999-13-136 **Sean M. Sather-Wagstaff*** (`swagstaff@math.unl.edu`), Department of Mathematics, University of Nebraska, 203 Avery Hall, Lincoln, NE 68588-0130. *Semidualizing modules.* Preliminary report.

A finitely generated module C over a Noetherian ring R is semidualizing if the natural homothety homomorphism $R \to \mathrm{Hom}_R(C, C)$ is bijective and $\mathrm{Ext}^i_R(C, C) = 0$ for each $i > 0$. The set of isomorphism classes of such modules is denoted $\mathfrak{S}_0(R)$. We will describe basic properties of these modules, our motivation for their study, some open questions about the structure of $\mathfrak{S}_0(R)$, and some recent progress on these questions. (Received August 19, 2004)