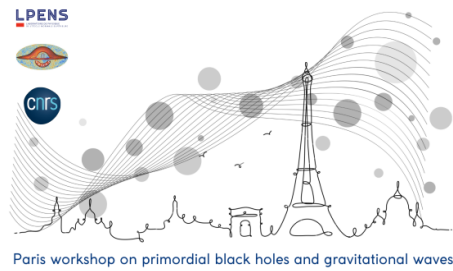


## Paris workshop on primordial black holes and gravitational waves



Contribution ID: 30

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### Large $|\eta|$ approach to single field inflation

*Tuesday, 28 November 2023 14:30 (45 minutes)*

Single field models of inflation capable to produce primordial black holes usually require a significant departure from the standard, perturbative slow-roll regime. In fact, in many of these scenarios, the size of the slow-roll parameter  $|\eta|$  becomes larger than one during a short phase of inflationary evolution. In order to develop an analytical control on these systems, I explore the limit of  $|\eta|$  large, and promote  $1/|\eta|$  to a small quantity to be used for perturbative expansions. Formulas simplify, and analytic expressions for the two and three point functions of curvature fluctuations are obtained. I will then discuss the behaviour of loop corrections to inflationary observables in this framework.

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