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Measurement of atmospheric electric field and electromagnetic waves by Mars lander

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Measurement of atmospheric electric field and electromagnetic waves on the ground in Mars is very new and unique approach dedicated not only to understanding of the electric current research but also to the meteorology. Dust devil and storm are closely related to the DC field generated by dust particle collisions in the very near surface region. The electromagnetic wave measurement makes it possible to know the location and the quantitative strength of dust devils wind with few observation sites. This measurement also contributes to the studies both on the crust and the upper atmosphere. We propose an instrumentation set for the DC and AC electromagnetic observation making use of lander.

Keywords: Mars, lander, electromagnetic wave, electric field, dust devil