Asher Auel* (asher.auel@yale.edu), Yale University, 10 Hillhouse Ave, New Haven, CT 06511.

Curves and Brauer classes on K3 surfaces associated with cubic fourfolds. Preliminary report.

We study K3 surfaces associated with cubic fourfolds containing special cycles over number fields. These can give rise to prime period Brauer classes on isogenous K3 surfaces, as well as families of algebraic curves that have applications to the arithmetic of moduli spaces of curves. (Received January 28, 2014)