THE GRADED CENTERS OF DERIVED DISCRETE ALGEBRAS

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Recently a growing interest is attracted by graded centers of triangulated categories. In the talk we describe a structure of the graded centers for the derived categories of the derived discrete algebras. In particular, we prove that the reduced part of the graded center of the derived category is nontrivial for a derived discrete algebra if the only if the global dimension of this algebra is infinite. Moreover, we also show that the nilpotent parts of the graded centers for the derived discrete algebras is controlled by the Calabi-Yau objects (i.e., the objects for which the Auslander-Reiten translation coincides with a power of the suspension functor).