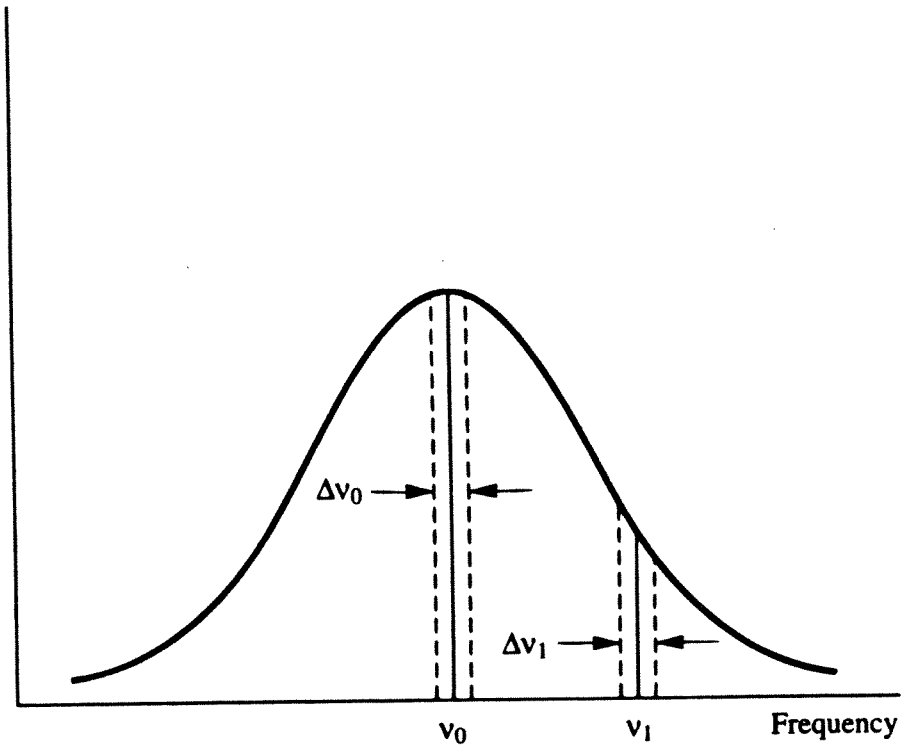

Fig. 4.1. Build-up of laser oscillation at two different frequencies in a noninteractive laser cavity.

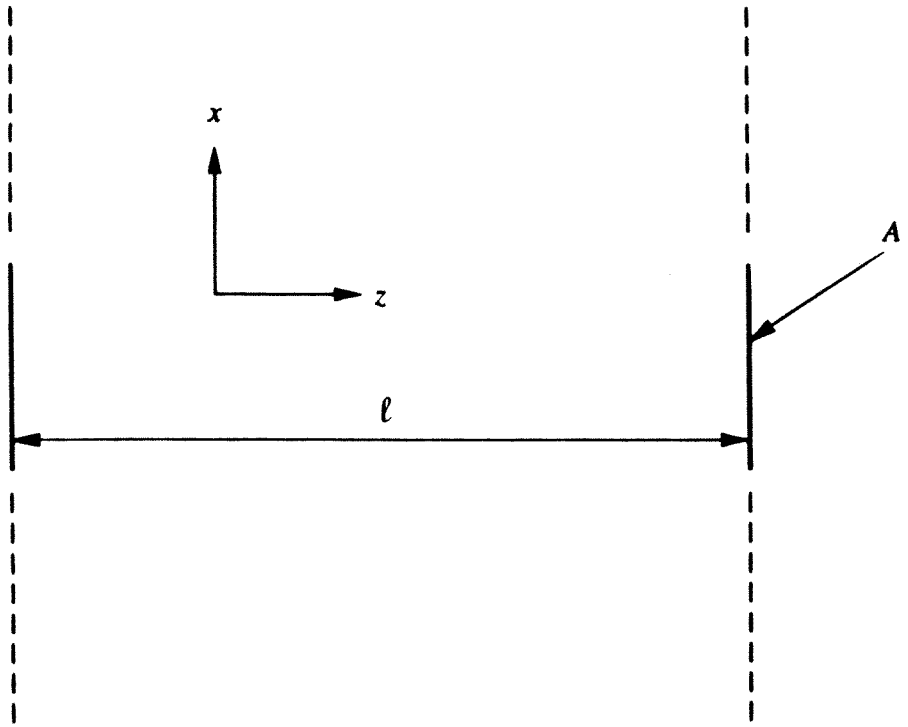

Fig. 4.2. Resonant system consisting of two perfectly-conducting, parallel, infinite planes.

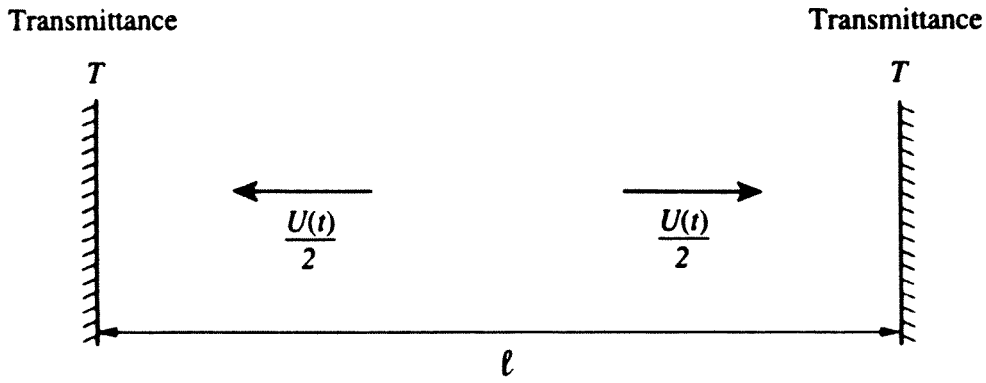

Fig. 4.3. Stored energy within a resonator at time t. The resonator is symmetrical, with both mirrors having identical transmittance T, so equal amounts of energy are propagating towards each mirror.

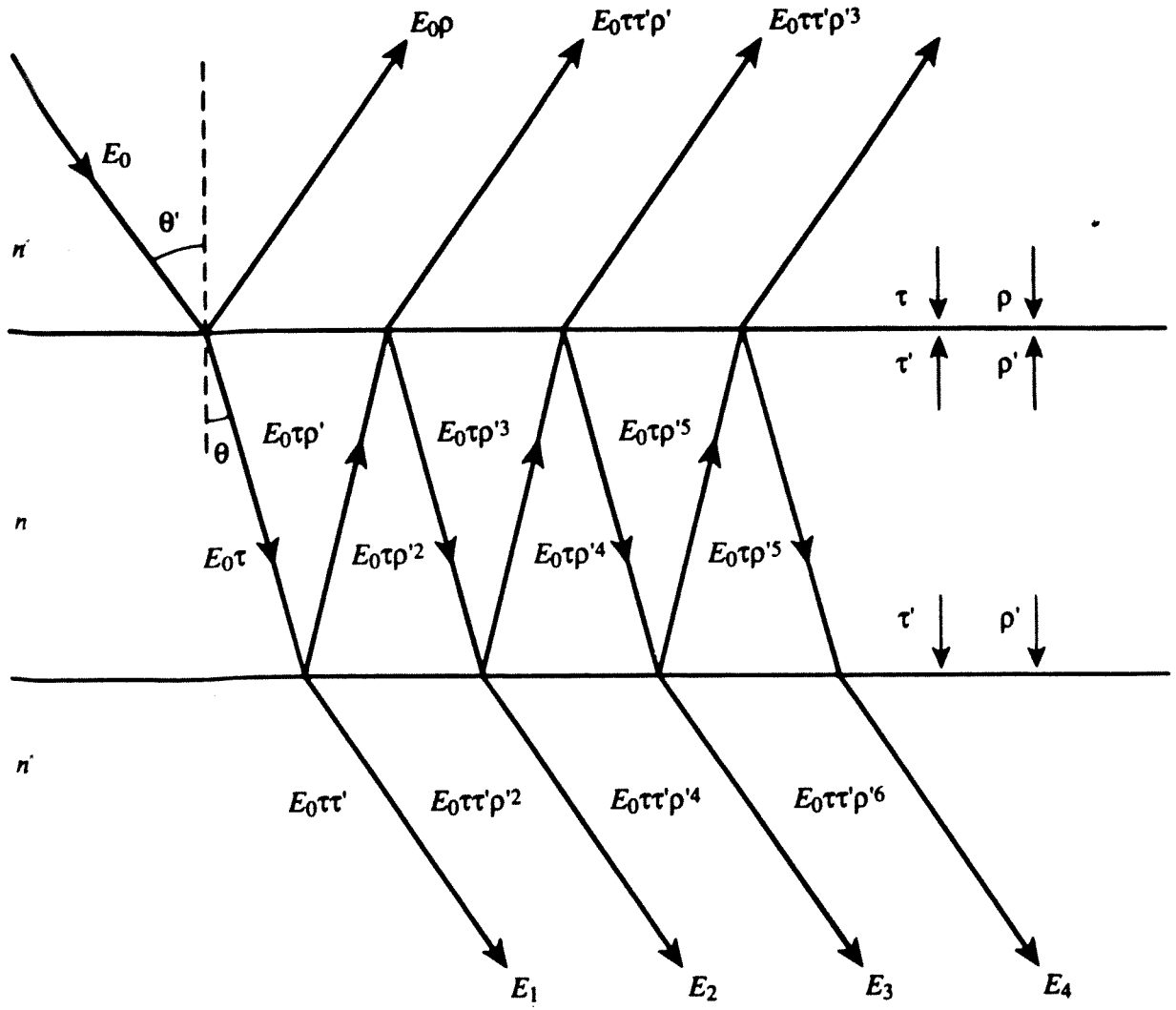

Fig. 4.4. Electric field amplitudes of the various singly and multiply reflected and transmitted waves in a Fabry–Perot etalon.

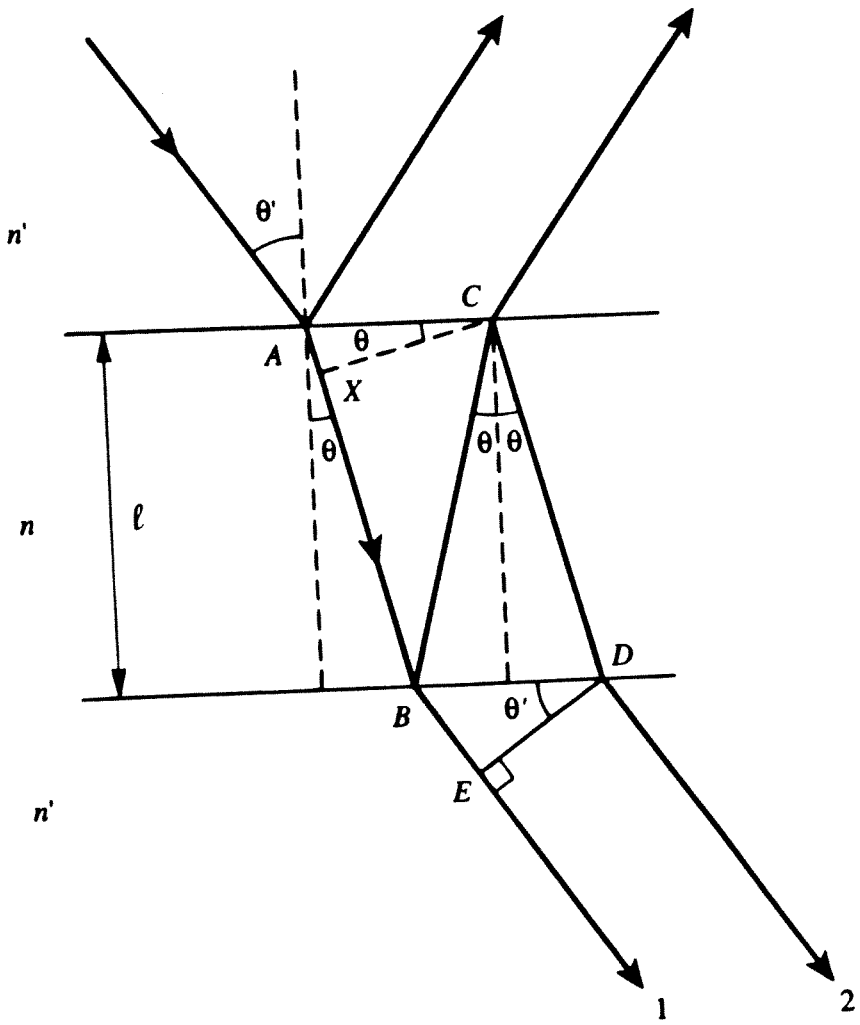

Fig. 4.5. To illustrate the path difference between successive transmitted waves in a Fabry–Perot etalon.

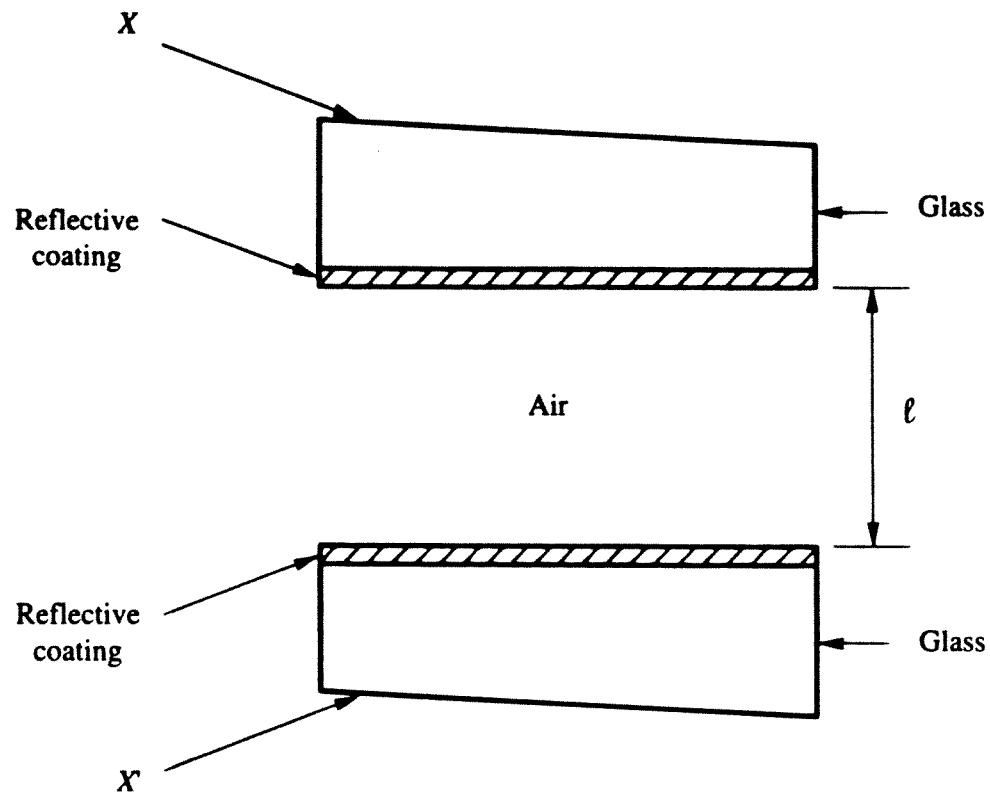

Fig. 4.6. A practical air-spaced Fabry–Perot etalon. The outer faces X, X' are generally antireflection coated and make a small wedge angle with the inner reflecting faces.

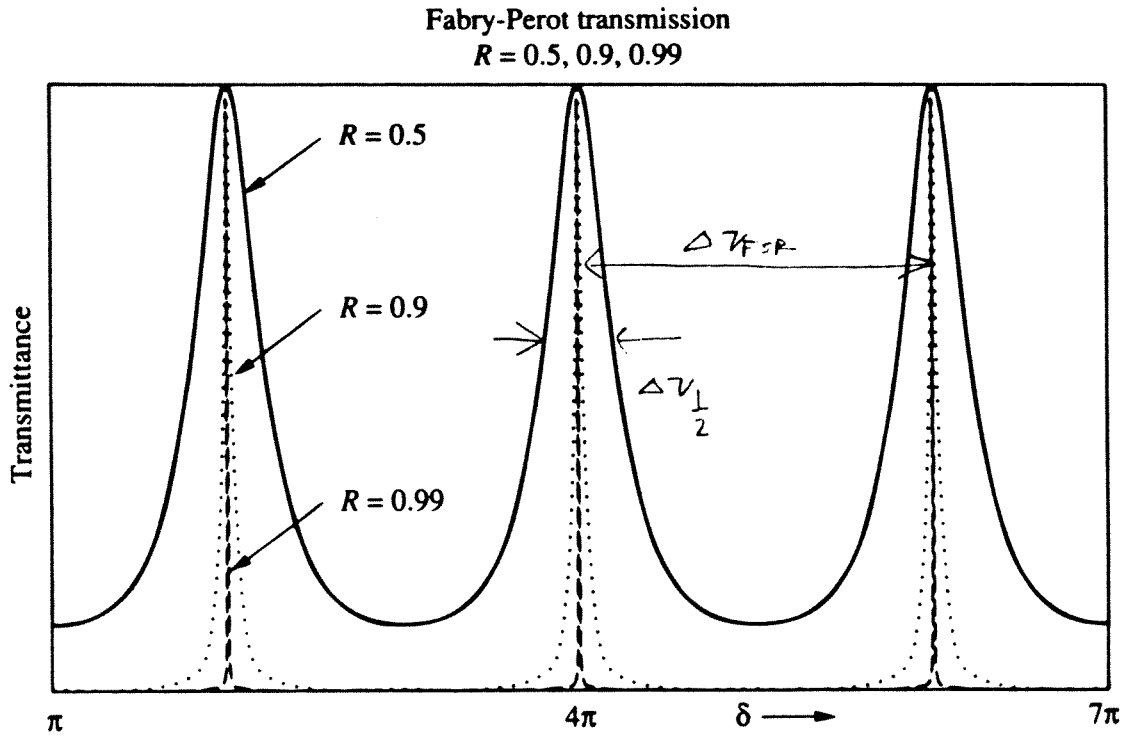

Fig. 4.7. Theoretical transmission characteristic of a Fabry–Perot etalon calculated from Eq. (4.44) for different values of mirror reflectance R. The theoretical reflection characteristic that corresponds to these curves can be viewed by turning the diagram upside down.

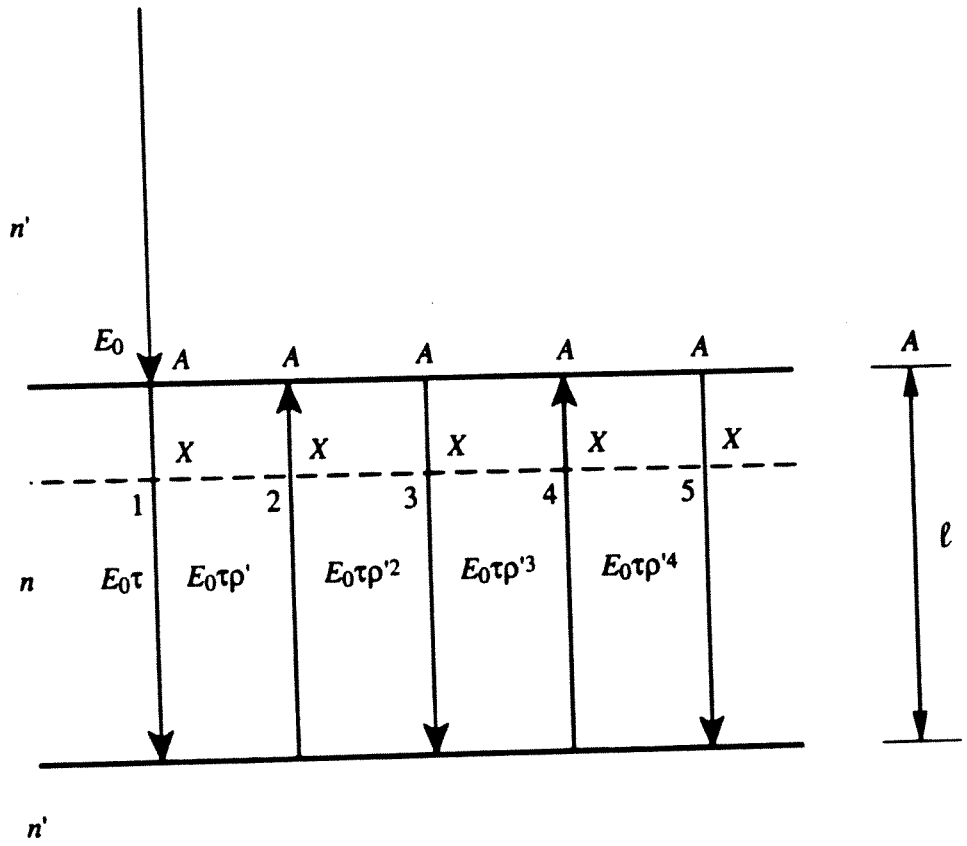

Fig. 4.8. Field amplitudes of the multiply reflected waves inside a Fabry–Perot etalon in normal incidence.

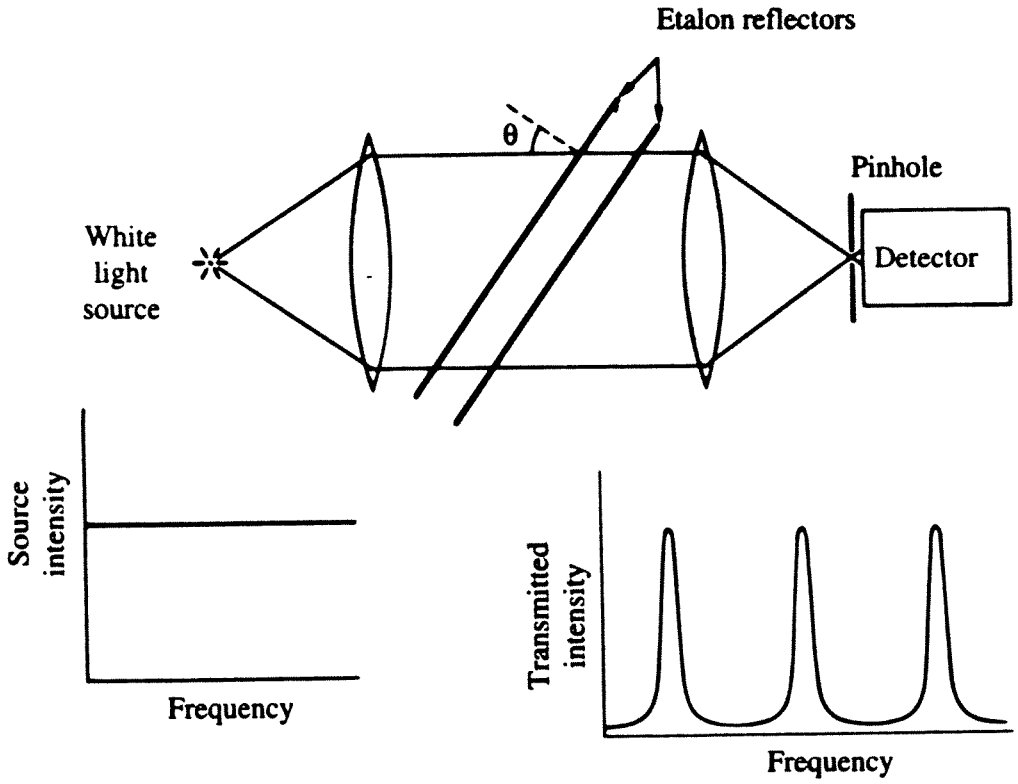

Fig. 4.9. Schematic arrangement in which a Fabry–Perot etalon is illuminated at angle θ with parallel light from a white light source.

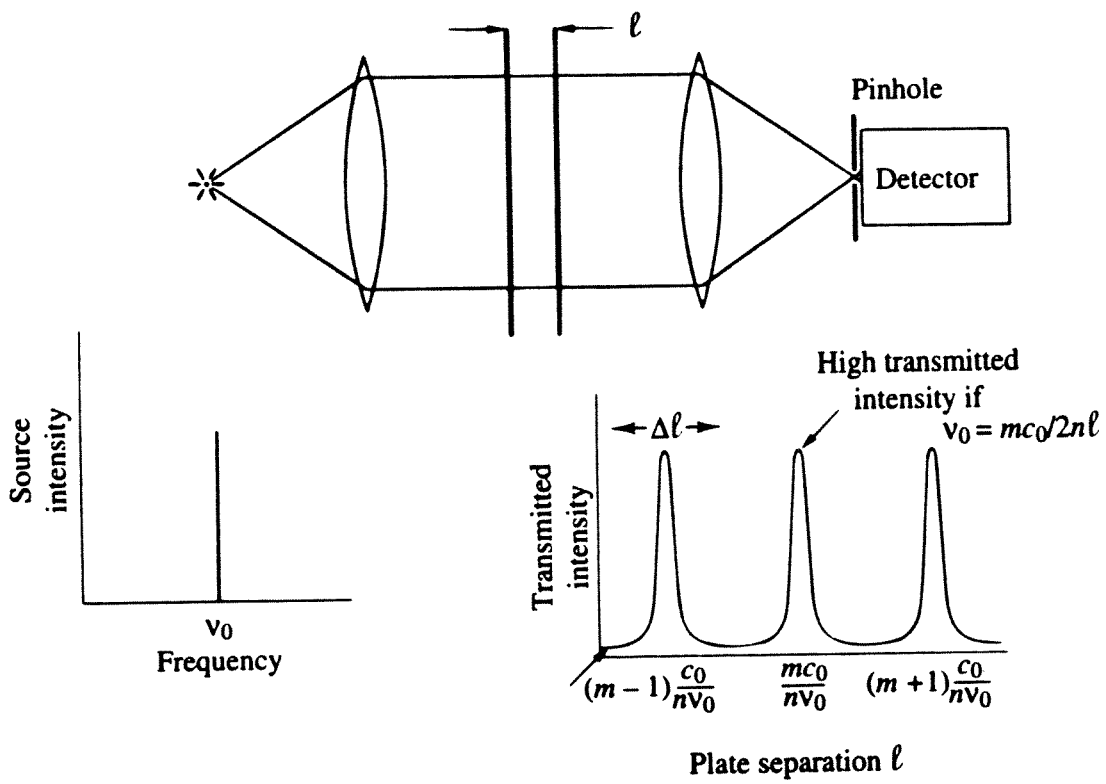

Fig. 4.10. Schematic arrangement in which a Fabry–Perot interferometer of adjustable spacing is illuminated normally with monochromatic parallel light.

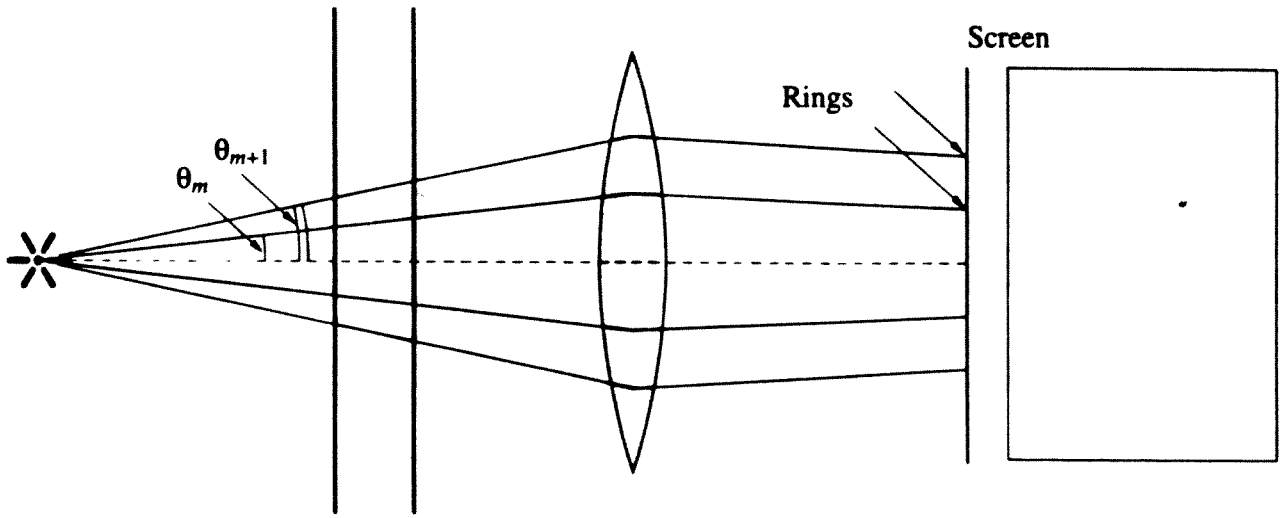

Fig. 4.11. Schematic arrangement in which a Fabry–Perot etalon is illuminated with a monochromatic point source and a ring pattern of transmitted light is observed.

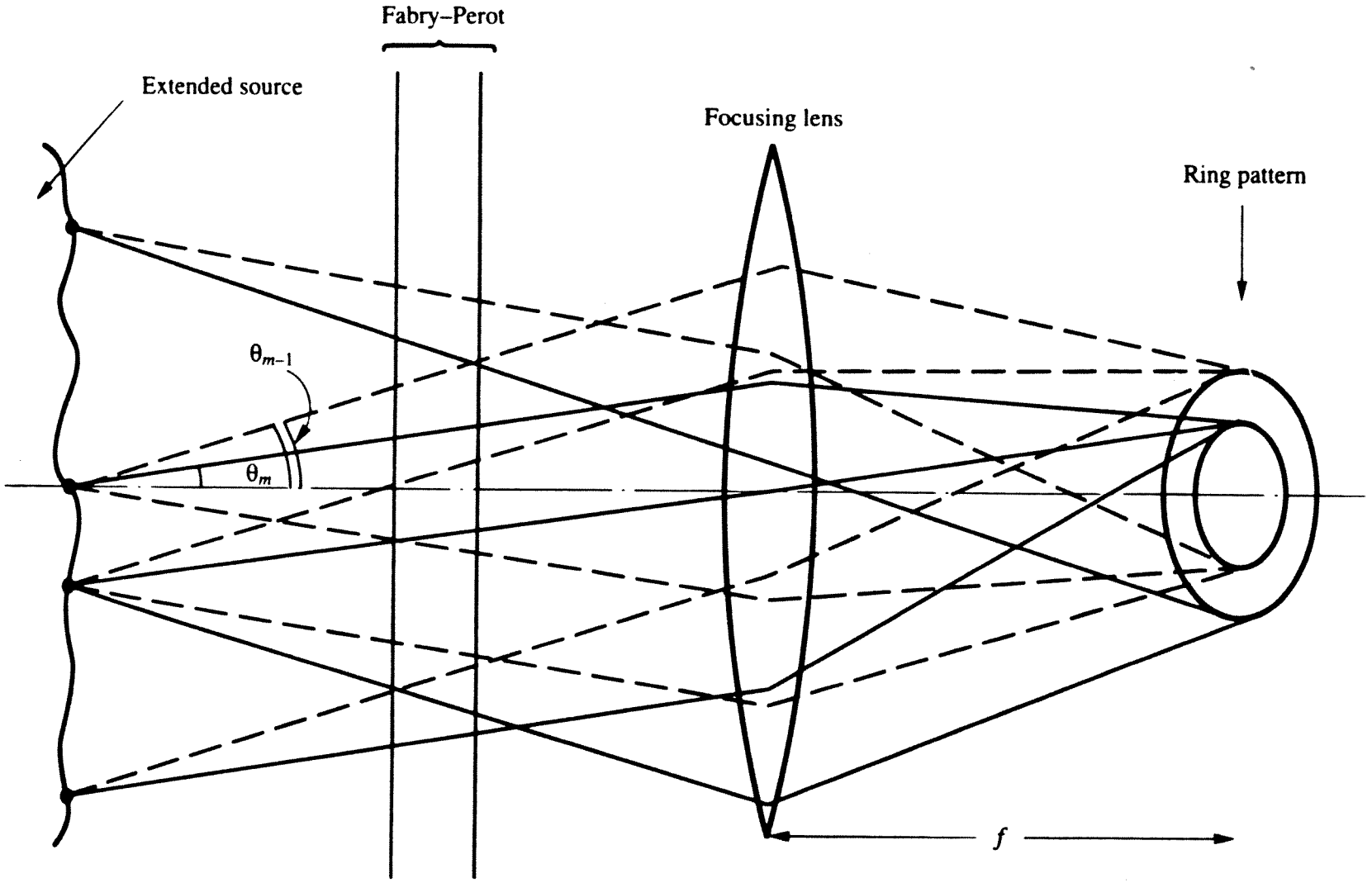

Fig. 4.12. Schematic arrangement used for viewing Fabry–Perot rings with a diffuse monochromatic source and an air-spaced etalon.

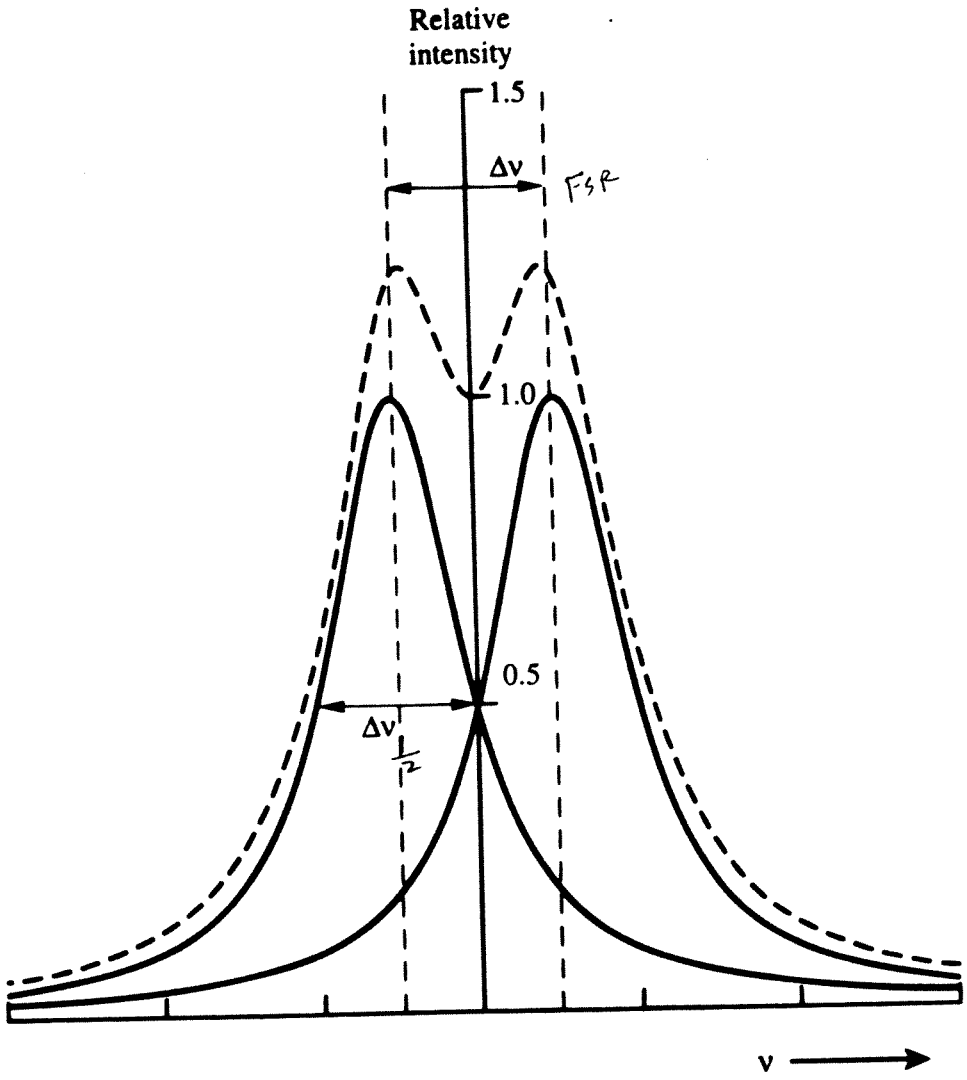

Fig. 4.13. Transmitted intensity (dashed line) as a function of plate separation when a Fabry–Perot interferometer is illuminated with two monochromatic lines (solid lines) closely spaced in frequency that the interferometer is *just* able to resolve.

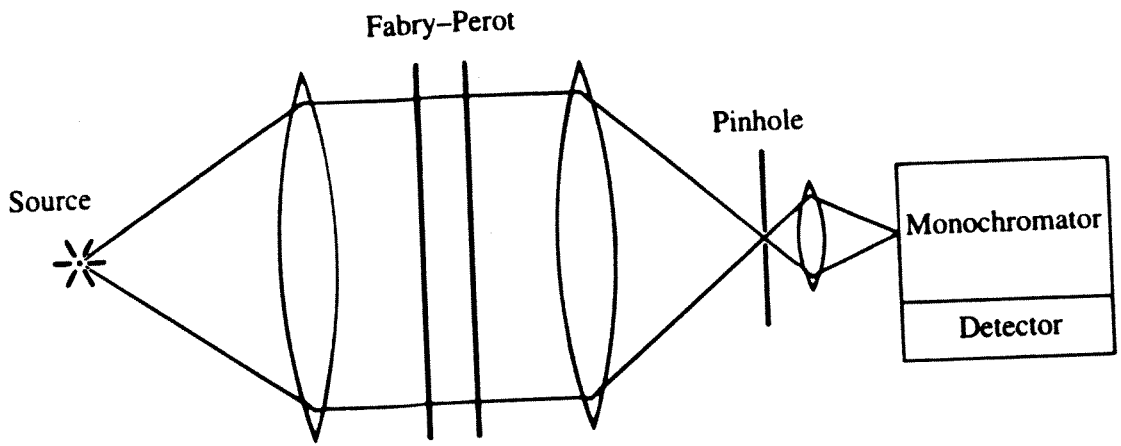

Fig. 4.14. Schematic arrangement for performing high resolution spectroscopy in which a Fabry–Perot interferometer is used in conjunction with a monochromator.