

Fabry-Perot Interferometry

Experiment 03

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1 Aim

Using Fabry-Perot interferometer and simple optical elements viz. polarisers and waveplates to observe the manifestation of Pancharatnam-Berry phase through the shifting of fringe patterns.

2 Apparatus

The required apparatus for performing the experiment are:

- | | |
|-----------------------|------------------|
| 1. Laser source | 4. Focusing lens |
| 2. Fabry-Perot etalon | 5. Screen |
| 3. Power meter | 6. Optical table |

3 Theory

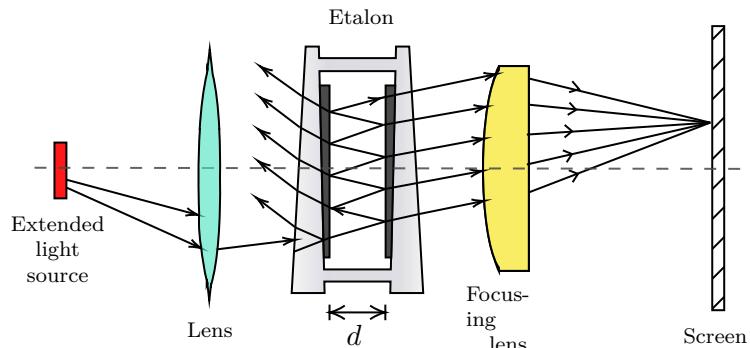


Figure 1: Schematic diagram of the Fabry-Perot experimental set-up

4 Data and Calculations

5 Error Analysis

6 Discussion and Conclusion