

Testing a new channel routing component in JGrass-NewAge model

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Abstract. The paper presents two applications of the JGrass-NewAge model in order to investigate the influence of an explicit channel routing model on the discharge simulation. The semi-distributed, component based hydrological model JGrass-NewAge is based on the Object Modeling System version 3.0 (OMS3). OMS3, which facilitates exchange of model components, was used to set up two different model configurations named Hymod and RHymod, respectively. The two models differ only by the new channel routing component. Different basin delineations (one, three and twenty Hydrological Response Units (HRU)) are analyzed for both the model configurations. Simulated discharges in all the cases are compared with measurements from a quantitative point of view by using classical indices of goodness of fit such as index of agreement, percentage bias and Kling-Gupta efficiency.