Noncircular, Finite Aspect Ratio, Local Equilibrium Model

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Abstract

A tokamak equilibrium model, local to a flux surface, is introduced which is completely described in terms of nine parameters including aspect ratio, elongation, triangularity, and safety factor. By allowing controlled variation of each of these nine parameters, the model is particularly suitable for localized stability studies such as those carried out using the ballooning mode representation of the gyrokinetic equations.