



Electron cloud measurements

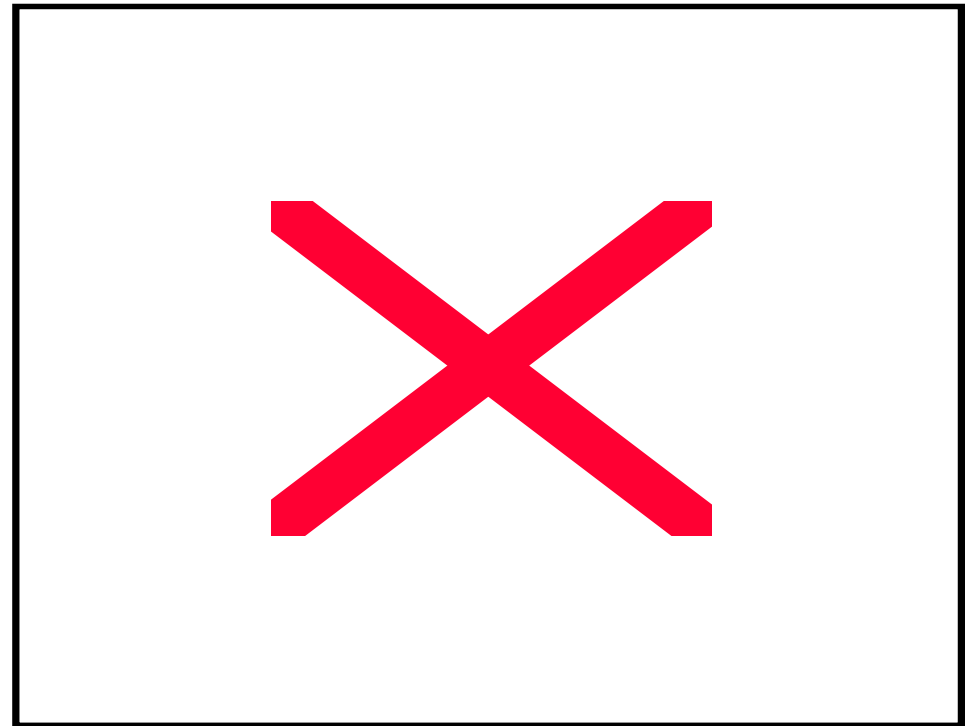
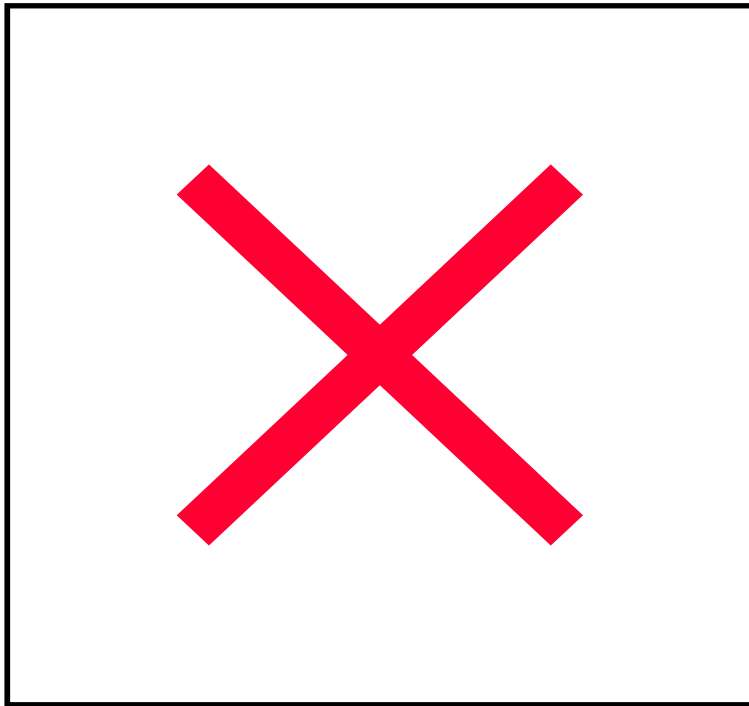
G. Arduini SL/OP

Measurements performed in collaboration with B. Henrist, J.M. Jimenez, K. Weiss (LHC/VAC), F. Zimmermann (SL/AP), G. Ferioli (SL/BI), W. Hofle (SL/HRF), P. Collier (SL/OP) and others...



FT beam

- 2.9×10^{13} p @ 400 GeV ($\sim 7 \times 10^9$ p/bunch)
- 4200 bunches (almost uniformly distributed in the SPS) - 5 ns spacing

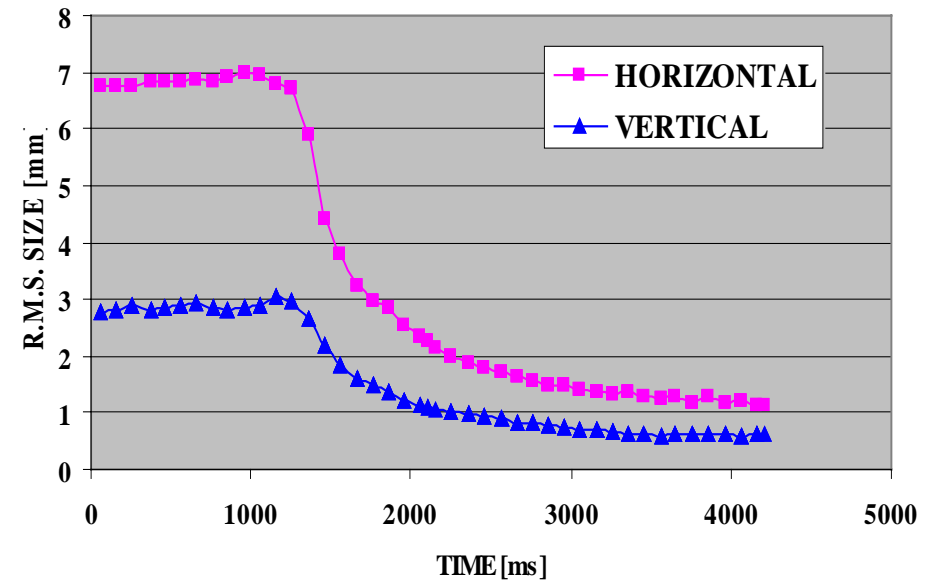
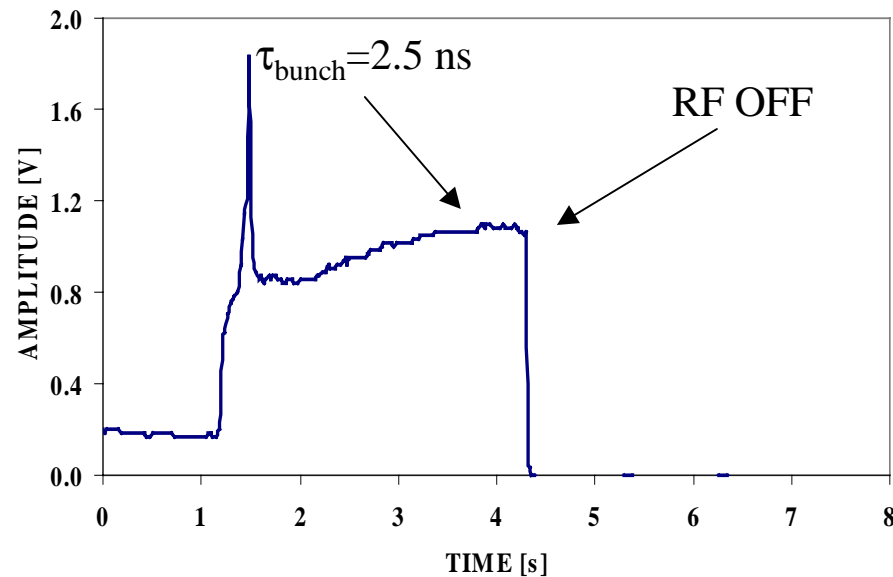


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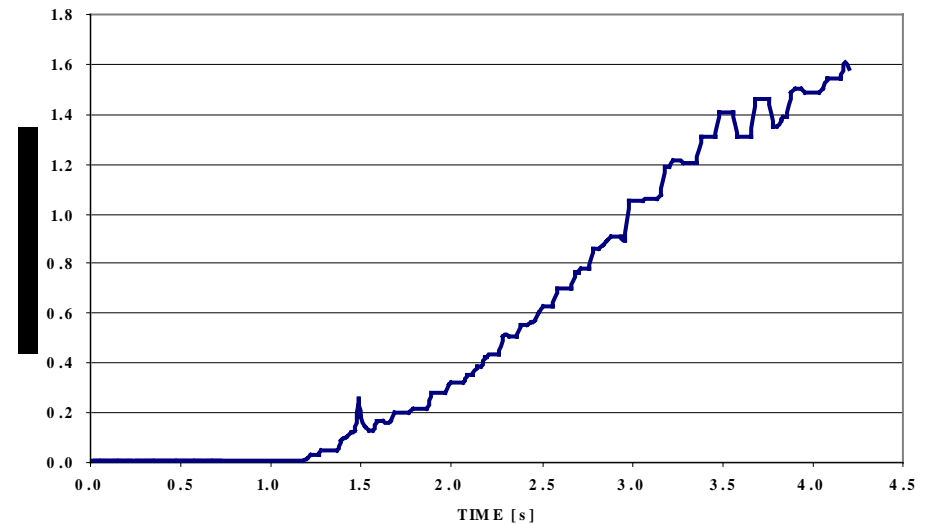
Why during the ramp?

- AEW peak detected signal ($\propto 1/\tau_{\text{bunch}}$)
- Beam size

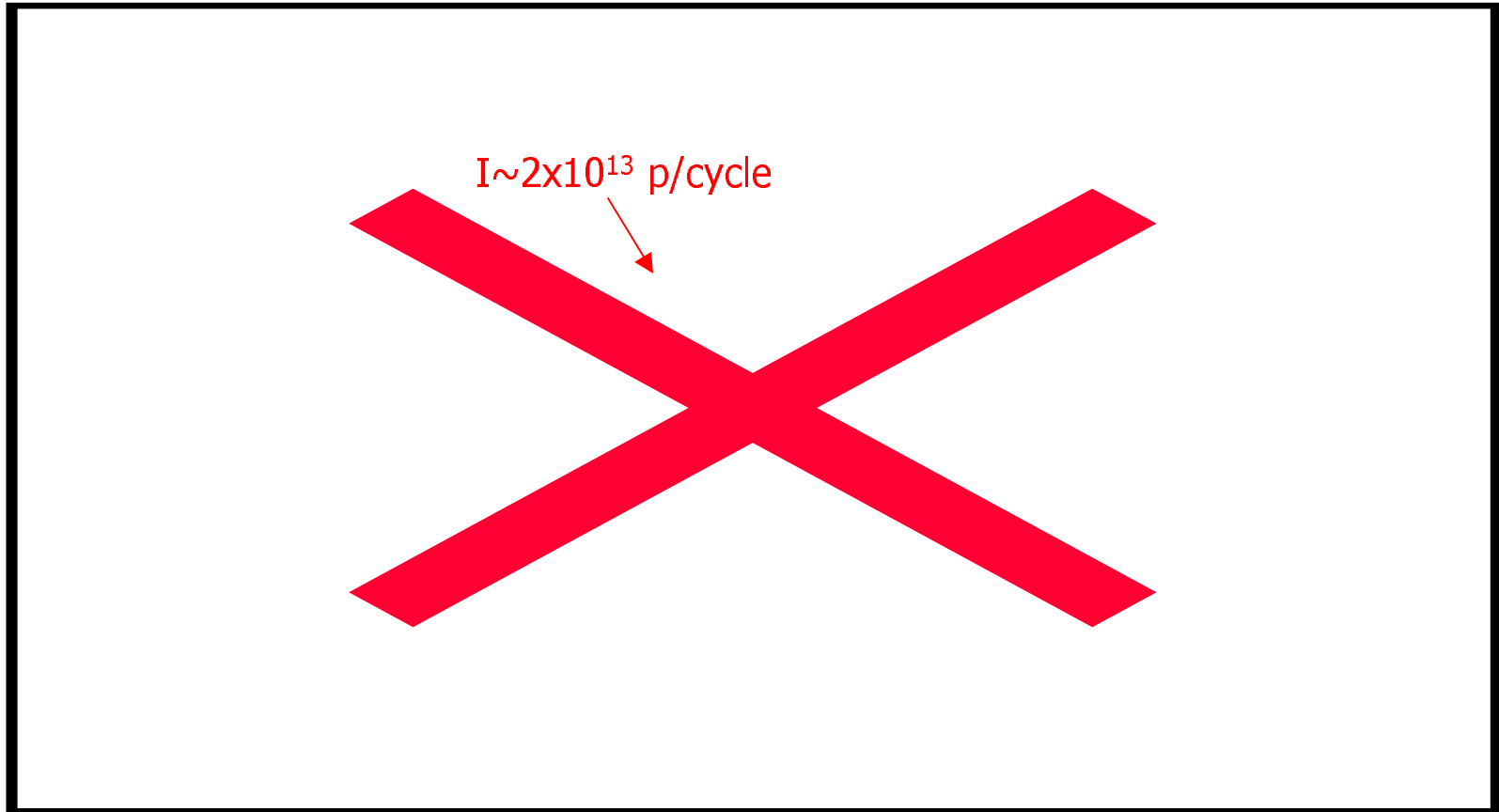


Why during the ramp?

- Electron cloud signal inversely proportional to 'bunch charge density' $\propto (\tau_{\text{bunch}} \sigma_H \sigma_V)^{-1}$



Threshold for FT beam (08/08/2001) - arcs



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