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Thomas Philip Wakefield* (TomWakefield@gmail.com), Department of Mathematics, Slippery Rock University, Slippery Rock, PA 16057. *Verifying Huppert's Conjecture for ${}^2G_2(q^2)$.*

In the late 1990s, Bertram Huppert conjectured that if G is a finite group and H a finite nonabelian simple group such that the set of character degrees of G and H are the same, then $G \cong H \times A$, where A is an abelian group.

Huppert verified the conjecture for many nonabelian simple groups, including some of the simple groups of Lie type. His method of proof relies upon a five step procedure which ultimately requires properties of the character degrees and maximal subgroups of the simple group in question. We will examine the verification of Huppert's Conjecture for the family of simple groups ${}^2G_2(q^2)$, with $q^2 = 3^{2m+1}$, $m \geq 1$. (Received September 04, 2008)