

which I would qualify into the second category, 2. Transport of energy in stochastic fields.

"Transport modelling with E3D",

Alex Runov

Abstract:

The effect of ergodisation (either by additional coils like in TEXTOR-DED (Dynamic Ergodic Divertor) or by intrinsic plasma effects like in W7-X) defines the need for transport models being able to describe this properly. A prerequisite for this is the concept of local magnetic coordinates allowing a correct discretization with minimized numerical errors. For these coordinates the appropriate full metric tensor has to be known. The status of the Monte Carlo transport model E3D based on this concept of local magnetic coordinates is summarized. Specific applications for DIII-D scenarios with additional coils resulting in ergodic layers close to the separatrix are presented.