

Abstract Submitted  
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**Analysis of the Mars Global Surveyor Radio Occultation Data**

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— The Mars Global Surveyor which was launched on November 7, 1996 was designed to orbit Mars over a two year period and collect data on the surface morphology, topography, composition, gravity, atmospheric dynamics, and magnetic field. This data will be used to investigate the surface processes, geology, distribution of material, internal properties, evolution of the magnetic field, and the weather and climate of Mars. The instruments on the nadir equipment deck consist of a camera, thermal emission spectrometer, laser altimeter, and a radio transmission relay. The main instrument that we were interested in was the radio transmission relay. My research consisted of the analysis of the Electron Density Profiles for the Martian ionosphere in the seven occultation seasons that range from December 1998 to June 2005 that were obtained from the MGS radio science experiment. The main data that I collected consisted of the values for the F1 peak and the E peak for each profile. The F1 peaks are photo ionization by EUV photons and the E peaks are from the absorption of x-ray photons. I also calculated the F10.7 values for each day that I observed in the occultation seasons. I have also been analyzing the dependence of the peak values on solar zenith angle and the F10.7 value. From the data obtained a model for each occultation season was generated and then compared to the Chapman function for further analysis.

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