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Enrique Trevino* (enrique.trevino@dartmouth.edu), 6188 Kemeny Hall, Dartmouth College, Hanover, NH 03755. *The Smoothed Pólya-Vinogradov Inequality and some Applications*. Preliminary report.

Let χ be a non-principal character to the modulus q . Let M and N be integers. The Pólya-Vinogradov inequality $\left| \sum_{a=M+1}^N \chi(a) \right| \leq cq^{1/2} \log q$, has been a very useful tool in number theory estimates. In a recent paper, Levin, Pomerance and Soundararajan use a modified version of this inequality for primitive characters which they call “Smoothed Pólya-Vinogradov”. The smoothed version is convenient for numerical estimates. They use it to solve a conjecture of Brizolis. In this talk we’ll talk about the smoothed inequality and give more applications. (Received September 10, 2010)