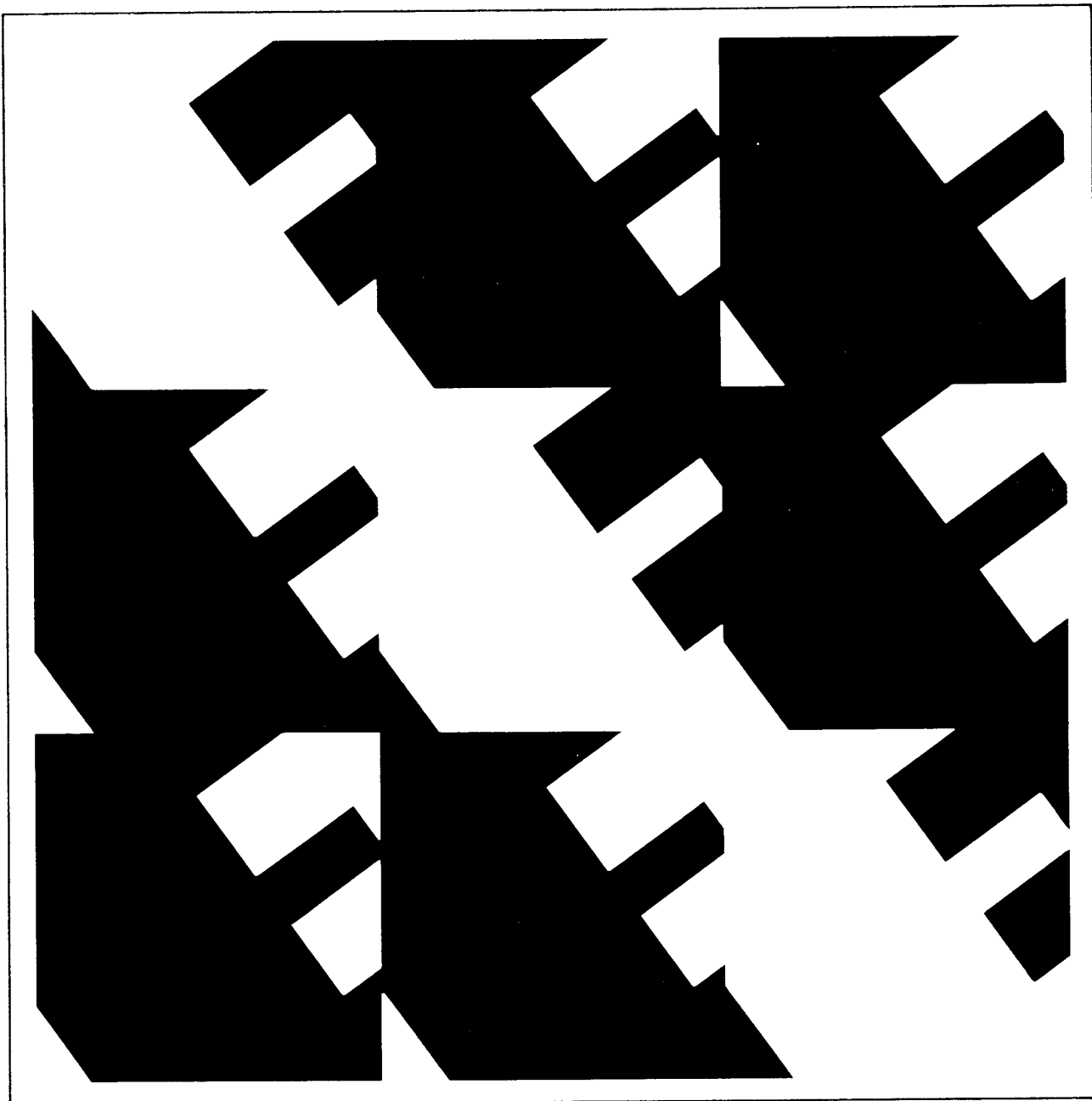


IEEE Standard Definitions of Terms for Radio Wave Propagation



ANSI/IEEE Std 211-1977



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**IEEE Standard Definitions of Terms for
Radio Wave Propagation**

Sponsor

**Wave Propagation Standards Committee of the
IEEE Antennas and Propagation
Society**

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Foreword

(This Foreword is not part of ANSI/IEEE Std 211-1977, Standard Definitions of Terms for Radio Wave Propagation.)

On March 30, 1962, the Wave Propagation Standards Committee resolved to develop standards for any electromagnetic phenomena including optical and hydromagnetic wave propagation. In regard to definitions, the committee resolved on April 14, 1972, to assume responsibility for defining radio-astronomy terms, and on April 13, 1973, to concern itself with defining terms pertaining to the propagation of optical, gravity, and plasma waves. Institute of Radio Engineers document No 51 IRE 24.PS1, Proposed Definitions in Radio Astronomy, dated June 3, 1952, was used as a starting base. Work on other terms took into consideration CCIR* Recommendation 310-2, Definitions of Terms Relating to Propagation in the Troposphere (1951-1959-1966-1970).

IEEE Std 211-1977 now has an expanded scope relative to its predecessor through the addition of terms for radio astronomy, hydromagnetic, acoustic, and electrostatic waves, magnetosphere, and plasma. Some new definitions are related to dispersion, Doppler frequency, time-harmonic fields and waves, phasor notation, and Poynting vectors. Note that under **radio spectrum** the commonly used designations ULF and UHF lack symmetry, since only for ULF is the use of "ultra" in accord with "beyond."

For definitions in the field of radio astronomy, valuable comments on proposed terms were received from Ronald N. Bracewell, John D. Kraus, and George W. Swenson, Jr. The definition of antenna temperature is the work of Ralph M. Showers, and the magneto-telluric definitions are by Elwood Maple. Valuable suggestions on several definitions were received from C. M. Minnis. Coordination was effected with CCIR and URSI**. The responses offered no official comments.

Although the revision of IEEE Std 211-1969 commenced in 1969, the revision process gained momentum in 1972. During the following four years, nine committee or subcommittee meetings were held. In June 1976, after three voting cycles lasting 75, 46, and 11 days respectively, the proposed revision was approved by the IEEE Standards Board.

The need for revising a definitions standard transcends its publication date and is essentially continuous. The process of preparing definitions amidst a multitude of views can lead to tabling of definitions. While IEEE Std 211-1977 is now on stage, the tabled definitions are waiting in the wings.

*Comité Consultatif International Radio — International Radio Consultative Committee.

**Union Radio Scientifique Internationale — International Union of Radio Science.

This revision was prepared by the Wave Propagation Standards Committee of the IEEE Antennas and Propagation Society with the following membership:

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