



A German Investigator Has Discovered That if a Tube Containing Radium Bromide Is Brought Near a Wireless Aerial, the Strength of Signals Will Be Intensified. A Coil Antenna Was Used as Shown.

183. On Radium Antennæ (Influence of the proximity of Radium upon Signal Reception). **E. Leimer.** (Elekt. Zeits. 36. p. 94, Feb. 25, 1915.)—The author describes how, when he was merely repeating an experiment on indoor reception with a makeshift "antenna" consisting of a 8-m. wooden rod closely wound with 0.2 mm. diam. enamel-covered wire, no signals whatever could ordinarily be heard from a sending station about 800 km. distant; and yet, on bringing up near to the "antenna" a glass tube containing 0.01 gm. of radium bromide (of 50,000 units activity only), signals at once became quite audible. The signals ceased when the telephones (of 4000 ohms resistance) were shunted with 220 ohms. This behaviour was confirmed by experiments in which a parallel-wire antenna was used, and a galvanometer in place of the telephone receivers. The current through the galvanometer, without radium, was 20–21 microamps; with radium brought near to the free end of the antenna 50–53 microamps was observed (a shift in the tuner adjustment was required to get this maximum). The effect is also produced when the radium is brought near to the other end of the antenna, but no effect when the radium tube is placed at the mid-point of the antenna. When the radium is brought near the tuning coil the effect seems to be distinctly prejudicial to the quality of the reception. L. H. W.

On Radium Antenna – Influence of the proximity of Radium upon Signal Reception. E. Leimer. (Elekt. Zeits. 86. P.94, Feb. 25, 1915.)

The author describes how, when he was merely repeating and experiment on indoor reception with a makeshift "antenna" consisting of a 8 meter wooden rod closely wound with 0.2 mm. diam. Enamel-covered wire, no signals whatsoever could ordinarily be heard from a sending station about 800 km. distant; and yet, on bringing up near to the "antenna" a glass tube containing 0.01 gm. Of radium bromide (of 50,000 units activity only), signals at once became audible. The signals ceased when the telephones (of 4000 ohms resistance) were shunted with 220 ohms. This behavior was confirmed by experiments in which a parallel-wire antenna was used, and a galvanometer in place of the telephone receivers. The current through the galvanometer, without the radium, was 20-21 microamps; with radium brought near to the free end of the antenna 50-53 microamps was observed (a shift in the tuner adjustment was required to get maximum). The effect is also produced when the radium is brought near the other end of the antenna, but no effect when the radium tube is placed at mid-point of the antenna. When the radium is brought near the tuning coil the effect seems to be distinctly prejudicial to the quality of the reception. L. H. W.