Nonlinear Processes
in Geophysics

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Interactive comment on "Application of Gamma functions to the determination of unit hydrographs" *by* Hongyan Li and Yangzong Cidan

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First of all thank you for your careful review of this article. (i) This article mainly studies the improvement process of the unit line estimation method. The unit curve is very common in hydrology, and there are many methods for its estimation. However, these methods not only have limitations, but also have poor results. Therefore, it is necessary to introduce more novel methods to improve the estimation results and methods of the unit curve. (ii) In this paper, the unit line estimation equation is expressed as a non-linear gamma function and parameterized, and the unit line estimation result is improved by the method of parameter optimization by genetic algorithm. (iii) The limitations of the previously commonly used unit line estimation methods are explained in the form of the applicability conditions of the methods in the introduction of these

methods.

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Discussion paper