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Compactification of moduli of polarized abelian varieties.

I will discuss the compactification problem for the moduli space of polarized abelian varieties. In general, we know how to compactify the moduli space of pairs consisting of a Calabi-Yau variety and an ample divisor, the so called KSBA stable pairs. But this does NOT give a compactification of the moduli space of the underlying Calabi-Yau varieties, since the degeneration of a family of polarized Calabi-Yau varieties depends on the choice of divisors. However, for a family of polarized abelian varieties, there is a canonical set of divisors that gives a canonical degeneration of the abelian varieties. This is because the degeneration only depends on some tropical data, and any choice of a divisor from this canonical set gives the same tropical data. I will explain how to get this canonical set of divisors. If time permitted, I will also explain how the existence of this canonical set is predicted by mirror symmetry. (Received January 07, 2016)