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Abstract for an Invited Paper
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Primordial Non-Gaussianity and High Energy Physics[1]

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A central goal of physical cosmology is to determine the mechanism of cosmic inflation, a hypothetical period $\sim 10^{-35}s$ after the big bang during which all of the structure of the universe was generated by quantum fluctuations. The statistics of primordial structure in the universe, in particular measurements of non-Gaussian statistics, provide key information about the high energy physics of inflation. I will review how non-Gaussianity can inform inflationary models, how cosmological datasets constrain primordial non-Gaussianity, and what to look forward to in the post-Planck era.

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