

# Just how big is the universe?

## **NEEL ROBERTS**

Have you ever wondered how big the universe is?

A recent Space.com article estimated there are between 100-200 billion galaxies while another article estimates our galaxy, the Milky Way, has over 100 billion solar masses like our sun.

While these are guesses, if we used these figures, the number of stars in the universe would be about 10,000,000,000,000,000,000,000 (1022), pronounced 10 septillion.

The closest star is Proxima Centuri, which is over four light years away. Our closest major galaxy is Andromeda (M31), which is about 2.5 million light years away. A light year is just under 9.46 trillion kilometres, so the universe would be about 130-plus septillion kilometres. To put all of this into perspective, our solar system ends at about the theorized Oort clouds just under two light years away.

However, travelling the speed of light (300,000 kilometres per second) from the sun to Pluto — 5,906,376,272 kilometres — would take under six hours.

These gigantic numbers and

concepts are impossible for the average person to grasp and can only humble anyone with a conscience.

## **SKY WATCH**

Visit <http://whatsouttonight.com/Resources/2021FebSkyWOT.pdf> to download this month's sky free chart.

Look up in the southeast-east on Saturday, Feb. 6 at 7:38 a.m. to see Saturn and Venus come up before fading into daylight.

Before sunrise, around 7:30 a.m. on Wednesday Feb. 10, Mars, Saturn, Jupiter, Venus, Pluto, and a thin-crescent moon will come up in one shot just before the sun rises.

Betelgeuse, the Valentine's star, is visible on Valentine's Day, starting in the southeast-east from dusk until setting in the west after 3:30 a.m.

After sunset on Thursday Feb. 18, look up in the southeast-east to view Mars and the moon.

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