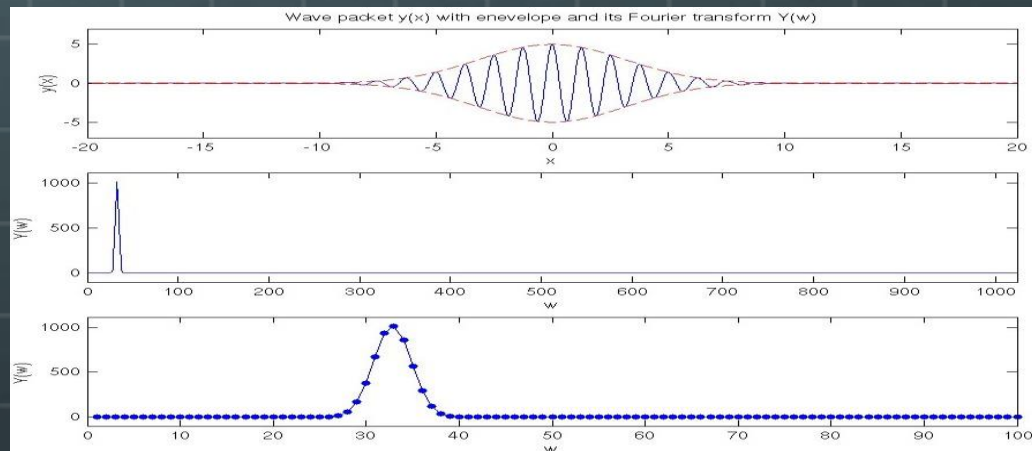
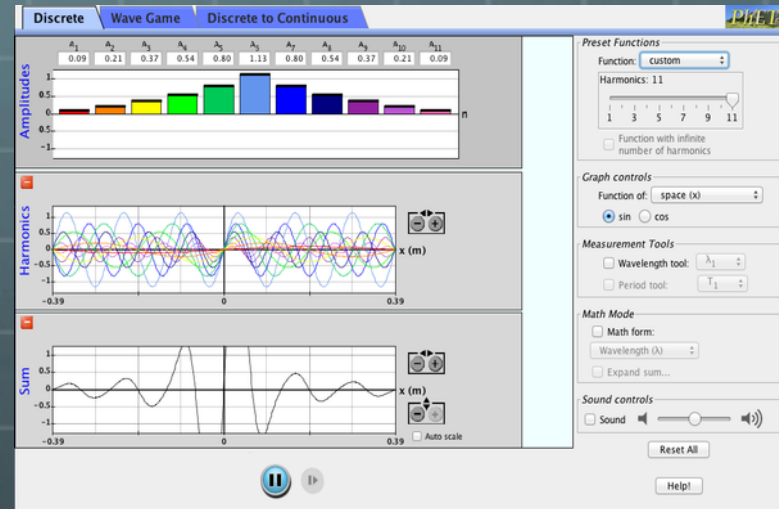
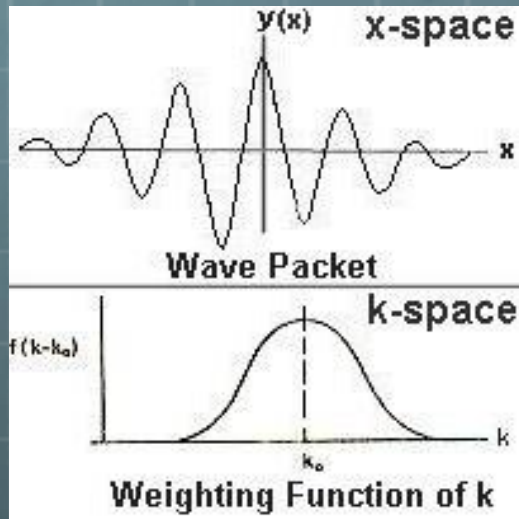


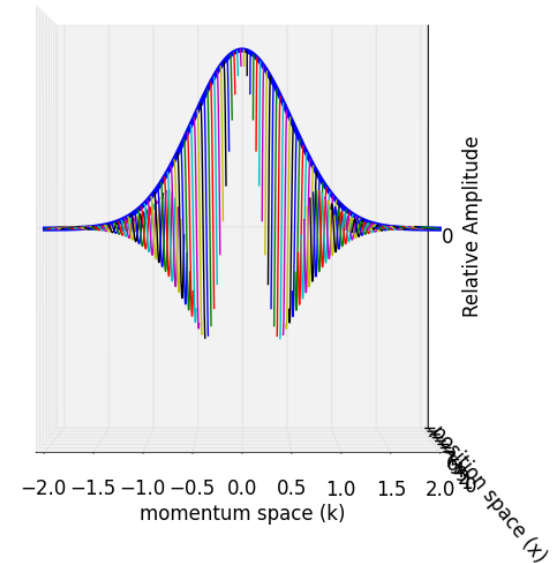
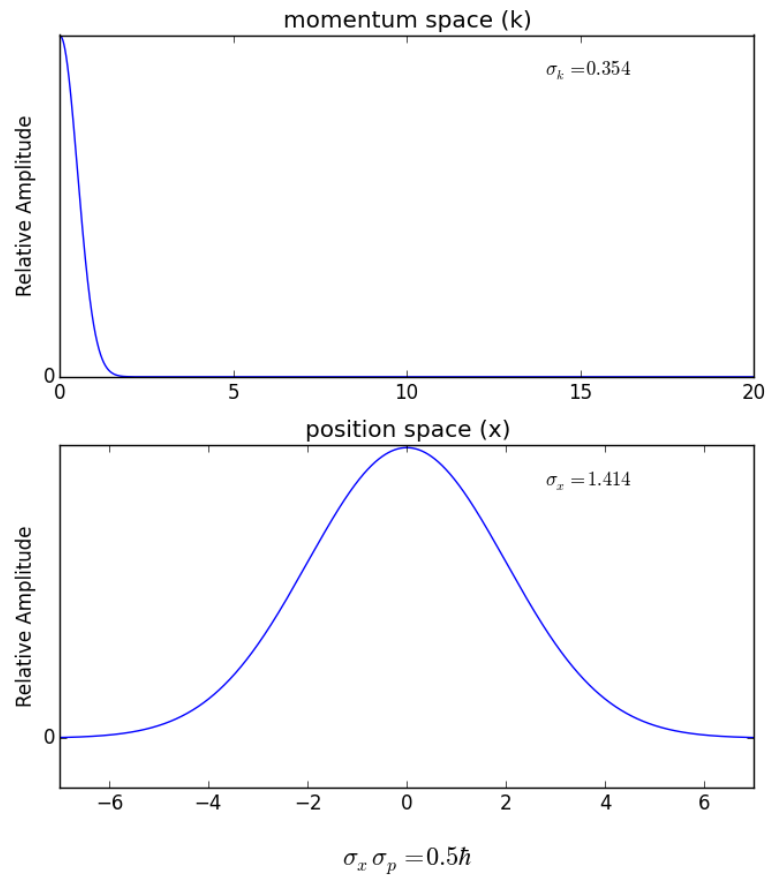
Uncertainty Relation: Fourier Analysis of Wave Packets

Brian Allgeier, Chris Browder, Brian Kim

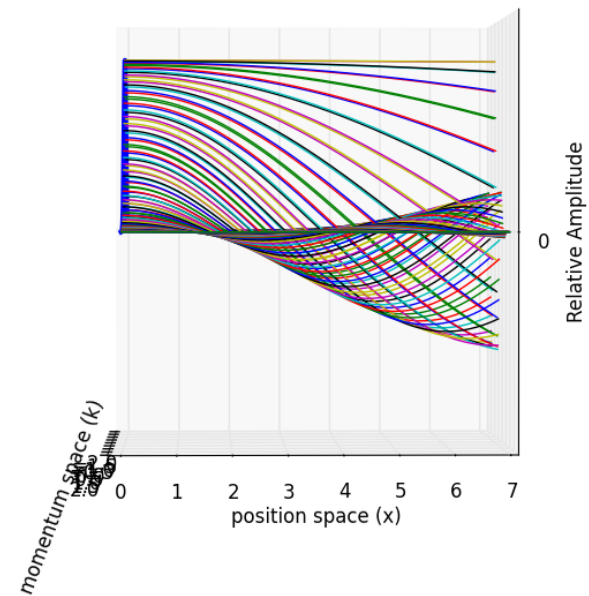
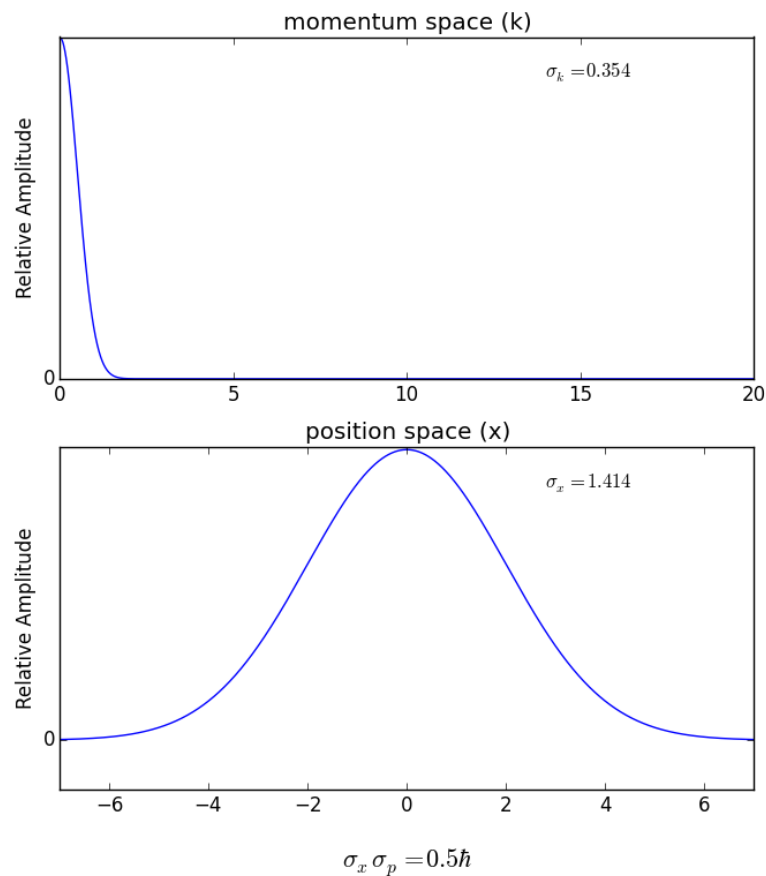
What we used before...



Gaussian k-distribution centered at 0 with sigma 0.5
showing 120.0 component waves, $0.0 < k < 20.0$ & $-7.0 < x < 7.0$



Gaussian k-distribution centered at 0 with sigma 0.5
showing 120.0 component waves, $0.0 < k < 20.0$ & $-7.0 < x < 7.0$



With only...

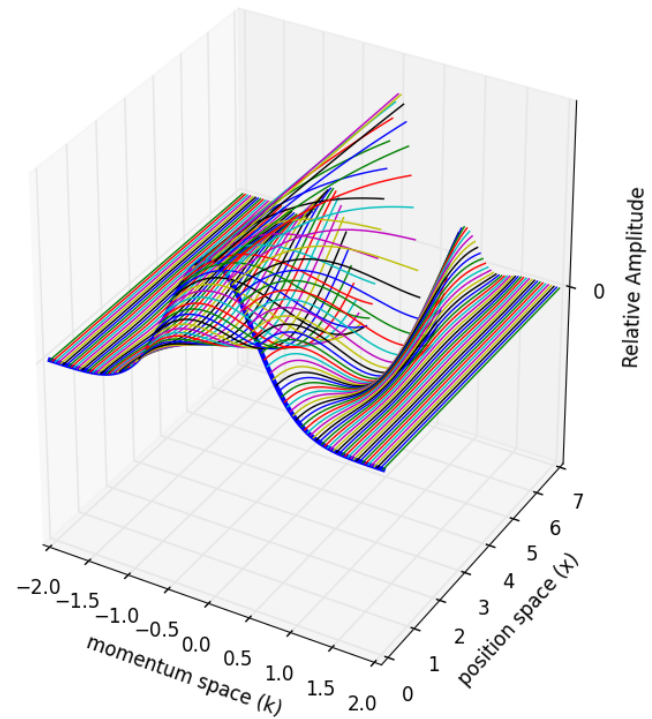
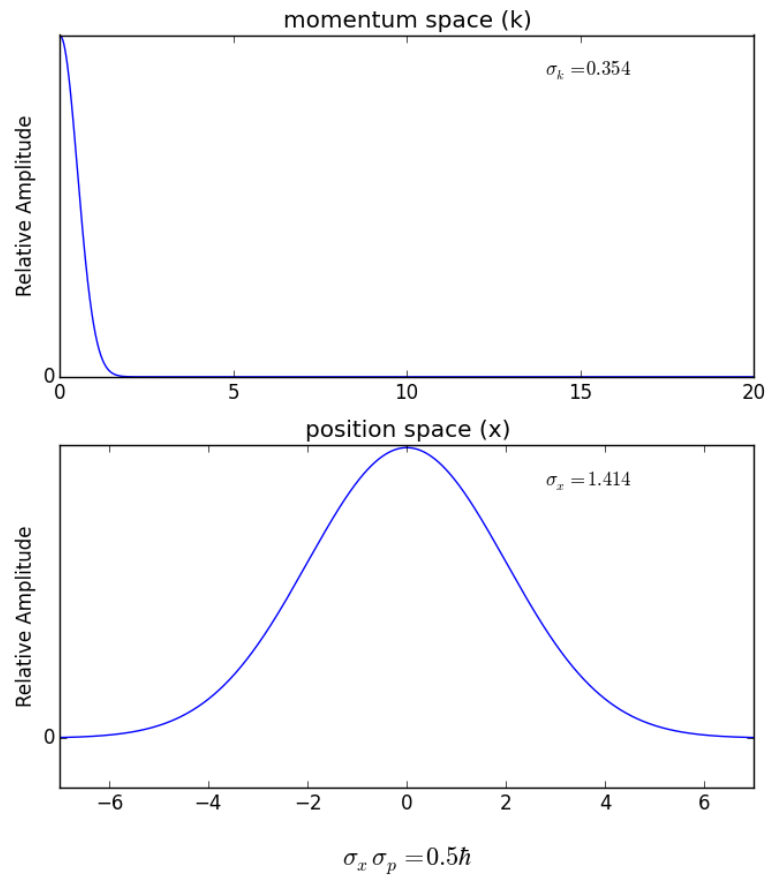


 ~200 lines of
python code



 Matplotlib
python
library

Gaussian k-distribution centered at 0 with sigma 0.5
showing 120.0 component waves, $0.0 < k < 20.0$ & $-7.0 < x < 7.0$



Learning Outcomes

- 🌐 Better understanding of Fourier Analysis
- 🌐 Deeper knowledge of the Uncertainty Principle
- 🌐 Firmer grasp on the relationship between position and momentum spaces

**Let's have a little fun
with it!**