

Abstract Submitted  
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**Effects of divertor's topology on stochastic particle transport**<sup>1</sup> Y. NISHIMURA, J.C. LYU, National Cheng Kung University — Particle behavior and resultant transport are studied in realistic divertor geometries incorporating topologies of both the closed and the open magnetic field lines. The magnetic stochasticity allows particles to move from the closed field line region to open field line regions. When the closed field lines are connected to the open field lines, particle and heat can move along the field lines to the divertor plate and immediately disappear. The transport process then is no longer diffusive. Computational model employing Duffing equation<sup>2</sup> and the method of transformation to magnetic flux coordinate are presented.

<sup>1</sup>Ministry of Science and Technology of Taiwan, MOST 103-2112-M-006-007 and MOST 104-2112-M-006-019

<sup>2</sup>S. Abdullaev, *Magnetic Stochasticity in Magnetically Confined Fusion Plasmas*, Springer (2014).

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