1046-05-880 **Michael D Barrus*** (mbarrus2@illinois.edu), Department of Mathematics, University of Illinois, Urbana, IL 61801, and **Douglas B West** (west@math.uiuc.edu), Department of Mathematics, University of Illinois, Urbana, IL 61801-2975. *On A_4-balanced graphs.*

The A_4-structure of a graph G is the 4-uniform hypergraph H on $V(G)$ whose edges consist of vertex subsets inducing $2K_2$, C_4, or P_4 in G. We define G to be A_4-balanced if the vertices of G may be partitioned into two subsets such that each hyperedge in H has two vertices in each subset; thus the class of A_4-balanced graphs contains all graphs which have the same A_4-structure as a split or bipartite graph. We survey results on A_4-balanced graphs and the similarly defined P_4-balanced graphs and give characterizations of the A_4-split and A_4-bipartite graphs. (Received September 12, 2008)