1080-05-244 **Edward Boehnlein** and **Tao Jiang*** (jiangt@muohio.edu), Department of Mathematics, Miami University, Oxford, OH 45056. *Set families with a forbidden induced subposet.*

Sperner's Theorem asserts that the largest antichain in a Boolean lattice B_n has size $\binom{n}{\lfloor n/2 \rfloor}$. Recently, Bukh proved a substantial asymptotic extension of Sperner's theorem by proving that for any poset H whose Hasse diagram is a tree of height k, the largest size of a subfamily of B_n not containing H as a subposet (as a function of n) is asymptotic to $(k-1)\binom{n}{\lfloor n/2 \rfloor}$. When H is the poset consisting of three elements a, b, c with $a \leq b, a \leq c$, Carroll and Katona were able to establish an induced version of Bukh's result. Here, we establish an induced version of Bukh's result for all posets H whose Hasse diagram is a tree. We show that for any poset H whose Hasse diagram is a tree of height k, the largest size of a subfamily of B_n not containing H as an induced subposet is asymptotic to $(k-1)\binom{n}{\lfloor n/2 \rfloor}$. (Received January 28, 2012)