Effect of the slope curvature on an avalanche dynamics

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Motion of an avalanche flow down a curvilinear slope is considered.
The ratio of the flow depth to the typical curvature radius is supposed to be small. The equations in shallow water approximation with account of terms of an order of are discussed. Numerical study of the influence of different terms connected with the slope curvature is performed. Comparison of the flow parameters values calculated a) without account of the slope curvature, b) with account of centrifugal force only, and c) with account of all terms arising due to the slope curvature is given.