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Saline-Alkali (Mixed) Dust Storms and Their Main Generation Mechanism

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The exposed surface of the dry salt lake basin contains a large number of extremely fine lightweight saline-alkali (mixed) dust and clay dust. It is extremely easy to dust and since saline-alkali lake is low-lying and its temperature lower than the adjacent light soil 2 ~ 4 °C or above. The lake surface may be formed vertically upward “vortex” which rolls saline particles forming a mixture of saline and alkali dust storms when the appropriate weather conditions encountered. Moreover, dry salt limnology autonomous phenomenon forming various scales of “vortex” occurs not only in a single salty lake. If there are several dry salty lake communities existing side by side, under the same climatic

conditions, these dry salt lakes are likely to occur simultaneously “vortex” phenomenon. Therefore, saline-alkali (mixed) dust storms could not only be independently formed but also affect human survival and ecological environment downwind side. Saline-alkali (mixed) dust storms’ main generation mechanism, which is discussed in this article, is not a precise mathematical or physical model but mainly the result of observation, induction and deduction. Thus, this opinion is not determined but still a cognition stage conclusion and abecedarian understanding and worthy of further investigation and study.

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