



## **Riemann problem for shallow water flows on step**

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Initial discontinuity decay problem (Riemann Problem) for shallow water equations on step is considered. We suggest kvass-two-layer model for shallow flows in the step vicinity, namely, by effective subdividing shallow flows in sub layers and subsequent consideration of classical equations on flat plate. The suggested model reproduces clearly the diversity of flow patterns around the step. Results obtained confirmed self-similar properties of solutions. It is shown the stationary property of flows bellow step boundary. Computations based on our model proved all possible analytical patterns of the Riemann Problem solutions.