

Single Chord Polarimetry results on RFX

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Abstract

A single-chord FIR polarimeter ($\lambda=118.8\mu\text{m}$) has been mounted on RFX and is now under test. The purpose of the diagnostic is to ascertain the feasibility of measuring a Faraday rotation effect in the RFX plasma and to discover what requirements are necessary for a future six-chord diagnostic. The diagnostic should measure small Faraday rotation angles (of the order of a few degrees) and the required resolution is of $\pm 0.2^\circ$. The tests carried out reveal various sources of disturbance: electrical disturbances in the signals vibration effects on the optical components, detector noise and perturbations on the laser system

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