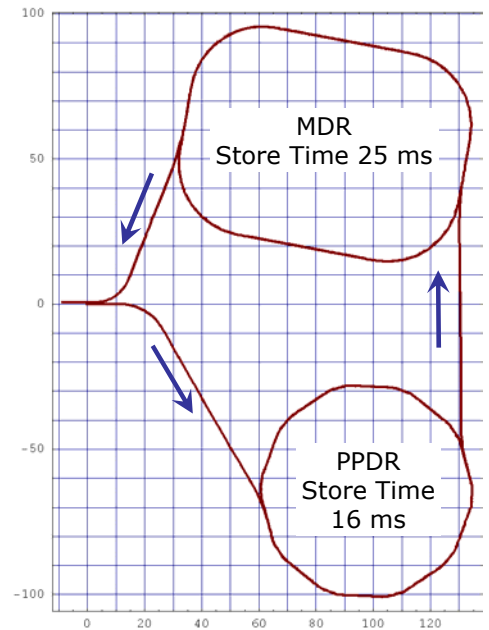
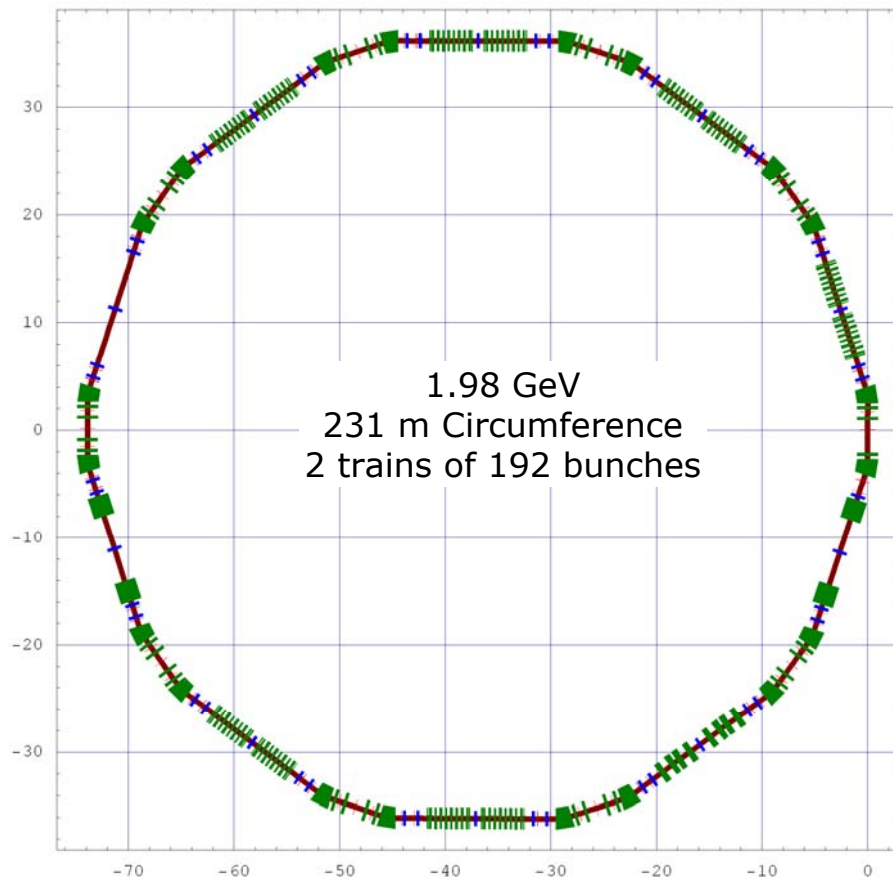


The Positron Pre-Damping Ring

- Positron Pre-Damping Ring simplifies the Positron Main Damping Ring design by accepting the large emittance beam from the positron source.
- Damping time and emittance are relaxed compared to the main rings.
- Lattice design based on Double Bend Achromat, commonly used in 3rd generation synchrotron light sources.
- Larger aperture reduces impact of various collective effects compared to main damping rings, e.g. resistive wall effects, electron cloud.



Top: Possible configuration for positron damping rings.

Left: Positron Predamping Ring lattice.

Dynamic aperture of the positron predamping ring, with nonlinear wiggler model.

Left: dynamic aperture in co-ordinate space.

Right: dynamic aperture in tune space.

