



Mars Reconnaissance Orbiter Image

1
00:00:10,310 --> 00:00:08,390
hi i'm matt heverly for the jet

2
00:00:11,990 --> 00:00:10,320
propulsion laboratory rover driver for

3
00:00:13,350 --> 00:00:12,000
the opportunity rover

4
00:00:15,270 --> 00:00:13,360
recently spirit and opportunity just

5
00:00:17,349 --> 00:00:15,280
celebrated their fifth anniversary a big

6
00:00:19,029 --> 00:00:17,359
milestone for both rovers we had some

7
00:00:20,950 --> 00:00:19,039
trouble recently with both of the rovers

8
00:00:23,269 --> 00:00:20,960
but fortunately they're both back on the

9
00:00:25,910 --> 00:00:23,279
road at driving kent

10
00:00:27,670 --> 00:00:25,920
in late january on sol 1800 spirit

11
00:00:29,349 --> 00:00:27,680
celebrated a significant milestone by

12
00:00:31,269 --> 00:00:29,359
operating 20 times longer than its

13
00:00:33,030 --> 00:00:31,279

original mission warranty which was just

14

00:00:34,950 --> 00:00:33,040

90 days

15

00:00:36,870 --> 00:00:34,960

all 1800 also had some troubles for the

16

00:00:38,869 --> 00:00:36,880

rover in the way that the data is

17

00:00:40,869 --> 00:00:38,879

written to its memory and transmitted to

18

00:00:43,190 --> 00:00:40,879

earth we think that this is the result

19

00:00:46,389 --> 00:00:43,200

of cosmic radiation corrupting its flash

20

00:00:48,470 --> 00:00:46,399

memory on board on 1806 however we were

21

00:00:50,549 --> 00:00:48,480

able to return to driving and the rover

22

00:00:52,229 --> 00:00:50,559

seems to be behaving fine we were only

23

00:00:54,229 --> 00:00:52,239

made at 30 centimeters before we

24

00:00:55,910 --> 00:00:54,239

encountered a partially buried rock that

25

00:00:57,189 --> 00:00:55,920

hit the right front wheel if you

26

00:00:59,349 --> 00:00:57,199

remember the right front wheel and

27

00:01:00,549 --> 00:00:59,359

spirit no longer turns so it makes it a

28

00:01:01,670 --> 00:01:00,559

little difficult to make it over

29

00:01:04,149 --> 00:01:01,680

obstacles

30

00:01:05,830 --> 00:01:04,159

it's all 1809 however the rover drivers

31

00:01:07,510 --> 00:01:05,840

were able to successfully negotiate

32

00:01:10,789 --> 00:01:07,520

around this rock and are now continuing

33

00:01:12,789 --> 00:01:10,799

their trek to get to home plate

34

00:01:15,109 --> 00:01:12,799

spirit also had a little good luck until

35

00:01:16,630 --> 00:01:15,119

1812 a wind gust must have gone through

36

00:01:18,710 --> 00:01:16,640

blown a little dust off from the rover

37

00:01:20,950 --> 00:01:18,720

solar panels gave the rover a modest

38

00:01:22,310 --> 00:01:20,960

boost in its energy level

39

00:01:24,149 --> 00:01:22,320

on the other side of the planet with

40

00:01:26,950 --> 00:01:24,159

opportunity we're still on our long trek

41

00:01:28,870 --> 00:01:26,960

to endeavor crater last week opportunity

42

00:01:30,950 --> 00:01:28,880

also experienced some trouble

43

00:01:32,789 --> 00:01:30,960

when the drive was terminated due to an

44

00:01:34,230 --> 00:01:32,799

error on the pan cam mass pointing

45

00:01:35,830 --> 00:01:34,240

assembly this is how we point our

46

00:01:38,390 --> 00:01:35,840

cameras as we drive

47

00:01:40,149 --> 00:01:38,400

this also looks to be cosmic radiation

48

00:01:42,149 --> 00:01:40,159

in the form of what we call a single

49

00:01:44,069 --> 00:01:42,159

event upset on the motor controller

50

00:01:45,910 --> 00:01:44,079

electronics everything seems to be

51
00:01:48,310 --> 00:01:45,920
performing well now though

52
00:01:50,069 --> 00:01:48,320
and we're able to continue driving again

53
00:01:51,510 --> 00:01:50,079
coming up we're going to be

54
00:01:53,910 --> 00:01:51,520
trying out some new capabilities where

55
00:01:55,429 --> 00:01:53,920
we'll be able to do multi-soul driving

56
00:01:57,350 --> 00:01:55,439
this basically means that the rover can

57
00:01:59,590 --> 00:01:57,360
drive one day and then wake up on the

58
00:02:01,590 --> 00:01:59,600
next day continue driving autonomously

59
00:02:03,109 --> 00:02:01,600
without any human interaction

60
00:02:04,870 --> 00:02:03,119
this is going to greatly increase our

61
00:02:06,469 --> 00:02:04,880
ability to make long distances for a

62
00:02:08,389 --> 00:02:06,479
given planning cycle

63
00:02:09,910 --> 00:02:08,399

as we continue this long long trek to

64

00:02:11,750 --> 00:02:09,920

endeavor crater

65

00:02:12,869 --> 00:02:11,760

thanks again for tuning in and i'm matt