

## Biography of Jacob Bean

Jacob Bean is an Assistant Professor of Astronomy & Astrophysics at the University of Chicago. He teaches classes in astronomy and the physical sciences and leads a nine-person research team.

Professor Bean's research is focused on the observational study of planets outside the Solar System ("exoplanets"). Exoplanet characterization using atmospheric spectroscopy has been a major theme of his research over the last five years. He has led research programs on this topic using many of the largest ground-based telescopes and on the *Hubble* and *Spitzer Space Telescopes*. These programs have led to a number of breakthroughs in the field, including the measurement of the first spectrum of a super-Earth planet, the development of a technique for ground-based exoplanet spectroscopy observations, the first detection of clouds in a super-Earth atmosphere, a precise measurement of the water abundance in an exoplanet atmosphere, and the determination of the most detailed temperature map of an exoplanet. These results were published in papers in high-impact journals (including *Nature* and *Science*) and were widely reported by the popular media (including NPR and *The New York Times*).

In addition to carrying out research programs with existing facilities, Prof. Bean is also involved in developing new instrumentation for exoplanet detection and characterization. His research group develops new instruments for ground-based telescopes, and he serves on committees that advise national and international organizations on new instrument development (e.g., NASA and the Gemini Observatory). Prof. Bean is currently participating in the design of the Giant Magellan Telescope, which will be the world's largest telescope when it is completed early in the next decade.

Prof. Bean is originally from Chatsworth, Georgia. He received an undergraduate degree in Physics from the Georgia Institute of Technology in 2002, and he received a PhD in Astronomy from the University of Texas at Austin in 2007. He has held postdoctoral appointments in Germany and at Harvard University. His honors and awards include Marie Curie, Sagan, Sloan, and Packard Fellowships. He has been at the University of Chicago since 2011

Prof. Bean lives in Chicago with his wife Ashley and their two young children Kathryn and David.