Particle Melting Pot
One particle mixing

Laser

Lens

Half-silvered Mirror to split light

Left path

Mirror

Half-silvered Mirror to recombine light

Right path

Stripes!
Two particles?

Fancy laser 1

Half-silvered Mirror to combine light

Stripes!

Fancy laser 2
Two particle interference

• Exactly the same as before

• Nature does not care if it is one laser or two, a wave is a wave and all particle move like waves
Two colors?
White light through a prism
Colored light to white light

Prism

White light
Two lasers

Fancy laser 1

Fancy laser 2

Prism

Combined light with beats
Many fancy lasers!
Many fancy lasers
Pulsed laser
Optical Frequency Comb