



# ARE THERE EARTHQUAKES ON OTHER PLANETS



1  
00:00:00,203 --> 00:00:02,625  
Are there earthquakes on other planets?

2  
00:00:03,040 --> 00:00:05,231  
We Asked a NASA Scientist.

3  
00:00:05,446 --> 00:00:07,074  
Yes, definitely.

4  
00:00:07,074 --> 00:00:10,920  
But on other worlds, these aren't called earthquakes.

5  
00:00:10,920 --> 00:00:13,639  
They're called moonquakes or marsquakes

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00:00:13,639 --> 00:00:16,000  
if they're on the Moon and Mars.

7  
00:00:16,000 --> 00:00:17,312  
We know that these exist

8  
00:00:17,312 --> 00:00:21,511  
because we actually sent seismometers  
to the Moon and to Mars.

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00:00:21,511 --> 00:00:24,060  
And when we sent seismometers to these worlds,

10  
00:00:24,060 --> 00:00:28,037  
we actually found thousands of quakes underneath the surface.

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00:00:28,037 --> 00:00:31,194  
Even when we don't have seismometers on other planets,

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00:00:31,194 --> 00:00:34,823  
we can actually tell that some worlds have earthquakes

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00:00:34,823 --> 00:00:38,291

or had earthquakes in the past because there are cracks at the surface.

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00:00:38,600 --> 00:00:42,275

And so when we see cracked rocks or even cracked ice on places

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00:00:42,275 --> 00:00:45,354

like Europa and Enceladus, we know for a fact

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00:00:45,627 --> 00:00:48,821

that there were quakes there to generate those cracks.

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00:00:49,374 --> 00:00:53,053

Quakes of all sizes are really interesting and they can tell us a lot

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00:00:53,053 --> 00:00:54,587

about the inside of a planet.

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00:00:54,821 --> 00:00:58,365

Bigger earthquakes, bigger marsquakes  
and bigger moonquakes can tell us

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00:00:58,365 --> 00:01:02,136

about really deep processes and features on these planets.

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00:01:02,377 --> 00:01:05,881

Now, recently, we've discovered that the Moon also has

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00:01:05,881 --> 00:01:09,017

a small liquid core surrounding its solid core.

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00:01:09,017 --> 00:01:12,799

And we've also discovered, thanks to NASA InSight, that the

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00:01:12,799 --> 00:01:15,854

Mars core is actually larger than we initially thought,

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00:01:15,929 --> 00:01:18,000

which means it's actually less dense,

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00:01:18,000 --> 00:01:19,635

which is a really interesting science puzzle.

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00:01:19,685 --> 00:01:22,821

So understanding the interior of other worlds will help us

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00:01:22,821 --> 00:01:25,691

understand how our own world, the Earth, evolved.

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00:01:26,049 --> 00:01:28,552

So are there earthquakes on other planets?

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00:01:28,614 --> 00:01:29,648

Definitely.

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00:01:29,648 --> 00:01:34,050

Moonquakes, marsquakes and possibly  
one day we'll be able to send seismometers

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00:01:34,050 --> 00:01:38,327

elsewhere to record europaquakes and enceladusquakes and beyond.

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00:01:39,061 --> 00:01:39,745

We asked a NASA scientist.