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**Debra L. Boutin** (dboutin@hamilton.edu), **Priyadarshini Das** (pdas@ouray.cudenver.edu) and **Ellen Gethner\*** (ellen.gethner@cudenver.edu). *Thickness-Two Graphs: New Approaches and Generalizations*. Preliminary report.

A nonplanar graph  $G$  is said to have *thickness-two* if it can be decomposed into two edge disjoint planar subgraphs. It is well known that the largest chromatic number of a thickness-two graph is  $n$  where  $n \in \{9, 10, 11, 12\}$ . We discuss some nonstandard methods for (potentially) reducing the number of choices for  $n$  and present new high chromatic thickness-two graphs. Moreover, a thickness-two graph  $G$  is said to be *doubly linear* (or to have *geometric thickness-two*) if there is a decomposition of  $G$  into two edge disjoint planar layers for which the edges are line segments and the locations of the vertices are the same in each layer. We generalize the notion of doubly linear and report on our findings. (Received September 27, 2005)