



Bedforms in high-amplitude meandering channels

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Abad et al. (2007a) investigated experimentally the implications of bend orientation (upstream- and downstream-valley skewed) on the mean and turbulence flow structure for the case of the periodic asymmetric “Kinoshita” meandering channels under flat-bed conditions. Herein, experiments under self-formed bed equilibrium conditions are studied. Several types of bedforms were observed in the experiments during the evolution in time. It was noticed that bedforms (dunes, bars) are more developed under downstream-skewed condition, rather than upstream-skewed condition. Most of the current models for meandering migration do not consider the fact that shear stress distribution (bed and banks) is modified by the progression of these bedforms. Furthermore, there is no insight on how much this process influences and defines the bend preferential migration. This study represents an attempt to describe the behavior of bedforms in meandering channel at high-amplitude and their influence on bend preferential migration.