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*When are generative models suitable for signal recovery from subsampled Fourier measurements?*

Using the range of generative models as prior sets has shown promise for recovering signals from what appears to be an incomplete set of noisy linear measurements. We present sample complexity bounds when the measurements are subsampled from the rows of a fixed unitary matrix, e.g., subsampled Fourier measurements. To provide meaningful bounds, we introduce a parameter quantifying whether a generative model is well-conditioned with respect to subsampled unitary measurements. We further show how these sample complexity bounds depend on the sampling distribution, and how they can be improved by picking the sampling probabilities in a manner adapted to the generative model.