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Three dimensional full-wave simulations of reflectometry in toroidal plasma ERNEST VALEO, GERRIT KRAMER, RAFFI NAZIKIAN, PPPL, Princeton, NJ — A three-dimensional wave propagation code, developed specifically to simulate correlation reflectometry in large scale fusion plasmas is described. The code extends an algorithm previously implemented in 2D [E. J. Valeo, G. J. Kramer, and R. Nazikian, Plasma Phys. Control. Fusison **44** (2002) L1-L10], in which separate computational methods in the vacuum, underdense and reflection regions of the plasma are implemented in order to obtain the high computational efficiency necessary for correlation analysis. Simulations of ITER plasma are presented which demonstrate the efficiency of the method.

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