

The Gamma Conjecture in mirror symmetry relates central charges of dual objects. Mathematically, periods of a Lagrangian submanifold are related to characteristic classes of the mirror coherent sheaf. In this talk, I will test the Gamma Conjecture in the setting of local mirror symmetry. For a given coherent sheaf on the canonical bundle of a smooth toric surface, I will identify a 3-cycle in the mirror using tropical geometry by comparing its period with the central charge of the coherent sheaf through the Gamma Conjecture. If time permits, I will also discuss about the higher dimensional case. This work is based on Ruddat and Siebert's work on the period computation and is inspired by Abouzaid, Ganatra, Iritani and Sheridan's work on the Gamma Conjecture.