

DESCENT OF SEMIDUALIZING COMPLEXES

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Semidualizing complexes arise in the study of local homomorphisms of finite Gorenstein dimension. For instance, the dualizing complex of a local ring homomorphism of finite Gorenstein dimension yields an ascent-descent result for the Gorenstein property. The ascent behavior of semidualizing complexes under completion is well understood; descent is more mysterious. For instance, an example of Ogoma shows that there exists a ring R such that the dualizing complex of \hat{R} does not descend to R . In this talk we will describe conditions under which every semidualizing \hat{R} -complex descends to R . This is joint work with L.W. Christensen.