



1
00:00:00,010 --> 00:00:04,000
music

2
00:00:04,020 --> 00:00:08,000
Scientists have discovered a human-made barrier around Earth

3
00:00:08,020 --> 00:00:12,020
protecting against the natural particle radiation in space.

4
00:00:13,400 --> 00:00:16,020
They believe the bubble was formed

5
00:00:16,040 --> 00:00:19,640
by very low frequency waves, or VLFs.

6
00:00:19,640 --> 00:00:23,740
VLFs have been found to interact with the particles in space, affecting how and where they move.

7
00:00:23,740 --> 00:00:27,140
affecting how and where they move.

8
00:00:27,140 --> 00:00:31,600
VLFs are used for radio communications, including with submarines,

9
00:00:31,600 --> 00:00:34,540
because they can penetrate deep into the ocean.

10
00:00:34,540 --> 00:00:38,760
The waves can also travel far into the environment around Earth.

11
00:00:38,760 --> 00:00:44,140
By understanding more about how VLF transmissions help shape our space environment,

12
00:00:44,160 --> 00:00:47,760
we learn more about this complex region surrounding us.

13
00:00:47,760 --> 00:00:51,740

The more we know, the more situational awareness we have

14

00:00:51,740 --> 00:00:56,360

to protect our satellites from natural radiation in space.

15

00:00:56,380 --> 00:01:00,360

tone