DR2007285

2007285_Model1.gif (2.58 MB) shows **Model 1** results (one-detachment model with rigid, horizontal base); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model2.GIF (7.17 MB) shows **Model 2** results (one-detachment model; addition of fl exural isostasy); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model3.GIF (7.56 MB) shows **Model 3** results (two-detachment model; addition of an internal detachment layer); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model4.GIF (7.25 MB) shows **Model 4** results (two-detachment model; addition of strain softening within the thick, strong layers); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the

tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model5.GIF (6.63 MB) shows **Model 5** results (two-detachment model; addition of signifi cant, slope-dependent surface erosion); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model6.GIF (8.36 MB) shows **Model 6** results (two-detachment model; addition of sedimentation to specified base level); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model7.GIF (8 MB) shows **Model 7** results (three-detachment model; erosion only); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge.

2007285_Model2.GIF (8.25 MB) shows **Model 8** results (three-detachment model; erosion and sedimentation); frames are spaced equally in time. Elapsed time since beginning of convergence and magnitude of convergence are shown. Illustrated width is 200 km, encompassing the entire Eulerian grid. Cells within the Eulerian grid are colored according to material type (see Figure 2 and Table 1), and the Lagrangian mesh is shown

by black lines (only every third mesh line, horizontally and vertically, is drawn for clarity). Dashed line above wedge in C is a visual fi t to the tops of the pop-up structures, with a slope of 1.6°. Solid lines connecting the topographic low points of the upper surfaces in A–D have slopes equal to that predicted by the Dahlen (1984) equations for model 1 materials (0.835°). Arrows in H indicate shear zones with relatively large displacements resulting from self-organization of the wedge. OOS—out-of-sequence.