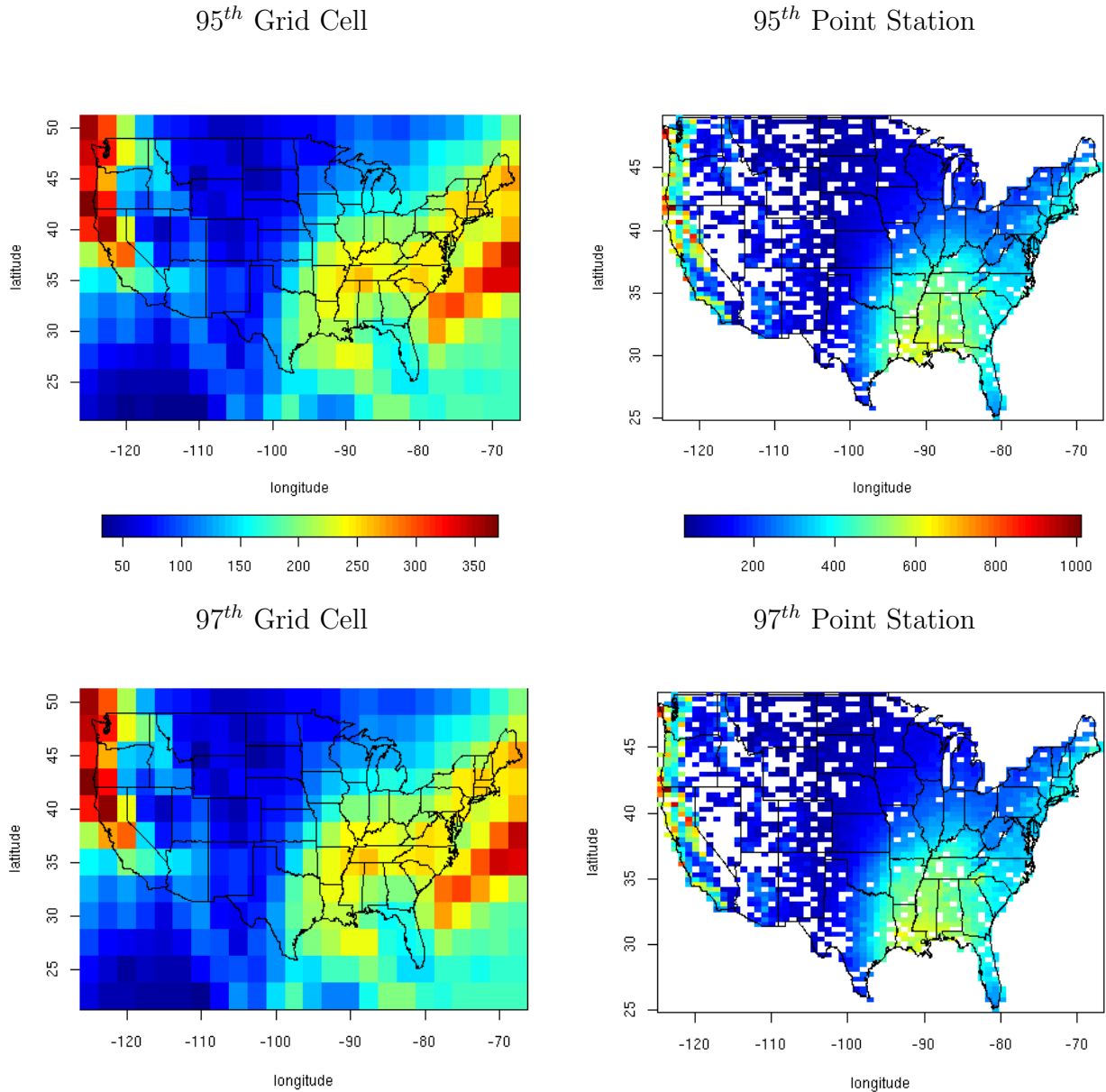


Supplemental Appendix for Downscaling Extremes: A Comparison of Extreme Value Distributions in Point-Source and Gridded Precipitation Data

Elizabeth C. Mannshardt-Shamseldin, Richard L. Smith, Stephan R. Sain,
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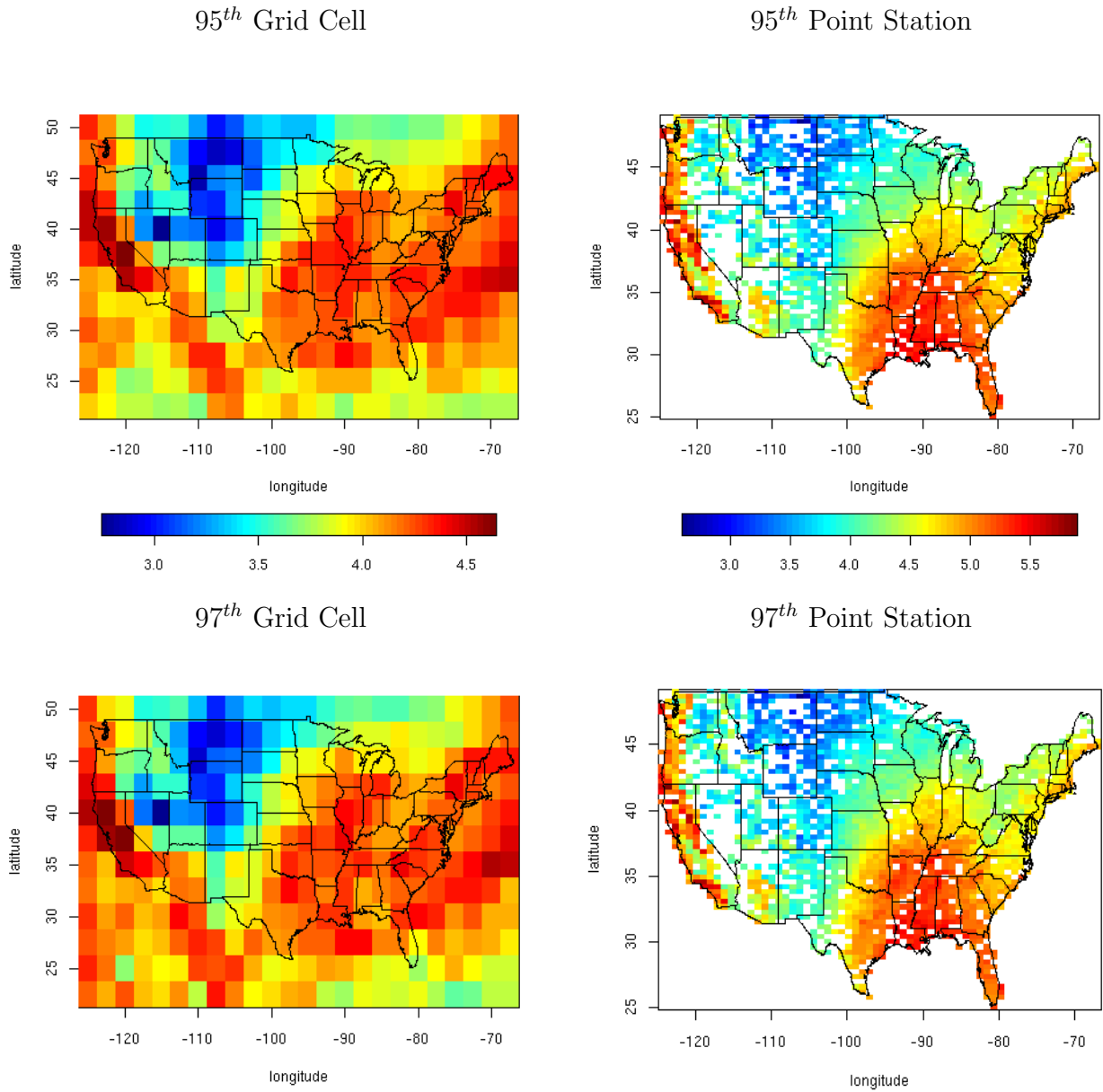
A Appendix

A.1 Figure A.1: GEV Parameter Estimates: μ



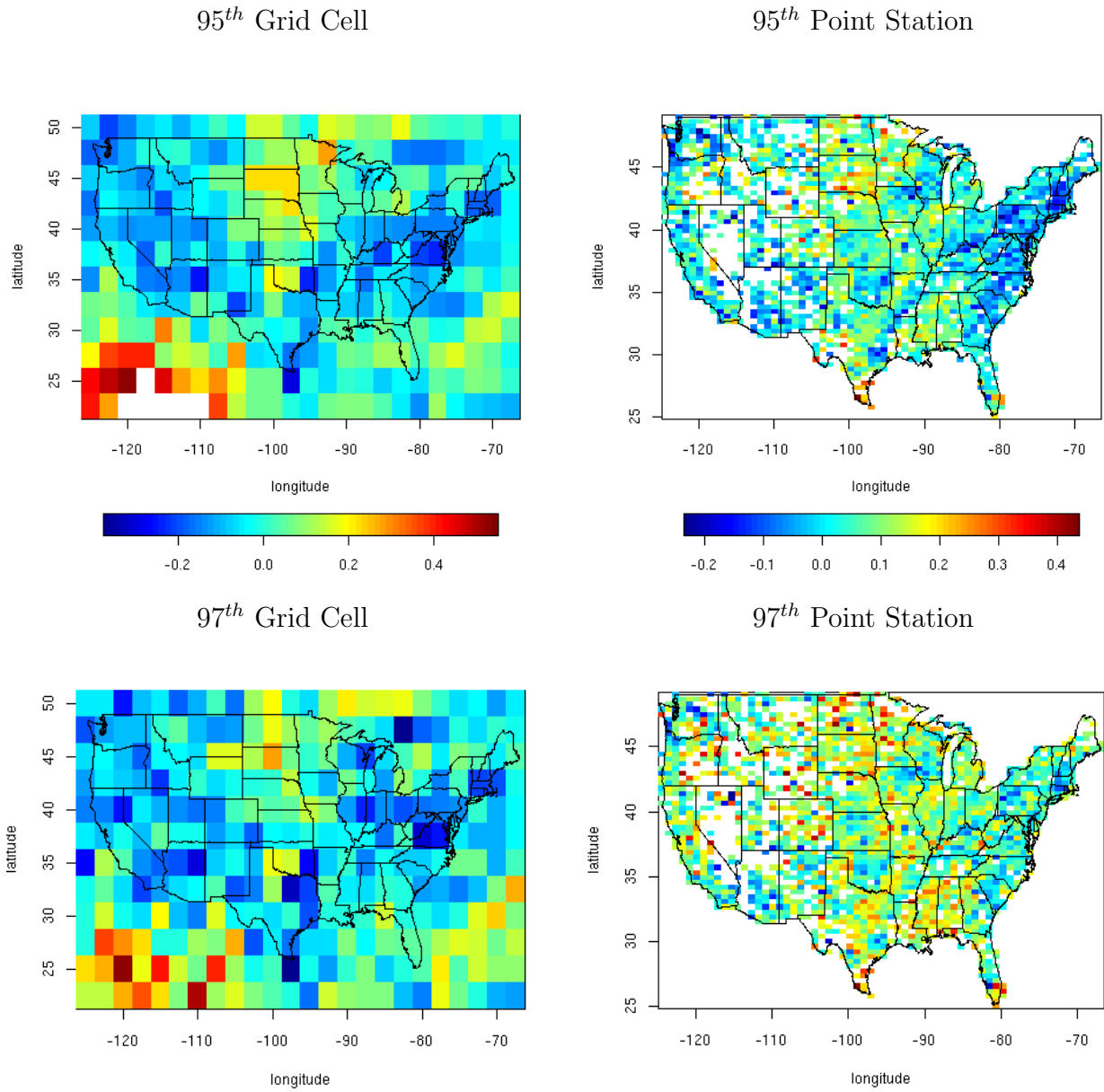
Comparison of GEV parameter estimates (μ) for both NCEP grid cells (left column) and NCDC point-level (right column) over both 95th (top row) and 97th (bottom row) percentile threshold choices.

A.2 Figure A.2: GEV Parameter Estimates: $\log(\psi)$



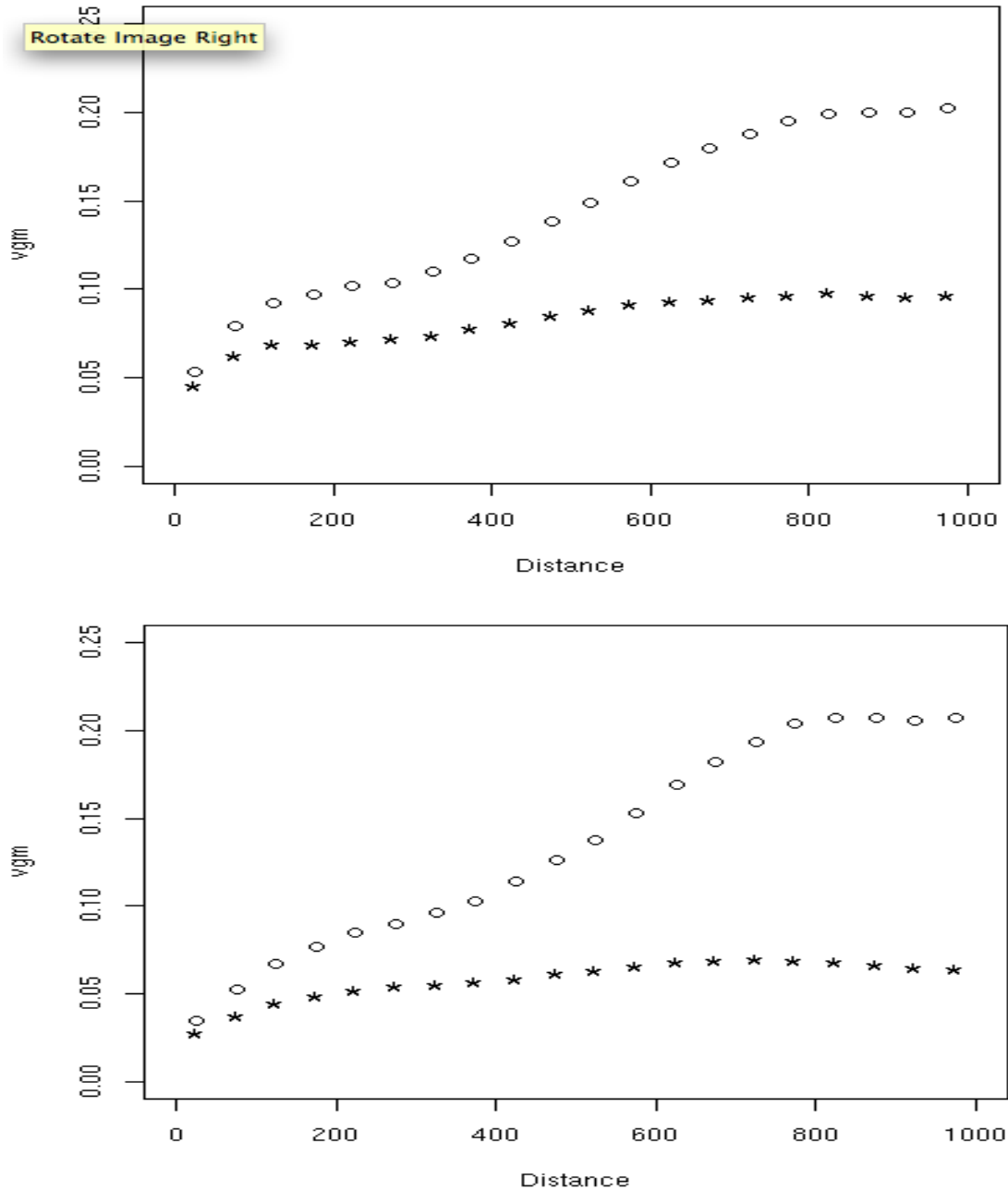
Comparison of GEV parameter estimates ($\log(\psi)$) for both NCEP grid cells (left column) and NCDC point-level (right column) over both 95th (top row) and 97th (bottom row) percentile threshold choices.

A.3 Figure A.3: GEV Parameter Estimates: ξ



Comparison of GEV parameter estimates (ξ) for both NCEP grid cells (left column) and NCDC point-level (right column) over both 95th (top row) and 97th (bottom row) percentile threshold choices.

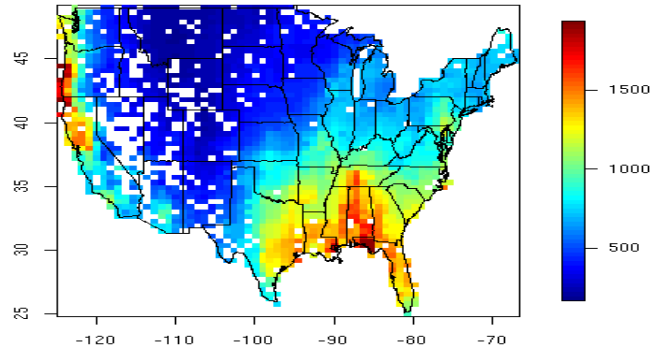
A.4 Figure A.4: Variograms: Basic vs Cubic Model



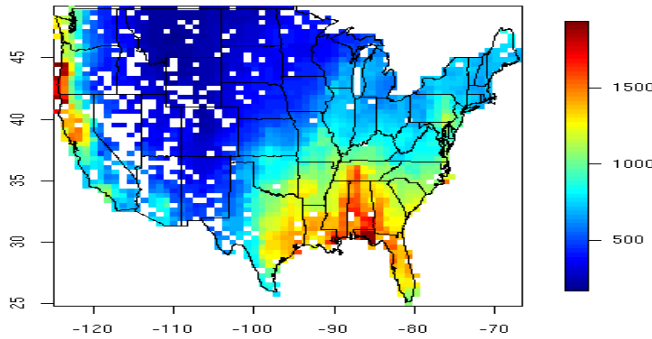
Empirical variograms, over a 1000 mile range, for residuals from the fitted model $\text{LogPoint} \sim \text{Grid} + \text{Elevation}$ with no latitude or longitude terms ('o') and the cubic model in lat and lon ('*') for the NCEP grid cell data. The top frame represents the spatial relationship across the continental U.S. The bottom frame considers stations east of 100° W.

A.5 Figure A.5: Kriged vs Regression

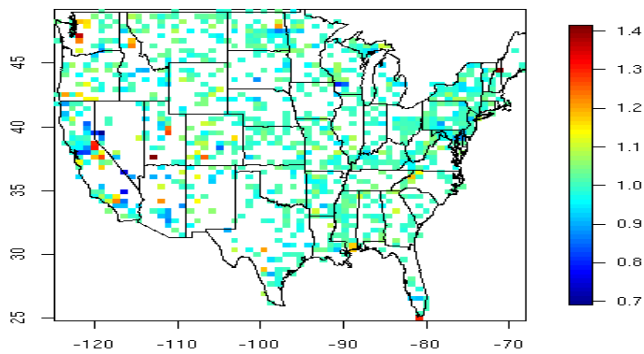
1970-1999 Regression Model Predictions*



Kriged Predictions*



Ratio of Kriged to Regression



Comparison of cubic regression model predictions (top) to kriged predictions (center) and the ratio of kriged to regression model predictions for the CCSM grid cell data. Ratio considered for stations un-used in original analysis due to missing values or non-convergence.

*There is still some sparseness in the smoothing due to the available latitude and longitude readings for only the 5873 stations' data.