LHC at 7 TeV ECLOUD: HP vs Water Bag Dist.

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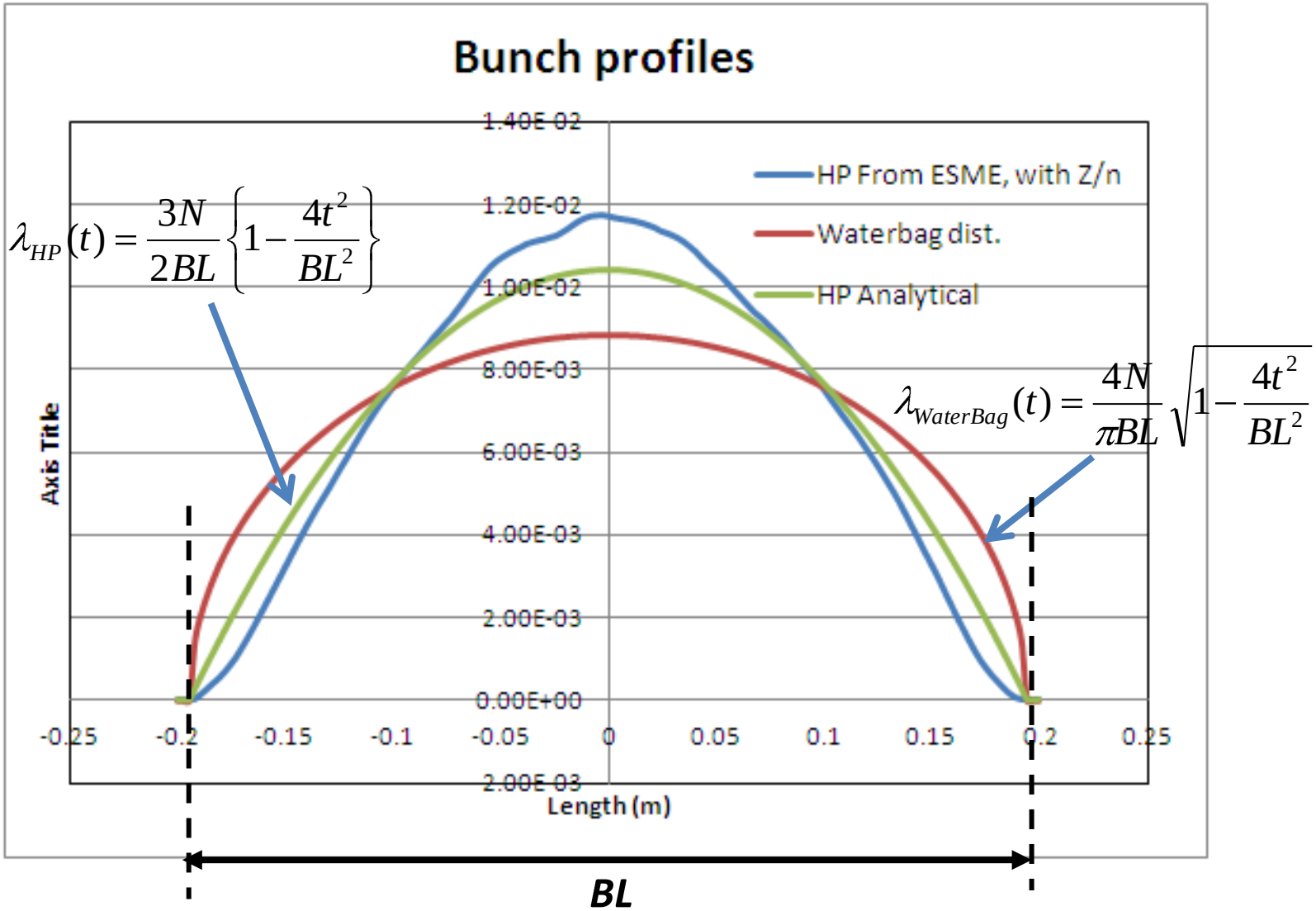
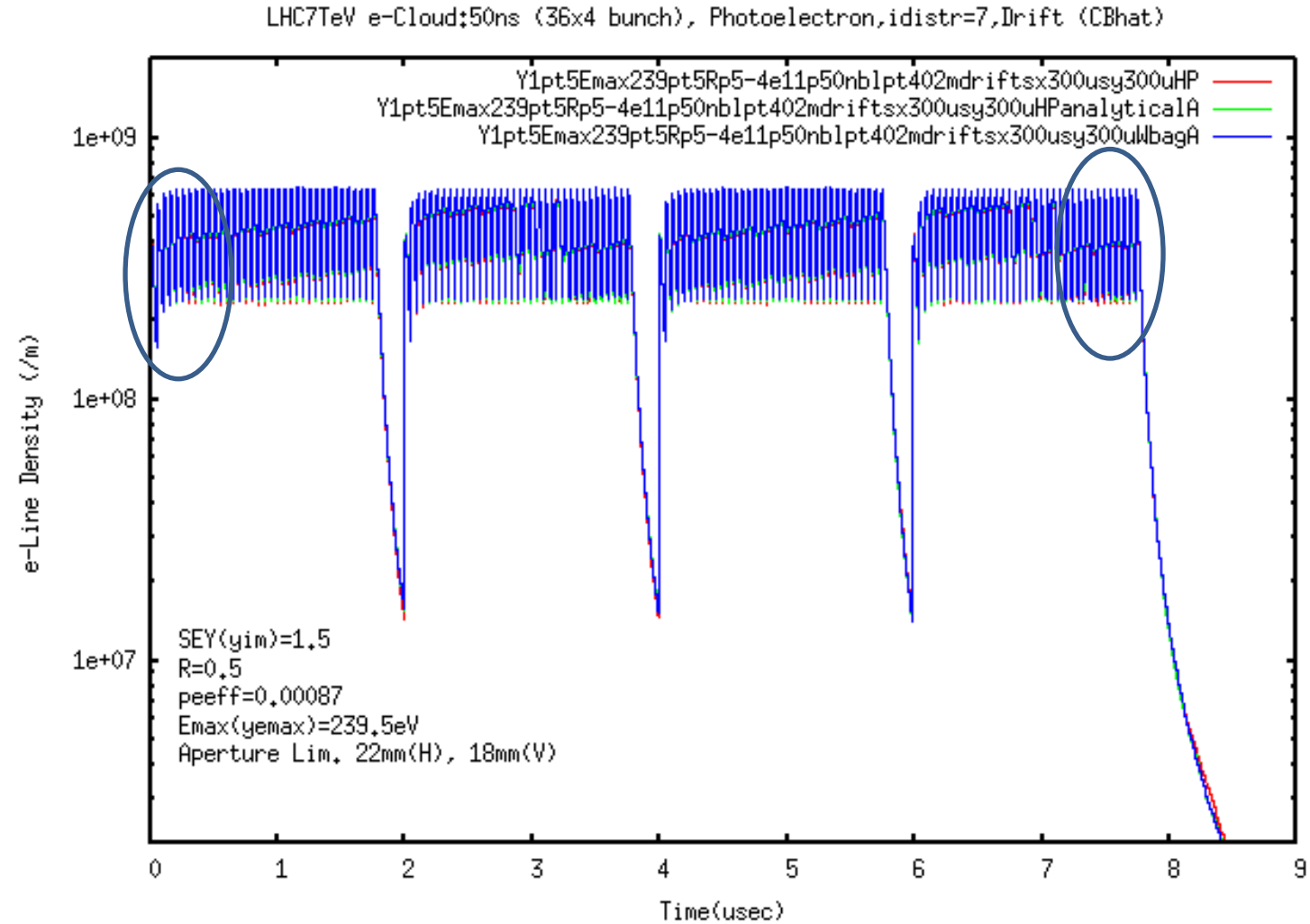
Comparison between different LHC Bunch Profiles (BL~0.40m), 2.5 eVs

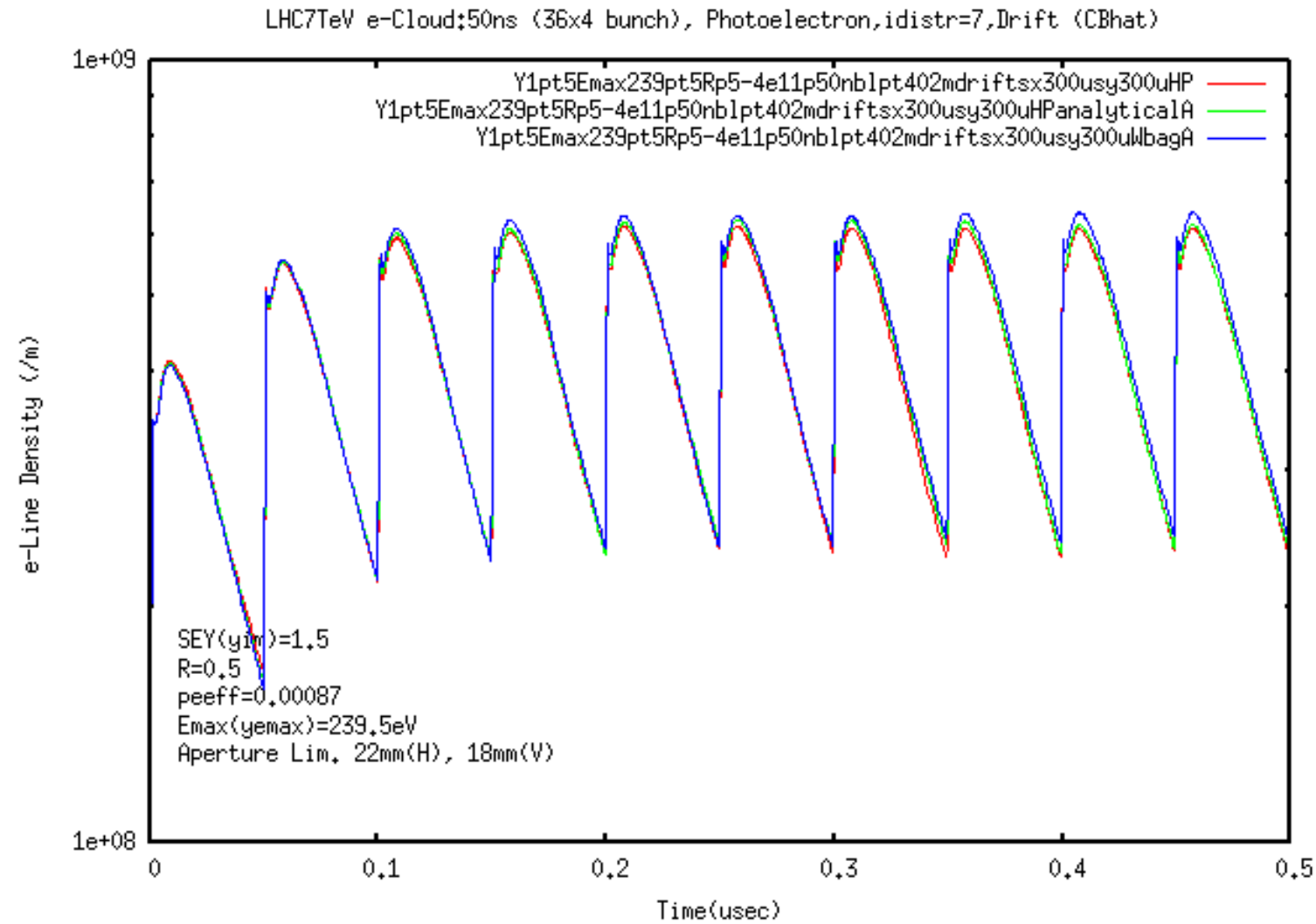


e-line Density: Drift Space



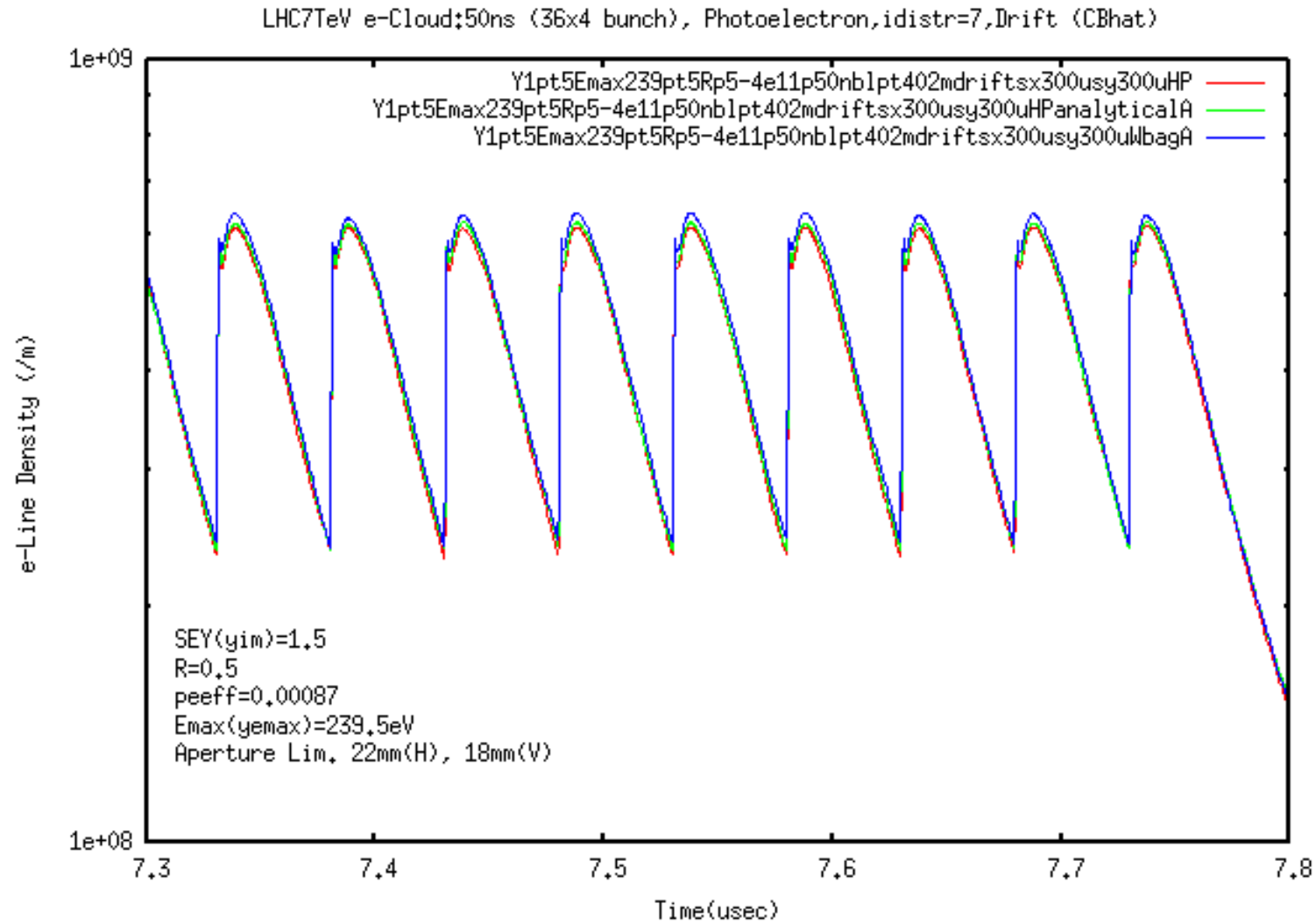
1.41207, 875813.

e-line Density -1 to 10 bunches :Drift Space



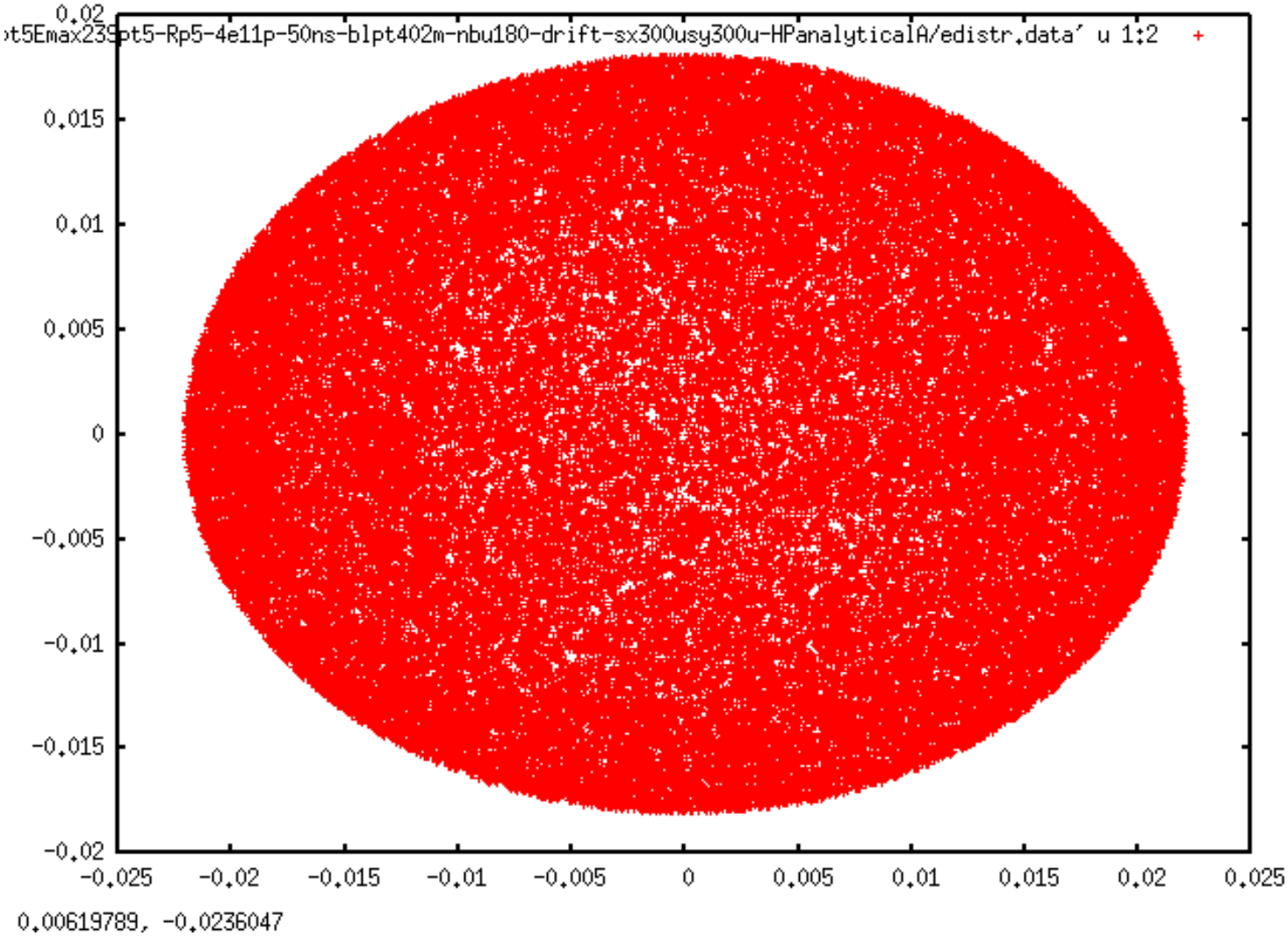
0.200718, 7.69252e+07

e-line Density –Last 10 bunches: : Drift Space

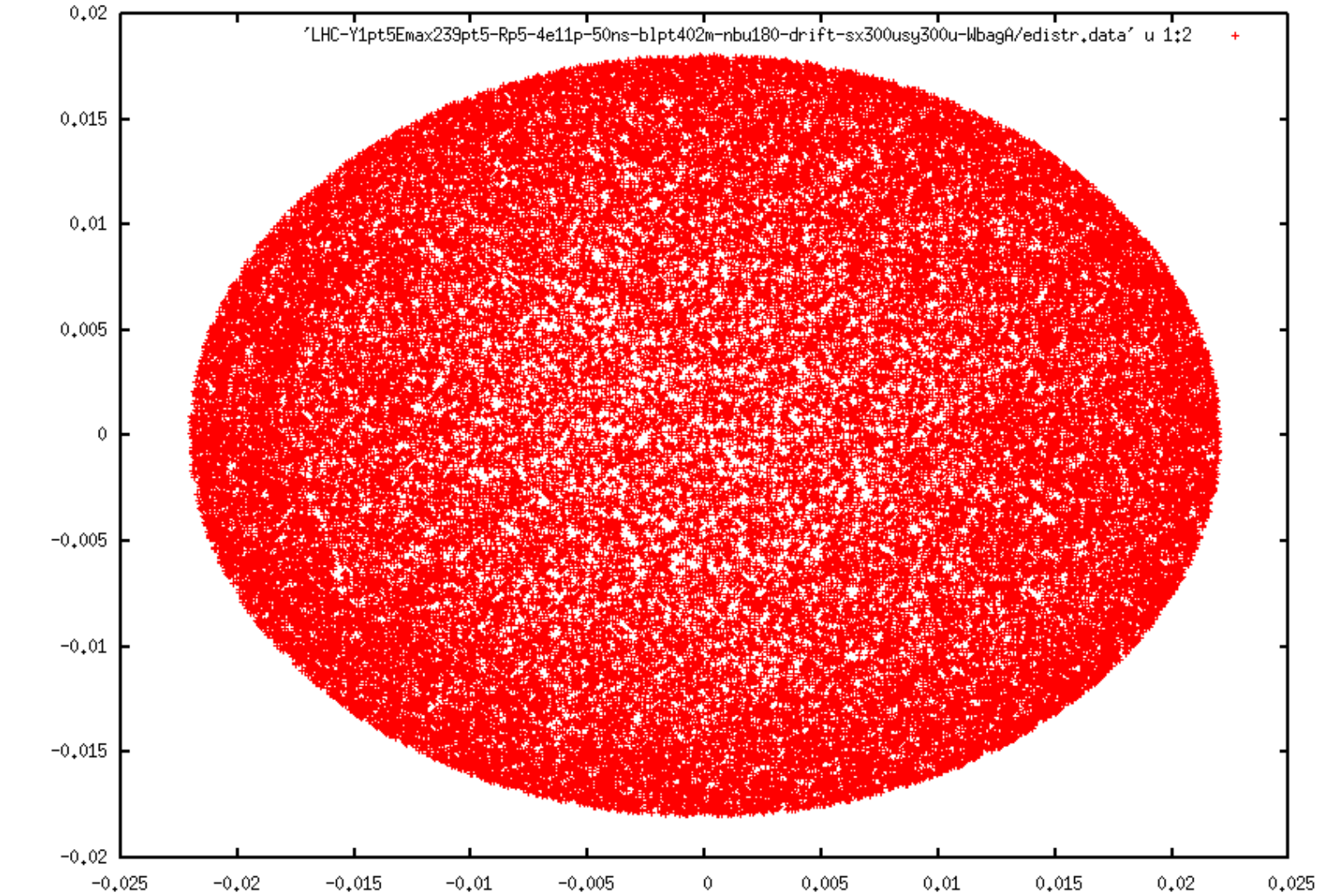


7.57342, 4.53659e+08

(x,y) e-distribution after bunch # 139 for HP bunch Profile



(x,y) e-distribution for after bunch # 139
Water Bag Bunch Profile



-0.00576709, -0.0229070

Average Heat Load :Drift Space

Bunch profile: HP with Z/n ← Realistic Distribution

LHCY1p5Emax239p5Rp54e11p50ns2p5eVs**drift**x300uy300uHP

Average loss over 4. batches : **2.97 (Watts/m)**

Bunch profile: HP Analytical

LHC-Y1pt5Emax239pt5-Rp5-4e11p-50ns-blpt402m-nbu180-**drift**-sx300usy300u-HPanalyticalA

Average loss over 4. batches : **2.72 (Watts/m)**

Bunch profile: Water Bag

LHC-Alexey/LHC-Y1pt5Emax239pt5-Rp5-4e11p-50ns-blpt402m-nbu180-**drift**-sx300usy300u-WbagA

Average loss over 4. batches : **2.39 (Watts/m)**

Bunch profile: Bunches in Double Harmonic RF with V2/V1=-0.5

LHCY1p5Emax239p5Rp54e11p50ns2p5eVs**drift**x300uy300uBLMp50

Average loss over 4. batches : **2.43 (Watts/m)**

Comparable