SQUID-based Multiplexing by Slope Switching
and Binary-to-Hadamard Address Translation

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Abstract - We have demonstrated multiplexing and demultiplexing of seven test signals using the Hadamard basis set. The encoding utilizes the sign change of the SQUID gain when a $\Phi_0/2$ flux shift occurs. The periodicity of the SQUID response allows recursive construction of in principle arbitrarily high order Hadamard matrices out of binary addresses and hence makes possible to access *N* channels by log2 *N* address lines.

Index Terms - Code division multiplexing, SQUIDs, Superconducting photodetectors.