Superposition in optics

Vector addition of displacement of a particle

Condition for interference of waves from superposition

Movement of two waves of same frequency and with same velocity and same direction

Condition for stationary waves from superposition

Movement of two waves of same frequency and amplitude with same speed in opposite direction

Condition for formation of beats from superposition

Movement of two waves of slightly different frequencies with same velocity in same direction

Consequence of movement of two waves of same velocity of same frequency moving in same direction

Interference of waves

Consequence of movement of two waves of same frequency and amplitude with same speed moving in opposite direction

Stationary waves

Consequence of movement of two waves of slightly different frequency moving with same velocity and in same direction

Beats

Limitation of principle of superposition

Limited to systems obeying Hooke's law

Term for principle of superposition

Principle of linear superposition