Contribution ID: **74**   Type: **Poster**

Real time digital position calculation algorithms at GSI SIS-18

Beam position monitoring is essential for the operation of all synchrotrons. With ever increasing speed of computational infrastructure, many different algorithms are used for treating the pick-up signals at various facilities. At GSI SIS-18 synchrotron, bunches are of the order of few meters and thus capacitive shoebox pick-ups are used. The pick up signals are fast sampled and digitally processed in FPGA to give real time position monitoring. First algorithm implemented was baseline restoration algorithm and is under operation right now. A new improved algorithm based on linear fitting has been recommended recently. We present and compare these algorithms used at SIS-18 for position determination in this contribution.

Author: Mr SINGH, Rahul (GSI)

Co-authors: Mr LANG, Kevin (GSI); FORCK, Peter; Dr KOWINA, Piotr (GSI)

Presenter: Mr SINGH, Rahul (GSI)