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Jincheng Jiang, Hsinchu, Taiwan 30013, Taiwan, **Shuanglin Shao***, 1460 Jayhawk Blvd, Lawrence, KS 66045, and **Betsy Stovall**, Madison, WI. *Linear profile decompositions for a family of fourth order Schrödinger equations.*

We establish a linear profile decomposition for the fourth order Schrodinger equations. The proof relies on a refined Strichartz inequality. We also give an application establishing a dichotomy result on the extremal problem of the Strichartz inequality for the fourth order Schrodinger equation. (Received January 19, 2015)