

Abstract Submitted
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The ITER-Core Turbulent Plasma Diagnostics Based on Multi-Frequency-Laser-Beam Thomson Scattering¹ V. ALEXANDER STEFAN, Institute for Advanced Physics Studies, Stefan University — A novel ITER-core turbulent-plasma-diagnostic method is proposed based on the multi laser beam Thomson scattering, during the nonlinear electron cyclotron plasma heating (with on-axis B-field of 10T).^{2 3} Nonlinear electron cyclotron plasma heating leads to the excitation of electron-Bernstein mode turbulence in the ITER core-plasma, influencing electron temperature and electron density profile. Under these conditions, the use of multi-frequency-laser-beam may prove to be an effective core-plasma diagnostic method for nonstationary plasma turbulence.⁴

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