THE CHANGE IN ATMOSPHERIC CIRCULATION SINCE LAST INTERSTADIAL AS INDICATED BY THE LAKE-STATUS RECORD IN CHINA

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The Change in Atmospheric Circulation since Last Interstadial as indicated by the Lake-status record in ChinaXue Bin and Yu Ge(Nanjing Inst. of Geography & Limnology, CAS, Nanjing 210008) The effective precipitation and the frame of atmospheric circulation in the past three key periods, i.e. 30 kaBP, 18 kaBP and 6 kaBP, have been analyzed on the basis of the palaeo-lake status produced by the Chinese Lake Status Data Base (CLSDB). The results have shown that the central-to-west part of China at 30 kaBP was characterized by high lake-level as resulted from strengthened Southwest Monsoon; Whereas the high lake stand, which occurred in the Central-to -west part of China at 18 kaBP, was caused by the southly migration and the strengthing of the westlies, although the scale of this high-stand distribution was reduced. Meanwhile the central-to-east part of China at 18 kaBP was under the control of strong winter monsoon; The high lake level which occurred in the central-to-east part of China at 6 kaBP was related to enhanced summer monsoon, however, the reason that the decrease in the lake-level in the central-to-west part of China at 6 kaBP lies in that the westlies moved to the north and was correspondingly shrunk.The comparison study between the lake-status and the state-of-the-art atmospheric circulation models (AGCMs) has shown that there do exist some gap between the geological evidences and the model simulations. The agreement between each other has provided an possible mechanical explanation on the geological phenomena, but the discrepancies show that the models need to a great extent to be revised.