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Qing Hong, Guozhen Lu and Lu Zhang* (luzhang.math@gmail.com). *L^p estimates for some rough bi-parameter Fourier integral operators.*

We mainly study the L^p estimates for some rough bi-parameter Fourier integral operators. Such operators are motivated by the classical one-parameter FIOs. We first define the bi-parameter FIOs with both the non-smooth amplitude functions $a(x, \xi, \eta) \in L^\infty BS_\rho^m$, and the phase functions $\varphi(x, \xi) \in L^\infty \phi^2$ which satisfy a rough non-degeneracy condition. Then we establish their L^p boundedness properties when $1 \leq p \leq \infty$. (Received January 17, 2016)