Representation of the C_{3v} group

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1 Introduction

The group of the permutation of 3 objects is isomorphic to the group of symmetries of the equilateral triangle, called C_{3v}.

- Self-consistent resolution of the spin-fermion model equations.
- Two-band framework.
- Two-branch parametrization of $\Im\chi(q,\omega)$
- Constraint C1: Fermi surface is supposed to be known, and kept fixed during iterations.
- Constraint C2: a broadening factor δ is added to the diagonal part of the self-energy, $\delta = 30\,\mathrm{meV}$.
- Constraint C3: the offdiagonal term of the Nambu matrix is assumed to be known, and kept equal to $\phi(k,\omega) = \Re Z_{A,B}(k,\omega=0)\Delta_k$ with $\Delta_k = \Delta_0(\cos k_x - \cos k_y$ and $\Delta_0 = 30\,\mathrm{meV}$.

2 Relaxation of the constraints

2.1 Broadening factor δ