Dust Devils on Mars and Earth

Workshop
16 – 20 February 2015

Dust devils are whirlwinds (i.e., vertical vortices) that lift dust from the surface and thus become laden with airborne dust. They occur on Earth and Mars and contribute to dust entrainment into the atmosphere on both planets. Mars is a hyperarid desert planet and dust devils are suggested to be an important factor to lift dust in the martian atmosphere, replenishing the background atmospheric dust haze. The impact of dust devils on the climate of Earth and Mars is poorly understood, so the main goal of the workshop is to quantify the contribution of dust entrainment by dust devils on Earth and Mars. Many recent studies in the last years improved our knowledge in specific areas of dust devil processes (i.e., terrestrial field and laboratory measurements, remote sensing and rover measurements on Mars, progress in numerical models), but the wealth of new information was never combined to quantify the global dust contribution by dust devils on Earth and Mars.

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