1131-13-166 **Saeed Nasseh**, **Sean Sather-Wagstaff*** (ssather@clemson.edu), **Ryo Takahashi** and **Keller VandeBogert**. *Semidualizing modules give a defective Gorenstein defect.* Preliminary report.

One can argue that the number $s_0(R)$ of isomorphism classes of semidualizing modules over a local, complete, Cohen-Macaulay ring R is a good measure of the severity of the singularity of R, namely, how far R is from being Gorenstein. (Here a finitely generated R-module C is *semidualizing* provided that $\mathrm{Hom}_R(C,C) \cong R$ and $\mathrm{Ext}^{\geqslant 1}_R(C,C) = 0$.) For instance, one always has $s_0(R) \geq 1$, with equality holding if and only if R is Gorenstein. However, in this talk, we will exhibit such a ring R with $\dim(R) = 1$ such that $s_0(R_{\mathfrak{p}}) > s_0(R)$ for some prime ideal $\mathfrak{p}$. In other words, this invariant suggests that the singularity can get worse under localization, which is undesirable behavior for such an invariant. (Received July 12, 2017)