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The quantum gravity interface and the origin of the seeds of cosmic structure during inflation

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The observations of the first traces of cosmic structure in the Cosmic Microwave Background are in excellent agreement with the predictions of Inflation. However, as we shall see, that account is not fully satisfactory, as it does not address the transition from an homogeneous and isotropic early stage to a later one lacking those symmetries. We will argue that New Physics is needed to account for such transition and that Quantum Gravity might be the place from where this new physics emerges. Moreover, we will show that the observations can be used to constrain the various phenomenological proposals made in this regard.