

Poster paper

A SIMILARITY BETWEEN THE SOLAR SYSTEM AND THE KEPLER'S THREE-PLANETARY EXTRASOLAR SYSTEMS

Borislav Stanishev Borisov

*University of Shumen, Faculty of Natural Sciences,
115, Universitetska Str., 9712 Shumen, Bulgaria
E-mail: b.st.borisov@abv.bget*

All known 3-planetary systems discovered by Kepler are included in this study. A linear transformation of planetary distances for each system is made so the distance to the innermost planet is equal to zero and the distance to the outermost one is equal to one. A distribution histogram of the transformed distance to the third planet is built. It is fitted with two Gaussian functions. Based on this fit the Earth-Sun distance is derived as it has never been included in the calculations. The accuracy of the result is more than 99.5%. All this shows that there is a simple linear relationship between the planetary distances in the Solar system and the planetary distances in most extrasolar systems.