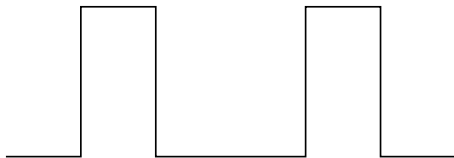# Lecture 4

Resonant tunnelling



Two wide barriers – quantum version of a Fabry-Pérot etalon

- set of narrow resonances (fringes)
- transmission probability is unity at energies of bound states of square well between the barriers
  (small probability of particle leaking out to right balanced by an equal probability of it coming in from left)
- very large probability of finding particle trapped in the well
- at other energies, transmission probability drops to $\sim$ zero