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**Paul Wrayno\*** (pwrapno@emory.edu), Dept. of Mathematics and CS, Emory University, 400 Dowman Dr., W401, Atlanta, GA 30322, and **Ronald J. Gould**. *Edges in 2-factor Isomorphic Graphs*.

A graph  $G$  is considered 2-factor isomorphic if it contains a 2-factor  $F$ , and all other 2-factors are isomorphic to  $F$ . Alternatively, when a 2-factor is viewed as a multiset of unlabeled cycles, copies of  $F$  are the only 2-factors in  $G$ . Faudree, Gould, and Jacobson give a formula and a construction for the maximum number of edges for 2-factor hamiltonian graphs as a function of  $|V(G)|$ . In this talk we will generalize this result to any chosen 2-factor, any 2-factor with a fixed number of cycles, and any unspecified 2-factor. Constructions of graphs that attain these bounds will also be given. (Received September 16, 2010)