



**How do solar flares
impact Earth?**

1
00:00:00,040 --> 00:00:01,140
<music throughout>

2
00:00:01,340 --> 00:00:04,300
How do solar flares impact Earth?

3
00:00:04,300 --> 00:00:08,120
A solar flare is a burst of X-ray light.

4
00:00:08,130 --> 00:00:12,130
We know that the Sun influences space all the way down to the Earth's upper atmosphere.

5
00:00:12,150 --> 00:00:16,160
A new study observed

6
00:00:16,180 --> 00:00:20,170
when the X-rays pulsated, so too did the lower ionosphere.

7
00:00:20,190 --> 00:00:24,200
The ionosphere is the lowest level of space, a region of the upper atmosphere

8
00:00:24,220 --> 00:00:28,230
about 30 - 600 feet above sea level.

9
00:00:28,250 --> 00:00:32,250
It is home to the aurora, the International Space Station, radio waves, and satellites.

10
00:00:32,270 --> 00:00:36,310
This is the first time we have seen its

11
00:00:36,330 --> 00:00:40,330
response synchronized with solar flare pulsations.

12
00:00:40,350 --> 00:00:44,360
Understanding how the Sun affects

13
00:00:44,380 --> 00:00:48,420

near-Earth space helps us learn how to protect astronauts and satellites close to home.

14

00:00:48,440 --> 00:00:52,430

tone