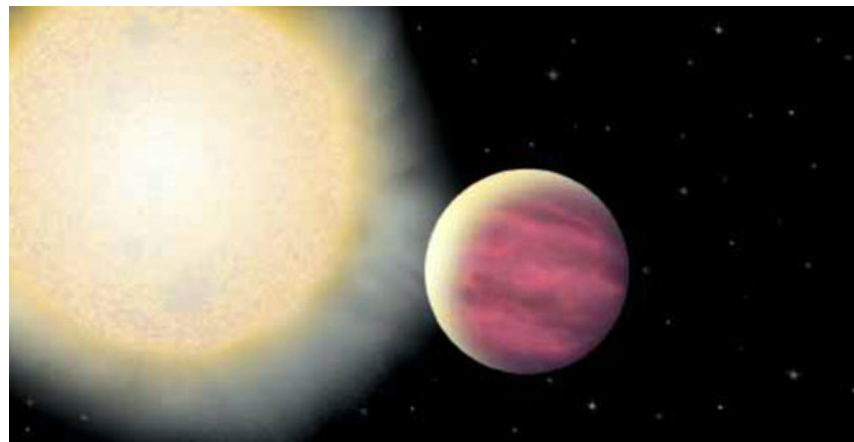


OBSERVATORY

Small Telescope Helps Make Big Discovery



Julie Turner/Vanderbilt University

A drawing of KELT-1b, which is about 30 times the mass of Jupiter.

By SINDYA N. BHANOO
Published: June 18, 2012

A small telescope, no bigger nor more powerful than a high-end digital camera, has helped researchers discover two new planets, both similar in makeup to the gas giant [Jupiter](#).

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One, [named KELT-2Ab](#), is unique because it is near a very bright star. The bright light from the star will help researchers understand the atmosphere of the planet, said [Thomas G. Beatty](#), an astronomer at Ohio State University who was involved in the research. "It's the only way to really understand a planet's interiors and exteriors," he said. "We can get enough of a signal from the light that goes through or reflects off the planet."

The second planet, [called KELT-1b](#), is about 30 times the mass of Jupiter. It is so massive that it is being designated a [brown dwarf](#), a category reserved for bodies "too heavy to be planets but not heavy enough to be stars," Mr. Beatty said.

KELT-1b is so close to its star that a year for the planet is just 29 hours, Mr. Beatty said.

KELT-1b is about 825 light-years from Earth, KELT-2Ab about 360. Each planet receives thousands of times more sunlight from its star than the Earth does from the Sun, Mr. Beatty said. The researchers identified the planets using the Kilodegree Extremely Little Telescope, or KELT, housed at Winer Observatory, near Sonoita, Ariz., [which cost less than \\$75,000 to build](#). The most expensive telescopes in the world cost billions of dollars, Mr. Beatty said.

With a 42-millimeter lens, the instrument is "sort of like the little telescope that could," Mr. Beatty said. "If an amateur astronomer had the money, they could buy the components and assemble this very easily."

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He presented the findings recently at the national meeting of the [American Astronomical Society](#) in Anchorage, and the papers have been submitted to journals for publication.

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
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