Smashing subcategories generated by partial silting objects

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Silting objects in triangulated categories were introduced by Aihara-Iyama to complete tilting theory from the viewpoint of mutation. For this purpose, silting objects are usually asked to be small in a suitable way. In recent years, several authors also started studying large silting objects showing that such objects are useful to parametrise certain torsion pairs. In this talk, we will focus on partial silting objects in sufficiently nice triangulated categories with coproducts, and study the torsion pairs associated with them. Such partial silting objects generate smashing subcategories of our triangulated category and we will show that for derived module categories, every compactly generated smashing subcategory arises in this way.

This talk is based on work in progress with Lidia Angeleri Hügel and Jorge Vitória.