NON-THIN RATIONAL POINTS FOR DOUBLY ELLIPTIC K3 SURFACES

DAMIA´N GVIRTZ

We prove that elliptic K3 surfaces over a number field which admit a second elliptic fibration satisfy the potential Hilbert property. Equivalently, the set of their rational points is not thin after a finite extension of the base field. Furthermore, we classify those families of elliptic K3 surfaces over an algebraically closed field which do not admit a second elliptic fibration. The proof methods ultimately rely on understanding the fundamental group of certain open K3 surfaces. Joint work with G. Mezzedimi.