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Julie Rana* (rana@math.umass.edu). *Boundary Divisors in the Moduli Space of Stable Quintic Surfaces*. Preliminary report.

The moduli space of minimal surfaces of general type with fixed invariants admits a well-known compactification, the moduli space of stable surfaces, introduced by Kollár-Shepherd-Barron and Alexeev. Here, stable surfaces are connected projective surfaces with ample canonical class and semi log canonical singularities. There are two natural loci in this moduli space which are Cartier divisors if certain conditions are met. One of these corresponds to normal surfaces which have a unique Wahl singularity. A different set of expected boundary divisors corresponds to surfaces with orbifold normal crossings with some conditions on the orbifold normal bundle. We discuss these surfaces in the case of stable quintics. (Received September 03, 2012)