16 JANUARY, WEDNESDAY (EX1A)

Run the EX1A

- Is it a transfer line or a circular machine?
- Starting from the beta plot of the periodic solution evaluate the Q1 and Q2 (compare with the precise result).
- Why $\hat{\beta}_x \neq \hat{\beta}_y$ even if kqf=kqd in the periodic solution? Can you compute the periodic solution for a circular machine with 5000000 cells and 1000000 times longer machine (preferably think before blocking the PC) ...
- What is the behaviour of horizontal dispersion in this longer machine? and the vertical dispersion?
- What is the difference before a periodic solution and an initial condition solution?
- Move the k to have an unstable periodic solution. Can you do the same for the initial condition solutions? Discuss it with the colleague on your right if she/he exists.

16 JANUARY, WEDNESDAY (EX1B)

Run the EX1B

- Compare the target tune with the matched tune. Is the matching converging?
- Try to go to (2.45, 0.32). Is the matching converging? and if you start from K=(0.007,-0.007)? Is J. Bond playing a role here? Discuss it with the colleague on your left if she/he exists.

16 JANUARY, WEDNESDAY (EX1C)

Run the EX1C

- Stop the code execution before the tune matching.
- If you consider a beam at double energy how the tunes will change?
- If you consider an electron beam instead of a proton beam, how the tunes will change?
- Transform the circular machine in a linear machine and try to reach without matching the unstable point. What are the maximum tunes of the machine? for which k's?