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Jeremy Schwend* (jschwend@math.wisc.edu), 2921 Fish Hatchery Rd Apt 214, Fitchburg, WI 53713. *Optimal $L^p \rightarrow L^q$ Estimates for Euclidean Averages Over Prototypical Hypersurfaces in \mathbb{R}^3 .*

We find the precise range of $(\frac{1}{p}, \frac{1}{q})$ for which local averages along graphs of a class of two-variable polynomials in \mathbb{R}^3 are bounded (at least in the restricted-weak sense) from L^p to L^q , given the hypersurfaces have Euclidean measure. We derive these results using positive, geometric methods, for a model class of polynomials bearing a strong connection to the general real-analytic case. (Received September 25, 2018)