

Description of Additional Supplementary Files

File Name: Supplementary Movie 1

Description: \textbf{ReSCAL numerical experiment timelapses.} Shown are the 6 experiments of varying sand supply (rows: low, top; high, bottom.) and sand flux direction number SF_N (columns: 1, left; 2, center; 5, right). Experiments are shown to the same scale ($SF_N=1$ experiments are $\sqrt{2}$ wider). To ensure form can be seen during coarsening, the colorbar is unique for each experiment at each timestep: the minimum and maximum elevations η (i.e. the colorbar limits) are written in the bottom corners of each frame to the nearest meter. In the top right, the timestep is written to the nearest 1 decimal place in years. White space within the frame is non-erodible bedrock. Note the dislocation creep in $SF_N=2$ experiments.