PHYSICS
UNIT-2(Optics)
Michelson Interferometer

B.SC(Sem-IV)
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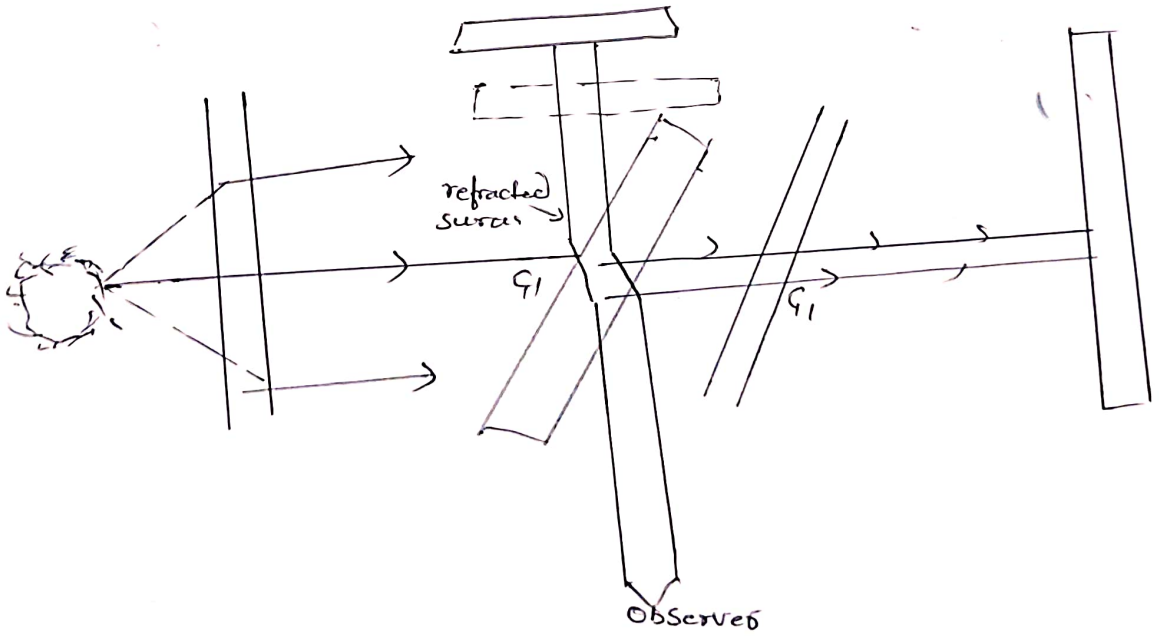
TITLE :- Working Principle of Michelson Interferometer and its application.

* Beam splitter seperate the incident beam into two seperate beam of equal intensity.
* One beam is sent towards a stationary mirror and the other is sent to a movable mirror
* The incident beams are reflected and sent back towards the beam splitter.
* The beam splitter recombines the waves to produce an interference.
* The interference pattern is projected onto a surface as a series of concentric rings of light and dark
* As the mirror is moved the successive rings of light and dark change and can be counted



Applications :

* Michelson interferometer can be used to determine

(i) The wavelength of light from a given monochromatic sourcelight ..

(ii) Determination of the difference in the wavelength of two waves.

(iii) Thickness of a thin transparent sheet.

(iv) Determination of the refractive index of gases.

(v) Standardization of the meter.
