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Geometric transitions through singular subfamilies in toric varieties

(Joined work with Charles F. Doran.) We present an explicit geometric transition between Calabi-Yau threefolds realized as anticanonical hypersurfaces and complete intersections in toric varieties, where the role of the singular variety in the geometric transition is played by a generically singular subfamily of hypersurfaces. The involved families of Calabi-Yau varieties may lead to a representative for the last class in Doran-Morgan classification of variations of Hodge structure associated to one-parameter families of Calabi-Yau threefolds. In the exploration of this example we have extensively used the newly developed framework for toric geometry in Sage.