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Neutron Scattering in High-T_c Cuprates: Two Component Spin-Fermion Model[1] YUNKYU BANG, Chonnam National University — Recent neutron scattering experiments reveal that the generic form of the magnetic excitations in the high-Tc cuprates has the so-called "hour-glass" form, in which both the quasi-elastic incommensurate (IC) excitations and the commensurate resonance peak show up at different excitation energies. We propose the two-component spin-fermion model having the local spin degrees of freedom and itinerant fermions. Our calculations of the dynamic spin correlation function both at normal and superconducting states explain the essential features of the hour-glass form of the neutron experiments.

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