

Lasers

Light Amplification by Stimulated Emission of Radiation

Laser operation (one kind):

- Tube of gas with mirrored ends.
- Excite the atoms to the upper state (mechanism not shown).
- Spontaneous emission generates some photons.
- Photons that travel along the axis are reflected. Other directions leak out the sides.
- Because the amplification process is exponential, the axial beam quickly dominates the intensity.
- One mirror allows a small fraction of the beam out.

