1046-05-481 **Hong-Jian Lai**, **Liming Xiong** and **Huiya Yan*** (hyan@math.wvu.edu), 320 Armstrong Hall, Dept. of Math, West Virginia University, Morgantown, WV 26506. *Bounded number of components of 2-factors in line graphs.*

A 2-factor is a 2-regular spanning subgraph of a graph G. A lot of results on the components of a 2-factor in G have appeared by studying the conditions on the minimum degree of the graph G. In this paper we avoid studying the minimum degree and get the following: if $\max\{d(x), d(y)\} \geq \dfrac{n-\mu}{p} - 1$ holds for any $xy \notin E(G)$ and $|U| \neq 2$, where $U = \{v : d(v) < \frac{n-\mu}{p} - 1\}$, $p \geq 2$ and μ are two positive integers, then for n sufficiently large relative to p and μ, $L(G)$ has a 2-factor with at most $p+1$ components. Moreover, $L(G)$ has a 2-factor with at most p components if $|U| \leq 1$. This result is best possible. Especially, it extends a result saying that if $\delta(G) \geq \dfrac{n}{p} - 1$, i.e., $U = \emptyset$, then $L(G)$ has a 2-factor with at most p components. We also show the graphs above are $(p+2)$-supereulerian, i.e., have a spanning even subgraph with at most $p+2$ components. (Received September 04, 2008)