

# ANL ILC Positron Source Activity Update

W. Liu, W. Gai

July, 22, 2008

# Outline

- Reconfirmed the emittance damping in undulator with updated software.
- Prepare and update the software environment for positron source simulation.
- Warming up

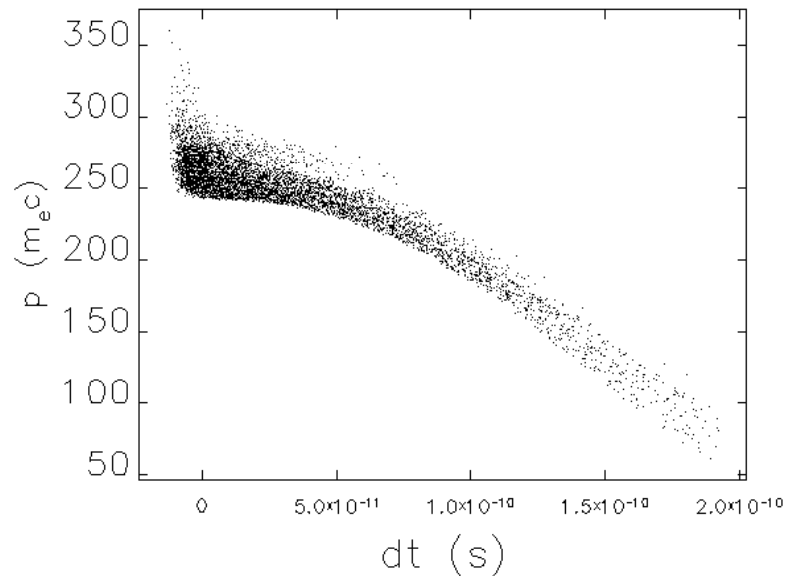
# Reconfirm the emittance damping with latest elegant software

- A new version of elegant, version 19.0 released last month with a bug fixed in cwiggle element.
- Rebuilt the software and reconfirmed the emittance damping.

With version 18.1, simulation shows ~1.37% damping in x(horizontal) plane and ~1.06% damping in y(vertical) plane for 100m UK1 undulator.

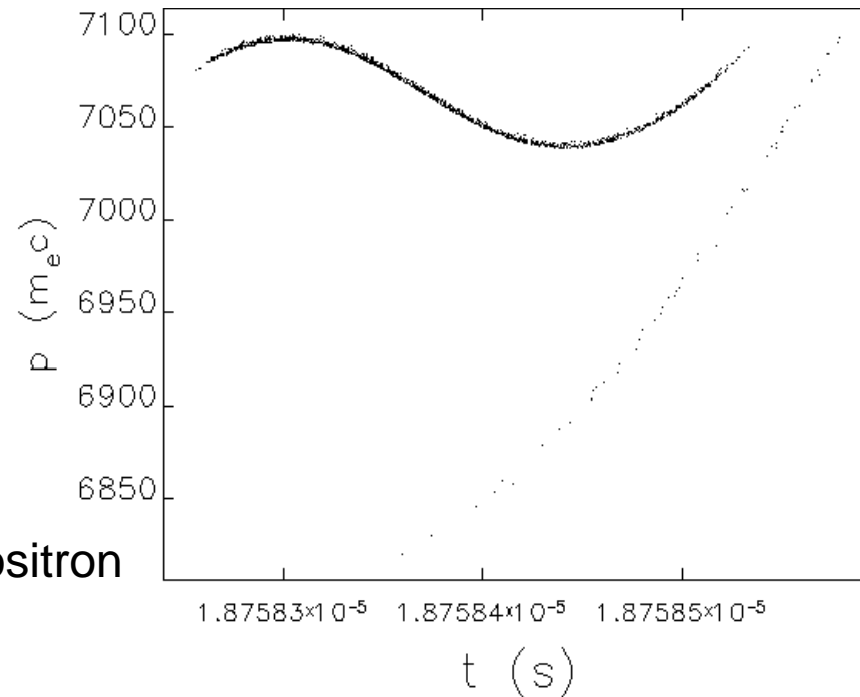
With version 19.0, for the same undulator, simulation still shows the same emittance damping.

# Start to end simulation with EGS4+PARMELA + elegant



watch-point phase space--input: positron0.ele lattice: positron\_test0.lte

Thanks to Feng Zhou @ SLAC for positron  
beamline input file.



output phase space--input: positron0.ele lattice: positron\_test0.lte

Will verify/tune the beamline parameters.