



## **Analysis of fine-grained dark material in craters on Mars using HRSC- and OMEGA-Data**

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The High Resolution Stereo Camera (HRSC) and the OMEGA-Spectrometer onboard the Mars Express orbiter provide high resolution images and spectral data that allow us to analyze geomorphological and mineralogical characteristics of surface materials. A specific surface unit is an aeolian fine-grained dark material that is mostly located in depressions as dunes. This contribution introduces some impact craters with dune fields and other occurrences of dark material. Mapping of the craters and a comparison with the wind field show a coherency between the locations of the material on the crater floors and the main wind direction. In some cases the material is identified as a result of a mechanical weathering of dark layers located in the crater walls and which were cut by the impact. The dark material is of mafic composition comprising a higher amount of pyroxene and olivine than the surrounding rocks and dust. This large constituent of mafic minerals indicates little or no chemical weathering.