1086-14-995 **Douglas A Torrance*** (torrance@vandals.uidaho.edu), Department of Mathematics, University of Idaho, 300 Brink Hall, Moscow, ID 83844. *Nondefective secant varieties of split varieties.* Preliminary report.

Suppose $\mathbb{k}$ is an algebraically closed field and $R = \mathbb{k}[x_0, \ldots, x_n]$. For a fixed d, the split variety, or variety of completely decomposable forms, consists of all points in $\mathbb{P}R_d$ which correspond to polynomials that are the product of d linear factors.

For every s distinct points lying on this variety, there is an (s-1)-plane containing them. We define the closure of the union of all these (s-1)-planes as the secant variety. We expect that the secant variety of a split variety will either fill up the projective space or have dimension $s(dn + 1)$. In this case, the secant variety is said to be nondefective. Otherwise, it is said to be defective.

It is conjectured that the secant variety to a split variety will be defective if and only if $d = 2$ and $2 \leq s \leq n/2$. It remains to show that the remaining cases are nondefective. We provide a partial proof of this conjecture, for $s \leq 15$. (Received September 17, 2012)