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Conical asymptotics for conformally balanced and HYM metrics

Motivated by the Chern-Strominger system and conifold transitions, we will discuss a conical asymptotics theorem for conformally balanced metrics near the vertex of a regular Calabi-Yau cone of complex dimension three. Under scale-invariant regularity bounds, and decay of $\partial\bar{\partial}\omega$, we obtain a unique asymptotic Calabi-Yau cone metric with a positive rate of convergence. For non-flat cones, we also establish compatible asymptotics for Hermitian-Yang-Mills metrics on the holomorphic tangent bundle.