

Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Non-Scaling FFAG lattice for the eRHIC DEJAN TRBOJEVIC, STEVEN BROOKS, FRANCOIS MEOT, SCOTT BERG, WUZHENG MENG, NICHOLAOS TSOUPAS, BRETT PARKER, VADIM PTISTYN, PETER THIEBERGER, VLADIMIR LITVINIENKO, THOMAS ROSER, MICHIKO MINTY, Brookhaven Nation Laboratory — The future electron ion collider eRHIC the “QCD test facility” will continue extraordinary results of the present Relativistic Heavy Ion Collider RHIC. There will be collisions between polarized electrons with heavy ions and with polarized protons/He³ using existing superconducting RHIC accelerator and with electrons accelerated inside of the existing tunnel. Electron acceleration will be with the Electron Recovery Linac (ERL) with a combination with Non-Scaling Fixed Field Alternating Gradient arcs. Two NS-FFAG allow electrons to pass through the same structure with an energy range between 1.334 and 21.1 GeV. After collisions the beam is brought back by the NS-FFAG’s and decelerated to the initial energy and directed to the dump.

Dejan Trbojevic
Brookhaven Nation Laboratory

Date submitted: 12 Jan 2014

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