DR2007274

Figure DR 1

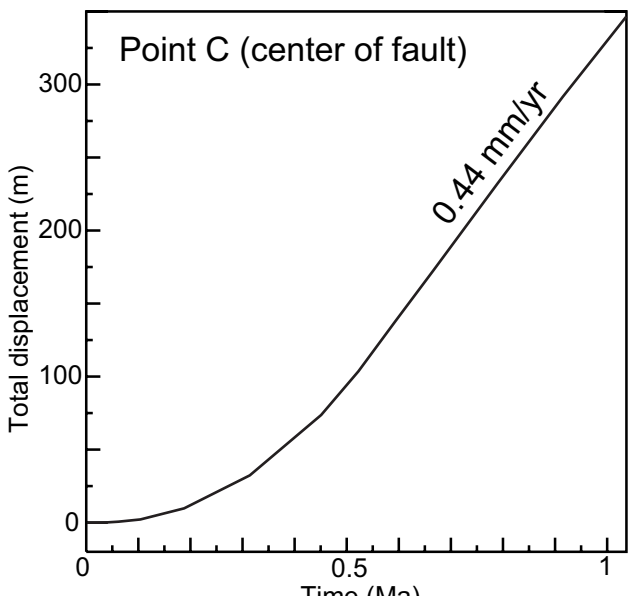

Figure DR1. Example for the slip evolution during an entire model run (1.035 Ma). Slip history is shown for point C in the center of the fault for the model with a viscoelastic lower crust.

Figure DR 2

DR2007274

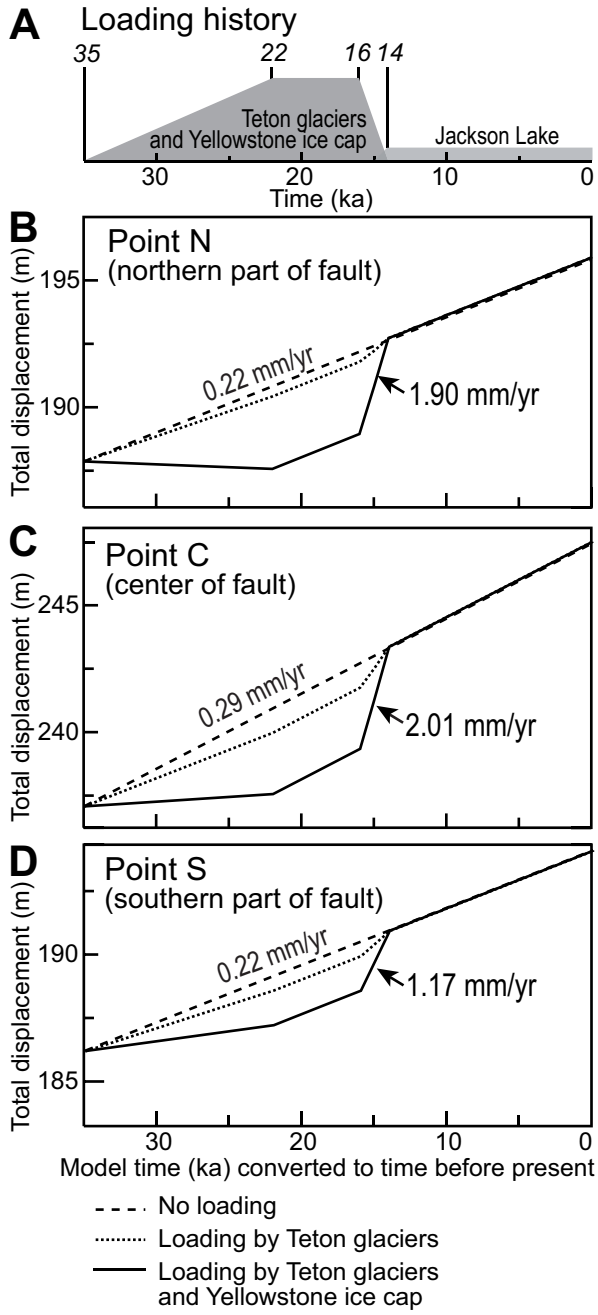

Figure DR2. Results of the experiment with an elastic lower crust. a) Applied loading history. Slip histories resulting from experiments without loading (dashed line), with loading by Teton valley glaciers (dotted line) and with loading by both, Teton valley glaciers and Yellowstone ice cap (solid line), are shown for b) point N on the northern part of the fault, c) point C in the center of the fault, and d) for point S on the southern part of the fault. For location of points see Figure 2B. Note that the time axis shows the time interval from the onset of loading at 35 ka to present.

DR2007274

Figure DR 3

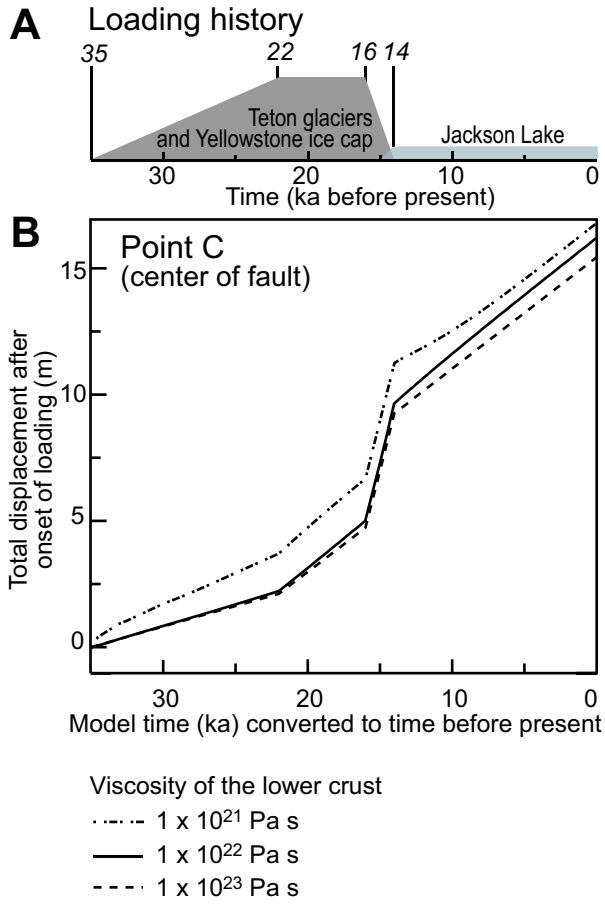

Figure DR3. Slip histories at point C for different viscosities of the lower crust. The results are shown for loading by Yellowstone ice cap and the Teton glaciers. a) Applied loading history. b) Total displacement on the fault after the onset of loading for different viscosities of the lower crust. For location of point C see Figure 2B. Note that the time axis shows the time interval from the onset of loading at 35 ka to present.

DR2007274

Figure DR 4

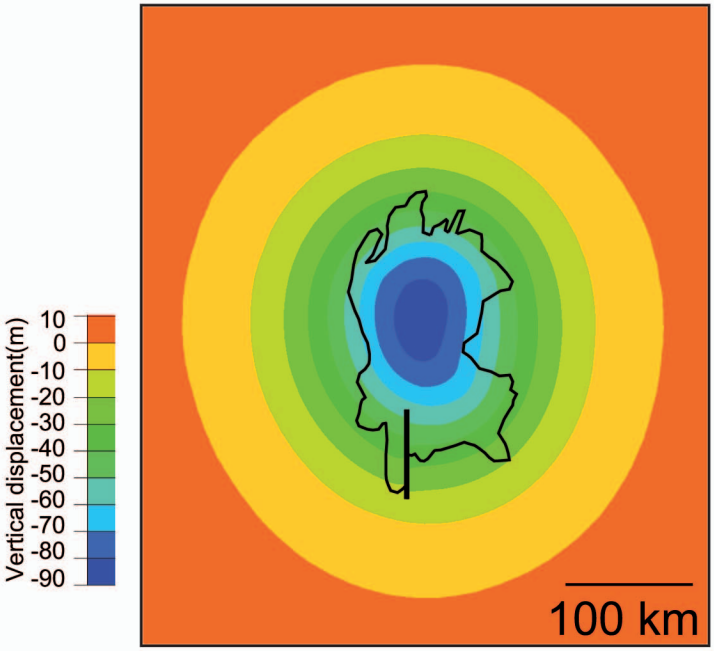

Figure DR4. Enlarged section of the model center showing the vertical surface displacement at 22 ka model years before present resulting from loading by both Yellowstone ice cap and Teton glaciers. Thin black line marks the outline of the Yellowstone ice cap and Teton range ice cover in the model. Location of the model Teton fault is indicated by thick black line.