## **Dynamics in the Damping Wigglers**

- Large dynamic aperture is needed in the Damping Rings for high injection efficiency.
- Intrinsic nonlinear fields in the damping wigglers impact the beam dynamics.
- Understanding of the dynamics allows design of compensation for nonlinear effects.
- Specified dynamic aperture for GLC/NLC Damping Rings can be achieved using octupole compensation.

Analytic representation of field is fitted to field data on the surface of a cylinder inscribed through the wiggler (left). Residual of fit (right) is a few gauss, with peak wiggler field 2.15 T.





Wiggler has significant impact on beam dynamics. Use of octupoles stabilizes particle trajectories.