

# The Reverend George V. Coyne, S. J. Lecture in Astronomy and Astrophysics

will be presented by

**Dr. David Latham**

of Harvard University



Tuesday, April 9, 2013

5:00PM

Weasler Auditorium  
Marquette University

## ***“Super Earths and Life”***

Transiting planets are special. The amount of light blocked by the planet as it passes in front of its host star sets the size of the planet. If an orbit can be derived from Doppler spectroscopy of the host star, the light curve also provides the orientation of the orbit, leading to the mass of the planet. The resulting density for the planet can be used to constrain models for its structure and bulk properties. Can we find rocky worlds with the right temperature for water to be liquid on the surface? NASA's Kepler mission has shown that small planets are common, but the real challenge is to measure their masses. Future space missions such as the Transiting Exoplanet Survey satellite and the James Webb Space Telescope will be able to use remote sensing to probe the atmospheres of transiting planets in a search for biomarkers that are signs of life.