

DESTINATION SPACE

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DIAMOND PLANET

The ground under your space boots is extremely hard, and it sparkles. The surface of the planet you're on looks as if it's made out of crystal. That's because it is: This planet is one giant diamond, five times the size of Earth.

You traveled 4,000 light-years (the distance light travels in a year) to get to planet PSR J1719-1438 b from Earth. But this strange sight is worth the trip.

You look up into the sky. Instead of a sun or moon you see a swirling cloud the size of a small city. The cloud is purple and glowing. At the center of the cloud is a pulsar, a type of star that has collapsed. The pulsar is spinning fast—about 170 times a second. As it spins, it shoots out deadly cosmic rays and radiation. Luckily you have a special space suit to protect you. Without it, these rays would instantly blast your body to bits. Your suit also has to withstand the intense 7640°F heat—it's so hot here that the ground glows.

A long time ago, the planet you're standing on was a star. It was much bigger than it is now. But then it got very close to this powerful pulsar. The pulsar's rays have been blasting the star for millions of years. Slowly the star's surface wore away, until 99.9 percent of it disappeared.

Today, only the center of the star is left: the giant diamond you're standing on. It's one of the most beautiful—and strangest—planets ever discovered.

THE PULSAR

Destination

PSR J1719-1438 b

Location

The constellation Serpens

Distance

4,000 light-years from Earth

Time to reach

108 million years

Weather

7640°F, with heavy cosmic rays and radiation

DIAMOND IN THE SKY



If you wanted to make this diamond into a ring, you'd need a **chunk of gold larger than Earth** to make the band.

A year on **PSR J1719-1438 b** lasts just over two hours.

EYE ON THE SKY

September 8: The planet Venus will appear next to the moon.

September 18-20: Venus and Saturn will be very close to each other. Look west and low in the sky at dusk to find Venus and Saturn. You'll be able to see them for about an hour after sunset.