1125-05-420 **Ronald J. Gould*** (rg@mathcs.emory.edu), Dept. Math and Computer Science, Emory University, Atlanta, GA 30322. *On Saturation Spectrum.*

Given graphs G and H, we say that G is H-saturated if G does not contain a copy of H as a subgraph, but the addition of any edge $e \notin E(G)$ produces at least one copy of H in $G \cup e$. Given a positive integer n, the saturation number, $sat(n, H)$, is the minimum number of edges in an H-saturated graph on n vertices. Of course, the well studied extremal number, $ext(n, H)$ is the maximum number of edges in an H saturated graph on n vertices. One question is now obvious: For what values of m, $sat(n, H) \leq m \leq ext(n, H)$ does there exist an H-saturated graph of order n with m edges? The set of all such values is called the saturation spectrum of H. In this talk we will explore this question for several families of graphs. (Received September 01, 2016)