

Abstract Submitted
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Study of Kepler Exoplanet Data STEPHEN DENNY, RUSSELL SEXTON, AKHTAR MAHMOOD, MUHAMMAD SALEEM, Bellarmine University — We have studied the Exoplanet data collected by the Kepler Telescope. The Kepler data contains information on 4696 exoplanet candidates, 2294 of which have been confirmed by Kepler. Kepler used the transit method to detect the exoplanets in and near the habitable zone (HZ) of solar-type (G) stars in the Milky Way galaxy by observing repeated transit of planets- periodic dimming (a slight reduction in the star's apparent magnitude) which is caused by extrasolar planets when they cross in front of their host stars. We have characterized the 2294 confirmed Kepler exoplanets into five categories- Earth-size, Super-Earth size, Neptune-size, Jupiter-size, and Larger than Jupiter-size. We will also present the charts/plots of the confirmed exoplanets in terms of Exoplanet Radii Relative to Earth Radius vs Earth Mass, Orbital Period in Earth Days vs. Earth Mass, Orbital Distance from their Host Stars vs. Earth Mass, Exoplanet Radii Relative to Jupiter Radius vs. Jupiter Mass, Orbital Period in Earth Days vs, Jupiter Mass, Orbital Distance from their Host Stars vs. Jupiter Mass, Size (Radius) Relative to Earth vs. Orbital Period in Days, and the Orbital Distances of the Confirmed Exoplanets (Kepler 1b – Kepler 1647b) from their Host Stars.

Stephen Denny
Bellarmine University

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