

## Complete Tests Results with the new BPM electronics for the ESRF Low-Emittance Ring

Kees Scheidt, Diagnostics Group, ASD, ESRF, Grenoble, France





BPM	Geom.	Libera/Spark	S [m]	β Hor [m]	β Vert [m]	Disp.[cm]
1	Large	Libera	2.65	7.92	5.30	0.2
2	Large	Libera	6.48	9.50	7.17	8.0
3	Large	Spark	7.52	7.82	6.54	7.3
4	Small	Libera	10.29	1.93	2.33	1.3
5	Small	Spark	12.73	1.13	3.39	1.5
6	Small	Spark	13.64	1.13	3.39	1.5
7	Small	Libera	16.08	1.93	2.33	1.3
8	Large	Spark	18.86	7.82	6.54	7.3
9	Large	Libera	19.90	9.50	7.17	8.0
10	Large	Libera	23.72	7.92	5.30	0.2

lattice (details), position of large & small BPM-blocks, and the electronics





the (1 cell) set-up of testing 4 Sparks in parallel with 1 Libera, over >6 months, in 32 cells  $\rightarrow$  all 128 units tested

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ADC	Att.	Input	Current	Resolution	Resolution
[cnts]	[dB]	[dBm]	[mA]	T-b-T rate	SA-rate (40Hz)
				[um]	[nm]
3000	10 31	> -30	> 25	< 0.3	< 10
3000	5	-35	15.4	0.44	11
3000	0	-40	8.7	0.72	13
1687	0	-45	4.9	1.27	16
949	0	-50	2.7	2.26	27
F22	0		1 6	4.01	20



ESRF – The European Synchrotron - 6 rue Jules Horowitz - BP220 - 38043 GRENOBLE CEDEX - FRANCE - Tel +33 (0)4 76 88 20 00