

Mode Conversion Coupling to Electron Bernstein Waves*

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In spherical tori like NSTX the emission of electron Bernstein waves (EBW) from the interior of the plasma can be observed in the vacuum region after mode conversion to the X mode and/or the O mode. The same mode conversion process comes into play when exciting EBWs through externally launched power. We consider the mode conversion process that couples the O mode to EBWs via the X mode. Results obtained from a comprehensive model [1] are compared with previously obtained analytical results [2]. A detailed analysis of the conversion process and of the comparison between the analytical and computational results will be presented.

[1] A. K. Ram and S. D. Schultz, *Phys. Plasmas* **7**, 4084 (2000).

[2] E. Mjølhus, *J. Plasma Phys.* **31**, 7 (1984).

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