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Optimal prediction of underresolved dynamics

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cally in ref. 3. A number of interesting attempts have been made over the years to ‘‘fill in’’ data from coarse grids in

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fied by the average functions ^$p(x)$& and ^$q(x)$&, which are zero by symmetry, and by the covariance functions,

$$\mathrm{Cov}[p(x'), p(y')] = \mathrm{Cov}[q(x'), q(y')] = \int_{k} \frac{e^{ik\cdot(x'-y')}}{k^2 + m^2}.$$

$$\mathrm{Cov}[p(x'), p(y')] = \mathrm{Cov}[q(x'), q(y')] =$$

1 and