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Calibration of TES bolometer arrays with application to CLASS

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Calibrating raw detector time-ordered data (TOD) to a standard unit is often the first step in processing data sets acquired by large arrays of detectors over many months of observations. The calibration method must be accurate, to suppress systematic errors in the final results, and robust, to be applicable to a vast majority of observations.

The raw calibration method developed for the CLASS TES bolometer arrays relies on I-V curves acquired before every observing period. By binning the I-V curves over the entire observing season, we improve the calibration accuracy by a factor of 2 to ~4% error per detector TOD, while generating well-characterized calibration factors for 99.9% of the data.

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