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Implications of the general constraints for single-qubit quantum process tomography[1] RAMESH BHANDARI, Laboratory for Physical Sciences, NICHOLAS PETERS, Oak Ridge National Laboratory — We revisit the general constraints of single qubit quantum process tomography and derive simplified forms in the Pauli basis. These forms give insight into the structure of the process matrix, which we examine in light of several examples. Specifically, we study some qubit leakage error models and show how different error models are manifest in the process matrix.

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