

## Objective

- Transmission and reflection coefficients of a piecewise constant potential profile.
- Locate resonances of the system.
- Demonstrate bandstructure creation.

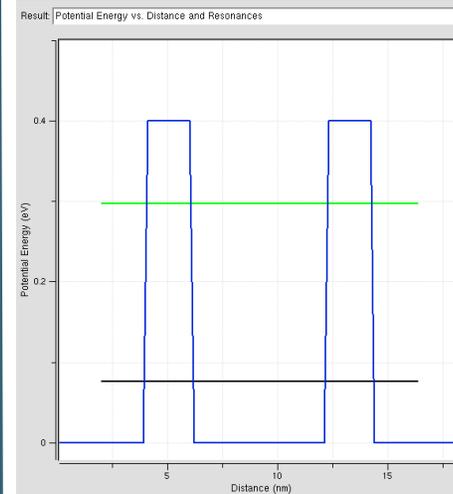
## Approach

- Semi-analytic Transfer matrix technique for continuum materials in parabolic bands.
- Transmission is adaptively refined to be resolved well.
- Resonances located based on transmission peak data.

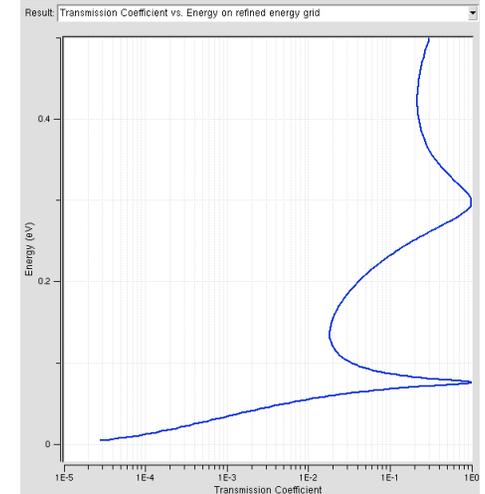
## Impact

- Tool on the nanoHUB: Piece-Wise Constant Potential Barrier Tool.
- 500 simulations from July - Nov 08.

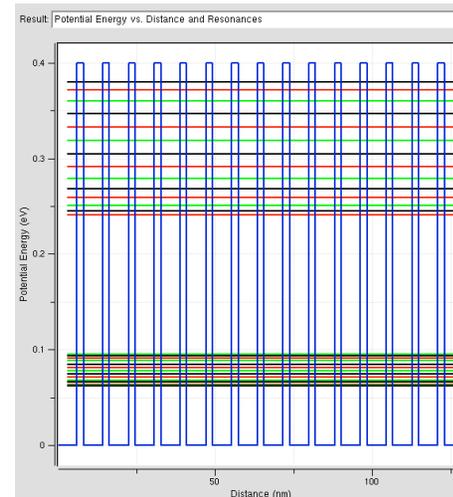
Band Profile with resonances



Transmission Coefficient



Band Profile with resonances



Resonances

