Newly multi-particle tracking results

1) **Tracking conditions**:

noIRerr_BB68_fullBBC10_12800p_e5
noIRerr_BB68_halfBBC10_12800p_e5
noIRerr_BB68_halfBBC10_38400p_e5
noIRerr_BB68_halfBBC_11520p_e6
noIRerr_BB68_noBBC_12800p_e5
noIRerr_noBB_12800p_e5

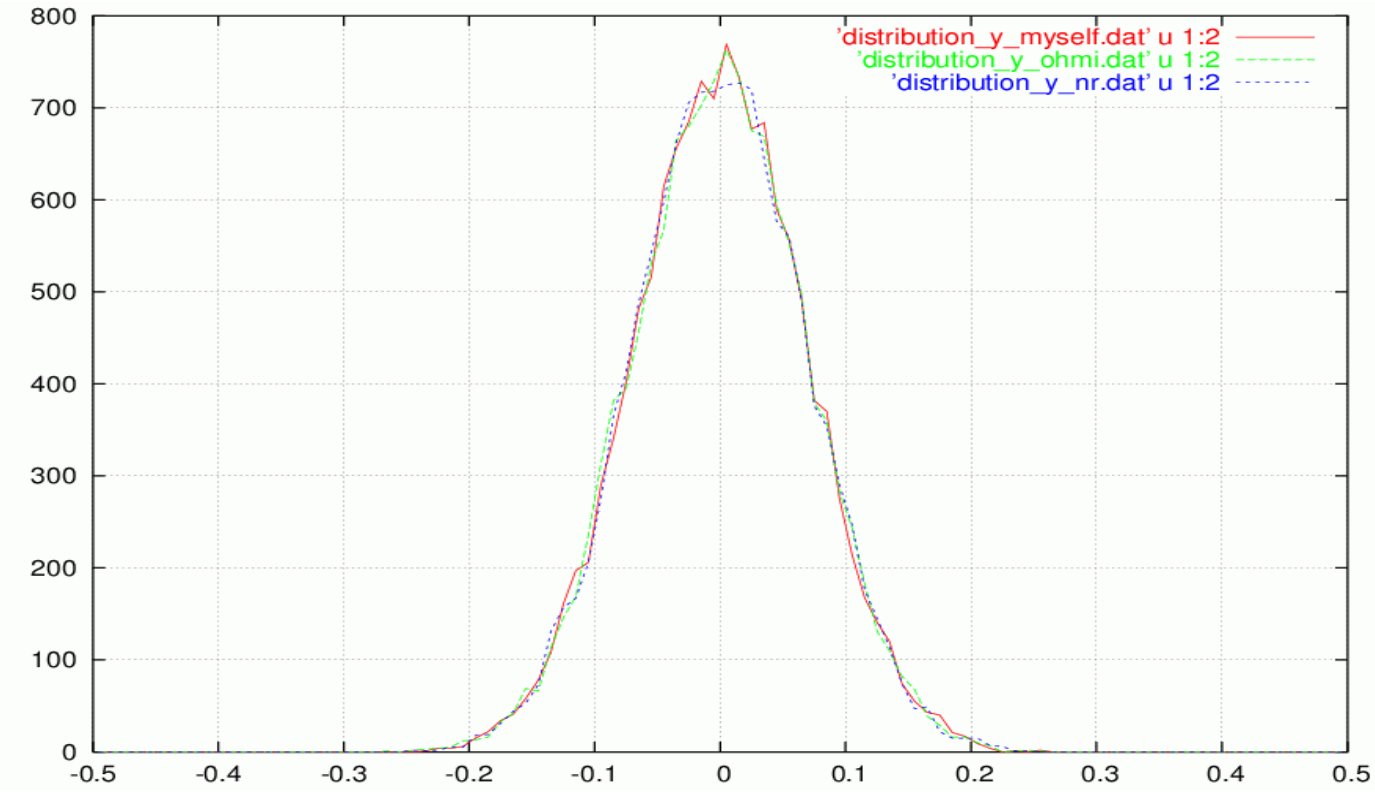
2) **puzzel 1**: Gaussian distribution generators

- Sources:
  1) numeric_recipe (nr)
  2) used in Ohmi' ion trapping code (fortan)
  3) chinese c lib.
- The emiitances (for 12800 particles):

1) nr: 0 12800 2.45370375299 2.47195165592

2)ohmi: 0 12800 2.49922364222 2.49985162775

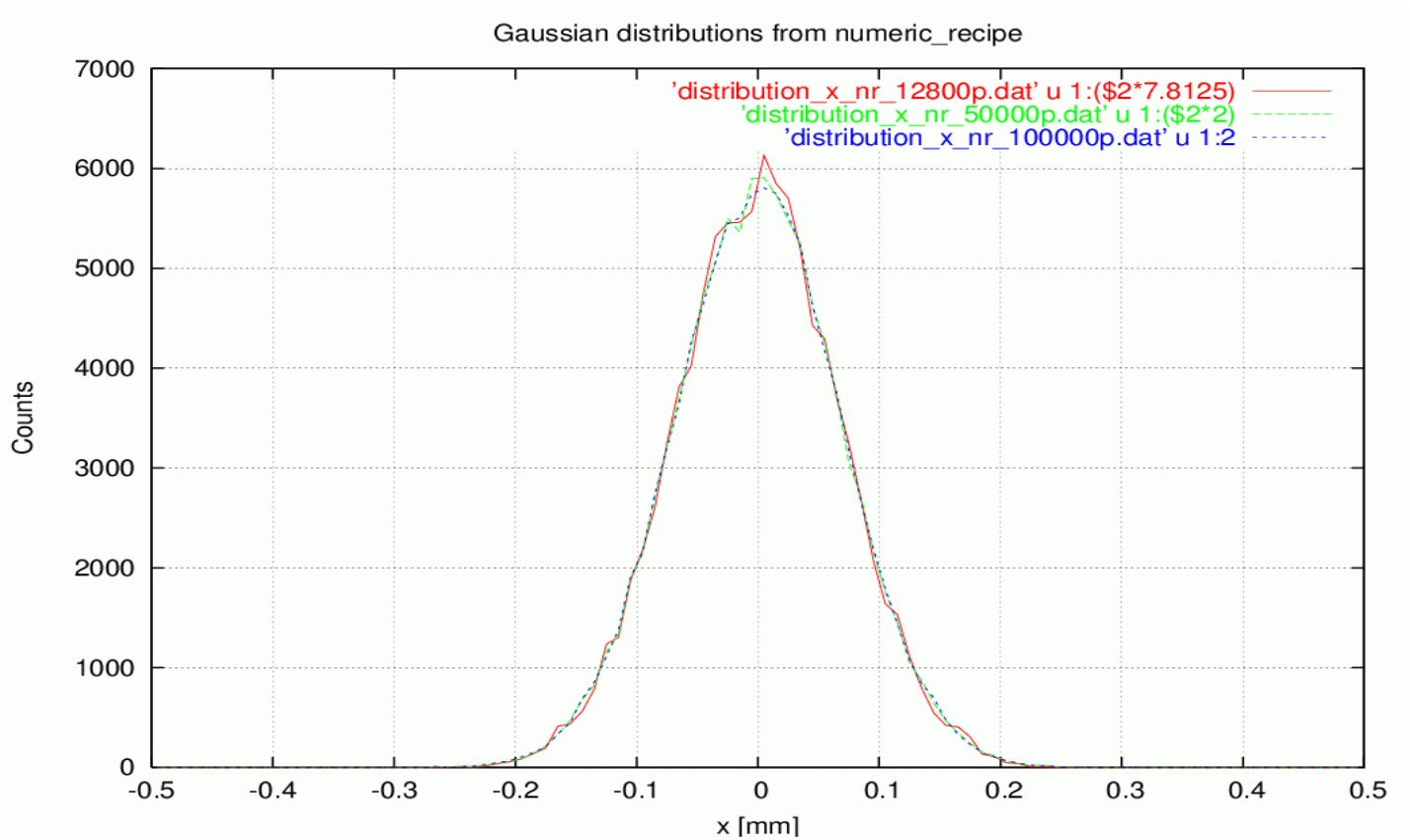
3)chinese c-lib: 0 12800 2.5053058681 2.5041931826



Can you believe Numeric_recipe?

- emittances from nr Gaussian generator:

12800p: 2.49206442576 2.49541900479
25600p: 2.49945405729 2.4933578126
38400p: 2.49206442576 2.49541900479
50000p: 2.49945405729 2.4933578126
100000p:2.5052535536 2.50030280711

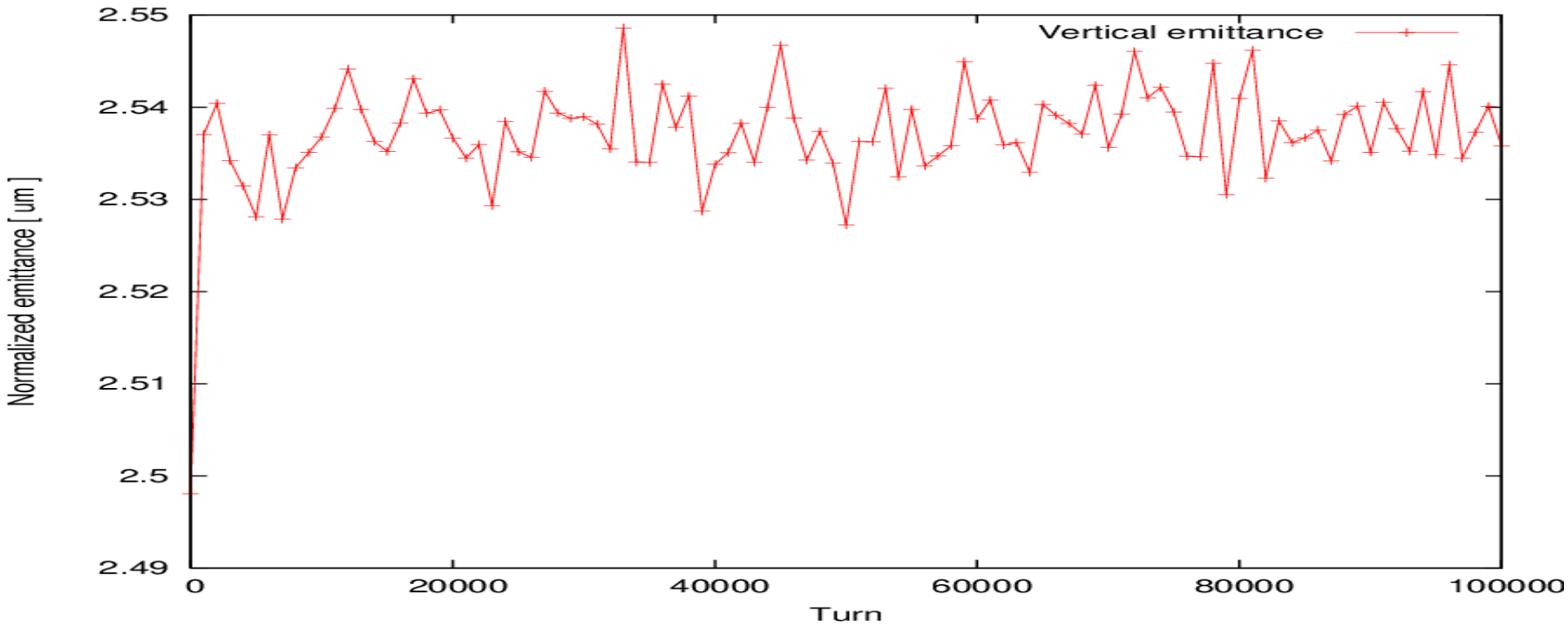


2) **Puzzel 2**: where come the fluctuations in calculated emittances

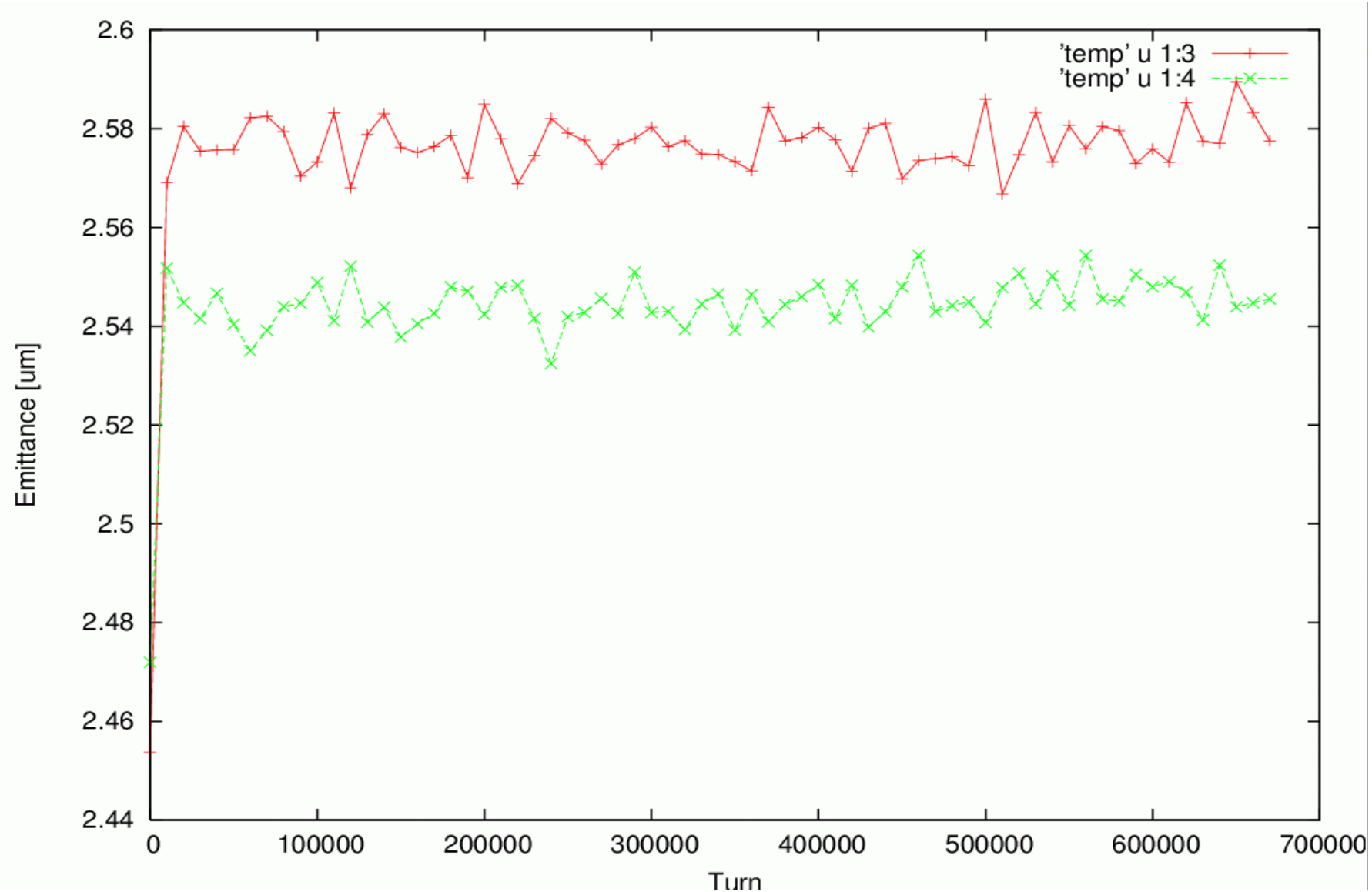
No particle loss observed in 10^5 turn tracking.

==> jump in the beginning: may link to beta mis-match
can be easily check later.

==>fluctations even in 38400p tracking



4) **Tracking with 12800p to 10^6 turns is possible here.**



5) **What we going to do next week** ?

==>where come the fluctuations in calculated emittances

==> can we eliminate them ?

==>thereafter, start formal trackings and document results

One thing important:

CODE DEBUGGING (Guillaume / Yun)
especially longitudinal plane