ARTICLES EVAPORATING PLANET



Click the full-screen arrows in the upper right to read the captions.

DESTINATION: CoRoT-2b

LOCATION: The constellation Aquila [uh-KWIL-uh]

DISTANCE: 800 light years from Earth

TIME TO REACH: 24 million years

WEATHER: 2,240°F

You're hovering in your spacecraft above the planet CoRoT-2b, gazing down at the swirling gasses that form this world. The planet looks familiar: CoRoT-2b resembles one of <u>Earth</u>'s neighbors, <u>Jupiter</u>. But CoRoT-2b's <u>solar system</u> isn't anything like the one that Jupiter and Earth belong to.

As you look up you see a huge <u>sun</u> looming above you. But this <u>star</u> is blotchy with dark spots all over it. And it's spewing x-ray radiation, the same form of energy doctors use to take pictures of broken bones. CoRoT-2b's sun uses gravity to pull the planet dangerously close. At the same time, it pummels CoRoT-2b with x-rays a hundred thousand times more intense than those that Earth receives from its sun.

The star's extreme x-ray raditation is evaporating CoRoT-2b. The x-rays also create an intense wind that blows particles off the planet and into space. Every second the radiation strips off about 4.5 million tons of particles from the planet's surface. That's the weight of 12 Empire State Buildings! You glance behind you and see the particles streaming from CoRoT-2b like the tail of a <u>comet</u>.

Checking your instrument panel, you realize that the needles are jumping. The high wind, blistering temperature, and extreme x-rays are more than your spaceship can handle. So you take one last look at the evaporating planet and head off to your next destination.

MORE FACTS

• A year on CoRoT-2b lasts just 1.7 days.

• The sun that's evaporating CoRoT-2b is about 300 million years old. That sounds ancient, but it's just a baby—our own <u>sun</u> is about 4.5 billion years old.

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