

## Motivation:

- Approximations used to reduce problem size without reducing accuracy
- Memory footprint and time to solution greatly decreased
- Large systems with realistic physics solved in reasonable times

## Approach:

- Most relevant modes chosen for transport solution
- Basis transformation performed on NEGF equations
- Basis reduction for ballistic simulations extended to NEGF with scattering

## Results/Impact:

- Speedup of **209x** achieved for Recursive Green's Function (RGF) algorithm
- Memory improvement of **7.14x** achieved
- Nearly identical physical results

