Abstract Submitted
for the MAR07 Meeting of
The American Physical Society

A model of the sediment transport on a river network XU-MING WANG, RUI HAO, JIN-FENG ZHANG, JIE HUO, NingXia University, Yinchuan 750021, P. R. China — A dynamical model is proposed to mimic the sediment transport on a river network. A river can be divided into some segments. For the ith segment the schlepping sediment ability of the flow may be scouring or depositing, which is influenced by that of the (i- 1)th segment. In order to compare our model simulation results with the empirical data obtained in Yellow River, the model is equipped with an experiential relation between the flow rate and the depositing rate of the Yellow River. After this, the simulation results show an excellent agreement with the empirical conclusions obtained with the upper and middle parts of Yellow River when it is in the low-water periods (for instance, in Dec., Jan. and Feb.). This indicates that our model may successfully describe the scouring-depositing of river networks.

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Date submitted: 06 Nov 2006 Electronic form version 1.4