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Competition scenario in Raman and ARPES experiments in electron-doped cuprates BELEN VALENZUELA, ELENA BASCONES, Instituto de Ciencias Materiales de Madrid (CSIC) — Raman and ARPES experiments in the superconducting state of electron doped cuprates have shown deviations from the predictions of a monotonic d-wave superconducting gap. Two scenarios have been proposed to explain these experiments: a non-monotonic BCS gap on a large Fermi surface and a two band model due to the truncation of the Fermi surface by antiferromagnetic correlations. We calculate angle resolved photoemission spectrum and Raman signal in the superconducting phase using a two-band model where superconductivity and antiferromagnetism competes and compare our results with others theoretical scenarios. We also discuss the effect of the non-monotonicity of the gap on the tunneling experiments.

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