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Muckenhoupt-Wheeden conjectures for sparse operators.

We provide an example of a pair of weights (u, v) for which the Hardy-Littlewood maximal function is bounded from $L^p(v)$ to $L^p(u)$ and from $L^{p'}(u^{1-p'})$ to $L^{p'}(v^{1-p'})$ while a dyadic sparse operator is not bounded on the same domain and range. Our construction also provides an example of a single weight for which the weak-type endpoint does not hold for sparse operators. (Received September 06, 2016)