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UNVEILING THE SECRETS OF THE SOLAR SYSTEM: A QUEST FOR PLANET NINE

Abstract

The existence of a ninth planet in our solar system, known as Planet Nine, has been a subject of intense scrutiny and speculation among astronomers for years. This elusive celestial body, hypothesized to reside in the distant realms of our solar system, presents a mystery that has captured the imagination of both scientists and the public alike. In this research endeavor, we embark on a quest to investigate the presence of Planet Nine and present our findings from extensive simulations and mathematical modeling conducted using MATLAB and other platforms. By meticulously analyzing observational data and gravitational perturbations, we have refined our understanding of the orbital parameters and gravitational influences exerted by Planet Nine on surrounding celestial bodies. Central to our investigation is the crucial role played by the Sun's barycenter (center of mass) in determining the gravitational influences exerted by celestial bodies in the solar system. By leveraging precise measurements of the Sun's motion in three-dimensional space and state-of-the-art telescopic observations, we endeavor to pinpoint the presence of Planet Nine and explain its impact on the orbital dynamics of surrounding objects. Through this interdisciplinary inquiry, we aspire to contribute to the ongoing dialogue surrounding our solar system's nature and composition while paving the way for future astronomical discoveries.