LRA via Linear Measurements

- Recover a rank-k approximation for A:

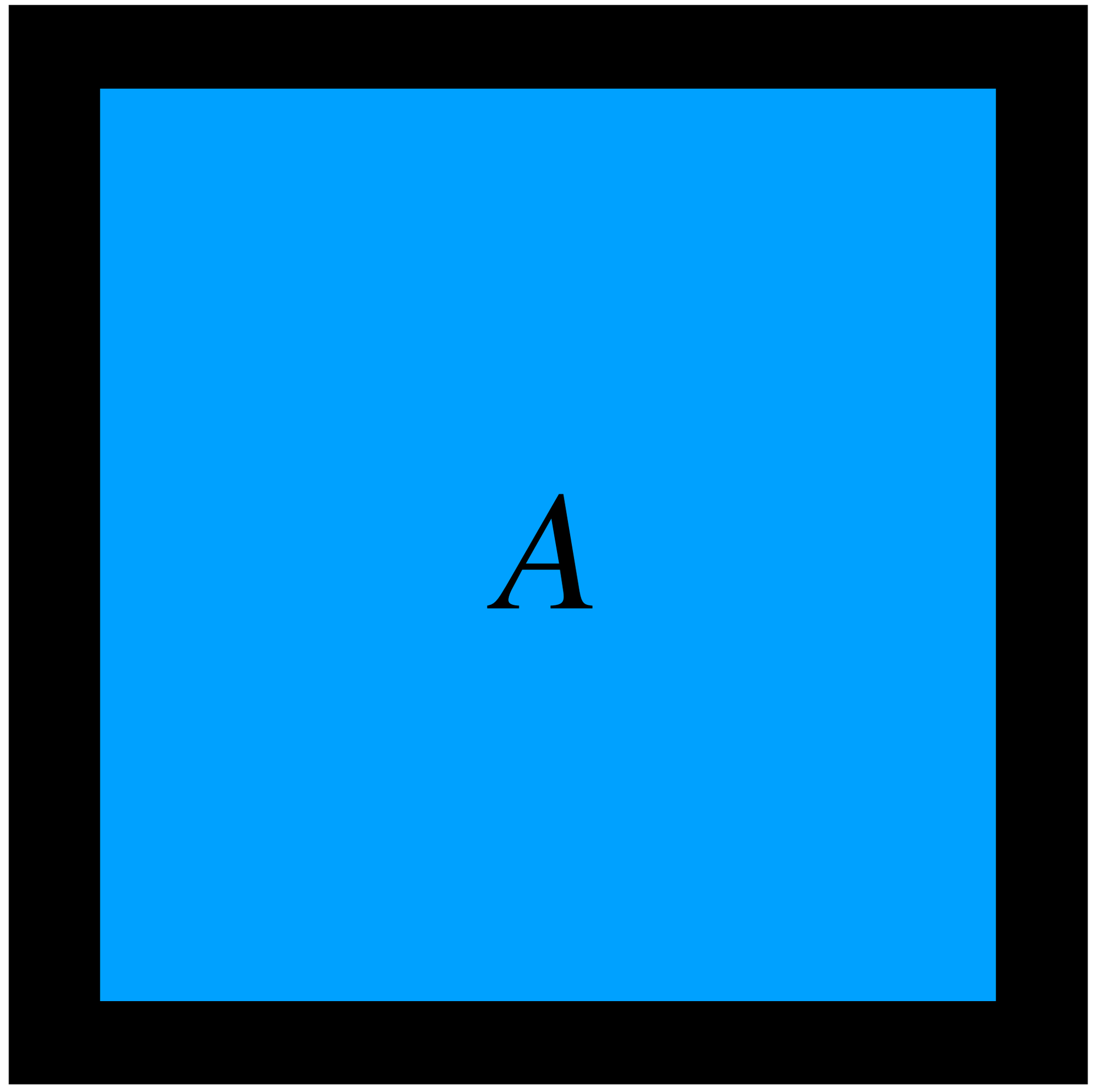
- Measure with $S_1, \ldots, S_t$ and output B

- Non-adaptive algorithms decide upfront

- Adaptive algorithms proceed in batches

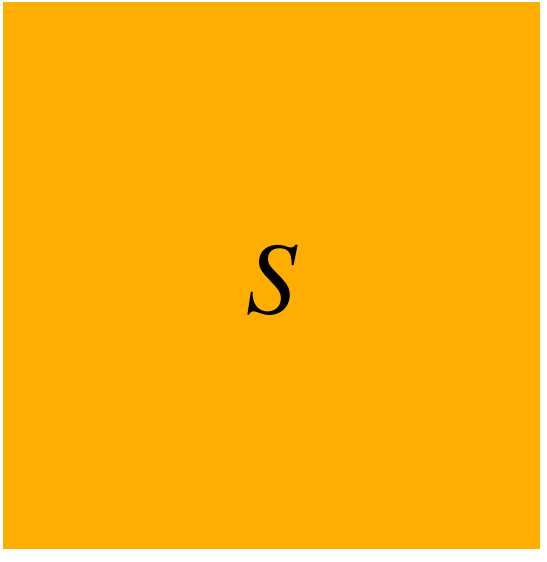
- How many linear measurements do we need?

- Direct connections to Matrix Recovery

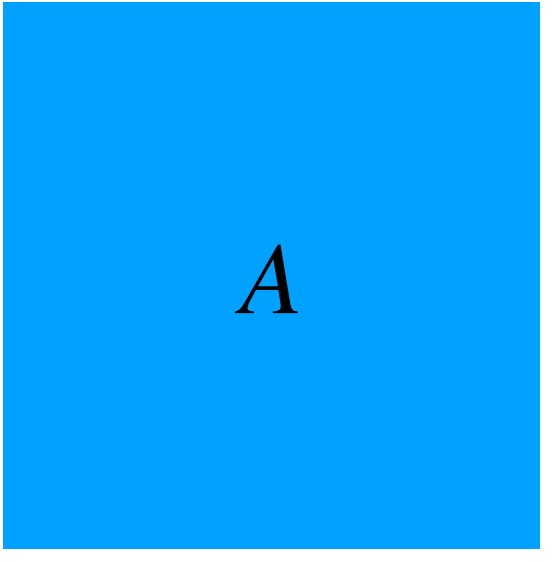

A

$$\|A - B\|_2 < 2\sigma_{k+1}(A)$$

23



with



$$= \langle \mathrm{vec}(S), \mathrm{vec}(A) \rangle$$

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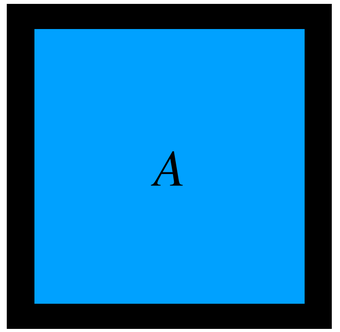

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Linear Measurements vs Matrix-Vector Products