

$$\Delta a_0 = 0.0016$$

ring mass  $m_r$

$10^{-8}$

$10^{-9}$

$10^{-10}$

$10^{-12}$

$10^{-11}$

$10^{-10}$

viscosity  $\nu_s$

814

824

- × crossed streamlines
- $\Delta q < 6 \times 10^{-4}$
- $6 \times 10^{-4} < \Delta q < 4 \times 10^{-3}$
- $\Delta q > 4 \times 10^{-3}$
- ◆ partially confined