Cosmological Inflation

Flashback of better times

In the previous classical cosmology notes, we have extensively discussed the set of classical equations that provide an accurated description of the dynamics of the Universe.

TO DO:

Mention somehow that this is a classical approach and one has to go to Q regimes to fully appreciate the power of perturbations that generate late time structures.

1. Describe that the model works fine for late time cosmo and the hot big bang works fine until some regime.
2. Elaborate on energy scales, down to inflation regime.
3. Elaborate on regular cosmo problems, with equations and plots.
4. Introduce inflation, how it solves problems described before.
5. Present EOM for inflation, parameters and values.
6. talk a little about different potentials.
7. Mention some quintessence. Connection to UV complete theories?
8. Contact with observations. Prove?

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References

[1] U. H. Danielsson and T. Van Riet, "What if string theory has no de Sitter vacua?," *Int. J. Mod. Phys. D*, vol. 27, no. 12, p. 1830007, 2018.