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The Influence of Continental Geometry and Land Surface Properties on Temperature Variability NICOLE NEUMANN, Minnesota State University, Mankato — The highest temperature variability on Earth is over central North America, with twice as much variance in the daily-mean temperatures as Eurasia. Researching temperature variability is important because of its implications on society now and because of its role in understanding climate change and future climates. We research the effects of continental geometry and land surface properties on this temperature variability. In this study, we use the idealized ISCA model to run simulations with varied continental shapes, latitudes, and topographies. We probe the simulations to see how these factors affect the variance of near-surface temperature. Applying these findings to the shapes, locations, and topographies of North America and Eurasia could help further explain the large difference of temperature variability among the two continents.

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