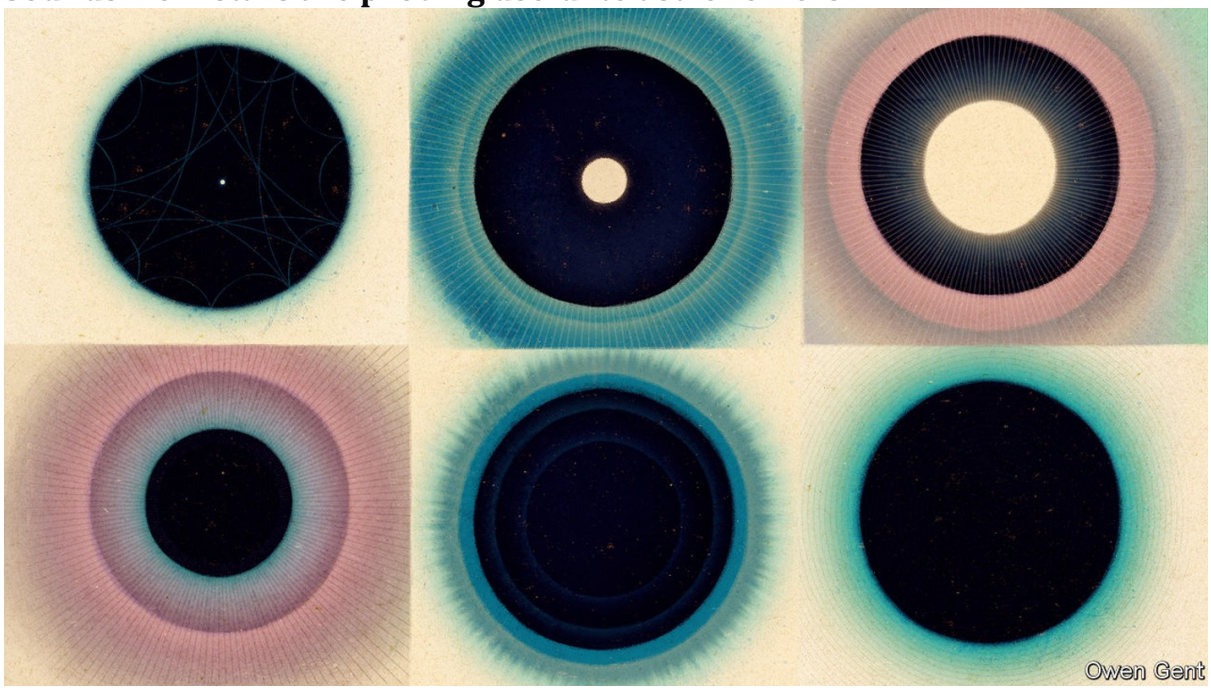
Want to know what's inside a star? Listen closely

Sounds from stars are proving useful to astronomers



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In the 1960s astronomers discovered that the Sun was pulsating—expanding and contracting regularly every five minutes. As well as this main oscillation, they later found millions more, each with a unique rhythm. The oscillations were the result of pressure waves that had been bouncing around inside the Sun. As such, they carried with them valuable information about the gases and conditions inside the star. Just as geologists used seismic waves caused by earthquakes to glean information about the rocky innards of Earth, astronomers began to use "sunquakes" to take a peek inside the nearest star.

By "listening" to sound waves from the Sun, "helioseismology" has since allowed astronomers to work out the structure and dynamics of the star's interior. New observatories are now extending this technique to stars beyond the solar system. "Asteroseismology" will give astronomers a glimpse of the interiors of faraway stars and also help them understand how the Milky Way, the Earth's galaxy, has evolved.