1074-05-159 **Michael Young*** (myoung@iastate.edu) and **Lale Ozkahya**. *Anti-Ramsey number of matchings in hypergraphs.*

A k-matching in a hypergraph is a set of k edges such that no two of these edges intersect. The anti-Ramsey number of a k-matching in a complete s-uniform hypergraph, $\mathcal{H}$, on n vertices, $ar(n,s,k)$, is the smallest integer c, such that in any coloring of the edges of $\mathcal{H}$ with exactly c colors, $\mathcal{H}$ will contain a k-matching such that each edge of the matching has a distinct color. The Turán number, $ex(n,s,k)$, is the maximum number of edges in an s-uniform hypergraph on n vertices with no k-matching. It is known that for $n > 2k$, $ar(n,2,k) = ex(n,2,k-1)+2$ and for $n = 2k$, $ar(n,2,k) = \begin{cases} ex(n,2,k-1)+2 & \text{if } k < 7 \\ ex(n,2,k-1)+3 & \text{if } k \geq 7. \end{cases}$ We conjecture, for $k \geq 2$, if $n > sk$, $ar(n,s,k) = ex(n,s,k-1)+2$ and if $n = sk$, $ar(n,s,k) = \begin{cases} ex(n,s,k-1)+2 & \text{if } k < c_s \\ ex(n,s,k-1)+s+1 & \text{if } k \geq c_s \end{cases}$,where c_s is a constant dependent on s. We prove this conjecture for $k = 2, k = 3$, and sufficiently large n, as well as provide upper and lower bounds. (Received August 19, 2011)