

Balloon-Based Measurements of the Cosmic Background Radiation

J.C. Mather, P.L. Richards and D.P. Woody. "Balloon-Based Measurements of the Cosmic Background Radiation." 1974 Transactions on Microwave Theory and Techniques 22. 12 (Dec. 1974, Part I [T-MTT] (Special Issue on the Proceedings of the First International Conference on Submillimeter Waves and Their Applications)): 1046-1048.

We have developed and flown a balloon-borne liquid-helium-cooled spectrometer to measure the cosmic background radiation in the 3 -18-cm/sup -1/ region. It features a cooled horn antenna, a polarizing Michelson interferometer, and a germanium bolometer. These design features and the performance of the instrument are discussed.

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