The Role of the GEM-Mars GCM within CROSS DRIVE

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CROSS DRIVE: "Collaborative Rover Operations and Planetary Science Analysis System based on Distributed Remote and Interactive Virtual Environments"

The main purpose of the CROSS DRIVE FP7 project is to develop new methods and systems for collaborative scientific visualisation and data analysis, and space mission planning and operation. The developed tools and techniques will allow scientists to work together with each other's data and tools, but also to do so between missions. The project will provide technological solutions to coordinate central storage, processing and 3D visualization strategies in collaborative immersive virtual environments, to support space data analysis. A special focus is given to the preparation of the ExoMars 2016 TGO and 2018 rover missions.

As a part of this project, the atmospheric model data from the GEM-Mars GCM will be utilized and integrated into the collaborative workspace to provide winds, pressure and other atmospheric properties on a global scale. The model data will be available for comparisons with the observations included in the system.

We will provide a brief overview of the project and present the function of the GCM model data within it. Along with this, we will discuss recent efforts to enhance the performance of the model and the application of it to current science questions.