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James E Carter* (carterj@cofc.edu), Department of Mathematics, College of Charleston, 66 George Street, Charleston, SC 29424-0001. *Leopoldt and Hilbert-Speiser fields of given type.*

If F is a number field we denote by O_F its ring of integers. Let K be a number field and let G be a finite abelian group. Call K a Leopoldt field of type G if for every abelian extension L/K with Galois group isomorphic to G , O_L is free over the associated order $\mathcal{A}_{L/K}$. Call K a Hilbert-Speiser field of type G if every tamely ramified abelian extension L/K with Galois group isomorphic to G has a normal integral basis. We will show that if K is a quadratic field and G has order 2, then K is a Leopoldt field of type G if and only if K is a Hilbert-Speiser field of type G . (Received February 20, 2006)