

Abstract Submitted
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ITER Plasma at Electron Cyclotron Frequency Domain: Stimulated Raman Scattering off Gould-Trivelpiece Modes and Generation of Suprathermal Electrons and Energetic Ions¹ V. ALEXANDER STEFAN, Institute for Advanced Physics Studies, Stefan University — Stimulated Raman scattering in the electron cyclotron frequency range² of the X-Mode and O-Mode driver with the ITER plasma leads to the “tail heating” via the generation of suprathermal electrons and energetic ions. The scattering off Trivelpiece-Gould (T-G) modes is studied for the gyrotron frequency of 170GHz; X-Mode and O-Mode power of 24 MW CW; on-axis B-field of 10T. The synergy between the two-plasmon decay³ and Raman scattering is analyzed in reference to the bulk plasma heating.⁴

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²R. Prater et. al., APS-DPP-2009, (BAPS.2009.DPP.NO4.11).

³V. Alexander STEFAN, APS-DPP-2009, (K1.00028); APS-DPP-2010, (DPP10-2010-000167).

⁴V. Alexander STEFAN, *Nonlinear Electromagnetic Radiation Plasma Interactions*, (S-U-Press, 2008).

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