

Abstract Submitted  
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**Charging of interplanetary dust in astrophysical magnetospheres.**<sup>1</sup> M NIGAM, MATTHEW DADDINO, ADRIAN WILEY, Middlesex County College, Edison NJ — The charging of interplanetary dust due to its interaction with cosmic plasma and radiation is investigated. In this two-way dust-plasma interaction [1], the plasma charges the dust particles, the charged dust grains in turn alter the electromagnetic environment [2, 3], this Debye shielding then shapes the spatial and size distribution of the grains themselves. The study involves studying the evolution of charge using the charge continuity equation and the underlying processes like charging of isolated grains as a function of plasma property, secondary and photoelectron emissions [3, 4]. References

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