

# **Mysterious Flashes of Radio Waves from Deep Space**

A Lecture by Gregg Hallinan

Friday, June 22nd, 8:00PM

Cahill Center for Astronomy and Astrophysics  
California Institute of Technology

About a decade ago, astronomers using the Parkes radio telescope in Australia began detecting millisecond-duration flashes of radio waves that appeared to originate from deep space. Initially, there was a lot of debate about whether these events were really astrophysical, or just a type of terrestrial interference. Indeed, some of the bursts were found to have originated from a microwave oven located near the Parkes telescope! However, most of the bursts are now known to come from far outside our solar system and likely from galaxies in the distant universe. These radio flashes, dubbed fast radio bursts (FRBs), are briefly among the most luminous sources in the sky, and occur at a prodigious rate -- a few thousand bursts hit the Earth each day.

However, their origin remains a mystery. A Caltech team has begun construction of a new radio telescope dedicated to hunting down and pinpointing these FRBs, potentially leading to deep insights in the physics responsible for this new and cryptic phenomenon.

Image Credit: L. Calçada / ESO.

These are free lectures at a public level followed by guided stargazing with telescopes (weather permitting). All events are held at the Cahill Center for Astronomy and Astrophysics at Caltech. No reservations are needed.

Lectures are 30 minutes, stargazing lasts 90 minutes. Stay only as long as you want.

For directions, parking, weather updates, and more information, please visit:

<http://outreach.astro.caltech.edu>