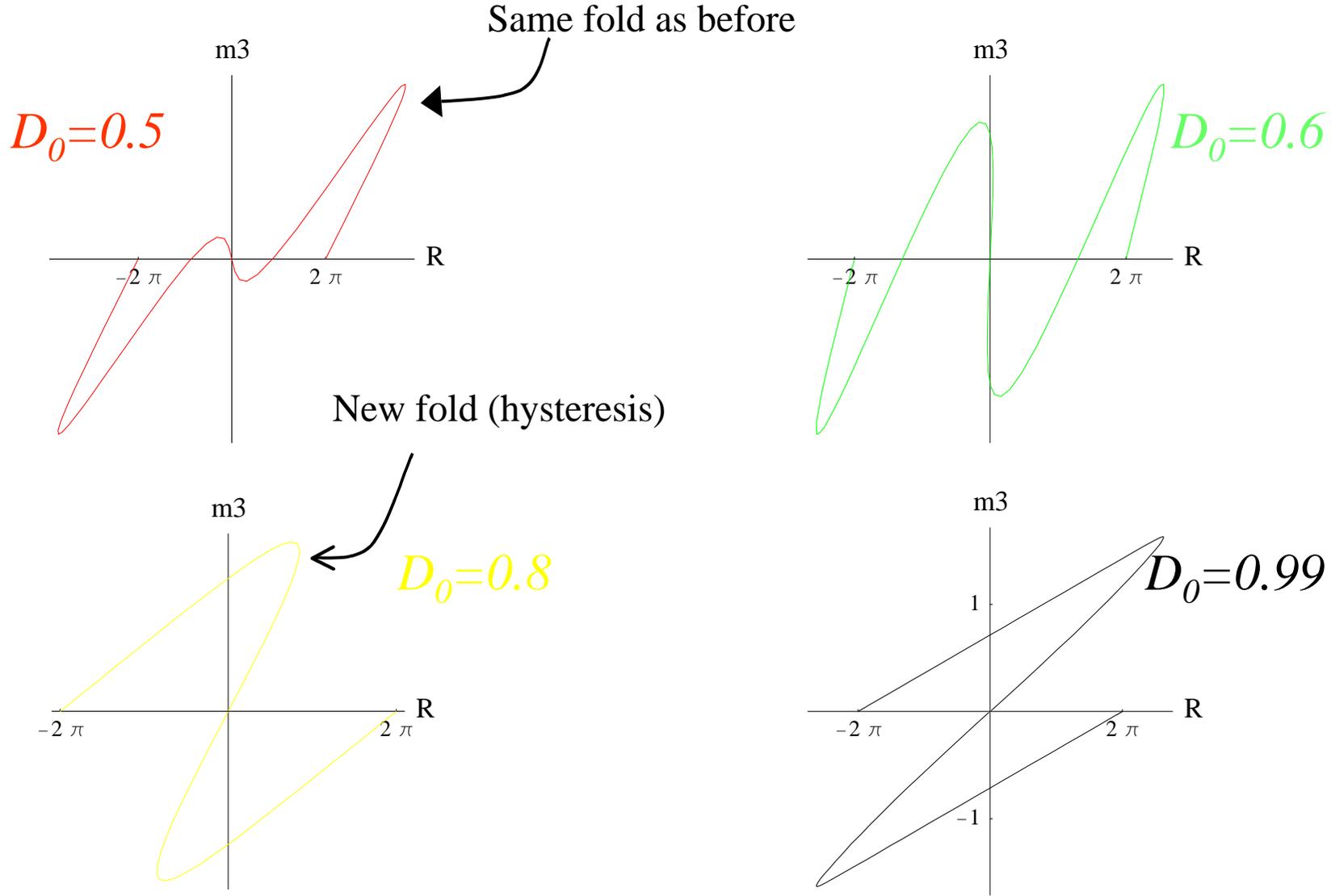


Finite length rod : rotation without sliding



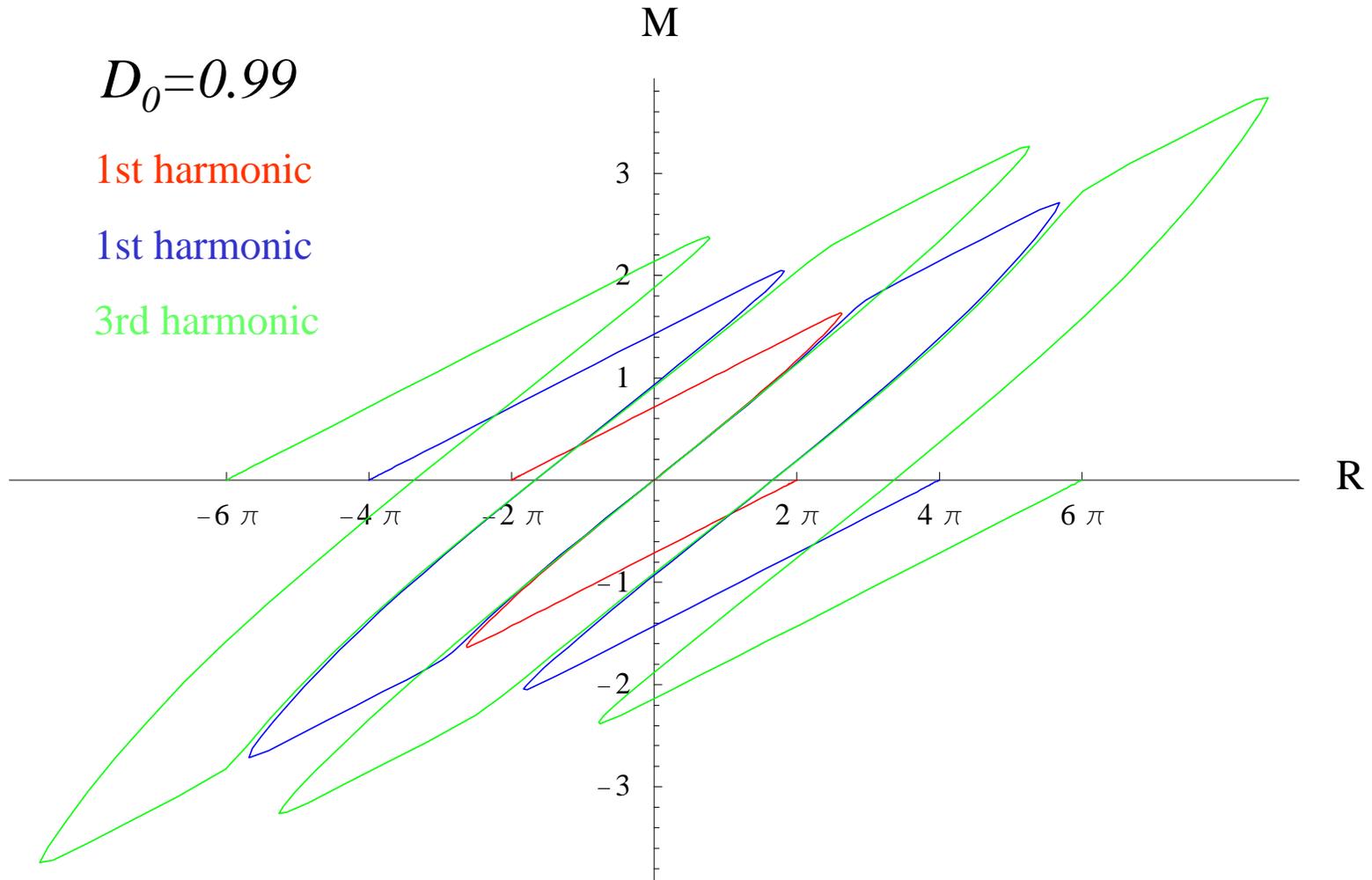
Finite length rod : rotation without sliding

$$D_0 = 0.99$$

1st harmonic

1st harmonic

3rd harmonic



Finite length rod : slightly opened rings

Planar and buckled rings are borders between clamped harmonics

