

Light

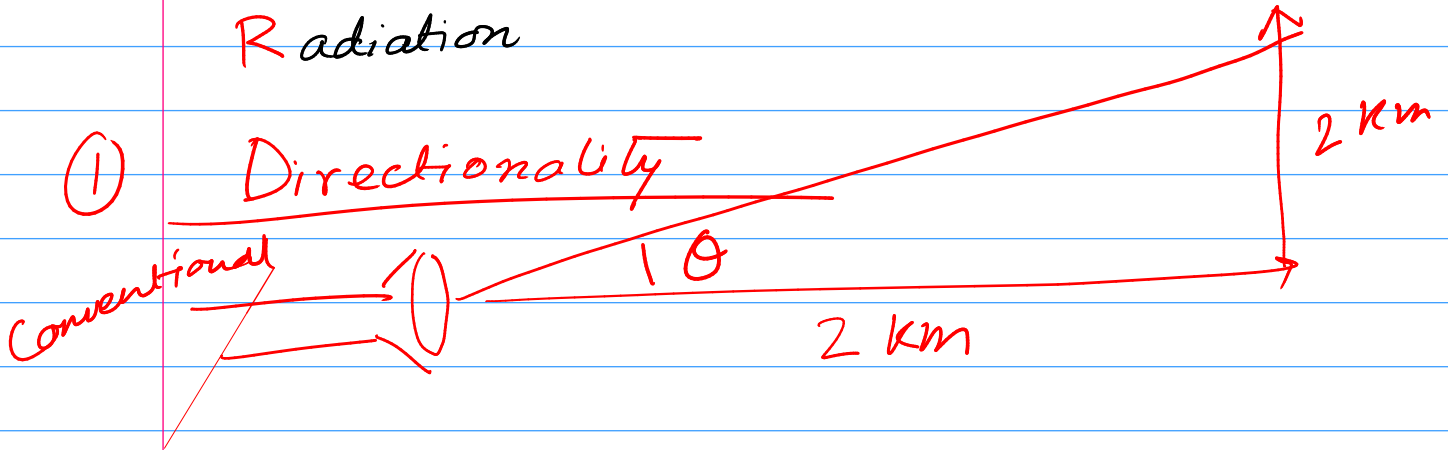
Amplification by

Stimulated

Emission of

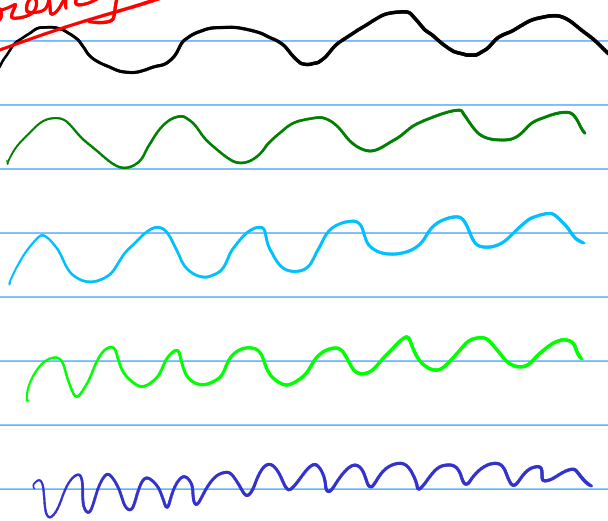
Radiation

① Directionality

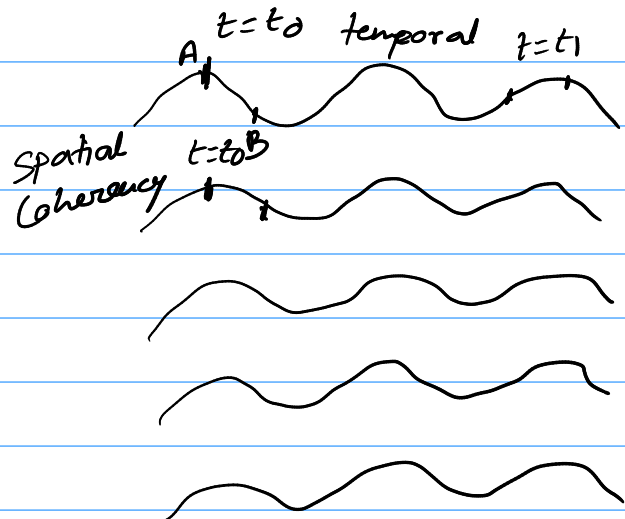


② High intensity

③ ~~Coherency~~



Incoherent



Coherent

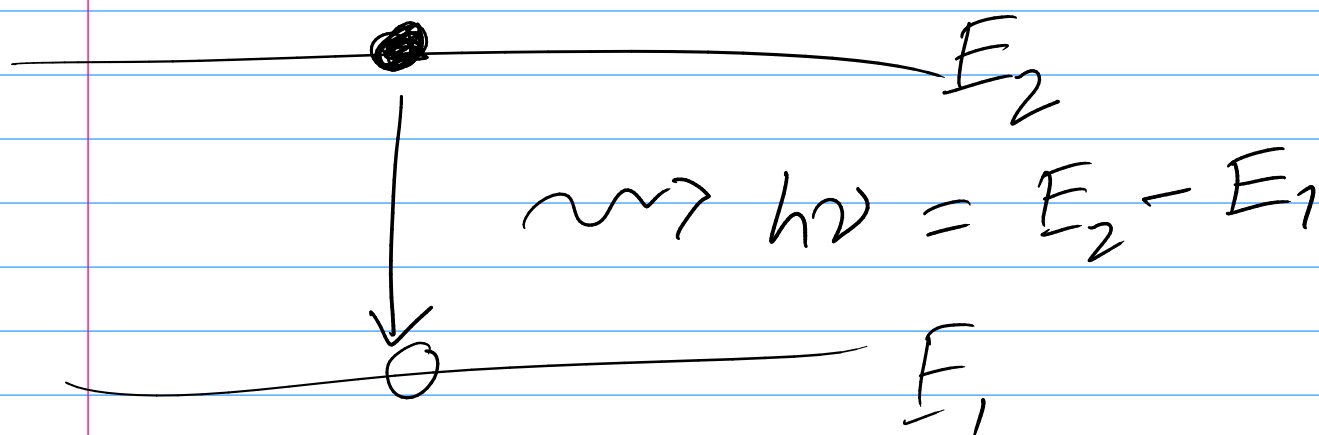
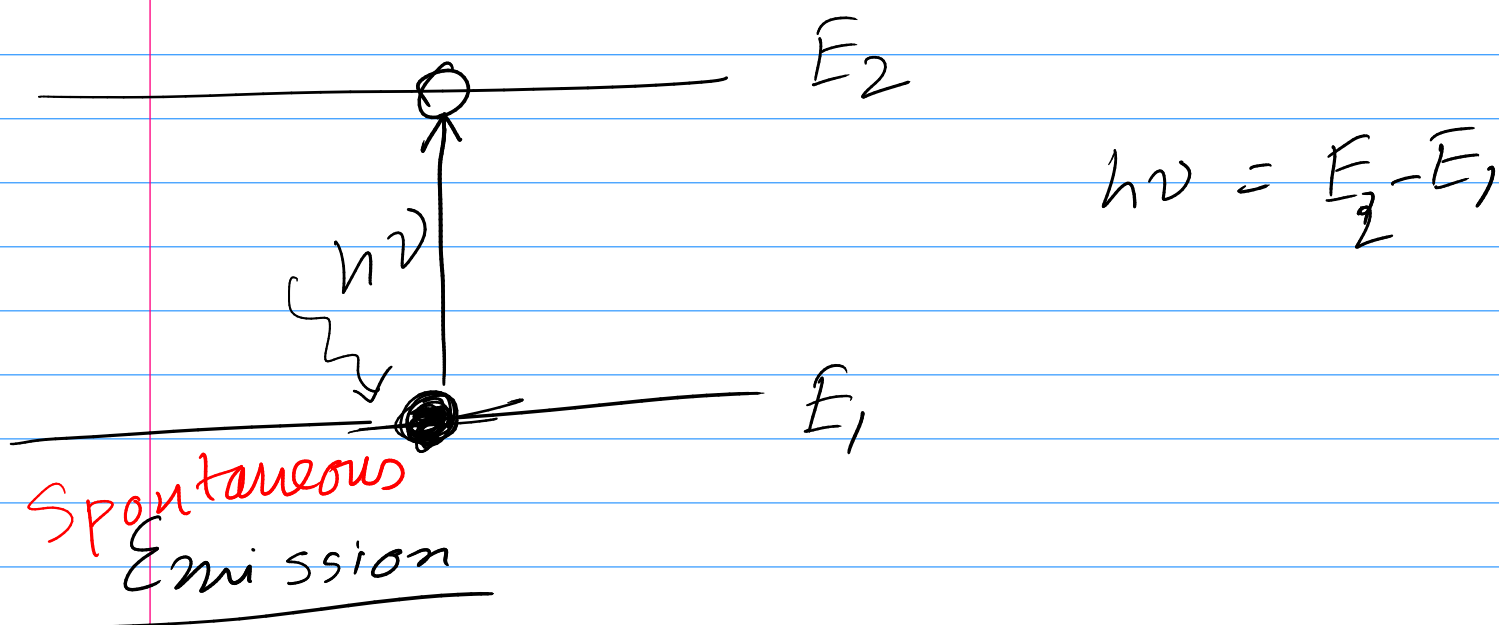
LASER light is coherent, both in space & time

④ Monochromatic
Single colour

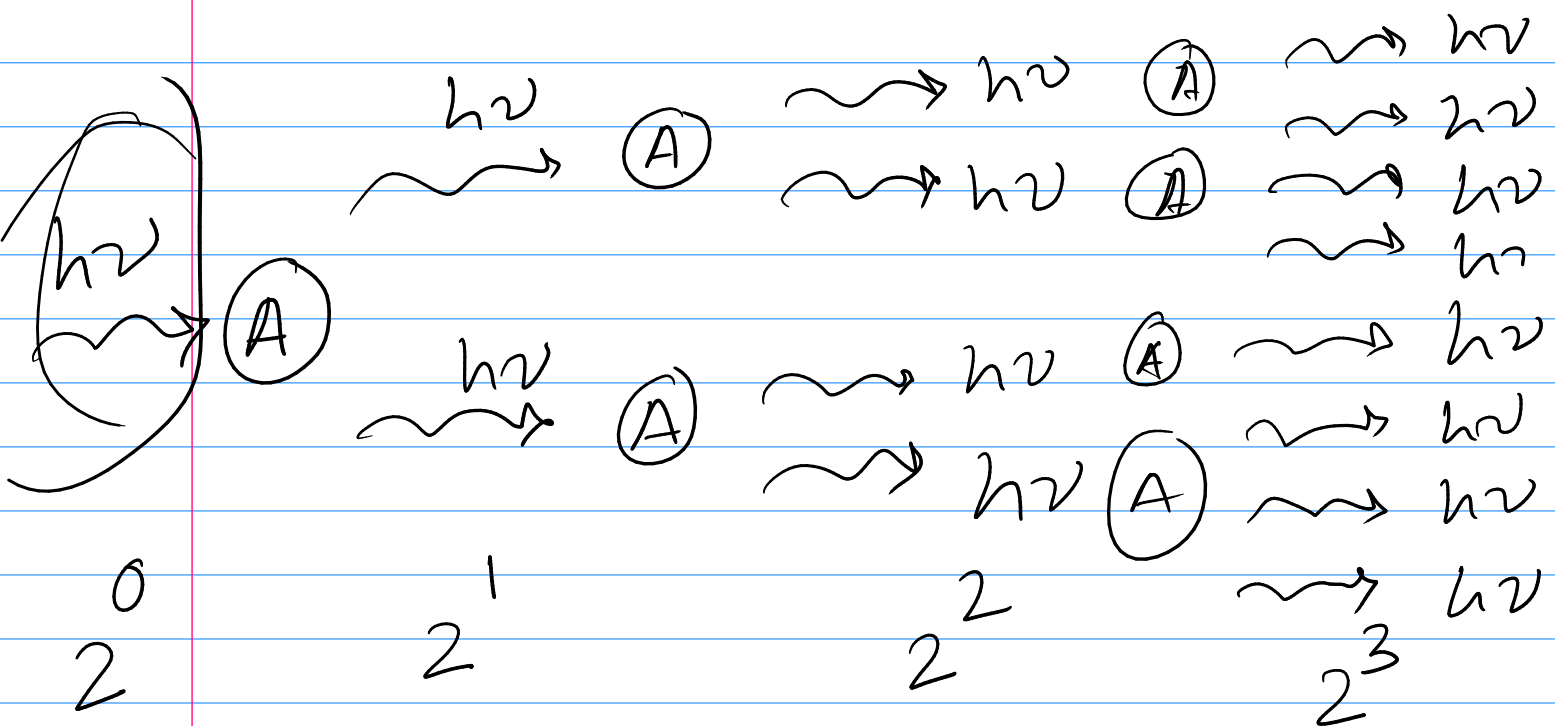
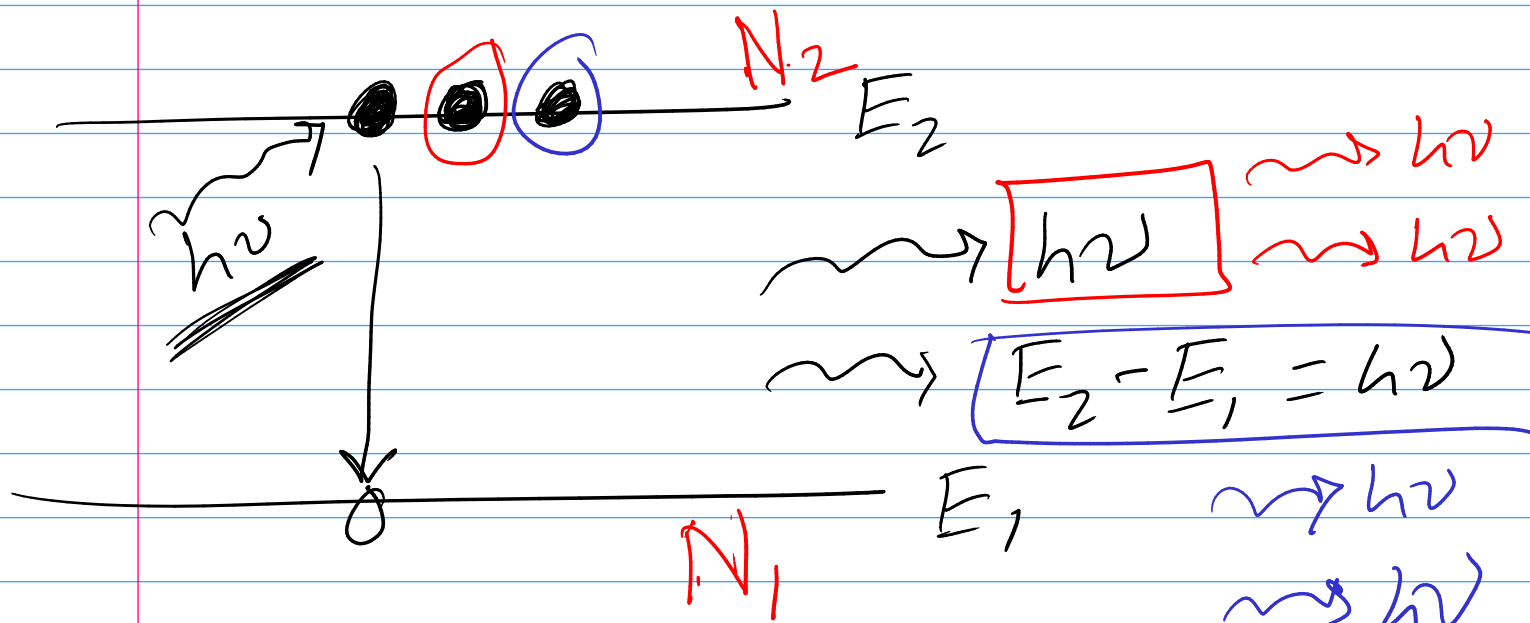
Conventional $\Delta\nu \approx 10^8$ Hz

LASER $\Delta\nu \approx 500$ Hz

Absorption



Stimulated Emission



$$N_1 \gg N_2 =$$

Required
Condition

$$N_2 \gg N_1$$

Population

inversion