

# Interstellar Space By Eyes Of NASA's Voyager 2

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NASA's Voyager 2 spacecraft has found something weird in deep space, it has reported a significant increase in the density of space outside the solar system. The farther the spacecraft is diving into outer space, the more the density is increasing. This discovery has challenged the accepted notion of space being a vacuum. NASA's Voyager 2 spacecrafts launched in 1977, Voyager 2 has been wandering in the cosmos for 43 years. At 11.6 billion miles, it is one of the farthest man-made objects from the earth's. The craft is now traveling more than 11.6 billion miles (18.8 billion km) from Earth. It is beyond the heliopause, or boundary region, where the sun's influence ends and the interstellar medium begins. The 43-year-old space probe was left flying solo for 7 months while repairs were made to the radio antenna that commands it. The only radio antenna that can command the space probe – the Deep Space Station 43 (DSS43) antenna in Canberra, Australia – has been offline since March. The space craft was launched to study the outer planets of the solar system, it explored Jupiter's moons, Saturn's rings, Uranus, and Neptune's surface features. All the knowledge of Uranus and Neptune comes from Voyager 2. In 2018, Voyager 2 escaped the boundary of the sun's influence. It became the second spacecraft to enter interstellar space after Voyager 1. Since then, it has been beaming back information about the space beyond the solar system. The recent discovery about the increasing space density has surprised everyone. This isn't the first time that such an increase in density is detected. In 2013, Voyager 1 made a similar observation, but at a different location. Because of low matter density, space is considered equivalent to a vacuum. In the solar system, the solar wind has an average proton and electron density of 3 to 10 particles per cubic centimeter. The plasma density near the edge of the solar system is .002 electron per cc. Several theories have been put forward time and again to explain this observation. One theory suggests that the interstellar magnetic field lines become stronger as they bend over the heliopause. However, more data is needed to untangle the mystery of increased density.