

Proposed Test of the Two Beam BPM at RHIC

The essence of the ERL operation implies that at least two beams (accelerated and decelerated) are co-propagating in the same vacuum vessel and each beam has its own trajectory. The existing beam position monitors measure only “average” trajectory but not that of an individual beam, unless the time separation between bunches is so large that one can resolve individual bunches.

It was proposed to use phase information of the pick-up signal to extract information on the orbit “difference”. We are planning to conduct experiments at RHIC to test the proposed idea. The approach and experiment set-up are described in the paper.

Primary author: PINAYEV, Igor (Brookhaven National Laboratory)

Presenter: PINAYEV, Igor (Brookhaven National Laboratory)

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