

NON-MARKOVIAN EFFECTS IN STOCHASTIC INFLATION.

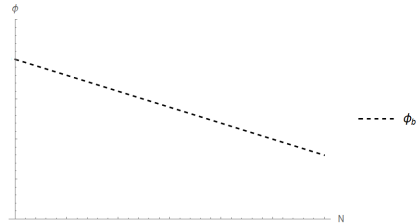
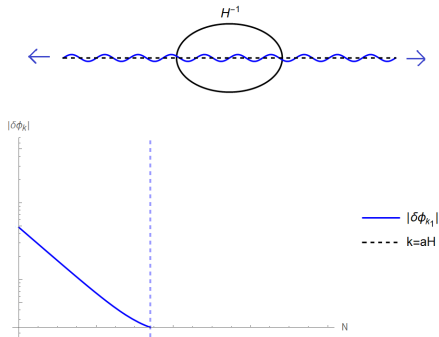
DIEGO CRUCES

ITP - CAS (BEIJING)

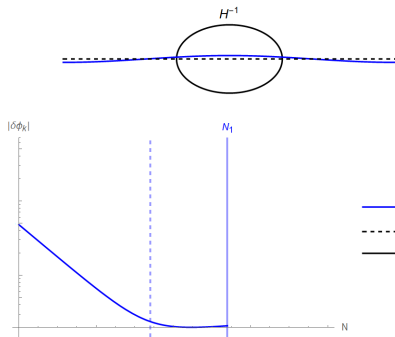
WORK IN PROGRESS WITH T. KURODA.

12 03 2025

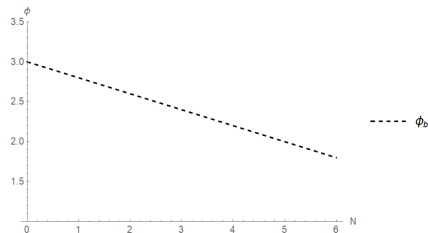
STOCHASTIC APPROACH TO INFLATION



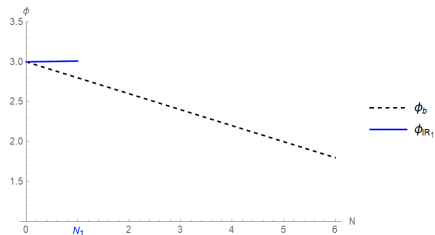
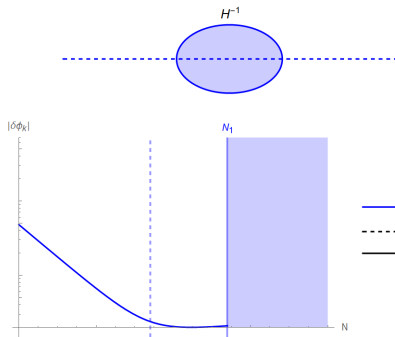
STOCHASTIC APPROACH TO INFLATION



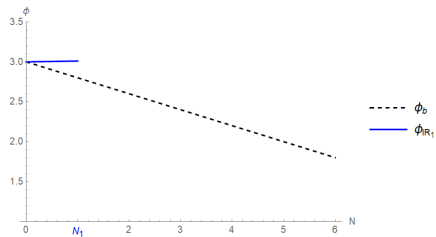
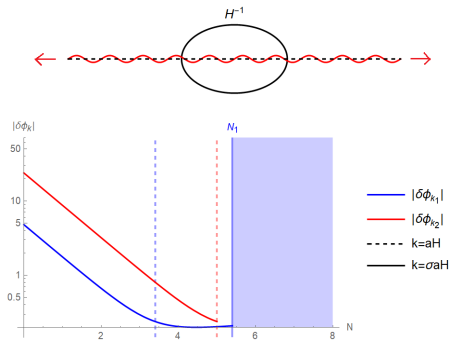
$|\delta\phi_{k_1}|$
 $k=aH$
 $k=\sigma aH$



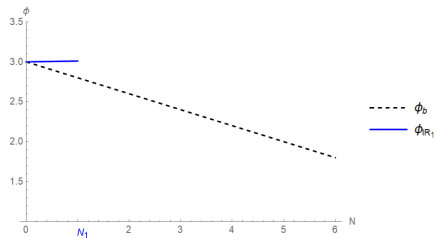
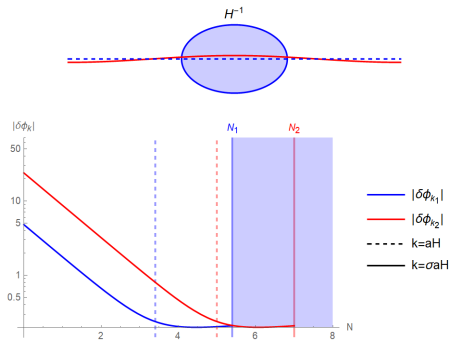
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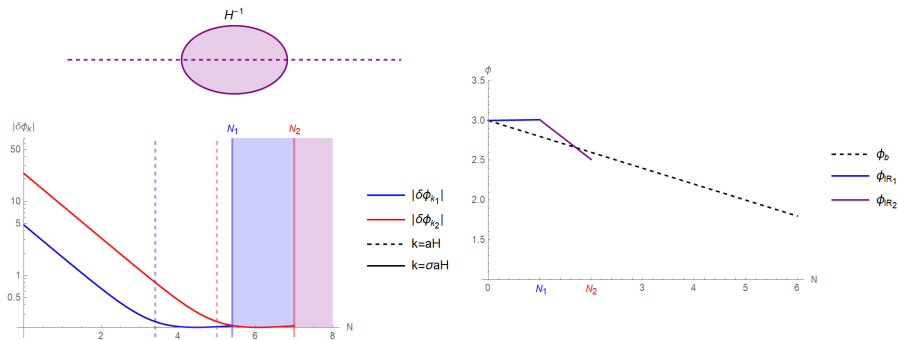
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- From N_1 to N_2 , the **red** mode evolves over a background modified by the **blue** mode → Memory effect! → Non-Markovian process.
- How can we model these effects analytically?
- How are they related with cosmological perturbation theory?