

Abstract Submitted  
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**Study of the Spherical Harmonic Power Spectrum of the EGRET All-Sky Dataset** DANIEL SUSON, Texas A&M University-Kingsville — Studies of transformed data sets have always yielded new insights into the underlying physics. For time series, Fourier transforms provide the energy spectrum driving the event. For data projected onto a sphere, such as astronomical all-sky maps, spherical harmonics perform the same transforming role. In this case, the underlying angular distribution spectrum is revealed. In turn, this yields insights into the scale of the forces organizing the structure. Spherical harmonic power series analysis has already been successfully applied to studies of the cosmic microwave background and to the oscillation modes of the Sun. It is now used to examine the gamma-ray sky as seen by EGRET. The results of this study and its implications for future missions, such as GLAST, are discussed.

Daniel Suson  
Texas A&M University-Kingsville

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