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Qiyu Sun* (matsunqy@yahoo.com.sg), Department of Mathematics, University of Houston, TX 77204, Manos Papadakias (mpapadak@math.uh.edu), Department of Mathematics, University of Houston, Houston, TX 77204-3008, Zhemin Tan (zhemintan@yahoo.com), Department of Physics, University of Houston, Houston, TX 77204-5003, Donald K. Kouri (kouri@uh.edu), Department of Chemistry, Department of Physics, University of Houston, Houston, TX 77204-5003, Donald K. Kouri (kouri@uh.edu), Department of Chemistry, Department of Physics, University of Houston, Houston, TX 77204-5003, David J. Hoffman, Department of Chemistry and Ames Laboratory, Iowa State University, Ames, IA 50011, and Ioannis A. Kakadiaris, Department of Computer Science, MS CSC 3010, University of Houston, Houston, TX 77204-3010. Symmetric Univariate QM Filters with Gaussian Decay II. Preliminary report.

We introduce a new class of scaling functions with Gaussian decay in the spatial domain, and study various properties of those scaling functions such as smoothness, uniform stability, dacay at infinity, and approximation to the Sinc function.

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