1
00:00:00,000 --> 00:00:03,980
[Music throughout]

2
00:00:04,000 --> 00:00:10,040
This pulsar is leaving a glowing trail as it races through our galaxy.

3
00:00:12,060 --> 00:00:17,040
A pulsar is a rapidly spinning neutron star, the superdense remnant of a star destroyed in a supernova.

4
00:00:21,060 --> 00:00:25,040
Some pulsars track through space at high speeds. Why?

5
00:00:27,060 --> 00:00:33,040
Astronomers think an uneven supernova explosion may give a swift kick to a newborn pulsar.

6
00:00:37,000 --> 00:00:42,040
The pulsar – called J0002+6216 – is among the swiftest, moving at nearly 2.5 million mph (4 million kph)…

7
00:00:42,060 --> 00:00:47,040
Fast enough to go from Earth to the Moon in 6 minutes.

8
00:00:51,000 --> 00:00:57,040
The pulsar shines brightly in gamma rays and was found by NASA’s Fermi Gamma-ray Space Telescope.

9
00:01:01,060 --> 00:01:06,980
Fermi data also allowed direct measurement of the pulsar’s speed through space.

10
00:01:10,000 --> 00:01:20,040
The pulsar's trail, mapped by the Very Large Array radio telescope, points back to the heart of the 10,000-year

11
00:01:24,000 --> 00:01:29,980
Further study of this object will shed more light on how supernovae are able to 'kick' neutron stars to such high

12
00:01:36,220 --> 00:01:47,170
Faster than 99 percent of all pulsars with measured speeds, this one will eventually escape our galaxy.

13
00:01:47,190 --> 00:01:51,310

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