1054-58-45 **Gilles Halbout** (`halbout@@math.univ-montp2.fr`), CC5149, Place Eugène Bataillon, Montpellier, France, and **Xiang Tang*** (`xtang@math.wustl.edu`), 1 brookings drive, St. Louis, MO 63130. *Dunkl operator and quantization of $\mathbb{Z}_2$-singularity.* Preliminary report.

Let (X, ω) be a symplectic orbifold which is locally like the quotient of a $\mathbb{Z}_2$ action on $\mathbb{R}^n$. Let $A_X^{((\hbar))}$ be a deformation quantization of X constructed via the standard Fedosov method with characteristic class being ω. In this paper, we construct a universal deformation of the algebra $A_X^{((\hbar))}$ parametrized by codimension 2 components of the associated inertia orbifold $\widetilde{X}$. This partially confirms a conjecture of Dolgushev and Etingof in the case of $\mathbb{Z}_2$ orbifolds. To do so, we generalize the interpretation of Moyal star-product as a composition of symbol of pseudodifferential operators in the case where partial derivatives are replaced with Dunkl operators. The star-products we obtain can be seen as globalizations of symplectic reflection algebras. (Received August 26, 2009)