

Analysis techniques for CMB B-mode experiments

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The hunt for CMB polarization B-modes is on. Many obstacles lie along the way besides the obvious cost driver of high sensitivity. Instrumental, atmospheric, and astrophysical systematics are challenges that can be addressed with sophisticated analysis techniques. I will advertise a series of recent results that break through several of these obstacles: optimal and efficient B-mode purification; Bayes-optimal polarized B-mode de-lensing with Lenseflow, and simulation-based approaches to inference using pyDelfi and Information Maximizing Neural Networks that are flexible enough to incorporate machine learning approaches into both the sky model and the analysis chain.

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