



1
00:00:00,070 --> 00:00:10,100
(Music)

2
00:00:10,120 --> 00:00:14,220
Narrator-Using data from NASA's Fermi Gamma-Ray Space Telescope, scientists have recently

3
00:00:14,240 --> 00:00:18,290
discovered a gigantic, mysterious structure in our galaxy.

4
00:00:18,310 --> 00:00:22,360
This never-before-seen feature looks like a pair of bubbles extending above

5
00:00:22,380 --> 00:00:26,500
and below our galaxy's center.

6
00:00:26,520 --> 00:00:30,540
These enormous, gamma-ray emitting lobes aren't immediately visible in the Fermi all-sky

7
00:00:30,560 --> 00:00:34,600
map, however, by processing the data, a group of scientists

8
00:00:34,620 --> 00:00:38,680
able to bring these unexpected structures into sharp relief.

9
00:00:38,700 --> 00:00:44,810
(Music)

10
00:00:44,830 --> 00:00:48,890
Each lobe is 25,000 light-years tall, and the whole structure may be only

11
00:00:48,910 --> 00:00:52,930
a few million years old. Within the bubbles

12
00:00:52,950 --> 00:00:56,980
extremely energetic electrons are interacting with lower-energy light to create

13
00:00:57,000 --> 00:01:01,010

gamma rays, but right now no one knows the source of these electrons.

14

00:01:01,030 --> 00:01:05,040

Are the bubbles remnants of a massive burst of star formation?

15

00:01:05,060 --> 00:01:09,140

Leftovers from an eruption by the supermassive black hole at our galaxy's center?

16

00:01:09,160 --> 00:01:13,240

Or did these forces work in tandem to produce them? Scientists aren't sure yet

17

00:01:13,260 --> 00:01:17,280

but the more they learn about this amazing structure, the better we'll understand