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**Abstract: Enhancing Resilience to Heat Extremes:
Multi-model Forecasting of Excessive Heat Events
at Subseasonal Lead Times**

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Heatwaves are among the most dangerous, yet invisible, of natural hazards. According to NOAA, the distribution of 30-year based annual mean fatalities from natural hazards in the U.S. ranks as follows; those from heat (130), floods (81), tornadoes (70), lightning (48) and hurricanes (46). Early warnings of excessive heat events can be improved by using multi-scale prognostic systems. We designed and developed such a system for probabilistic forecasting of excessive heat events at lead times beyond Week-1. The baseline version of the Subseasonal Excessive Heat Outlook System (SEHOS) consists of (a) a monitoring/verification component and (b) a forecasting component that uses NOAA's Global Ensemble Forecast System predictions of temperature and humidity. In this presentation, we discuss the definition of heat events, sources of predictability and present the forecast skill of SEHOS using reforecasts from the S2S database and discuss the value added by multi-model approaches.