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Maxim Gilula*, 619 Red Cedar Rd, East Lansing, MI 48824. *Oscillatory Loomis-Whitney*. Preliminary report.

I will discuss recent progress on multilinear oscillatory integral operator estimates. Significant progress in higher dimensions was made by Phong-Stein-Sturm for the case where the operator, L , acts on a tensor product of L_p functions of one variable for a certain range of p 's, where the phase function is any polynomial. Christ-Li-Tao-Thiele showed that for a large family of phases, L decays in the oscillatory variable for much more general inputs than tensor products of L_p functions. Recent progress by Xiaochun Li has reawakened interest in these operators in the case that the input functions have variables in common. I will discuss recent progress in the Loomis-Whitney case (inputs of L are functions $f_i(x_1, \dots, x_{i-1}, x_{i+1}, \dots, x_d)$ – please pardon the abuse of notation) with an oscillatory factor. This research is based off of unpublished work of Gressman-Xiao. (Received September 24, 2018)