1125-14-2210 **Luca Schaffler***, Department of Mathematics, The University of Georgia, 1023 D. W. Brooks Drive, Athens, GA 30602. *The KSBA compactification of the moduli space of $D_{1,6}$-polarized Enriques surfaces.*

We describe the moduli compactification by stable pairs of a 4-dimensional family of Enriques surfaces, which arise as the $\mathbb{Z}_2^2$-cover of the blow up of $\mathbb{P}^2$ at three general points branched along a configuration of six lines. The divisor is chosen to be an appropriate multiple of the ramification locus. We study the degenerations parametrized by the boundary, its stratification, and we construct a morphism from this compactification to the Baily-Borel compactification of the same 4-dimensional family of Enriques surfaces. The boundary of the compactification obtained using stable pairs turns out to be respectively toroidal, Baily-Borel and a mixture of these two in a neighborhood of the preimage of the three 0-cusps of the Baily-Borel compactification. The toroidal part of the boundary has a combinatorial interpretation in terms of certain polyhedral subdivisions of the unit cube. (Received September 19, 2016)