

(6) Measurement of the Phase Difference using Lissajous figure

Reference Books

- Vibrations and Waves, A.P. French, 1stEdn. 2003, CRC press.
- Waves: Berkeley Physics Course, vol. 3, Francis Crawford, 2007, Tata McGraw-Hill.
- Fundamentals of Optics, F.A. Jenkins and H.E. White, 1981, McGraw-Hill
- Principles of Optics, Max Born and Emil Wolf, 7th Edn. 1999, Pergamon Press.
- Optics, Ajoy Ghatak, 2008, Tata McGraw Hill
- The Physics of Vibrations and Waves, H. J. Pain, 2013, John Wiley and Sons.
- The Physics of Waves and Oscillations, N.K. Bajaj, 1998, Tata McGraw Hill.
- Fundamental of Optics, A. Kumar, H.P. Gulati and D.R. Khanna, 2011, R. ChandPublications
- Optics, Eugene Hecht, 4thEdn. 2004, Pearson Education.

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Page 2 of 5

Superposition of two perpendicular Harmonic Oscillations

Vibrations Having Equal Frequencies Assume that a molecule moves under the synchronous influence of two simple harmonic vibrations of equivalent frequency, one along the x axis, the other along the opposite y axis

When two mutually opposite simple harmonic movements of same frequency amplitude and phase are superimposed the subsequent movement is uniform circular movement. The subsequent movement is a linear simple harmonic movement along a straight line slanted similarly to the straight lines of movement of part ones.

Lissajous Figures