

The POLARBEAR Cosmic Microwave Background Polarization Experiment

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The POLARBEAR Cosmic Microwave Background (CMB) polarization experiment has been observing since early 2012 from its 17,000 ft site in the Atacama Desert in Northern Chile. Its measurements will characterize the expected CMB polarization due to gravitational lensing by large scale structure, and search for the possible B-mode polarization signature of inflationary gravitational waves. Its 250 mK focal plane detector array consists of 1,274 polarization-sensitive antenna-coupled bolometers, each with an associated lithographed band-defining filter and contacting dielectric lenslet, an architecture unique in current CMB experiments. We will present the status of the POLARBEAR instrument, its focal plane, and the analysis of its measurements.

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