

# **A MONTE CARLO MODEL OF THE EXOSPHERE OF SATURN'S MOON, RHEA**

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From the Cassini observations, it was found that carbon dioxide and oxygen exist in Rhea's exosphere. Their origin might have to do with ion sputtering, meteorite impact vaporization, photon desorption, and surface thermal sublimation. We use a Monte Carlo method to construct a three dimensional model of the exosphere of Rhea which can, in turn, be used to study the corresponding magnetospheric interaction.