

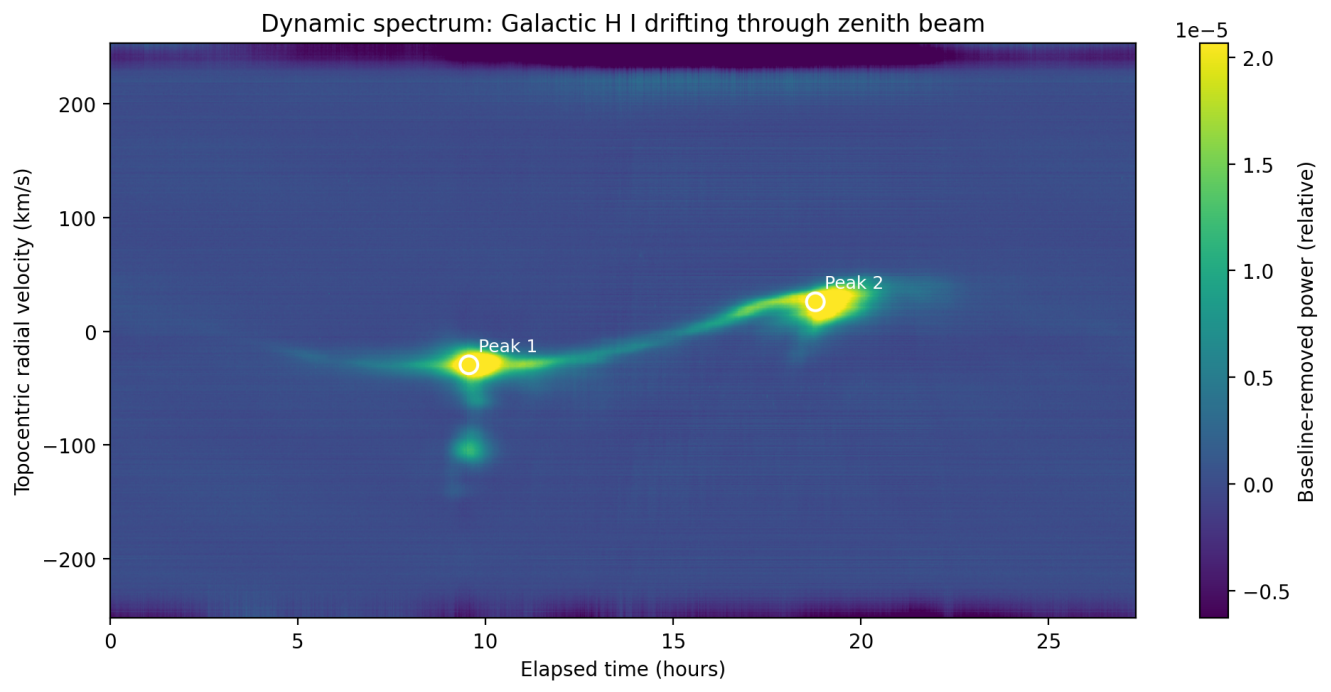
# Listening to the Milky Way from Glendora

A 2.1 meter backyard radio telescope detected hydrogen gas in our Galaxy Zenith drift scan - 2026-04-29 to 2026-05-01

**What happened?**

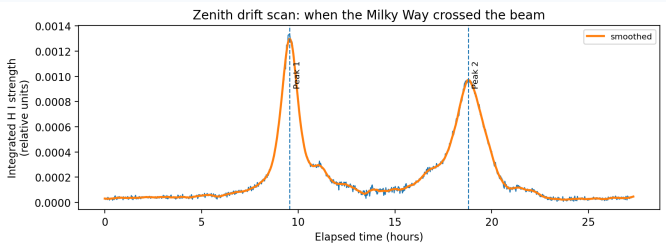
Hydrogen, the most common atom in space, gives off a faint radio 'tone' near 1420.405 MHz. Your dish was pointed straight up, so Earth's rotation swept the telescope beam across the sky. The bright patches in the graph are Milky Way hydrogen clouds passing through that beam.

**The main discovery**



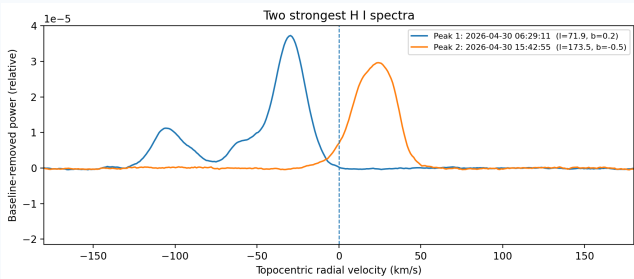
Each vertical slice is one spectrum. Bright bands show hydrogen emission at different velocities.

## When the signal was strongest



Integrated H I signal vs time. Two passes dominate.

## What the signal means



The peaks are shifted in frequency by gas motion along our line of sight

**Plain-English takeaway**

This is not an optical picture. It is a radio fingerprint of cold neutral hydrogen in the Milky Way. Because the telescope was fixed at zenith, the sky drifted overhead and the Galaxy announced itself as two strong windows of radio emission.

Raw spectra	Channels	Duration	Velocity resolution	Beam width
1,000	512	27.3 hours	0.99 km/s per channel	about 7.0 degrees