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Joshua Zahl* (jzahl@zahl.ca). *A variable coefficient Wolff circular maximal function.*

We consider a variable coefficient generalization of the Wolff circular maximal function. In 1997, Thomas Wolff proved sharp L^3 bounds for the Wolff circular maximal function, which takes maximal averages over circles with a prescribed radius and arbitrary center. We prove the same bounds for a variable coefficient version in which circles are replaced by curves satisfying the *cinematic curvature condition*, which was first introduced by Sogge. Our proof makes use of the discrete polynomial ham sandwich theorem of Guth and Katz, and our techniques also provide a shorter proof of Wolff's original result. (Received August 16, 2011)