

Building confidence in EoR Power Spectrum Limits

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In the past few years there has been enormous effort to develop new EoR analysis techniques and to realize them in precision software implementations. While the algorithms are key, one crucial step is rarely talked about: how do you build confidence that your as-built analysis is doing the right thing? It is easy to unintentionally subtract or calibrate out real sky power, or mis-estimate one's error bars to obtain unrealistically low limits on the EoR. In this talk I'll concentrate on five inter-related techniques we've developed to build confidence in our EoR limits including: parallel pipelines, end-to-end simulations with calibration, tracking error estimates through all analysis steps, software traceability, and diagnostic plots. Together these five techniques provide key tests that can be used to greatly increase both our confidence and the confidence of the community in EoR limits