The local volume of a klt singularity, introduced by Chi Li, is an invariant that encodes interesting algebraic, geometric, and topological information. Conjecturally, if the coefficient set is finite (resp. DCC), the local volume in a fixed dimension is discrete away from zero (resp. ACC). We verify this conjecture in the following three settings: dimension 2, dimension 3 terminal with no boundary divisors, or analytically bounded germs. We also investigate the relation between local volumes and the existence of δ-plt blow-ups. This talk is based on joint work in progress with Jingjun Han and Lu Qi. (Received August 10, 2020)