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Güven Yuceturk* (güven@westga.edu) and **Dean G. Hoffman**. *Parity Balanced Bipartite Graphs*.

Let $a, b \in \mathbb{P}$ and $e \in \mathbb{N}$, and let $\epsilon_a, \epsilon_b \in \{0, 1\}$. We say the *bipartite graph* G on bipartition (A, B) , where $|A| = a$ and $|B| = b$, is *parity balanced* with parameters $(a, b, e, \epsilon_a, \epsilon_b)$ if

$\forall u \in A, \deg(u) \equiv \epsilon_a \pmod{2}$, and further $\forall v \in A, |\deg(u) - \deg(v)| \leq 2$,

$\forall u \in B, \deg(u) \equiv \epsilon_b \pmod{2}$, and further $\forall v \in B, |\deg(u) - \deg(v)| \leq 2$.

We will give necessary and sufficient conditions for existence of such graphs. (Received September 22, 2011)