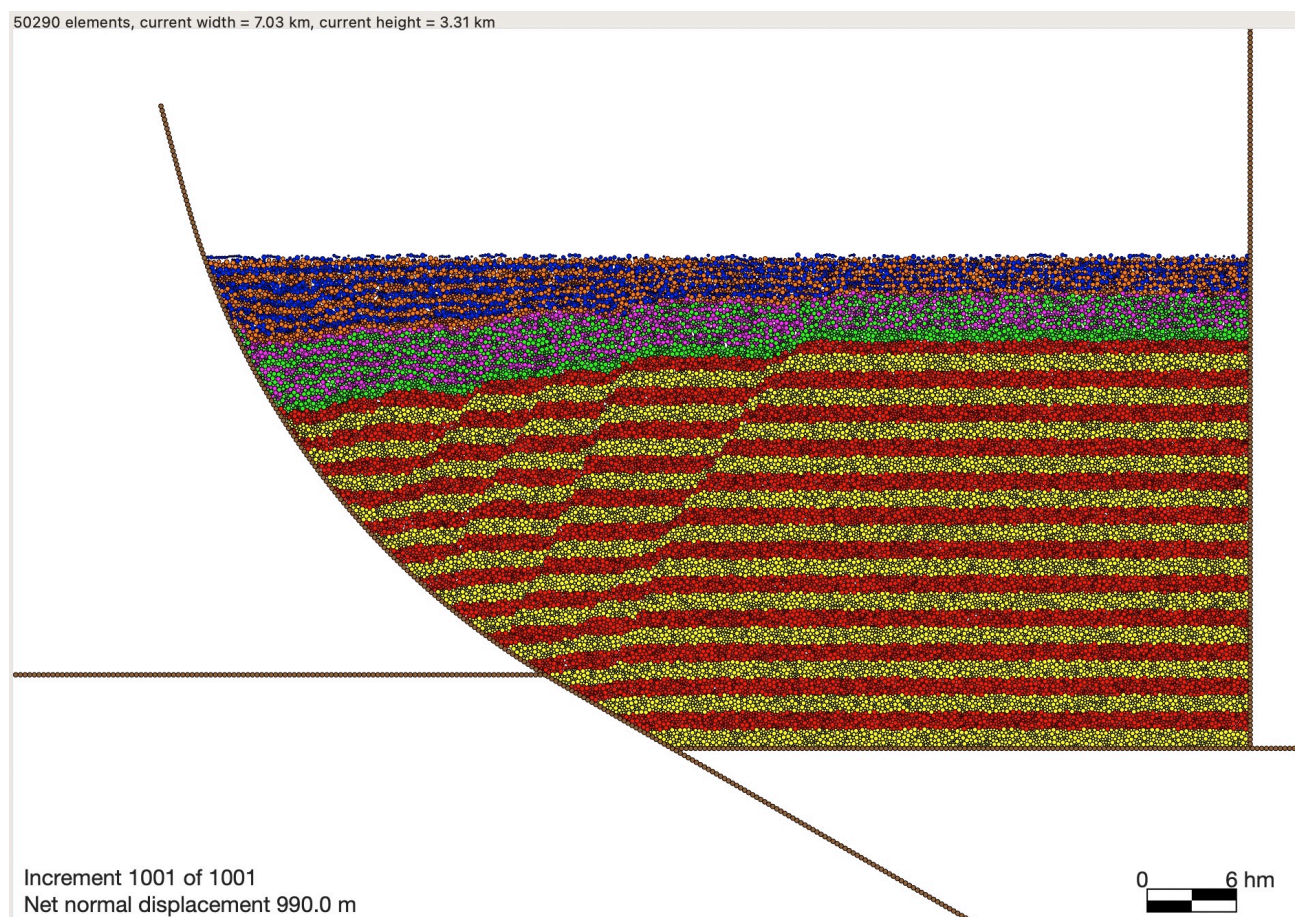


This is a kilometer scale (unit\_length 125.0 m <sup>1</sup>), very high resolution (very\_high\_res 1) simulation of a listric normal fault (fault\_sculpt 1, displacement\_sign -1.0). The displacement at the fault is modelled as a mylar sheet (mylar\_sheet 1). At the base of the fault (fault\_xloc 19.0 units, 2375 m), the fault has a dip of 30 degrees (faultdipdegrees 30.0) and increases in dip up section to a maximum dip of 75 degrees (max\_fault\_dip 75.0). All the layers are frictional cohesive and have the same properties. All walls, but the fault wall have friction (frictionless\_fault 1).

After assembly equilibration, the mylar sheet is pulled down along the fault. New sediments deposit during faulting (include\_sedimentation 1), and the base level is static (static\_baselevel 1). The display increment is 2.0 m (display\_metres 2.0). The total displacement is 990 m, over 1001 increments, the first 11 of which are equilibration. In my iMac Pro, the time between increments was 2 minutes, and the run took 2 days. The figure below shows the last increment.



**Figure 1.** Last increment of listricmylar simulation as displayed in cdem. The green-purple strata were deposited in the first half of the run, and the orange-blue strata in the second half of the run.

<sup>1</sup> Parameters mentioned here are those of the runtime.txt file.