

Abstract for an Invited Paper
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Effects of magnetic dipolar interactions on collective modes and instabilities of alkali BECs

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In this talk I will review the phenomenon of roton softening in systems with dipolar interactions. Special emphasis will be on magnetic dipolar interactions in Bose condensates of alkali atoms, when fast Larmor precession and spin dynamics strongly modify the character of unstable modes. I will also discuss the enhancement of roton softening in multilayer stacks of two dimensional condensates. Implications of these theoretical results for recent experiments with Rb-87 and K-39 atoms will be discussed.