



IS THERE
WEATHER
ON THE
MOON?



1
00:00:01,611 --> 00:00:04,471
Is there weather on the Moon?

2
00:00:09,009 --> 00:00:08,110
NASA

3
00:00:09,110 --> 00:00:13,680
Well, because the Moon doesn't have a significant atmosphere like Earth,

4
00:00:13,680 --> 00:00:16,883
it does not experience weather, like wind

5
00:00:16,883 --> 00:00:20,620
or atmospheric temperature or precipitation like rain and snow.

6
00:00:20,920 --> 00:00:25,625
However, the Moon does experience what we refer to as space weather.

7
00:00:26,226 --> 00:00:30,530
Space weather loosely refers to how changing conditions

8
00:00:30,530 --> 00:00:33,433
throughout the solar system, like the varying solar wind,

9
00:00:33,433 --> 00:00:36,403
which is composed of charged particles from the Sun

10
00:00:36,403 --> 00:00:41,641
and meteoroid streams, affect planetary surfaces and volatile cycles.

11
00:00:41,975 --> 00:00:46,413
So at the Moon, the solar wind and meteoroids have direct access

12
00:00:46,413 --> 00:00:50,550
to the surface and they continuously alter the lunar soil.

13
00:00:50,784 --> 00:00:55,055

These same processes can eject gases from the lunar soil and form

14

00:00:55,055 --> 00:01:00,026

a very tenuous lunar atmosphere, which we refer to as an exosphere.

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00:01:00,026 --> 00:01:05,198

At Earth, our atmosphere and magnetosphere largely protects us from space weather.

16

00:01:05,365 --> 00:01:08,401

However, in the uppermost regions of Earth's atmosphere,

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00:01:08,401 --> 00:01:11,137

it can be a problem for satellite technologies.

18

00:01:11,771 --> 00:01:14,207

So is there weather on the Moon?

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00:01:14,541 --> 00:01:18,378

The Moon does not experience weather like on Earth related to the atmosphere.

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00:01:18,378 --> 00:01:24,851

However, it does experience space weather and that will be very important to forecast as humans return to the