope the dust settles soon

59
00:02:42,400 --> 00:02:40,430
before opportunity's power runs out the

60
00:02:44,259 --> 00:02:42,410
things don't get worse we expect that

61
00:02:46,839 --> 00:02:44,269
we'll be in a situation of recovering

62
00:02:50,289 --> 00:02:46,849
and being able to go on but even if we

63
00:02:52,690 --> 00:02:50,299

don't okay instead of 90 days we've

64

00:02:54,670 --> 00:02:52,700

gotten over a thousand days operation on