

# ***AMERICAN SCIENTIST***

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## THE COVER

*The exoplanet HD80606b has the most elliptical orbit of any known planet. Its proximity to its parent star is the strongest factor determining temperature on the planet, which can be as high as 1,500 kelvin. The sequence on the cover shows the results of a computer simulation of the glow of infrared light on the night side of HD8060b in almost daily intervals as it passed by the closest point to its parent star during its 111-day orbit. The simulation is based on Spitzer Space Telescope infrared data taken in 2007. Simulations such as this one make it possible for scientists to visualize what we could not otherwise see. But how much credence should we lend emulations of reality? In this issue's Perspective, "The Nature of Scientific Proof in the Age of Simulations" (pages 174-177), Kevin Heng discusses this question. (Image by D. Kasen et al., UCSC, NASA, JPL-Caltech.)*