

Modern Interferometry

Preparatory questions

1. Explain the principle of operation of the Michaelson interferometer. How could Michelson and Morely detect the presence of the ether using this interferometer?
2. What happens when a piece of glass (or other material) is placed in one arm of the Michelson interferometer.
3. How can one measure the wavelength of light using the Michaelson interferometer.
4. Explain the principle of operation of the Sagnac interferometer. How is it different from the Michaelson interferometer.
5. Explain the principle of operation of the Mach-Zender interferometer.