

Selected Topics of LGT

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Assignment # 3

1 a)

An implementation of the code can be found in `main.py` and `simulation.py`.

2 b), c), d), e)

An example run of the correlator $C_p(\hat{\tau})$ can be found in `corrs.png`, as well as the corresponding energy extraction, which can be found in `eff_energies.png`. The energy has been extracted with the exponential form of the correlator.. hence, this calculation must be repeated but using the 3pt form of the correlator (to account for backward propagating waves).

After the energy computation has been fixed, then a lot of run with a large number of MC steps can be performed, and then a comparison against the continuum dispersion relation must be made.