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Adriana Salerno*, asalerno@bates.edu, and **Ursula Whitcher**. *Clausen's formula and high Picard rank K3 surfaces.*

Clausen's formula is a classical identity characterizing certain hypergeometric series as squares of other hypergeometric series. Evans-Greene and Fuselier-Long-Ramakrishna-Swisher-Tu have described finite field analogues of this identity. Clausen's formula also arises in the context of Picard-Fuchs equations satisfied by holomorphic forms on geometrically natural one-parameter families of K3 surfaces. We discuss the implications for point counting on such K3 surfaces over finite fields. (Received September 15, 2020)