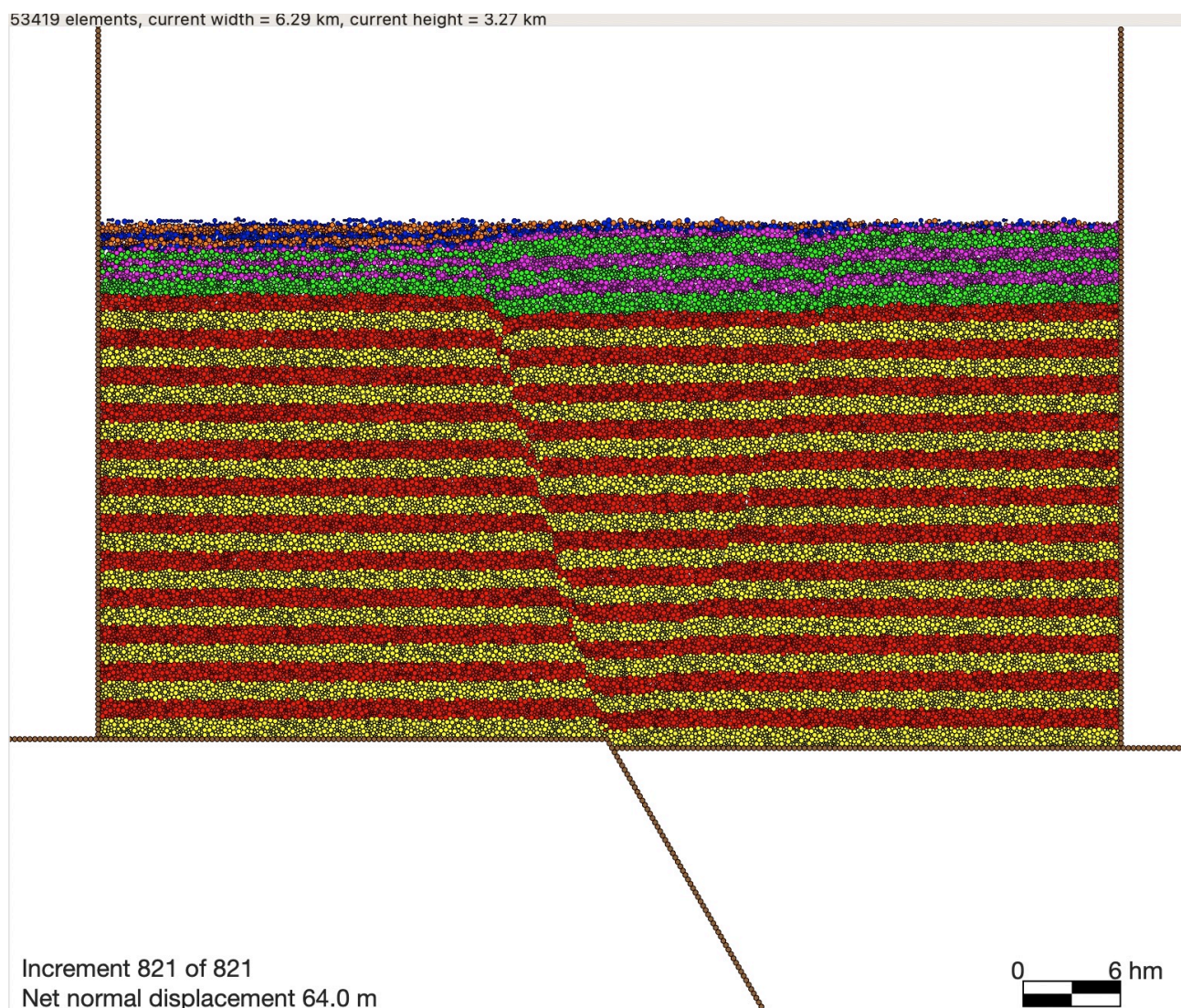


This is a kilometer scale (unit\_length 125.0 m<sup>1</sup>), very high resolution (very\_high\_res 1) simulation of a normal fault (displacement\_sign -1.0) of 60 degrees dip (faultdipdegrees 60.0). Fault displacement is normal until 60% of the model run, and then it is inverted (include\_inversion 1, start\_inversion 0.6). All the layers are frictional cohesive and have the same properties. All walls but the fault wall have friction (frictionless\_fault 1).

New sediments deposit during faulting (include\_sedimentation 1), and the base level rises at a constant rate of 0.0005 m per time step (risefromruntime 1, baselevel\_rise 0.0005). In total there are 821 increments, the first 21 of which are equilibration. The display increment is 1.0 m (display\_metres 1.0), the maximum displacement is 232 m, and the final displacement is 64 m. In my iMac Pro, the time between increments was 1 minute, and the run took 1 day. The figure below shows the last increment.



**Figure 1.** Last increment of someinversion simulation as displayed in cdem. The green-purple strata were deposited during normal faulting, and the orange-blue growth strata were deposited during inversion.

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