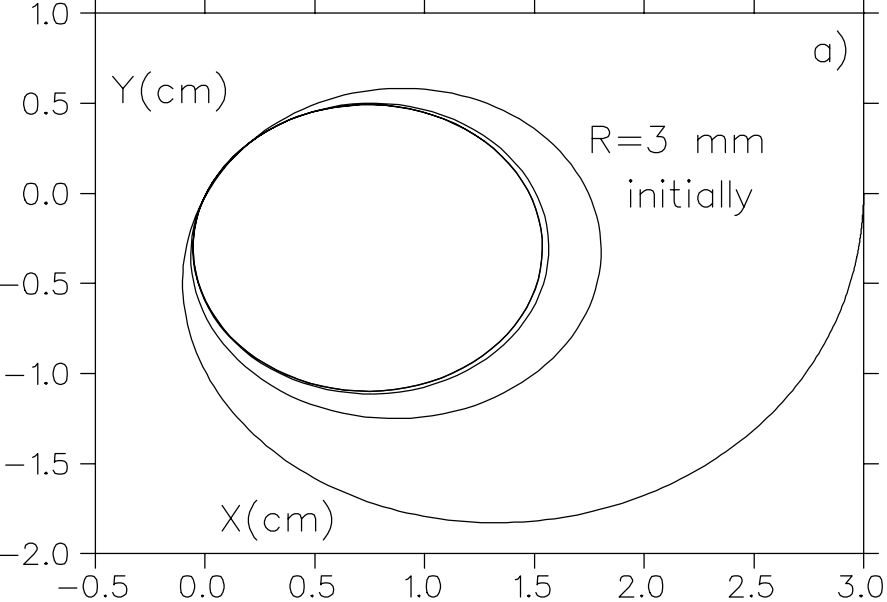
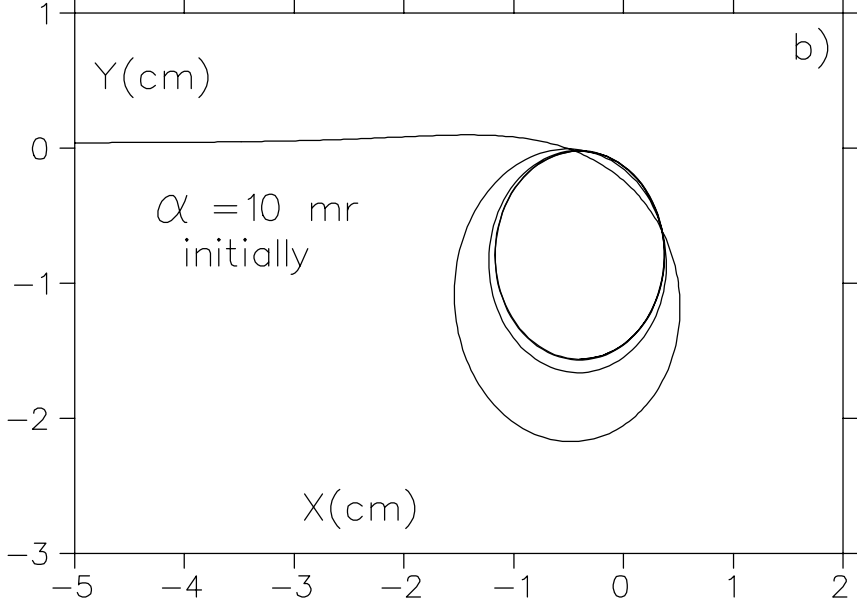
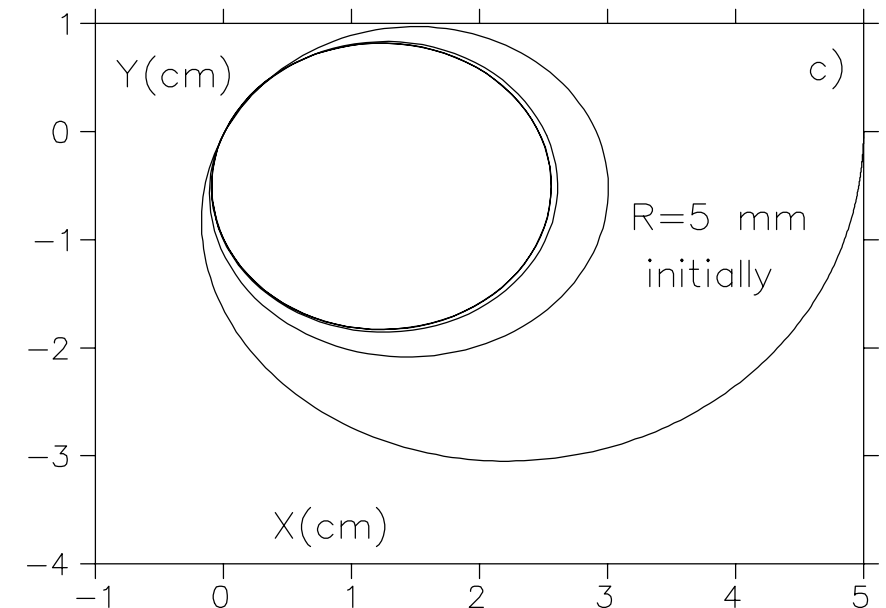
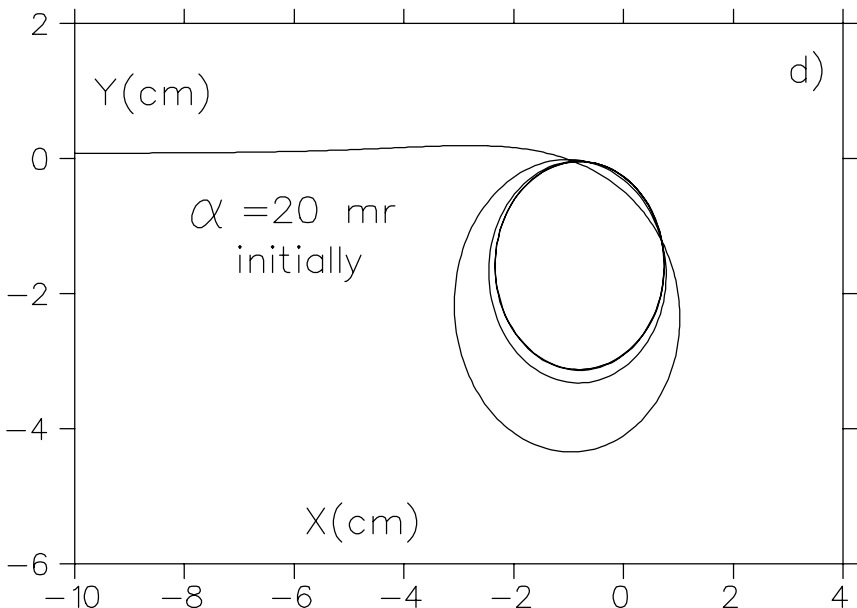

a)
Y(cm)
R=3 mm
initially
X(cm)
1.0
0.5
0.0
−0.5
−1.0
−1.5
−2.0
−0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0


b)
Y(cm)
α =10 mr
initially
X(cm)
1
0
−1
−2
−3
−5
−4
−3
−2
−1
0
1
2


c)
Y(cm)
R=5 mm
initially
X(cm)
1
0
−1
−2
−3
−4
−1
0
1
2
3
4
5


d)
Y(cm)
α =20 mr
initially
X(cm)
2
0
−2
−4
−6
−10
−8
−6
−4
−2
0
2
4