

Bridgeland stability manifolds of Calabi-Yau categories are of noticeable interest both in mathematics and in physics. By looking at some of the known examples, a pattern clearly emerges and gives a fairly precise description of how they look like. In particular, they all seem to have missing loci, which tend to correspond to degenerate stability conditions vanishing on spherical objects. Describing such missing strata is also interesting from a mirror-symmetric perspective, as they conjecturally parametrize interesting types of degenerations of complex structures. All the naive attempts at constructing modular partial compactifications show how elusive and subtle the problem in fact is: ideally, the missing strata would correspond to stability manifolds of quotient triangulated categories, but establishing such correspondence on geometric level and viewing stability conditions on quotients of the original triangulated category as suitable degenerations of stability conditions is not straightforward. In this talk, I will present a method to construct such partial compactifications if some additional hypotheses are satisfied, by realizing our space of interest as a suitable metric completion of the stability manifold.