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Analysis of noise spectra color on machine learning denoising algorithms

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Previous work has shown the efficacy of using machine learning for removal of noise in LLRF signals when operating in an industrial environment. Here we extend the analysis to include different noise power spectra. Specifically we analyze the impact on denoisig when correlated noise power spectra are used. Four different noise spectra are analyzed including red, pink, violet, and blue noise. We demonstrate the ability to remove the noise when trained on only white noise and compare this to results when retraining on different color spectra.

Footnotes

Paper preparation format

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