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Carolina, Columbia, SC 29208. On families of subsets with a forbidden subposet.

Let $\mathcal{F} \subset 2^{[n]}$ be a family of subsets of $[n] = \{1, 2, ..., n\}$. For any poset H, we say \mathcal{F} is H-free if \mathcal{F} does not contain any subposet isomorphic to H. For a fixed poset H, let $\operatorname{La}(n, H)$ be the maximum size of H-free families $\mathcal{F} \subset 2^{[n]}$. We give bounds on $\operatorname{La}(n, H)$ in terms of H. (Received August 07, 2007)