

The MAXIMA and MAXIPOL Experiments

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Abstract. MAXIMA is a balloon-based bolometric experiment to measure the temperature anisotropy of the CMB over spatial frequency range $36 \leq \dots \leq 1235$. The MAXIMA-1 flight produced a 124 square degree temperature anisotropy map with a beam diameter of 10 arcmin. These data have been used to produce a power spectrum which is in excellent agreement with data from BOOMERANG and DASI, but covers a wider range of angular scales. The MAXIMA power spectrum is consistent with the prediction of Λ CDM models and has been used to constrain cosmological models. The MAXIMA experiment is described and an outline is given of the contents and significance of papers written by the MAXIMA team. MAXIMA is being modified to measure the polarization anisotropy of the CMB. A brief description of this MAXIPOL experiment is also given.

THE MAXIMA-1 EXPERIMENT

Measurements of the anisotropy of the cosmic microwave background (CMB) can discriminate between cosmological models and determine cosmological parameters with high accuracy (Kamionkowski and Kosowski, 1999) [1]. MAXIMA is a balloon-borne experiment optimized to map the CMB anisotropy over