Cohomology of the moduli space of degree two Enriques surfaces

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Abstract. We compute the intersection Betti numbers of the GIT model of the moduli space of numerically polarized Enriques surfaces of degree 2. The strategy of the cohomological calculation relies on a general method developed by Kirwan to compute the cohomology of GIT quotients of projective varieties, based on the equivariantly perfect stratification of the unstable points studied by Hesselink and others and a partial resolution of singularities, called Kirwan blow-up.

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