

Micro-barometric variation associated with rainfall

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A sudden rainfall (shower) is often preceded by a micro-barometric variation. To examine quantitative relationships between them, we conducted observations of micro-barometric, rainfall and absorption of BS broadcasting radio waves and recorded the data with one second resolution.

As a result, we often observed the events where a pressure increase starts about one minute before a strong rainfall. Just after the start of the rainfall, micro-barometric variation with period about a few minutes were also observed. These results suggest that the dynamic pressure associated with the falling rain drops pushes the air and observed as a gradual increase of the pressure on the ground. If this is the case, a rarefaction waves may propagate upward over the rain cloud. In this paper, we will show the results obtained from many events.

Keywords: micro-barometric variation, gravity wave, rainfall, acoustic gravity wave