Jeffrey D. Achter* (j.achter@colostate.edu), Department of Mathematics, Colorado State University, Fort Collins, CO 80523-1874. Split reductions of simple abelian varieties. Preliminary report.

Let X/K be an absolutely simple abelian variety over a number field. Murty and Patankar conjecture that whether or not almost all reductions X_p are simple depends only on whether the absolute endomorphism ring $\operatorname{End}_{\overline{K}}(X)$ is commutative. I'll explain a proof of much of this conjecture, together with an effective upper bound for the number of primes of non-simple reduction. More generally, I'll discuss relations between $\operatorname{End}(X)$ and $\operatorname{End}(X_p)$. (Received August 08, 2008)