郭氏積雲參數化在中緯度地區通用性之探討

The Applicability of Kuo's Porameterization of Cumulus Convection in Middle Latitudes

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In this study, Kuo's formula of parameterization of cumulus convection is derived from the moisture conservation equation. In order to realize the applicability of Kuo's scheme in middle latitudes, the temperature, the mass flux, and the latent heat released of cloud ensemble are computed by the combination of Kuo's formula and the large-scale heat and moisture budgets. Furthermore, the assumptions in Kuo's scheme are discussed to clarify their plausibility.

郭氏積雲參數化法在中緯度地區適用性之探討

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本文將由水汽收支方程式重新推導郭氏積雲潛熱參數化公式，並借大規模運動熱與水汽之收支與郭氏公式相聯合，推算積雲之平均溫度，質量傳遞與所釋放之潛熱，以瞭解郭氏參數化法在中緯度地區之適用性，文中並探討郭氏參數化法中之諸假設，以明白其適用性之物理基礎，