

Preface

This book presents the collective drift and MHD type modes in inhomogeneous plasmas from the point of view of two fluid and kinetic theory. It is based on a lecture series given at Chalmers University of Technology. The title of the lecture notes is Low frequency modes associated with drift motions in inhomogeneous plasmas. The level is undergraduate to graduate. Basic knowledge of electrodynamics and continuum mechanics is necessary and an elementary course in Plasma Physics is a desirable background for the student. The author is grateful to A. Zagorodny, I. Holod, V Zasenkov, H. Nordman, A. Jarmén, R. Singh, P. Andersson, J.P. Mondt, H. Wilhelmsson, V.P. Pavlenko, H. Sanuki and C.S. Liu for many enlightening discussions, to G. Bateman, A. Kritiz and P. Strand for collaboration on transport simulation, to my collaborators at JET, J.Christiansen, P. Mantica, V. Naulin, T.Tala, K. Crombe, E. Asp and L. Garzotti in modelling JET discharges and to H.G. Gustavsson for help with proofreading. Thanks are also due to the American Institute of Physics, the American Physical Society and Nuclear Fusion for allowing the use of several figures. Finally I extend my gratitude to my family, Wivan, Henrik and Helena for their continuous encouragement and support.

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