

Abstract Submitted  
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**Coupling single particle states to phonons in a microscopical framework** CARLO BARBIERI, TRIUMF, Theory Group — The coupling of single particles to collective excitations can be approached microscopically by applying the Faddeev equations technique to quasiparticles. In this formalism, particle-hole and particle-particle (hole-hole) phonons are treated at the RPA level and beyond. This talk will consider applications in nuclear physics (mostly for the nucleus of O-16) and briefly summarize results obtained for the strength function, one- and two-nucleon knock out and density of states. A recent development considers nucleon-nucleus scattering at astrophysical energies.

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