

Introductory Quantum Optics and some applications

Horizon Summer School

July 2021

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Overview

1. The Generalized Uncertainty Principle
2. The Quantum Harmonic Oscillator
3. Introductory Quantum Optics
4. Different states of light.
 - (a) Coherent Light and its applications
 - (b) Squeezed light and its applications
5. The Origin of Van der Waals interaction
6. A brief overview of different quantum phases of matter.

References

1. Modern Quantum Mechanics by J.J. Sakurai, sections 1.4 and 2.3 for uncertainty principle and harmonic oscillator
2. Introductory Quantum Optics by Gerry and Knight, chapters 2 and 3 and section 7.7