



## **Prediction of atmospheric conditions at ExoMars 2016 landing site with global circulation model simulations**

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On the framework of the ExoMars programme, Schiaparelli lander was planned to land on Meridiani Planum during the dust storm season corresponding to the solar longitude of 244.7. The lander crashed at 2.1 degrees south and 6.2 degrees west. The images taken from NASA orbiter has shown that the parachute is located at 1 km south of the impact point of Schiaparelli lander, indicating the fact that wind direction was from north to south. Due to the flat topography of Meridiani Planum region, global circulation model simulations might provide reasonable estimations of atmospheric conditions without performing nested mesoscale simulations. In this present study, simulations have been performed with planetWRF, the extended version of the Weather Research and Forecasting model (WRF) for the extraterrestrial atmospheres. Diurnal variation of wind speed and wind direction along with other flow quantities have been investigated for the corresponding Martian day (sol 476). The sensitivity of predictions to modelling parameters have also been evaluated.