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Amalia Culiuc* (amalia@math.gatech.edu), Georgia Tech Mathematics Department, 686
Cherry St NW, Atlanta, GA 30308. *Two weight estimates with matrix measures for well-localized
operators.*

We discuss two weight estimates for well localized operators acting on vector-valued function spaces with matrix weights. We will show that the Sawyer-type testing conditions are necessary and sufficient for the boundedness of this class of operators, which includes Haar shifts and their various generalizations. More explicitly, we will show that it is sufficient to check the estimates of the operator and its adjoint only on characteristic functions of cubes. This result generalizes the work of Nazarov-Treil-Volberg in the scalar setting and is joint work with K. Bickel, S. Treil, and B. Wick. (Received August 27, 2016)