1062-26-174Armen Vagharshakyan* (armenv@math.gatech.edu). Recovering Singular Integrals from Haar
Shifts.

We recover one-dimensional Calderon-Zygmund convolution operators with sufficiently smooth kernels by means of a properly chosen averaging of certain dyadic shift operators. This extends the result of S. Petermichl on restoring the Hilbert transform via dyadic shift operators. As a corollary, a sharp A_2 inequality for the corresponding Calderon-Zygmund operators is derived from a corresponding inequality for dyadic shift operators. (Received August 06, 2010)