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Craig Alan Stephenson* (u.d.muss@gmail.com), C/ Vía Láctea, 1C-3A, Aravaca, 28023
Madrid, Spain. *F.R. Moulton and his plans for a new lunar theory.*

At the beginning of the 20th century Forest Ray Moulton was arguably the leading mathematical-astronomer in the United States. During his approximately 30 years at the University of Chicago, Moulton wrote several introductory books on astronomy and celestial mechanics and is nowadays remembered amongst astronomers as being the co-author of the Chamberlin-Moulton planetesimal hypothesis. However, Moulton's main interest was the three-body problem and much of his research was aimed at gaining an understanding of this problem through the study of its periodic solutions. It is on these investigations, which began with his 1899 PhD thesis and which culminated over 20 years later with the publication of his book *Periodic Orbits*, that this talk is focused.

After giving a brief introduction to Forest Ray Moulton, I will use his correspondence with the Carnegie Institution of Washington to tell the story of *Periodic Orbits'* long (11-year) road to publication and to show how the research this book contains was initially motivated by his desire to construct a new lunar theory. I will attempt to throw some light on his planned theory and to say something about the mathematical techniques which he employed throughout his research. (Received August 24, 2014)