

Will we ever stop developping "BPM-electronics" ?

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The ESRF has adopted the so-called Spark electronics for its 128 additional BPMs in the new ring. All these units had been installed on real RF-BPM signals for many months in 2018, to verify their reliability & performance (i.e. stability).

These Spark electronics do not use any active compensation scheme (at all) to correct any (relative) drift (between the 4 RF-channels) and yet fulfil our needs.

This presentation (15min, Kees) will show this quickly and comprehensively, and then aims to stimulate an active debate / discussion (45min, moderator Guenther) on what are the real reasons and motivations in the instrumentation community to continue to spend so much efforts in developing their own home-made BPM electronics.

- 1) is sub-um (mid- and long-term) stability/drift really still an issue for the (existing) BPM-electronics ?
- 2) are other sources of drift not at least as important, and today largely ignored and/or left aside ?
- 3) how can we better assess these and then possibly counter-act ?
- 4) in the end, would X-BPMs not be the ultimate judge, and are collaborations between institutes (diagnostics groups) possible to define, develop and test an X-BPM that focuses on such slow stability issues (only) ?

Related questions :

- 5) how to handle upgrades during the lifetime of the product ?
- 6) how to ensure reliability ?
- 7) ultra-fast data-streams, how far to go ?
- 8) should BPMs be like: smart phones, or more like self built PCs ?

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Track Classification: BPM electronics development