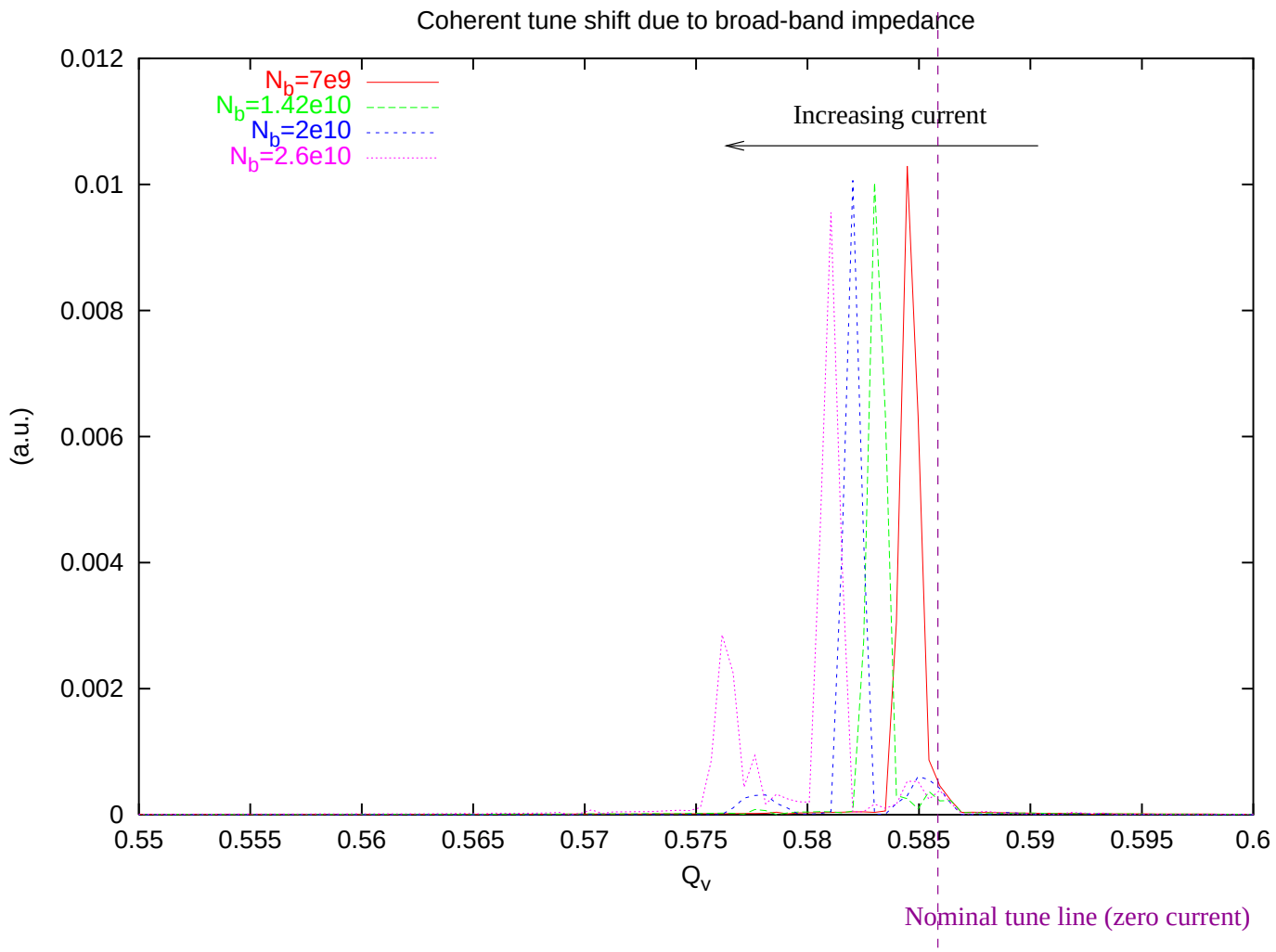
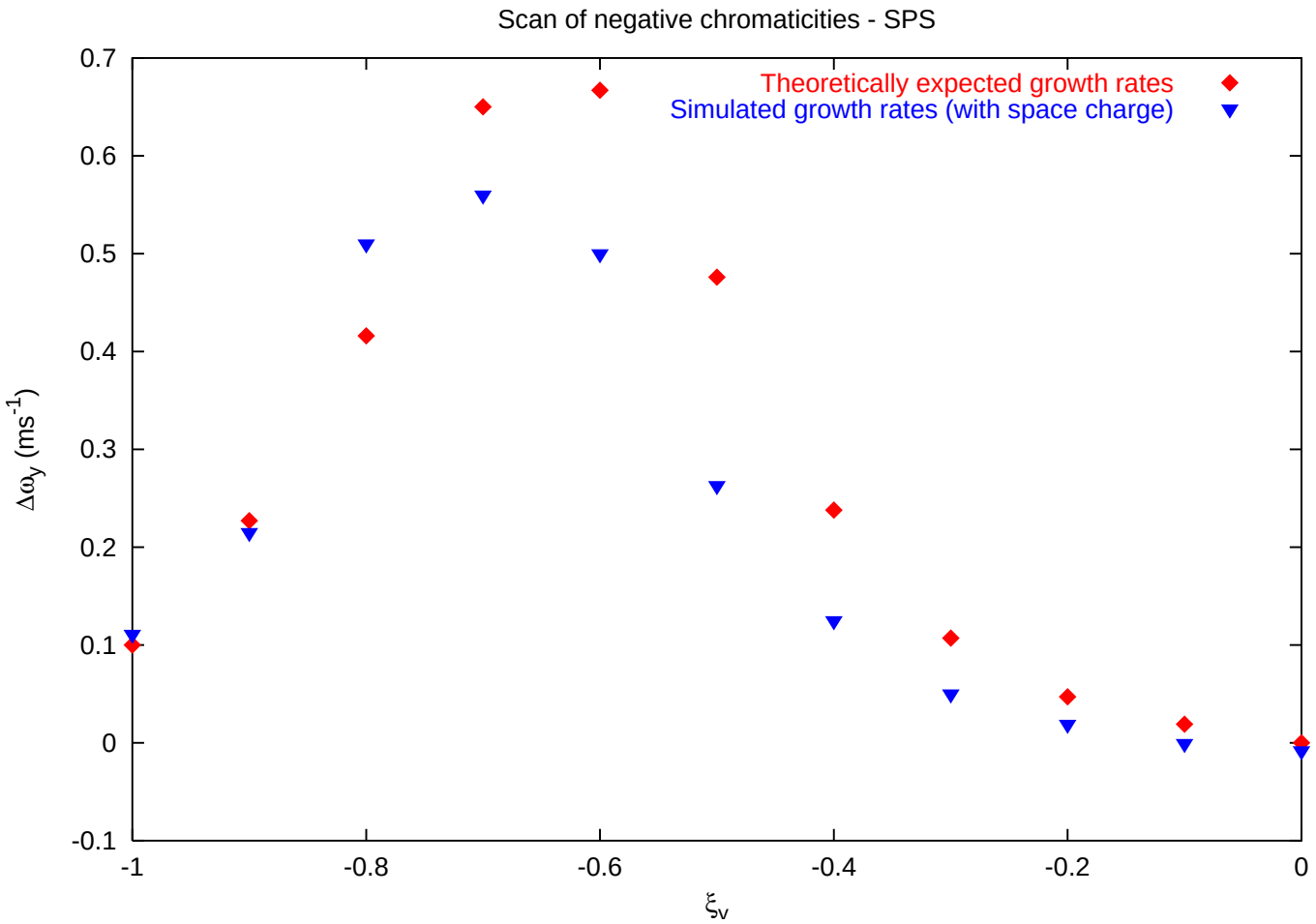

Coherent tune shift due to broad-band impedance
N_b=7e9
N_b=1.42e10
N_b=2e10
N_b=2.6e10
Increasing current
(a.u.)
0.012
0.01
0.008
0.006
0.004
0.002
0
0.55
0.555
0.56
0.565
0.57
0.575
0.58
0.585
0.59
0.595
0.6
Q_v
Nominal tune line (zero current)


Scan of negative chromaticities - SPS
Theoretically expected growth rates
Simulated growth rates (with space charge)
Δω_y (ms^-1)
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
-0.1
-1
-0.8
-0.6
-0.4
-0.2
0
ξ_v