



A Comparison of MHD Model Calculations with Observations for the Ta Flyby of Titan by Cassini

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We are presenting the model results of the global features of the interaction between Saturn's magnetospheric plasma flow and Titan's atmosphere/ionosphere. The model we use is our 3D, multi-species, high spatial resolution, global MHD model. Our model uses a spherical grid structure leading to a very good (~36km) altitude resolution in the ionospheric region of Titan. The model also provides good resolution and meaningful results in the upstream and wake regions. Titan's atmosphere/ionosphere is described by 10 neutral and 7 ion species. Here we specifically discuss the results we obtained simulating the Ta flyby of Cassini, using atmospheric input and upstream parameters obtained during this flyby. We compare the model results with the observed parameters and discuss the strengths and weaknesses of the model.