

Gluing theory for slc surfaces and threefolds in positive characteristic

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Abstract. We develop a gluing theory in the sense of Kollár for slc surfaces and threefolds in positive characteristic. For surfaces we are able to deal with every positive characteristic p , while for threefolds we assume that $p > 5$. Along the way we study nodes in characteristic 2 and establish a theory of sources and springs *à la* Kollár for threefolds. We also give applications to the topology of lc centers on slc threefolds, and to the projectivity of the moduli space of stable surfaces in characteristic $p > 5$.

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