1025-05-153   **Andre Kundgen***, Department of Mathematics, California State University San Marcos, San Marcos, CA 92096, and **Sebastian M. Cioaba**, Department of Mathematics, University of California San Diego, La Jolla, CA 92093. *Covering complete hypergraphs with cuts of minimum total size.*

The cut induced by a set of vertices X in a hypergraph H is the set of all edges which meet both X and its complement. This cut is called *stable* if X is an independent set in H. Let $s_r(n)$ denote the minimum total size of any cover of the edges of the complete r-uniform hypergraph on n vertices with cuts.

We show that there is a number n_r so that for all $n > n_r$, $s_r(n)$ is uniquely achieved by a cover with $\lfloor \frac{n-1}{r-1} \rfloor$ stable cuts, so that $s_r(n) = (r + o(1))\binom{n}{r}$. We also show that $c_1 r 2^r < n_r < c_2 r^4 2^r$. (Received January 22, 2007)