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Abstract for an Invited Paper for the TSF15 Meeting of the American Physical Society

## **Detecting quantum gravitational effects in the early universe?**" ANZHONG WANG, Baylor University

I shall first give a brief introduction on the current development of observational cosmology and state clearly the need for accurate calculations of power spectra and spectral indices of Cosmic Microwave Background (CMB) radiation, after quantum gravitational effects in the early universe are taken into account. Then, I shall present the uniform approximation method developed recently by us, which is specially designed to investigate such effects with an upper bounds of errors less than 0.15