

Abstract Submitted  
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**Collective Excitations of a Two-Component Bose Condensate at Finite Temperature**<sup>1</sup> CHANG-HUA ZHANG, Indiana University-Purdue University Indianapolis, HERBERT A. FERTIG, Indiana University — We compare the collective modes for Bose-condensed systems with two degenerate components with and without intercomponent coherence at finite temperature using the time-dependent Hartree-Fock approximation. We show that the interaction between the condensate and non-condensate in these two cases results in qualitatively different collective excitation spectra. We show that at zero temperature the single-particle excitations of the incoherent Bose condensate can be probed by intercomponent excitations.

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