1. Objectives of Research

The current profile (in tokamaks) and the iota profile (in helical systems) are closely related to plasma confinement and the measurements are indispensable to control burning plasmas.

2. Specification of PEM Polarimeter

2.1. Principle of PEM Polarimeter

2.2. Estimation of Error Terms

3. Experimental Results

3.1. Short wavelength FIR laser

3.2. Development of Silicon PEM

4. Summary

The Si PEM has been newly developed for a polarimeter using a short wavelength FIR laser, which is suitable for large fusion devices. The polarimeter with the new Si PEM can measure the polarization angle successfully.

Bench testing of new polarimeter with silicon photoelastic modulator for short wavelength FIR laser

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