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1 Time response of a landslide to meteorological events

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Previous researches have allowed to identify, for a landslide located on the Northwestern Italian Appennines (Cabella Ligure, Alessandria, Piedmont Region), a correlation between slope deep movements and rainfalls. It has been possible to determine the time lag needed for a rainfall peak to produce a corresponding peak in the graph of the landslide movements. This result has been possible with the use of an Automatic Inclinometric System (AIS) that allows to obtain a daily inclinometric measurement that can be correlated with the recorded rainfalls. In the present report we examine the possibility to extend to the entire landslide body the correlation previously mentioned and identified only at a single point. Further inclinometric tubes with traditional reading are in fact installed on the landslide body together with other tubes equipped with piezometric cells. Moreover, close to the AIS, a piezometer with automatic reading has been installed that provides a more representative and direct parameter that conditions the landslide movements. The potential correlations will be explored that may exist among rainfalls, water-bearing stratum oscillations and the related slope movements.