Diagnostics Experts of European Light Sources [DEELS]



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Home Made Button Type BPMs: simulations, real results and failures.

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In order to validate the electromagnetic design of beam position monitor (BPM) devices for fourth generation storage rings, three families of button type pick-up were developed based on vacuum sealing adhesive technology. The idea of gluing components for vacuum sealing purposes is not new in the accelerator field, although this approach seems to be mainly dedicated to solving vacuum leak issues, rather than being a possible solution for rapid prototyping of ultra-high vacuum feed-throughs at very low cost. This report describes some BPMs that have been designed, machined, assembled and tested under real working conditions, with the aim of "quick&dirty" evaluation of some button type pick-up samples in view of Elettra 2.0.

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