



## Abstract Details

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**Title:** A idealized simulation for the characteristics of oasis desert circulation

**Abstract:** A idealized simulation is conducted to study the formation mechanism, the structure and the characteristics of oasis desert circulation, and some main conclusions are shown below: 1. The imhomogeneity of the surface energy and water transferring between the oasis and desert is key issue in formation of special characteristics of oasis ABL. The low surface temperature caused by the evaporation results in the oasis wind, and forms the ODC. 2. The dry cool downdraft of ODC leads to the stable ABL over the oasis, and the wet hot updraft overt the edge of desert and oasis leads to the unstable ABL. The height of the ABL can reach to 600hpa. 3. The hot wet air column around the oasis acts as a protection-wall to prevent the dry hot air from the desert. The only path of dry hot air is the downdraft of the ODC.

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