

## Numerical study on the periodic behavior of squall-line type convective systems

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Numerical simulations of squall line is performed to investigate the mechanism which leads to pulsative convective activity with the time period of a few hours.

In a certain range of low-level environmental wind shear, simulated convective clouds are organized into a larger convective clouds (here after 'mesoscale cell') with the time period of a few hours. It is shown that the rearward propagating mesoscale cell and disturbances around it can be treated as gravity wave train, and periodic activity of squall line is explained in terms of the interaction between the gravity waves and the low-level clouds.