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About 25 years ago, in the framework of the ALICE TOF R&D effort, the time resolution of the RPC detector technology was extended to sub-100 ps by decreasing the gap width by about one order of magnitude and adopting the multigap construction method. This resolution range is interesting for particle identification or tagging by time-of-flight and opened the way to practical very large time-of-flight detectors for HEP and nuclear physics.

In this communication we will describe the preceding related detectors and the discovery process, the applications that have meanwhile emerged and the status of the theoretical understanding of these detectors.

Presenter: FONTE, Paulo

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