

HIGH-K THREE-QUASIPARTICLE ROTATIONAL BANDS IN ^{171}Hf ¹

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High-spin states have been populated in ^{171}Hf with the $^{48}\text{Ca} + ^{128}\text{Te}$ reaction at 200 MeV. A three-quasiparticle strongly coupled rotational band has been established in ^{171}Hf which is built upon the known $K^\pi = 19/2^+$, 6.2 ns, isomeric state. In addition the strongly coupled band built upon the $K^\pi = 23/2^-$, 18 ns, isomeric state in ^{171}Hf has been extended to higher excitation energy. $(g_K - g_R)/Q_0$ values, determined from the $(\Delta I=1)/(\Delta I=2)$ branching ratios, have been used in combination with the aligned angular momentum to confirm the configuration assignments for each band. Three new γ -ray transitions have also been established in ^{171}Hf which link the $K^\pi = 19/2^+$, 6.2 ns, isomeric bandhead state directly into the yrast states. The reduced hindrance factors for these decays are discussed.

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