

Interactive comment on “A hybrid model to simulate the annual runoff of Kaidu River in northwest China” by J. Xu et al.

Anonymous Referee #2

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General comments:

Combining the advantages of EEMD and BPANN, this study conducted a hybrid model to simulate the annual runoff (AR) of the Kaidu River, northwest China. The approach and idea of this study may be referenced to the similar study. I think the topic will be of interest for readers and the manuscript deserves publication. However, the manuscript needs a minor revision before its publication (see below).

Specific comments:

1. Line 9 of page 6, the sub-title “3 Methodology” should be changed to “3 Methods”. 2. In order to facilitate the readers to iterate the computing process, the MATLAB program for EEMD should be indicated by denoting the related references in the section “3.1 EEMD method”. 3. Generally, the coefficient of determination is denoted as R² in

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statistics. The CD in formula (14) on page 12 seems to be the R². Please confirm that the CD is the same meaning with R². If my understanding correct, they should be unified. The related question is that the R² value of the formula (16) on page 15 should be marked out. 4. The section “4 Results and discussion” needs more discussions. The authors should give an explanation why the hybrid model is much better than a single BPANN. What is the reason for this? 5. To avoid any error, please carefully check all words and sentences in the whole text before the manuscript to be resubmitted again. For example: (1) Line 22 of page 3, the first alphabet of the first word in the sentences “physically based land surface model.” should be capital, i.e. “physically” should be change to “Physically”. (2) Line 24~25 of page 15, the sentences “All the indices illustrate that the hybrid model much better that a single BPANN” should be changed to “All the indices illustrate that the hybrid model is much better than a single BPANN”.

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