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**Alex Iosevich\*** (iosevich@gmail.com), 5008 Forum Blvd., Columbia, MO 65203. *Sum/Product theorems in finite fields via Kloosterman sums*.

Let  $A \subset \mathbb{Z}_q$ , the cyclic group with  $q$  elements,  $q$  prime. Bourgain, Katz and Tao proved that if  $|A| \leq Cq^{1-\epsilon}$ ,  $\epsilon > 0$ , there exists  $\delta > 0$  such that  $\max\{|A \cdot A|, |A + A|\} \geq C'|A|^{1+\delta}$ . We prove an "effective" version of this theorem which, for example, implies that if  $|A| \approx q^{15/22}$ , then  $\max\{|A \cdot A|, |A + A|\} \geq C'|A|^{16/22}$ . Our main tools are additive combinatorics and sharp bounds for Kloosterman type sums.

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