

Geometric and algebraic relations for Weinstein domains

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I will discuss some connections between the geometric presentation of a Weinstein domain and the algebraic presentation of its wrapped Fukaya category. In recent work, it has been shown that the Lagrangian cocores of the critical handles generate this category. We will show that subcritical handles give relations in the wrapped Fukaya category between these cocores and produce a surjective map from singular cohomology to the Grothendieck group of this category. We also interpret Thomason's theorem about subgroups of the Grothendieck group in terms of symplectic flexibility and produce exotic Weinstein presentations for the same Weinstein domain, for example different Legendrians in the standard contact sphere so that Weinstein handle attachment results in the standard cotangent bundle of a sphere.

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