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Complementary nature of surface and atmospheric parameters associated with Haiti earthquake of January 2010

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Abstract. The present paper describes surface (surface air temperature and atmospheric parameters (relative humidity, surface latent heat over the epicenter (18°27'25" N 72°31'59" W) of Haiti earthquake of 12 January 2010. Our analysis shows pronounced changes in surface atmospheric parameters few days prior to the main earthquake event. Changes in relative humidity are found from the surface up to an altitude of 500 hPa clearly show atmospheric perturbations associated with the earthquake event. The purpose of this paper is to show complementary nature of the changes observed in surface, atmospheric and meteorological parameters. The total ozone concentration is found to be lowest on the day of earthquake and afterwards found to be increased within a week of earthquake. The present results show existence of coupling between lithosphere-atmosphere associated with the death of the earthquake.

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