1125-05-504 **Robert Aldred** and **Michael D. Plummer*** (`michael.d.plummer@vanderbilt.edu`), Vanderbilt University, Nashville, TN 37240. *Matching extension in prism graphs.*

If G is any graph, the *prism graph* of G, denoted $P(G)$, is the cartesian product of G with a single edge, or equivalently, the graph obtained by taking two copies of G, say G_1 and G_2, with the same vertex labelings and joining each vertex of G_1 to the vertex of G_2 having the same label by an edge. A connected graph G has property $E(m,n)$ (or more briefly "G is $E(m,n)$") if for every pair of disjoint matchings M and N in G with $|M| = m$ and $|N| = n$ respectively, there is a perfect matching F in G such that $M \subseteq F$ and $N \cap F = \emptyset$. A graph which has the $E(m,0)$ property is also said to be *m-extendable*. In this paper, we begin the study of the $E(m,n)$ properties of the prism graph $P(G)$ when G is an arbitrary graph as well as the more special situations when, in addition, G is bipartite or bicritical. (Received September 04, 2016)