

Abstracts

Heinrich Hertz at Work in Karlsruhe

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The confirmation of Maxwell's electrodynamical theory by Heinrich Hertz in the years 1887/8 was not a straight-on work. The generation and handling of oscillations of very high frequency had to be developed and misleading results to be interpreted. After preliminary experiments a powerful oscillator and transmitter was invented, excited by a spark. The radiated field was detected by secondary sparks in a wire-loop, which was tuned to resonance, also a new invention at that time. The finite velocity of the propagation of electromagnetic action was definitively proved by the detection of standing waves. Further experiments showed the similar nature of electromagnetic waves and light very clearly. Later Hertz verified the theoretically predicted skin-effect.

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