Executive summary for "A search for spectral hardening in HAWC sources above 56 TeV"

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This poster describes a search for spectral hardening at the highest gamma-ray energies in sources from the High Altitude Water Cherenkov Observatory's (HAWC) third catalog of sources. HAWC is a TeV gamma-ray experiment located in the state of Puebla in Mexico.

The spectrum of 3HWC J1908+063 may show some indications of spectral hardening at the highest energies, above ~50 TeV. The spectrum is roughly flat in  $E^2$ dN/dE space above this threshold, deviating from the best-fit log-parabola spectrum by approximately 2 sigma. This is potentially interesting because this shape is difficult to fit to one-population models, and provides the motivation for this search.

Nineteen sources that both extend to the highest energies and have a high test statistic are selected for this study. No significant spectral hardening is found. In general, uncertainties are too large to draw any definitive conclusions. A re-analysis of HAWC data with better reconstruction algorithms, especially one with better energy resolution and gamma/hadron separation parameters, will be useful. Such an analysis is presently ongoing.