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Schulze-Pillot, Rainer**Darstellung durch Spinorgeschlechter ternärer quadratischer Formen. (German. English summary)***J. Number Theory* **12** (1980), no. 4, 529–540.

A number a in an algebraic number field F is called a spinor exception of the lattice L on the quadratic F -space V if a is represented by the genus $\text{gen } L$, but not by all spinor genera in $\text{gen } L$. The author characterizes spinor exceptions of lattices L on ternary spaces V by the following conditions (see O. T. O'Meara's book [*Introduction to quadratic forms*, Academic Press, Berlin, 1963; [MR0152507 \(27 #2485\)](#)] for terminology): (1) $a \neq 0$; (2) $E = F(\sqrt{-adV})$ is a quadratic field extension; (3) $\theta(J_L) \subseteq N_{E/F}(J_E)$, where J_L and J_E are the idèle groups of L and E , respectively; (4) $\theta(L_{\mathfrak{p}}, a) = N_{\mathfrak{p}}(E_{\mathfrak{p}}^*)$ for all finite prime spots \mathfrak{p} of F and $\mathfrak{P}|\mathfrak{p}$. The first three conditions are known to be necessary [see J. S. Hsia, *Pacific J. Math.* **63** (1976), no. 1, 147–152; [MR0424685 \(54 #12644\)](#)]. The subgroups $\theta(L_{\mathfrak{p}}, a) \leq F_{\mathfrak{p}}^*$ are generated by all square classes which are spinor norms of some $\varphi \in \mathcal{O}^+(V_{\mathfrak{p}})$, such that $L_{\mathfrak{p}} \cap \varphi(L_{\mathfrak{p}})$ represents a . Condition (4) is calculated in terms of invariants of L for all odd and 2-adic primes \mathfrak{p} . In some examples—based on a table of B. W. Jones and G. Pall [*Acta Math.* **70** (1939), 165–191; *Zbl* **20**, 107]—spinor exceptions are explicitly determined.

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