



1
00:00:04,870 --> 00:00:02,629
a newly published study using images

2
00:00:06,789 --> 00:00:04,880
from nasa's lunar reconnaissance orbiter

3
00:00:08,390 --> 00:00:06,799
reveal tantalizing hints that the moon

4
00:00:11,110 --> 00:00:08,400
has slightly shrunk in the recent

5
00:00:13,350 --> 00:00:11,120
geologic past and in fact may still be

6
00:00:15,910 --> 00:00:13,360
actively shrinking today

7
00:00:17,750 --> 00:00:15,920
the research led by dr tom waters from

8
00:00:18,710 --> 00:00:17,760
the smithsonian national air and space

9
00:00:20,470 --> 00:00:18,720
museum

10
00:00:22,550 --> 00:00:20,480
involved searching thousands of lunar

11
00:00:25,509 --> 00:00:22,560
images for specific fault structures

12
00:00:27,589 --> 00:00:25,519
called lobate scarps

13
00:00:30,230 --> 00:00:27,599

we know the moon is shrinking by looking

14

00:00:31,509 --> 00:00:30,240

at the lobate scarps in detail they

15

00:00:33,990 --> 00:00:31,519

actually

16

00:00:36,389 --> 00:00:34,000

reflect the crustal materials of the

17

00:00:39,110 --> 00:00:36,399

moon being pushed together breaking and

18

00:00:41,910 --> 00:00:39,120

being thrust over one another

19

00:00:43,750 --> 00:00:41,920

so that indicates that something has

20

00:00:45,590 --> 00:00:43,760

been causing the moon to actually

21

00:00:47,110 --> 00:00:45,600

contract or shrink

22

00:00:49,110 --> 00:00:47,120

finding that the lobate scarps are

23

00:00:50,709 --> 00:00:49,120

globally distributed indicates that

24

00:00:52,709 --> 00:00:50,719

contraction of a lunar surface is

25

00:00:54,150 --> 00:00:52,719

happening on a global scale and this is

26

00:00:56,150 --> 00:00:54,160

critical knowledge to understand the

27

00:00:57,990 --> 00:00:56,160

geologic history of the moon

28

00:00:59,830 --> 00:00:58,000

the next steps in this research will be

29

00:01:01,750 --> 00:00:59,840

to more accurately assess the age of

30

00:01:03,670 --> 00:01:01,760

these scarps to help determine how

31

00:01:05,830 --> 00:01:03,680

geologically active the moon might still

32

00:01:07,750 --> 00:01:05,840

be today

33

00:01:10,630 --> 00:01:07,760

what's exciting about these findings for

34

00:01:11,830 --> 00:01:10,640

me is that the moon

35

00:01:13,350 --> 00:01:11,840

is not

36

00:01:15,510 --> 00:01:13,360

a dead body

37

00:01:17,510 --> 00:01:15,520

it's not an object

38

00:01:18,469 --> 00:01:17,520

where everything that happened on the

39

00:01:20,950 --> 00:01:18,479

moon

40

00:01:24,149 --> 00:01:20,960

happened billions of years ago

41

00:01:26,230 --> 00:01:24,159

these scarps could be

42

00:01:27,030 --> 00:01:26,240

younger than a billion years they could

43

00:01:29,270 --> 00:01:27,040

be

44

00:01:32,069 --> 00:01:29,280

in fact as young as a couple of hundred

45

00:01:34,390 --> 00:01:32,079

million years old or they could be even

46

00:01:36,789 --> 00:01:34,400

younger than that

47

00:01:37,749 --> 00:01:36,799

and that means in geologic terms the

48

00:01:39,270 --> 00:01:37,759

moon

49

00:01:41,190 --> 00:01:39,280

is active

50

00:01:43,030 --> 00:01:41,200

to learn more about this story visit the

51

00:01:46,550 --> 00:01:43,040

home page for the lunar reconnaissance