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)