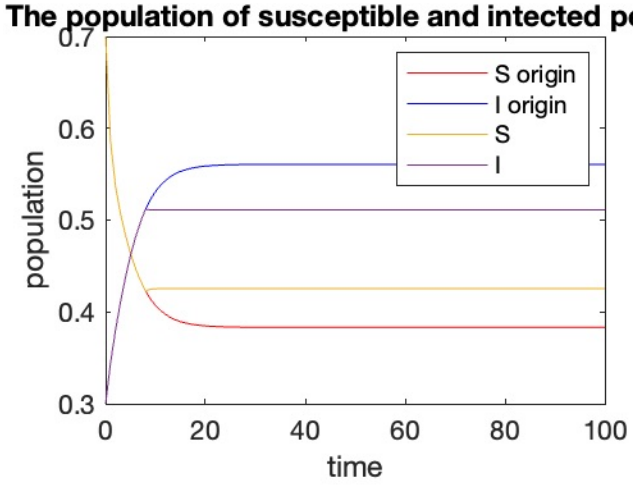
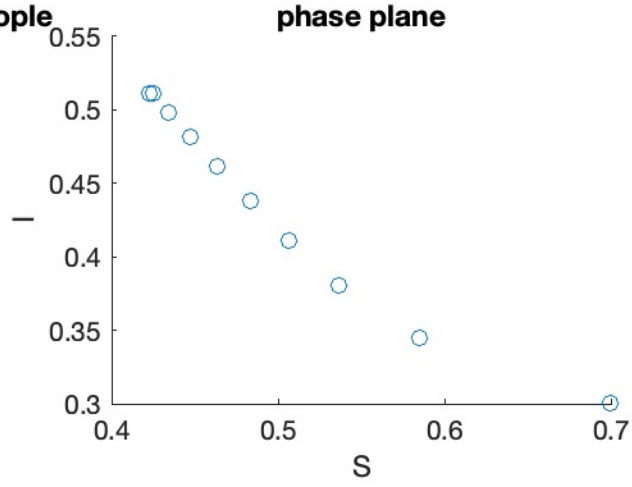
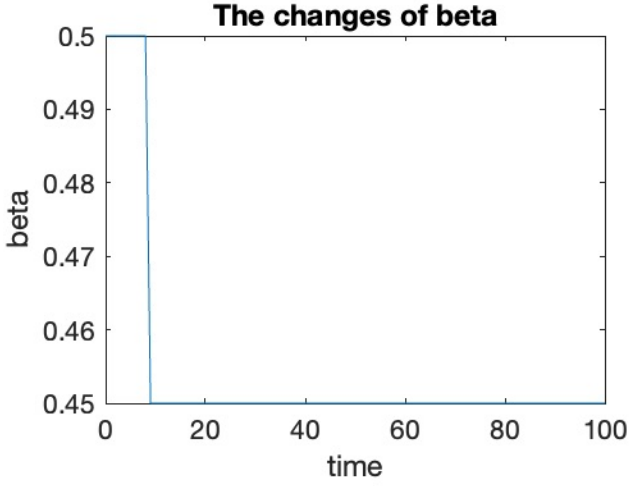
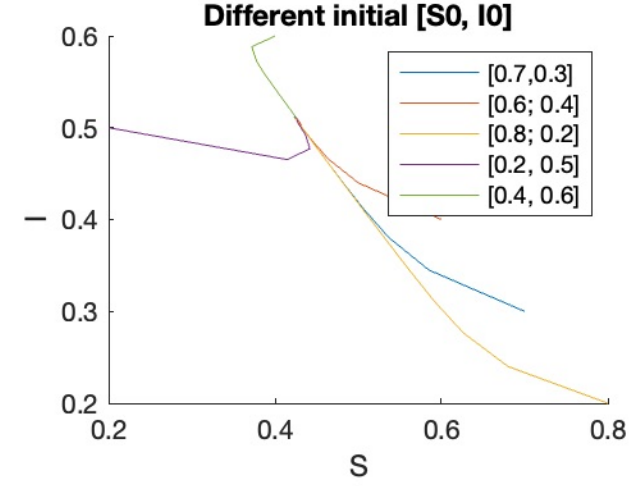
eplison = 0.1

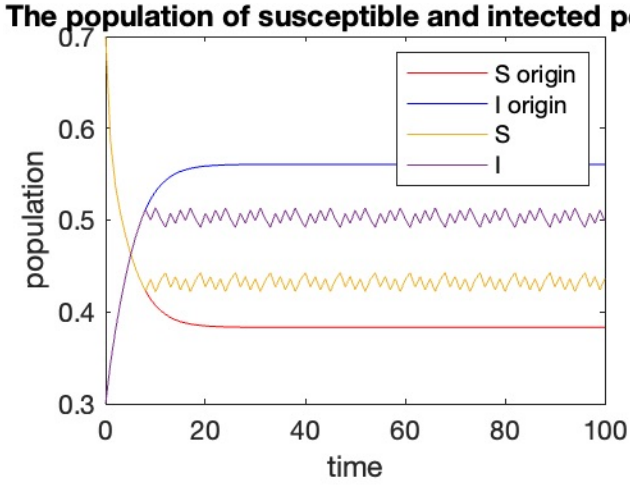

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

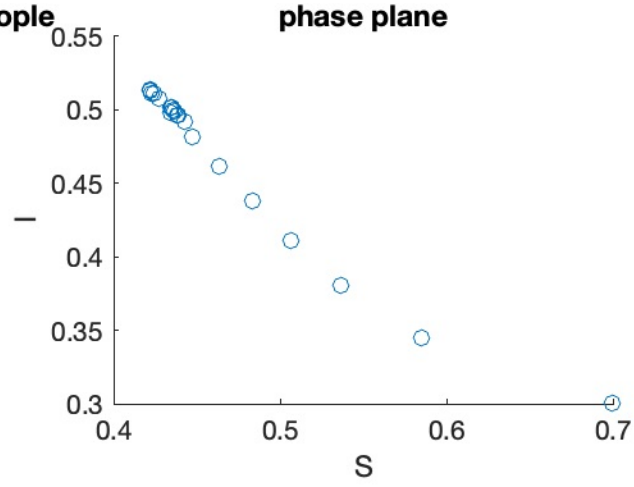

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

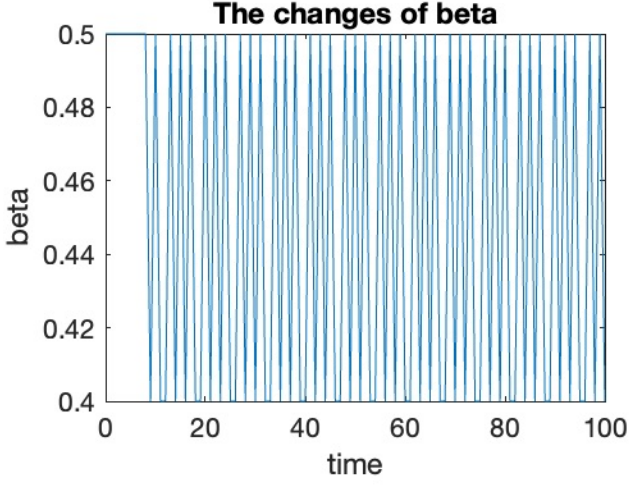

The changes of beta
beta
time
0.5
0.49
0.48
0.47
0.46
0.45
0
20
40
60
80
100

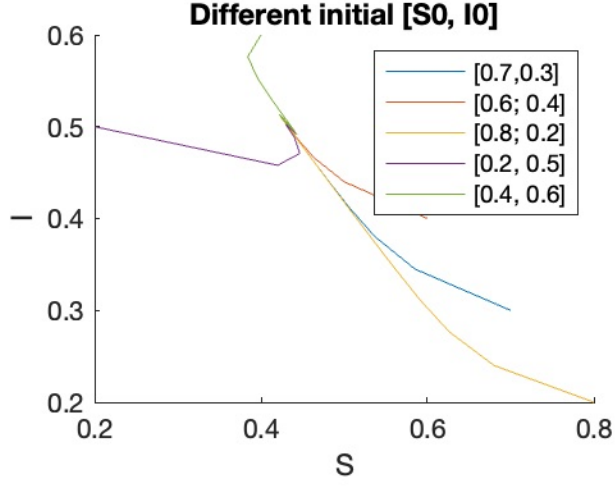

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.2

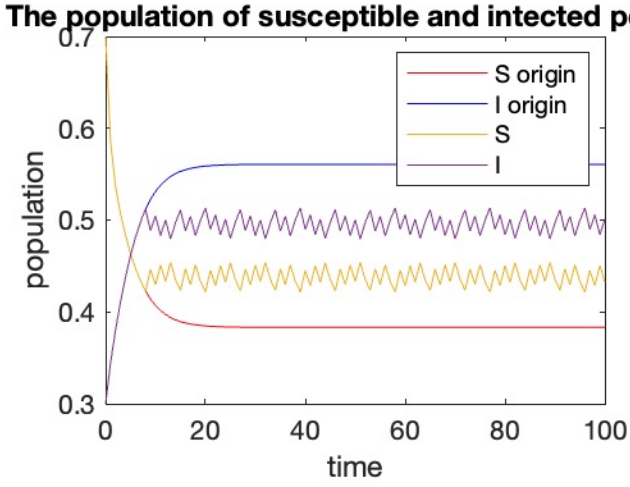

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

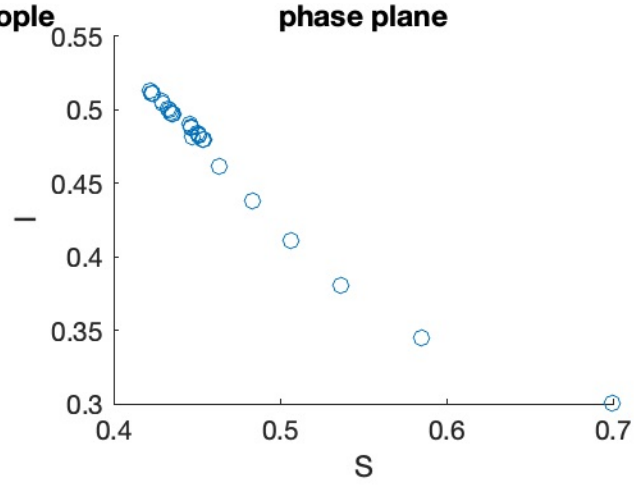

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

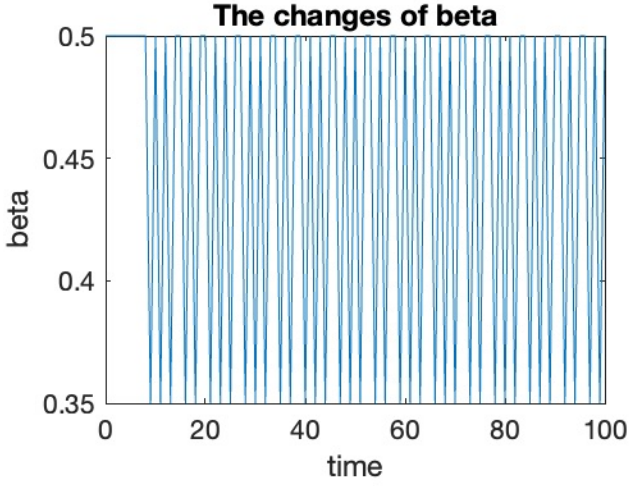

The changes of beta
beta
time
0.5
0.48
0.46
0.44
0.42
0.4
0
20
40
60
80
100

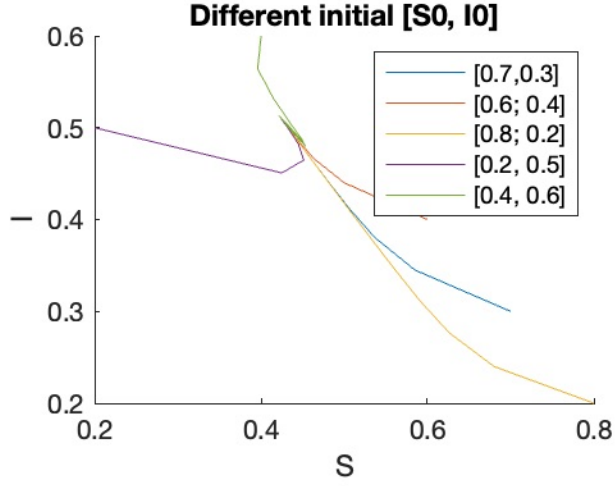

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.3

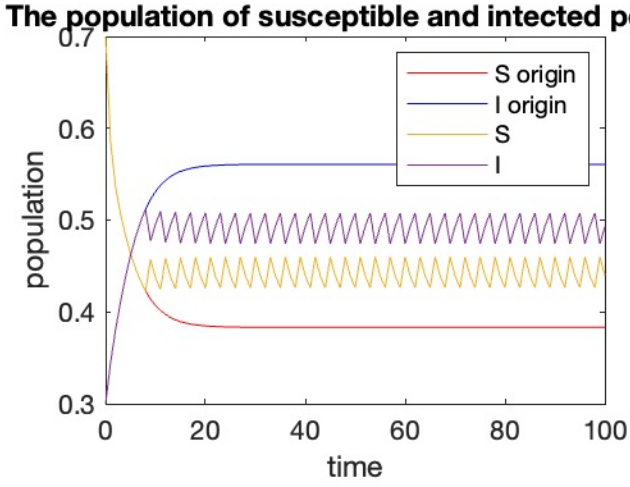

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

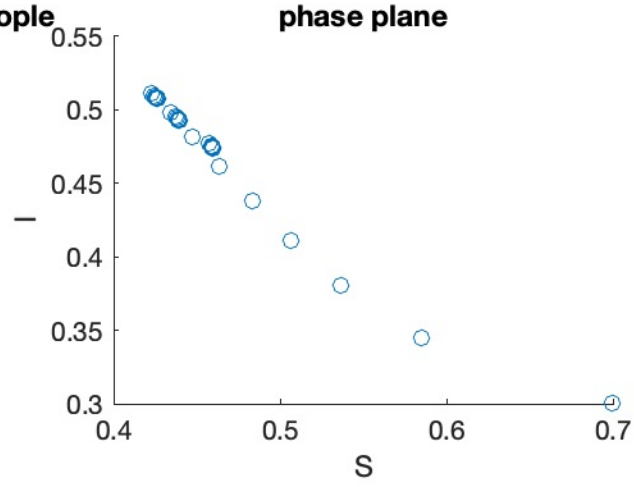

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

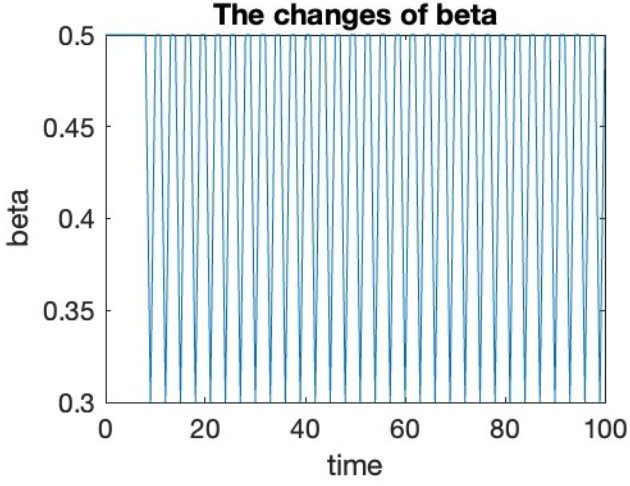

The changes of beta
beta
time
0.5
0.45
0.4
0.35
0
20
40
60
80
100

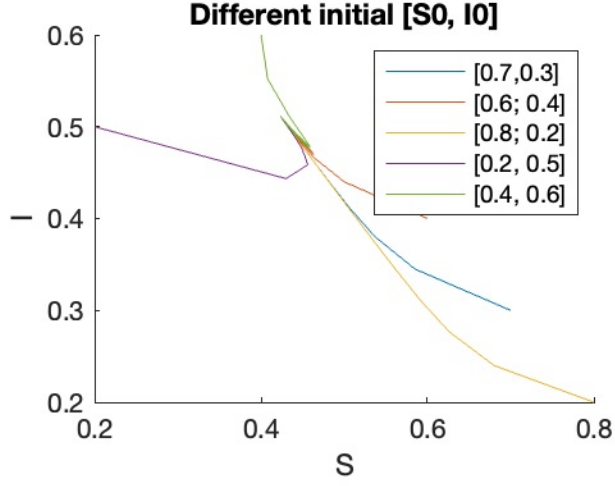

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.4

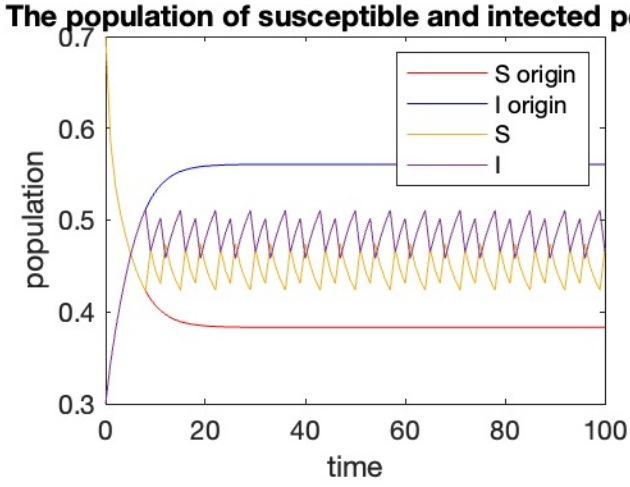

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

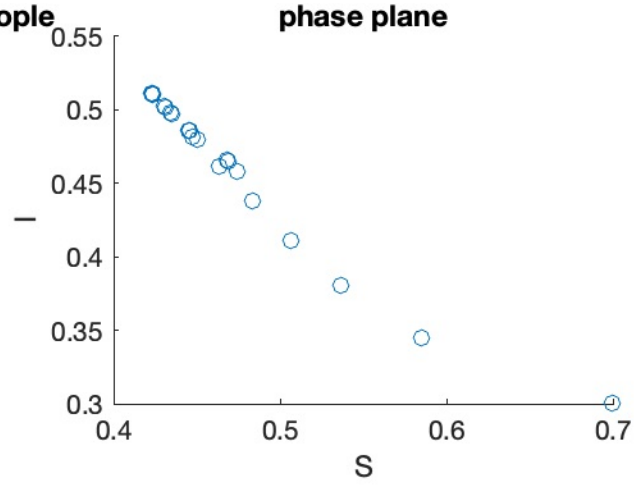

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

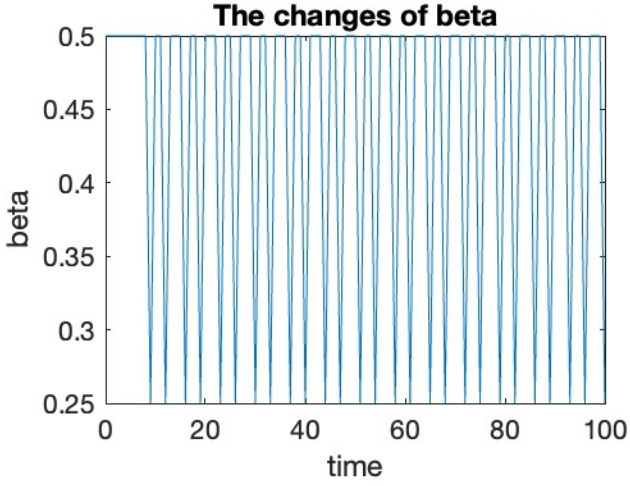

The changes of beta
beta
time
0.5
0.45
0.4
0.35
0.3
0
20
40
60
80
100

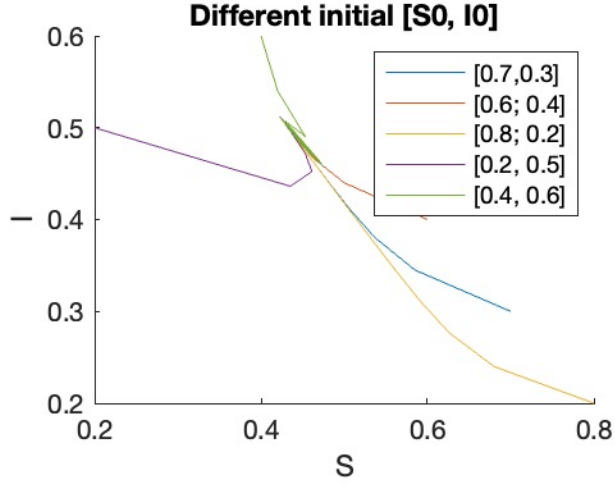

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.5

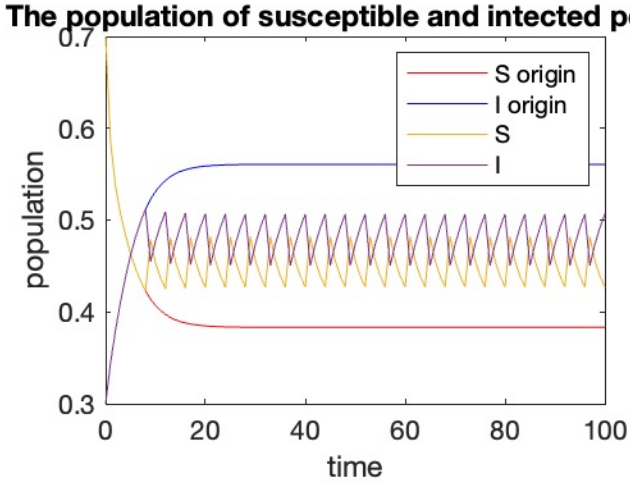

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

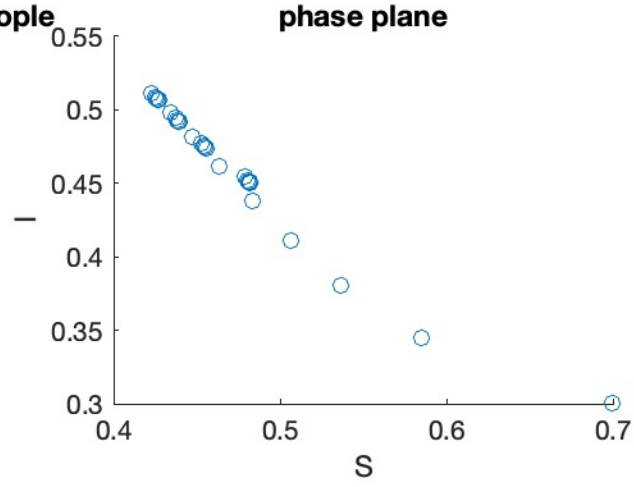

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

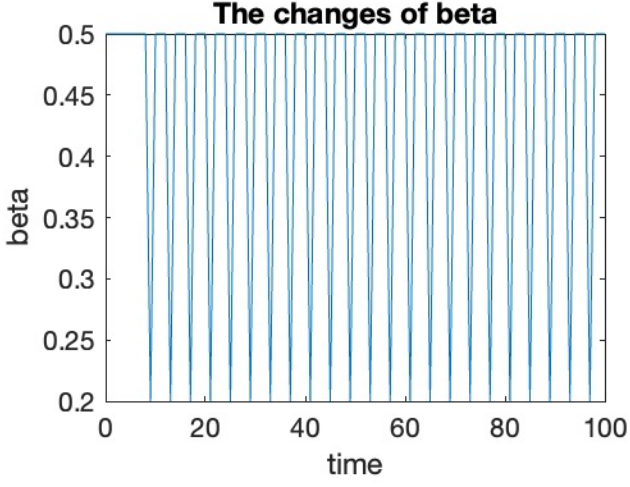

The changes of beta
beta
time
0.5
0.45
0.4
0.35
0.3
0.25
0
20
40
60
80
100

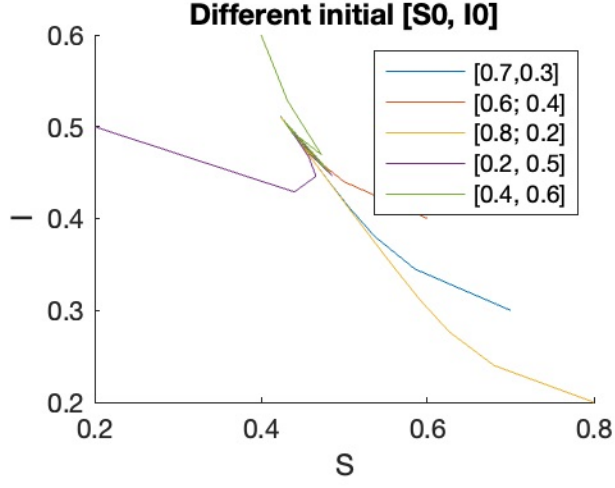

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.6

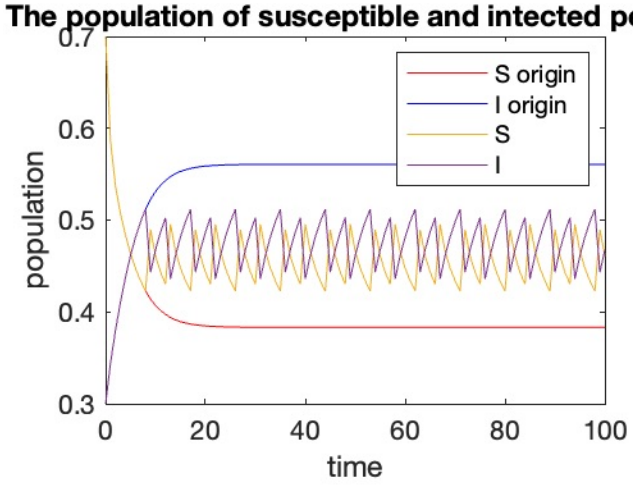

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

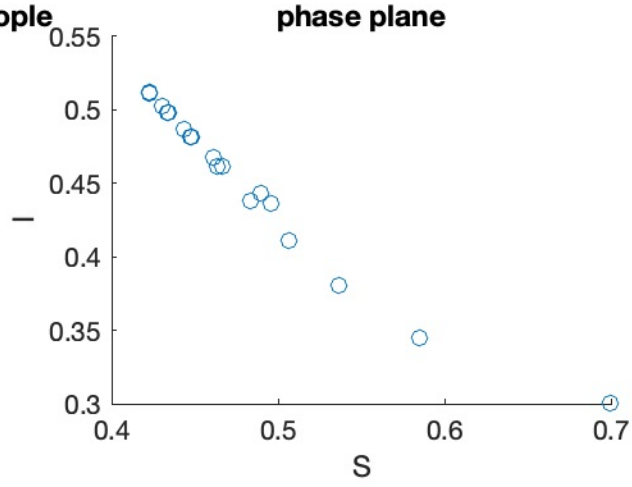

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

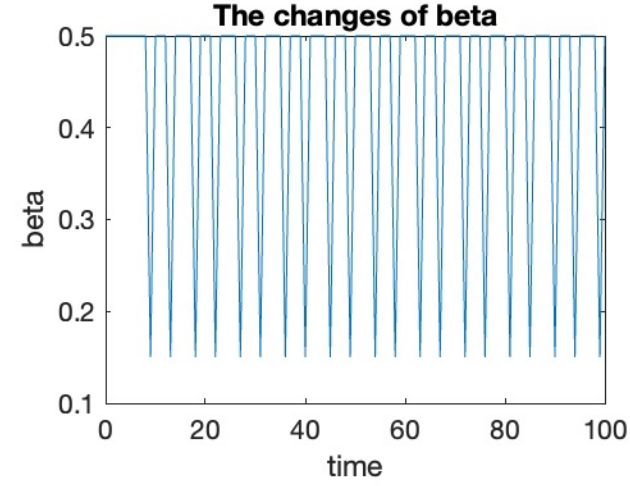

The changes of beta
beta
time
0.5
0.45
0.4
0.35
0.3
0.25
0.2
0
20
40
60
80
100

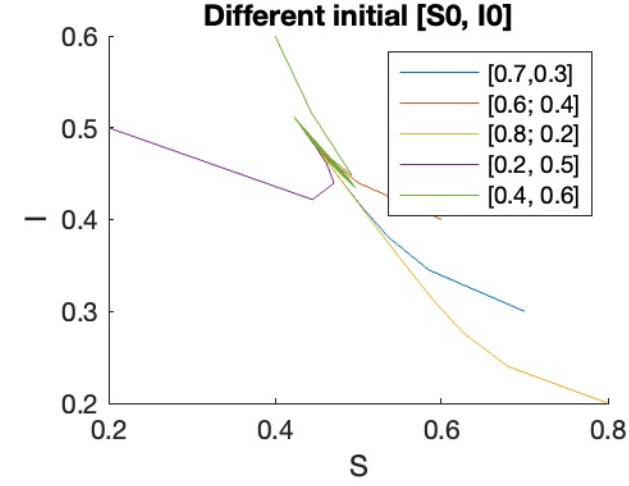

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.7

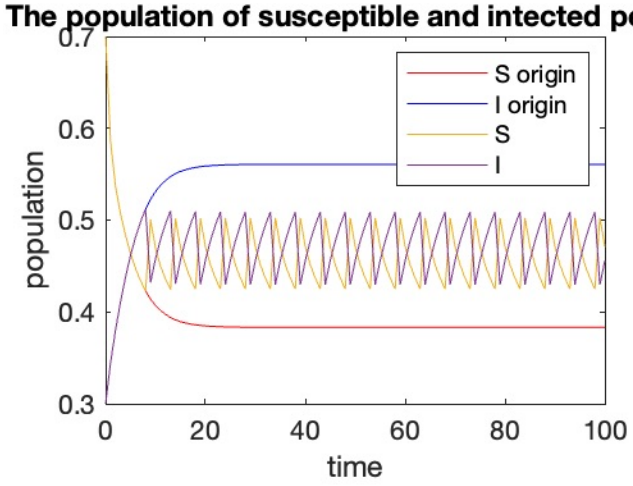

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

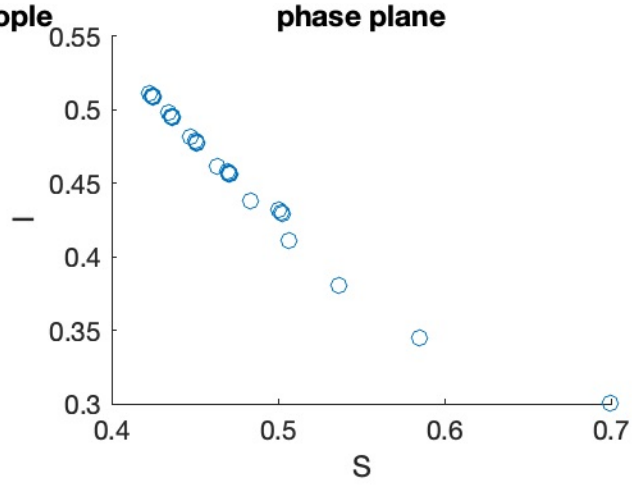

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

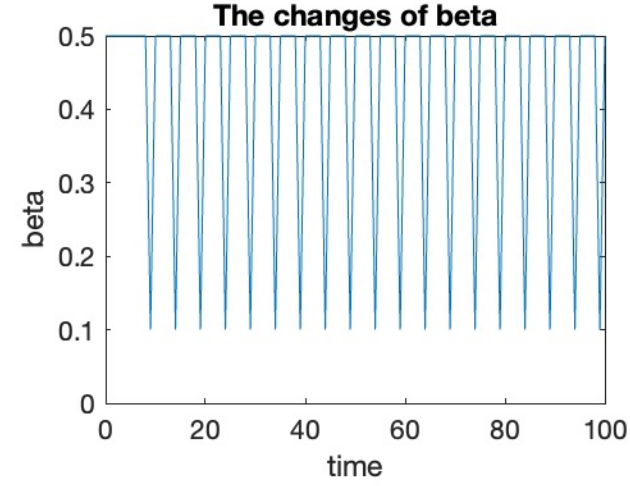

The changes of beta
beta
time
0.5
0.4
0.3
0.2
0.1
0
20
40
60
80
100

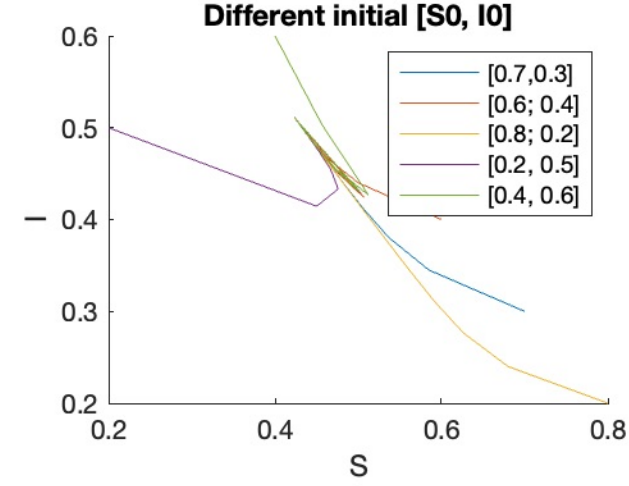

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.8

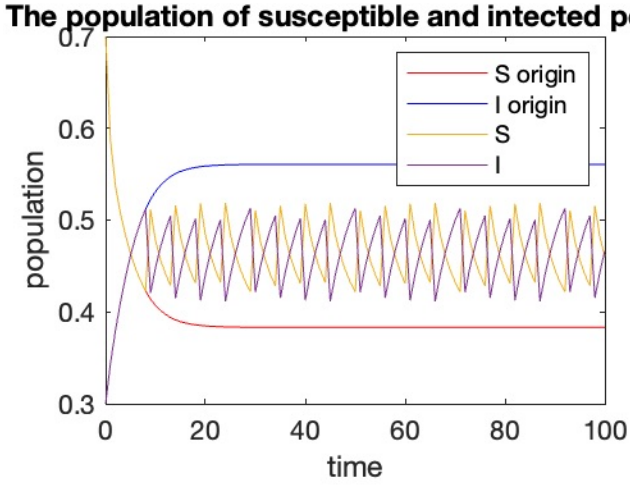

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

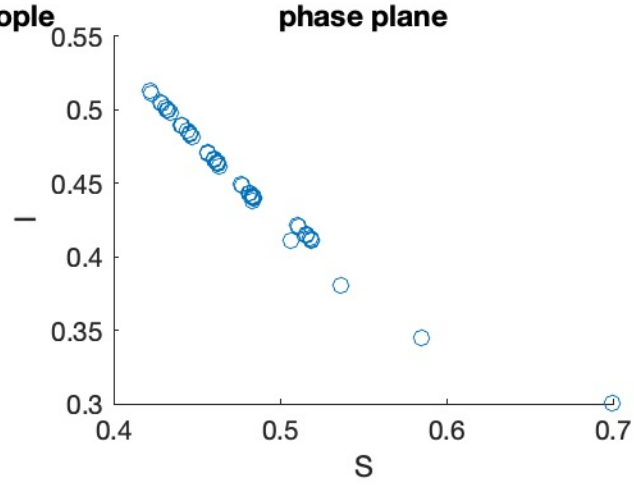

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

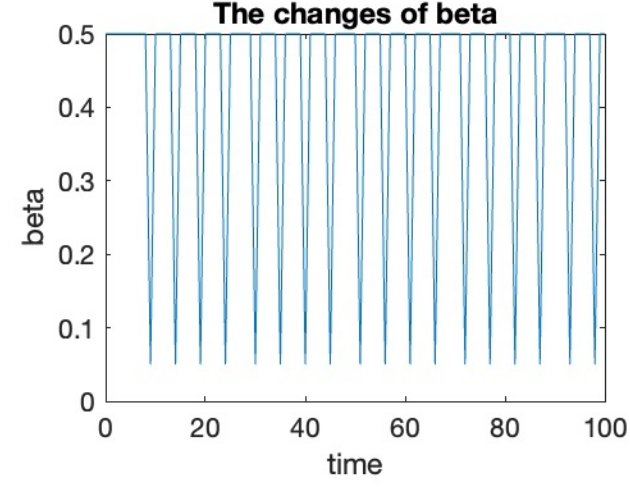

The changes of beta
beta
time
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100

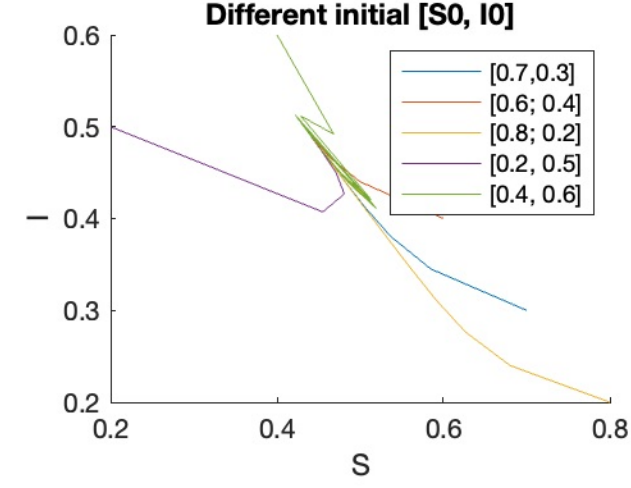

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

eplison = 0.9

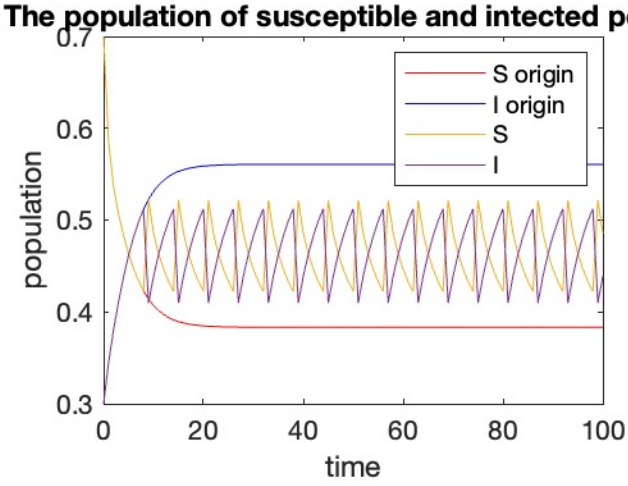

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

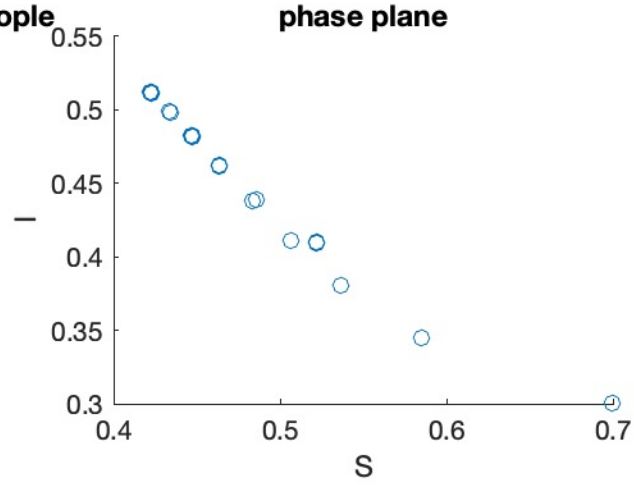

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

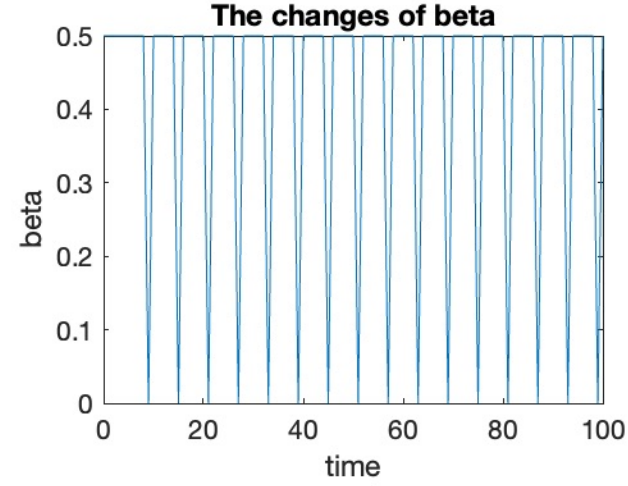

The changes of beta
beta
time
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100

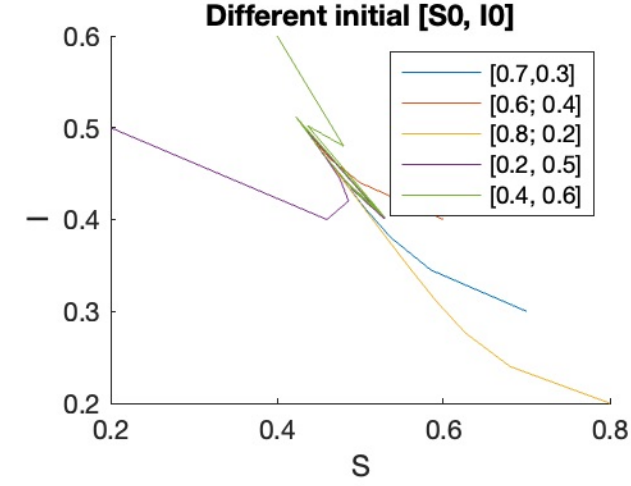

Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8

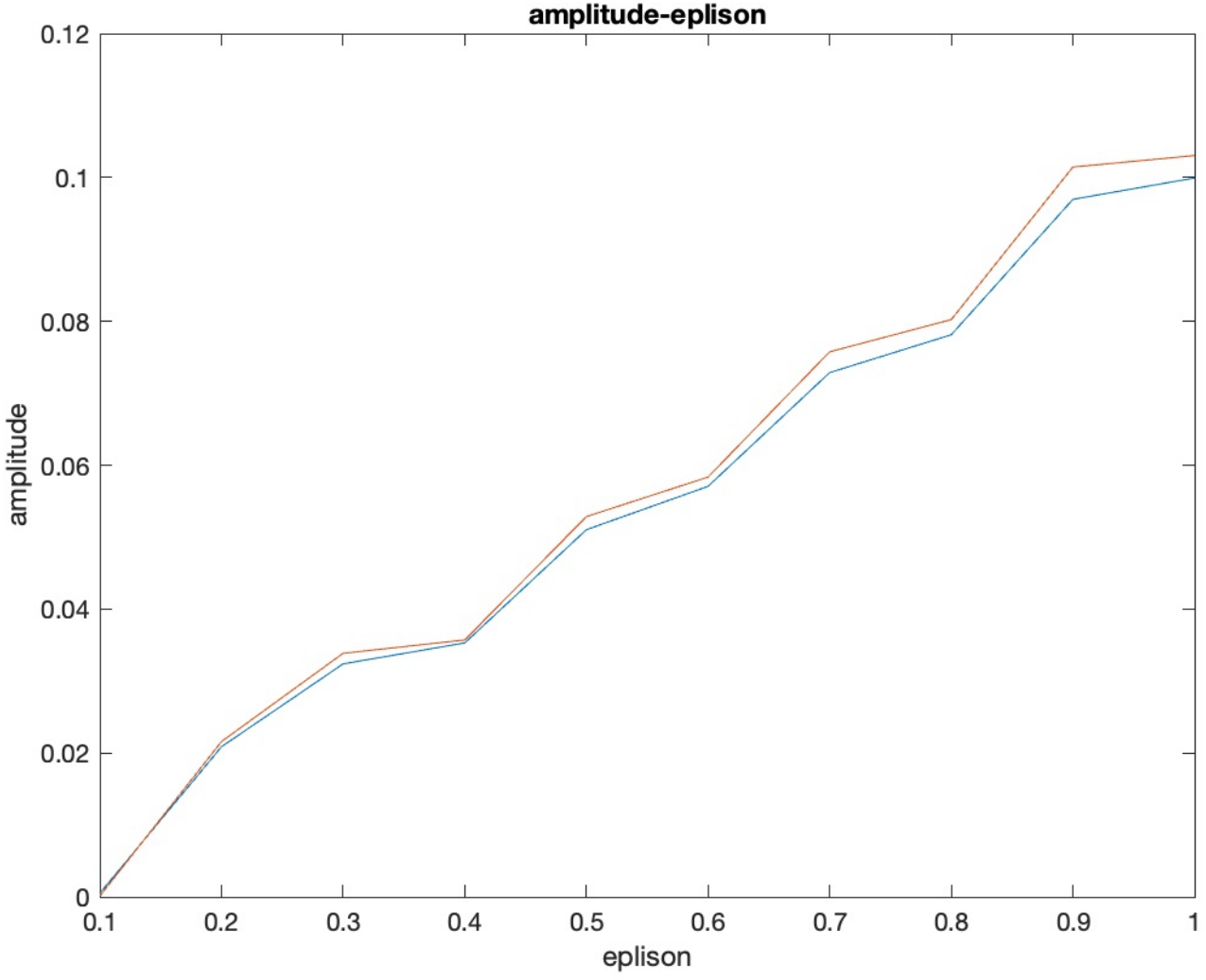
eplison = 1

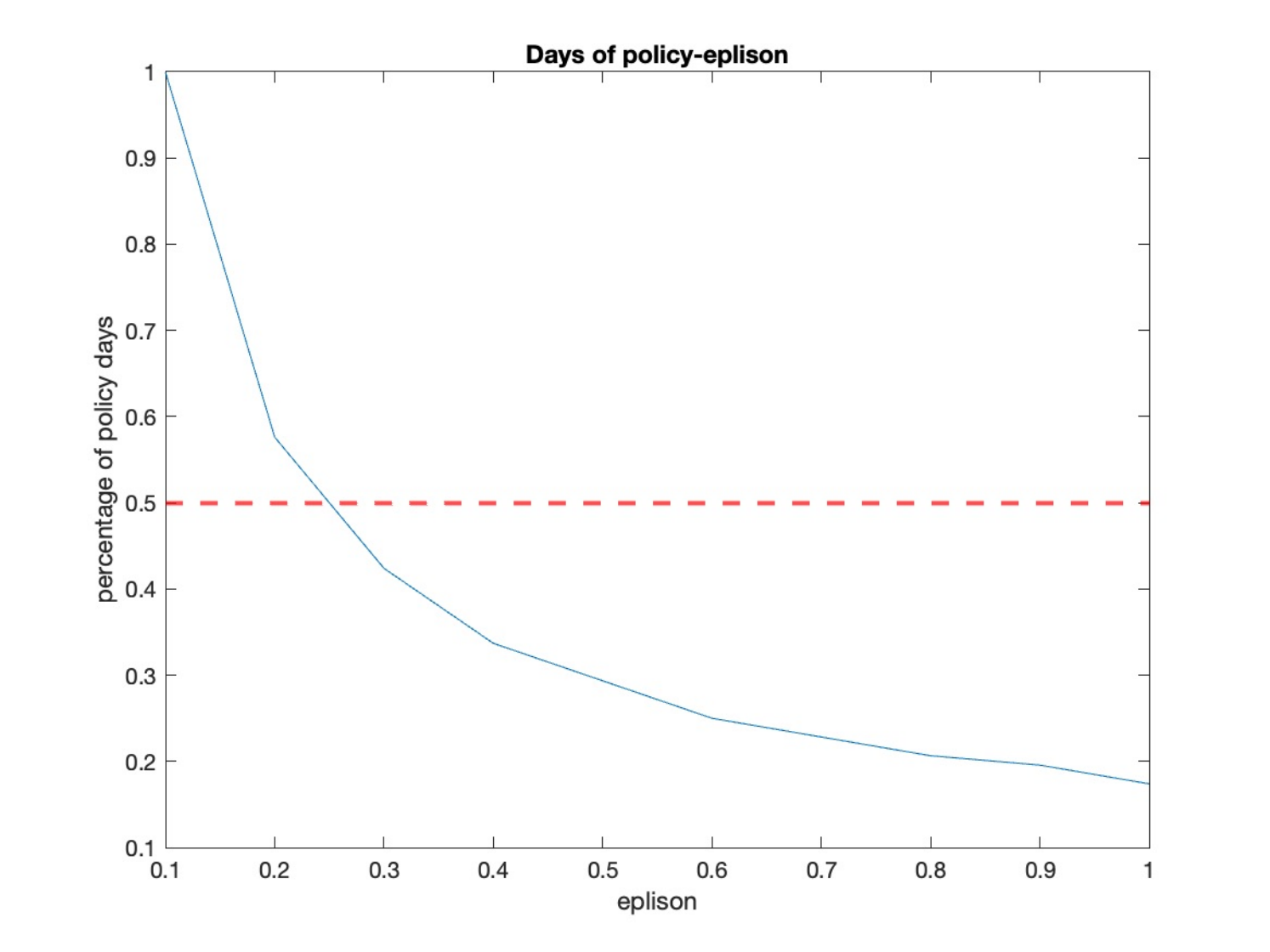

The population of susceptible and intected people
S origin
I origin
S
I
population
time
0.7
0.6
0.5
0.4
0.3
0
20
40
60
80
100

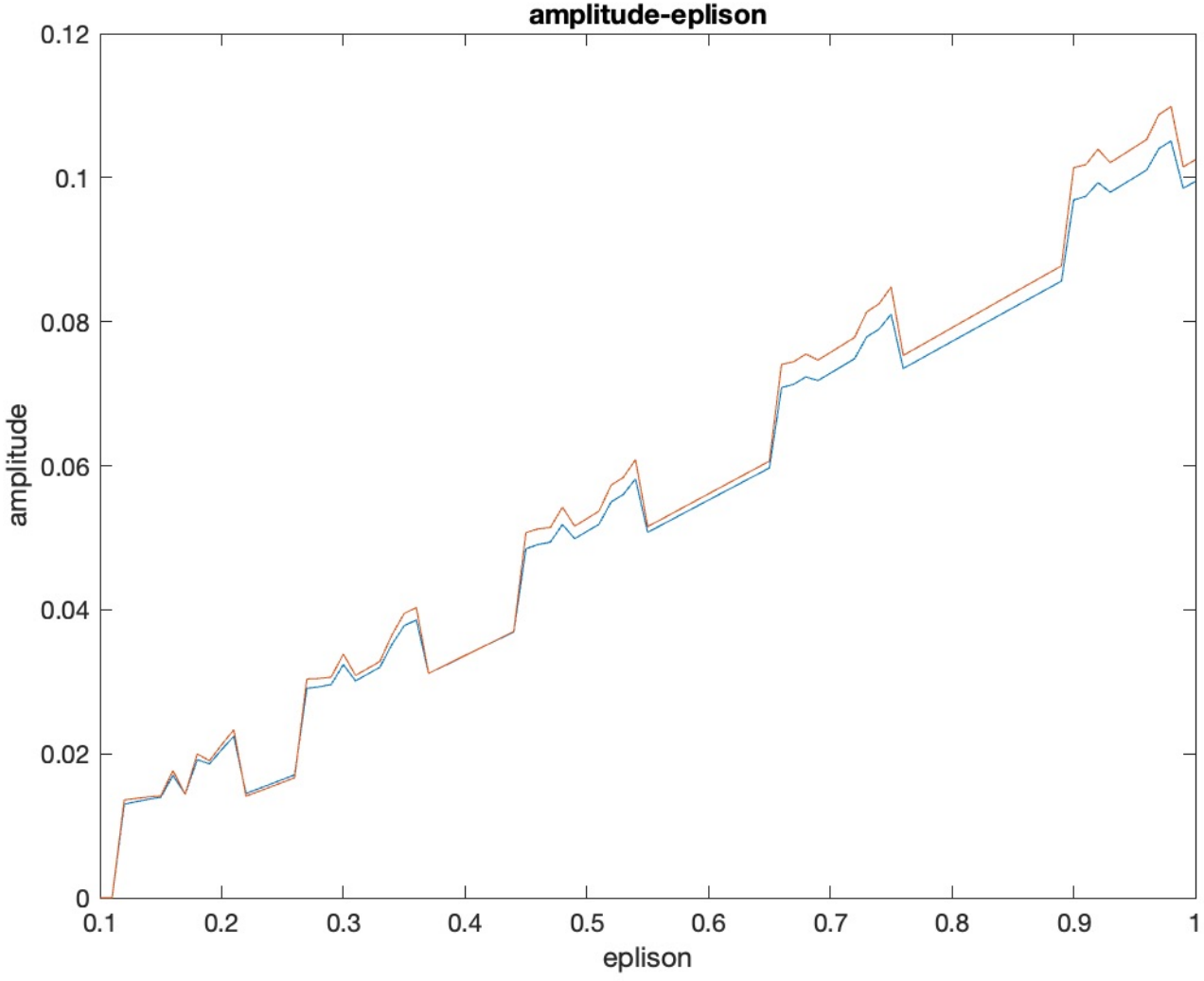

phase plane
I
S
0.55
0.5
0.45
0.4
0.35
0.3
0.4
0.5
0.6
0.7

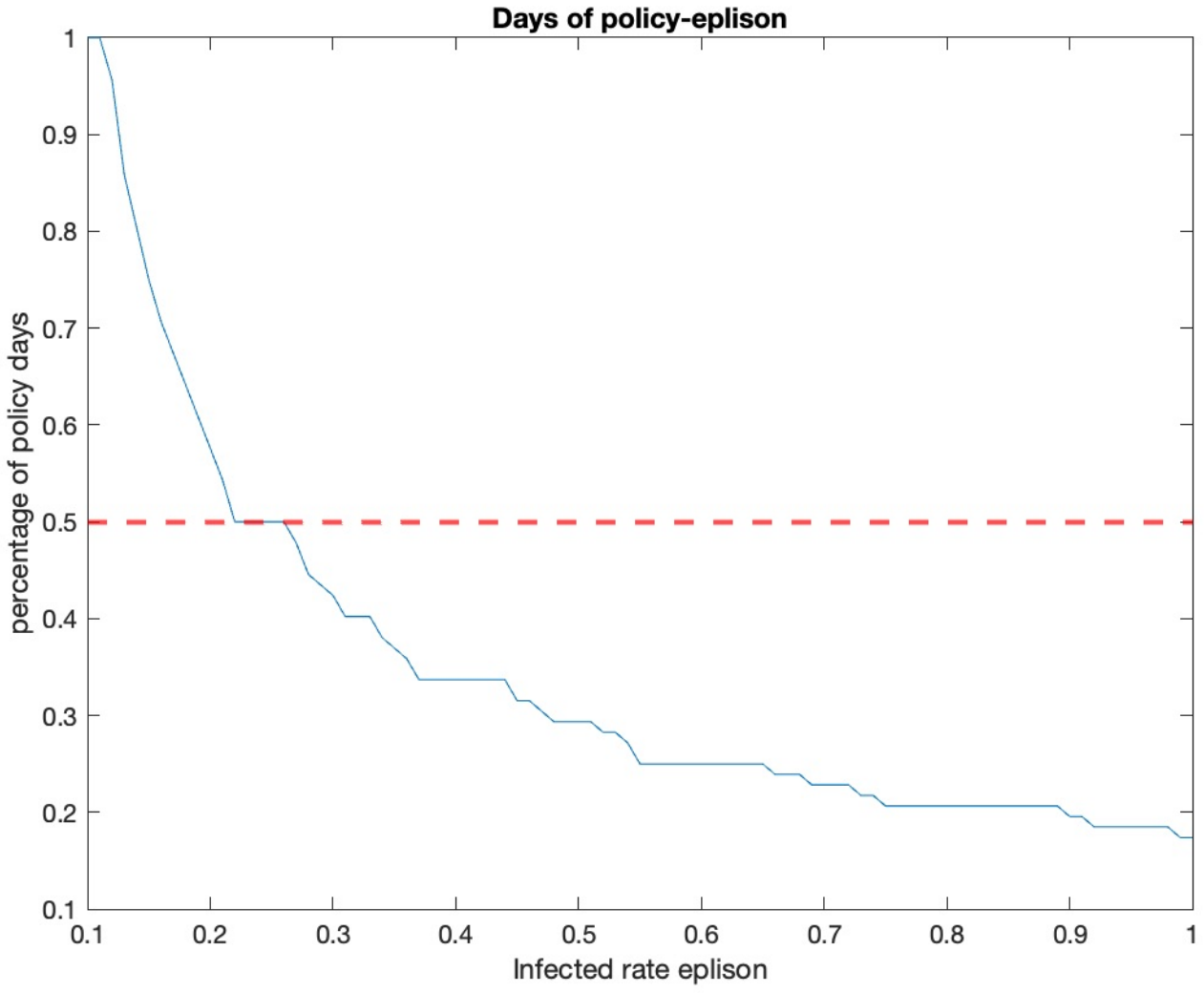

The changes of beta
beta
time
0.5
0.4
0.3
0.2
0.1
0
0
20
40
60
80
100


Different initial [S0, I0]
[0.7,0.3]
[0.6; 0.4]
[0.8; 0.2]
[0.2, 0.5]
[0.4, 0.6]
I
S
0.6
0.5
0.4
0.3
0.2
0.2
0.4
0.6
0.8


amplitude-eplison
0.12
0.1
0.08
0.06
0.04
0.02
0
amplitude
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1
eplison


Days of policy-eplison
percentage of policy days
eplison
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


amplitude-eplison
amplitude
eplison
0.12
0.1
0.08
0.06
0.04
0.02
0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1


Days of policy-eplison
percentage of policy days
Infected rate eplison
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1