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*A characterization of 1-cycle resonant graphs among bipartite 2-connected plane graphs*

A graph  $G$  is said to be *1-cycle resonant* if the graph  $G$  contains a cycle and every cycle in  $G$  is alternating. It is proved that a bipartite 2-connected plane graph  $G$  in which the common boundary of adjacent faces is a simple curve is 1-cycle resonant if and only if the outer face of  $G$  is alternating and each inner vertex has degree two.