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Special Topic Article

Compatibility of Materials in Fusion Blanket Systems

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An open system one-dimensional electrostatic particle code with the improved constant current generator model has been developed. Using this code, we have been able to study various phenomena at electron drift velocities larger than the electron thermal velocity ($v_d \geq v_{Te}$), where the original model is not applicable. This figure shows the result of a test simulation for $v_d = 0.7v_{Te}$ and indicates that the super ion-acoustic double layer discovered by a previous study with the original model is also created. (Hiroki HASEGAWA and Tetsuya SATO, Plasma and Fusion Research Vol.5, 020 (2010) <http://www.jspf.or.jp/PFR/>)