

Genesis / RegCM -- 11 ka Simulations

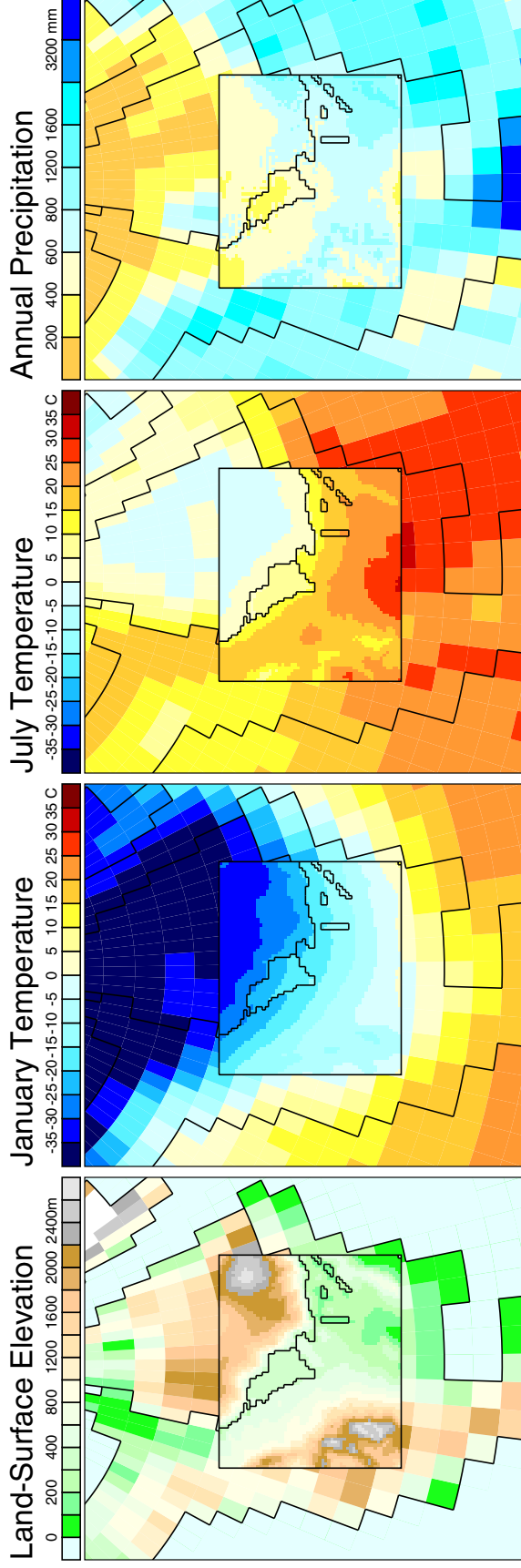


Figure 1 Surface elevation and simulated climate fields over North America at 11 kyr BP. The nominal resolution of the GENESIS atmosphere model, shown as the coarse continental outline and large grid boxes, is 3.758 (400 km by 400 km) latitude by longitude. The resolution of the RegCM2 model used in this study (inset box) is 45 km by 45 km, which yields ~80 grid cells for each AGCM grid cell. The AGCM-derived boundary conditions are assimilated into the RegCM2 every 12 h over an additional 8 grid-point strip, roughly the distance of one AGCM grid cell, along the entire boundary of the model. The figure illustrates that the patterns simulated by the RegCM2 are not simple interpolations of the patterns in the AGCM, but instead reflect the variations of topography and surface characteristics on the higher-resolution grid of the model.

Hostetler, S.W., P.J. Bartlein, P.U. Clark, E.E. Small and A.M Solomon (2000). Simulated influences of Lake Agassiz on the climate of central North America 11,000 years ago. *Nature* 405:334-337.