

ON LOW-FREQUENCY ALFVÉN INSTABILITIES IN STELLARATORS

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S u m m a r y

A theory of low frequency Alfvén eigenmodes [the global Alfvén eigenmodes (GAE) and non-conventional global Alfvén eigenmodes (NGAE)] in stellarators is developed taking into account the plasma compressibility. It is found that the conditions of existence of GAE/NGAE modes in stellarators differ from those in tokamaks and that the geodesic acoustic mode (GAM) may not exist in stellarators. Specific calculations modeling low-frequency Alfvén instabilities in a Wendelstein 7-AS are carried out.