

TIME TRAVEL

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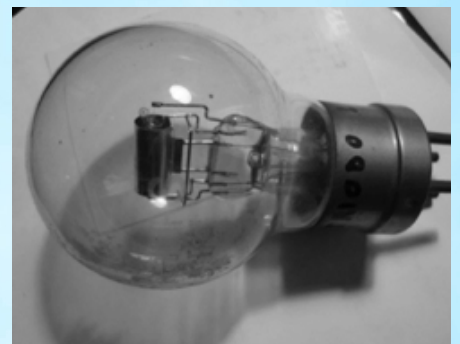
The Origin of the Term “Microwaves”

It is known in our community (here in Italy), although possibly not by everyone, that the term “microwaves” made its first appearance in scientific literature as the Italian word “microonde,”¹ and a few months later in English.²

The scientist who minted the term was Nello Carrara (1900 to 1993), a pioneer in the Italian development of electromagnetic engineering, the lessons of whom I had the privilege of studying when I was a graduate student at the University of Florence. The interested reader might refer to Pelosi³ for a focus on this.

According to Pelosi, it happened that Eugenio Carrara, son of Nello, found in his attic several vacuum tubes and other devices owned by his father and decided to donate them to the Department of Information Engineering of the University of Florence. (Indeed, the foundation of the School of Engineering of the University of Florence was strongly promoted by Nello Carrara in the 1970s).

Among the items is the vacuum tube Nello Carrara used in his experiments in the 1930s. A photo of this tube is shown here.



The Philips Type E vacuum tube with which Nello Carrara produced “microwaves” for the first time is on display in the Information Engineering Department of the School of Engineering at the University of Florence.

References

- [1] N. Carrara, “La rilevazione delle microonde [The Detection of Microwaves],” *Alta Frequenza*, Vol. 1, No. 1, March 1932, pp. 7-11.
- [2] N. Carrara, “The Detection of Microwaves,” *Proceedings of the IRE*, Vol. 20, No. 10, October 1932, pp. 1615-1625.
- [3] G. Pelosi, “Scanning the Past - The Birth of the Term «Microwaves»,” *Proceedings of the IEEE*, Vol. 84, No. 2, February 1996 p. 326.