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*Character Formulas on Cohomology of Deformations of Hilbert Schemes of K3 Surfaces.*

Let  $X$  be a Kaehler deformation of the Hilbert scheme of  $n$  points on a K3 surface. We compute the graded character formula of the generic Mumford-Tate group representation on the cohomology ring of  $X$ . Also, we derive a generating series for deducing the number of canonical Hodge classes of degree  $2n$ . (Received February 11, 2013)