

Abstract Submitted
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ITER Plasma at Electron Cyclotron Frequency Domain: Tokamak Core Plasma Diagnostics Based on the Synergy of Stimulated Raman and Brillouin Scatterings¹ V. ALEXANDER STEFAN, Institute for Advanced Physics Studies, Stefan University — A novel plasma diagnostic method is proposed based on the synergy of stimulated Raman and Brillouin scatterings. A nonlinear plasma mode is excited in a 4-wave coupling,² leading to the appearance of suprathermal electrons and accelerated ions at the plasma edge³ with the parameters directly dependent on the plasma parameters in the core of tokamak. Accordingly, plasma diagnostic in the core region, (ion temperature), can be performed by the diagnostics of suprathermal electrons and accelerated ions at the edge plasma.

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²V. Alexander STEFAN, *Nonlinear Electromagnetic Radiation Plasma Interactions*, (S-U-Press, 2008).

³V. Alexander Stefan, Abstract: D1.00018 : ITER Plasma at Electron Cyclotron Frequency Domain: Stimulated Raman Scattering off Gould-Trivelpiece Modes and Generation of Suprathermal Electrons and Energetic Ions; Bulletin of the American Physical Society APS April Meeting 2011 Volume 56, Number 4.

V. Alexander Stefan
Institute for Advanced Physics Studies, Stefan University

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