

In this talk a semiclassical framework to obtain quantum-gravity corrections to the inflationary power spectra will be presented. The geometrodynamical quantization of an inflationary model will be considered and the analysis of the Wheeler-DeWitt equation will be performed by decomposing the wave function into its infinite set of moments. By considering a truncation of the infinite system of equations, an appropriate gauge-fixing condition will be introduced. In this gauge, the scale factor of the universe will play the role of an internal time. The evolution of fluctuations and correlations of the different variables will then be explicitly solved for a de Sitter universe. In this way, specific corrections for the power spectra will be obtained. These corrections are in agreement with similar results obtained previously in the literature with very different semiclassical approximations.