

# Methods of Analysis

## Interpreting the Orientation Results

- Measurements:
  1. Orientation angles are also collected and a mean histogram is computed.
- For qualitative analysis a kernel density function is estimated<sup>1</sup>.

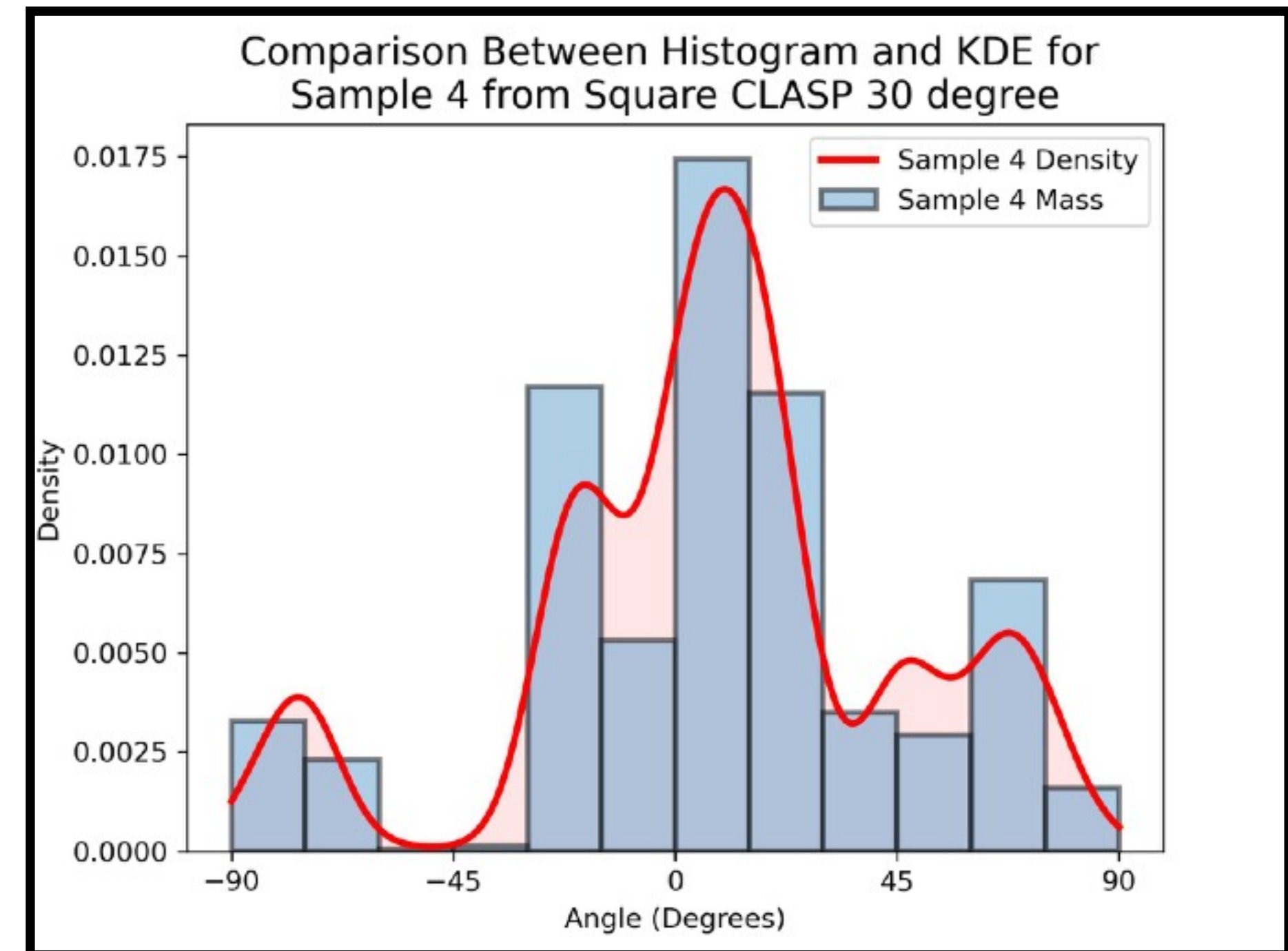


Figure 43: Closer look at one example for the KDE with a Gaussian kernel and the Scott bandwidth of the orientation PDF.

# Square Domain Shape Simulation Results

## All Local and Global Correlations

- Key results:
  - Crossover is uncorrelated locally and globally.
  - All other experiments indicate highly correlation locally.
  - All other experiments indicate some correlation globally.
    - The lower correlations are likely the result of multiple modes of orientation, along with mixture modes.

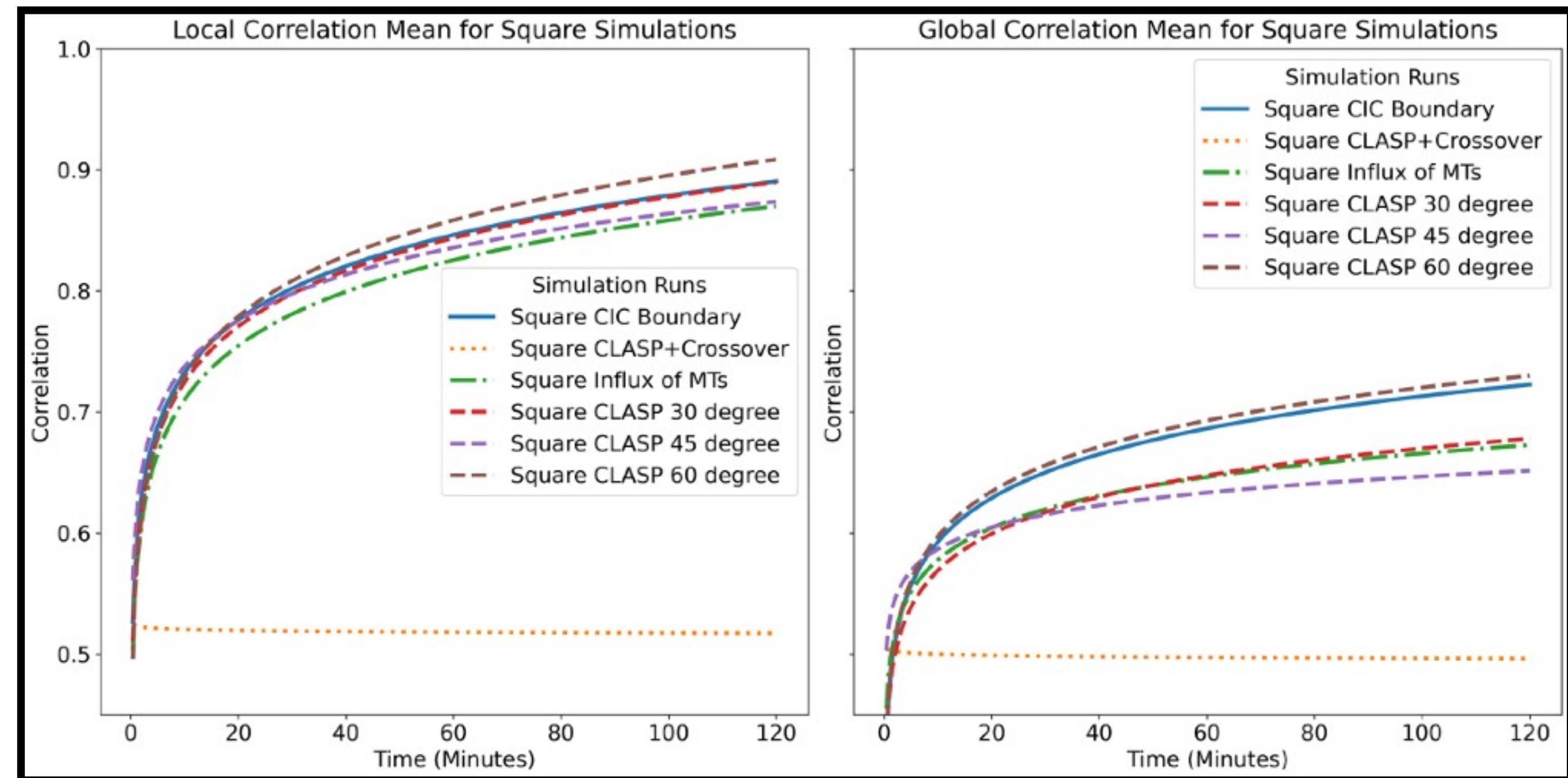


Figure 44: The plot contains the a best-fit logarithmic curves for the 120 minute range of interest fitted to the local and global mean correlation over time for each of the square simulation experiments.