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**Sharon Brueggeman\*** (Sharon-Brueggeman@utc.edu) and **Darrin Doud**. *Local corrections of discriminant bounds and  $S_n$ -extensions of quadratic base fields*. Preliminary report.

The discriminant bounds developed by Serre, Odlyzko and others are often used to predict the nonexistence of certain number field extensions with ramification at only one small prime. In the interest of getting good asymptotic formulas, local data are omitted from the bounds. But for low degree extensions, the effect of including this local data is significant. We describe some of these bounds and apply them to get new nonexistence results. (Received September 28, 2005)