

**Project Title:****Beam dynamics simulation in accelerators****Name:****Andreas Adelman****Laboratory at RIKEN: Accelerator R&D team**

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We have a plan to study space charge effect in the low-energy ring cyclotron of RIBF accelerator complex using OPAL (Object Oriented Parallel Accelerator Library). In FY 2014 we could successfully installed OPAL into the HPC. Unfortunately there was not enough time to perform science runs in 2019. I have a plan to visit RIKEN in 2020 to continue the discussion with the team members. The figure shows expected results from our results.

### Longitudinal Beam behavior using PIC with nonlinear space-charge forces

