



Dust Storms on Mars and their Effect on the Upper Atmosphere and Ionosphere

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Planetary-scale dust storms occur regularly on Mars. These storms are expected to have a significant effect on the upper atmosphere and hence on the ionosphere. Based on the temperature observations of the MCS (Mars Climate Sounder) onboard the MRO (Mars Reconnaissance Orbiter) during the MY 33 dusty season, we examine the neutral and ion measurements from the MAVEN Mars orbiter during the same time period. Observations of the NGIMS, LPW and STATIC instruments near periapsis are analyzed to identify the location and areal extent of the dust storms and to quantify the changes in the atmosphere and ionosphere due to the dust.