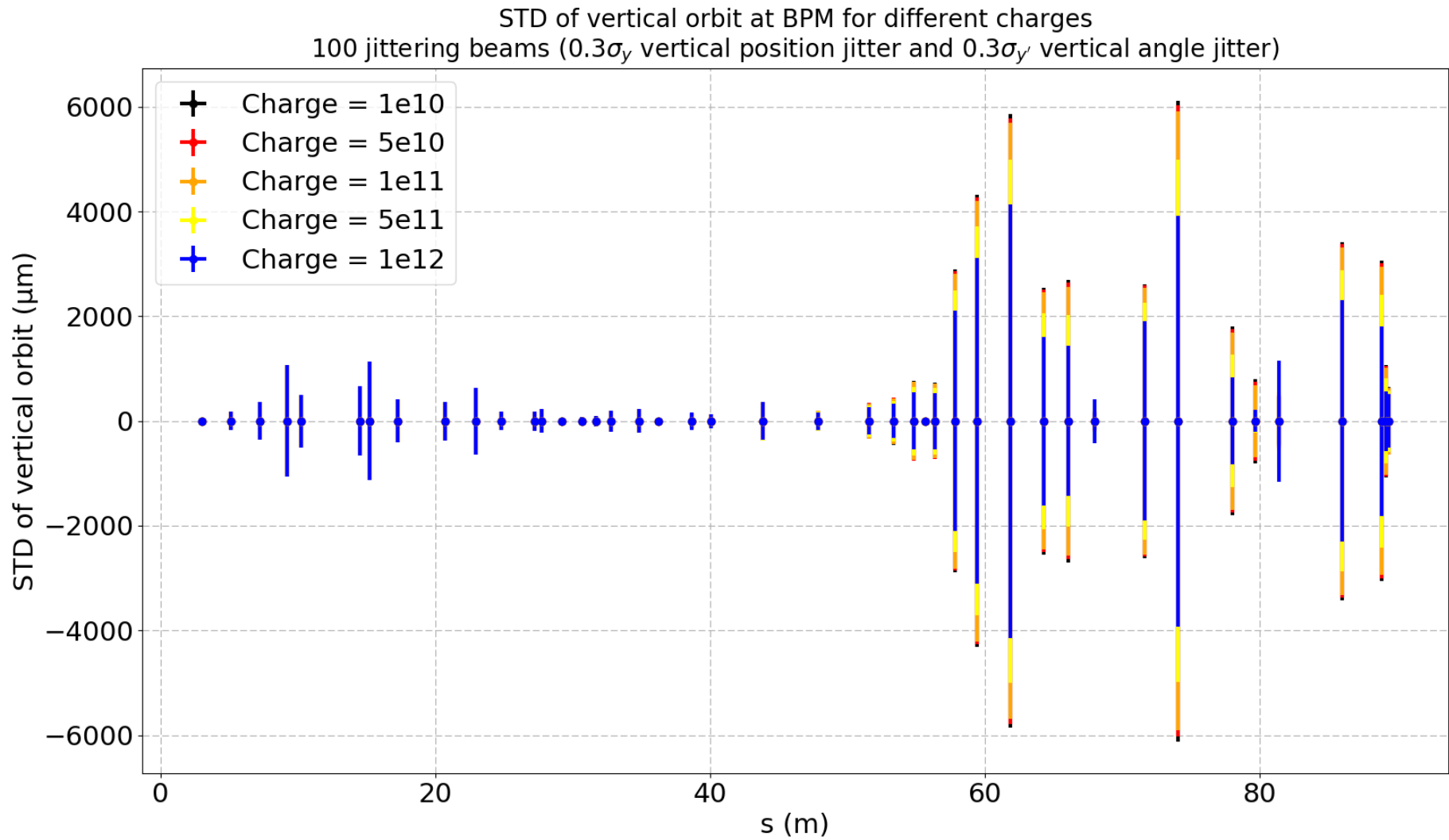


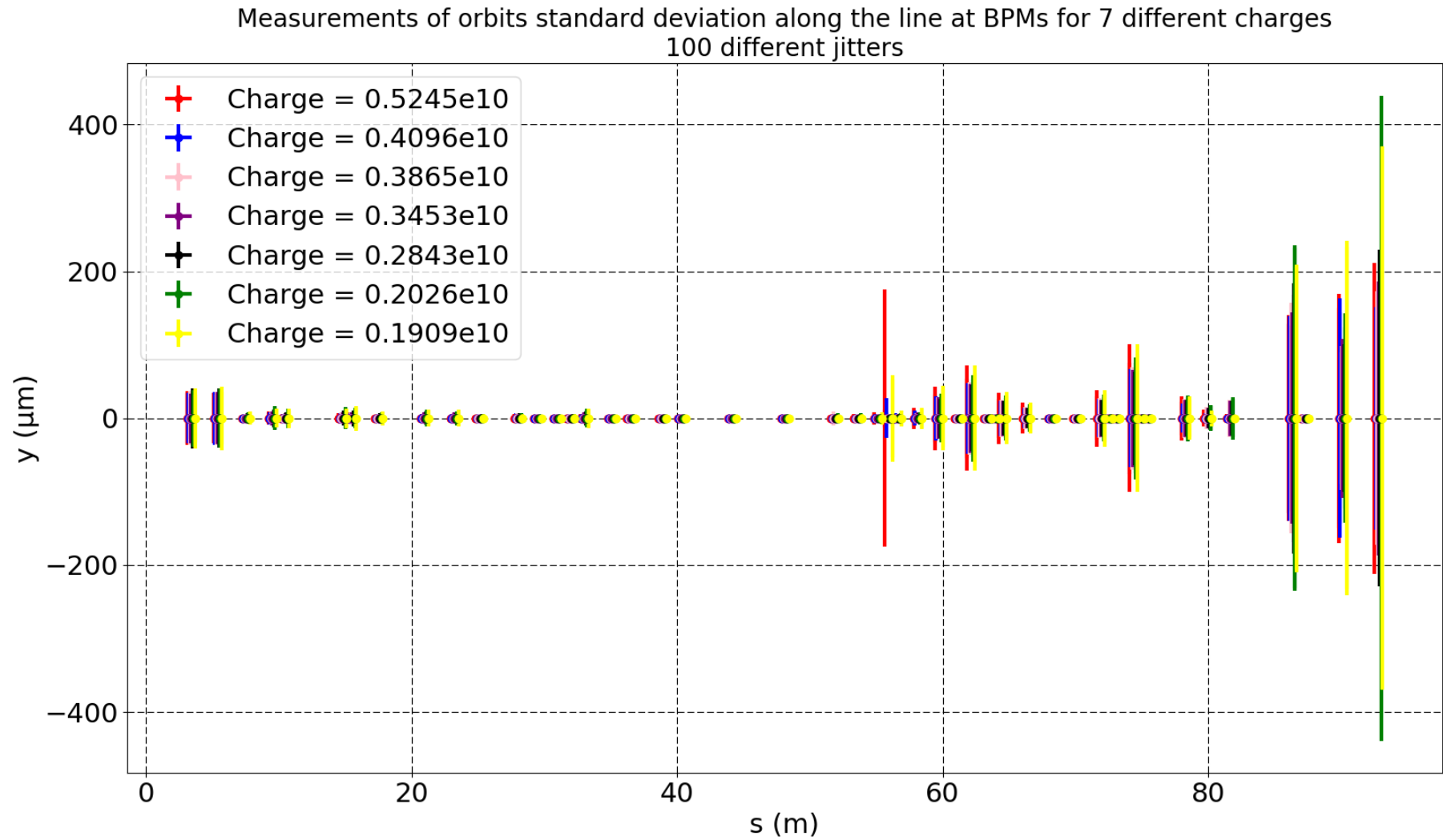
Intensity-dependent effects at ATF2

P. Korysko, A. Latina
CERN

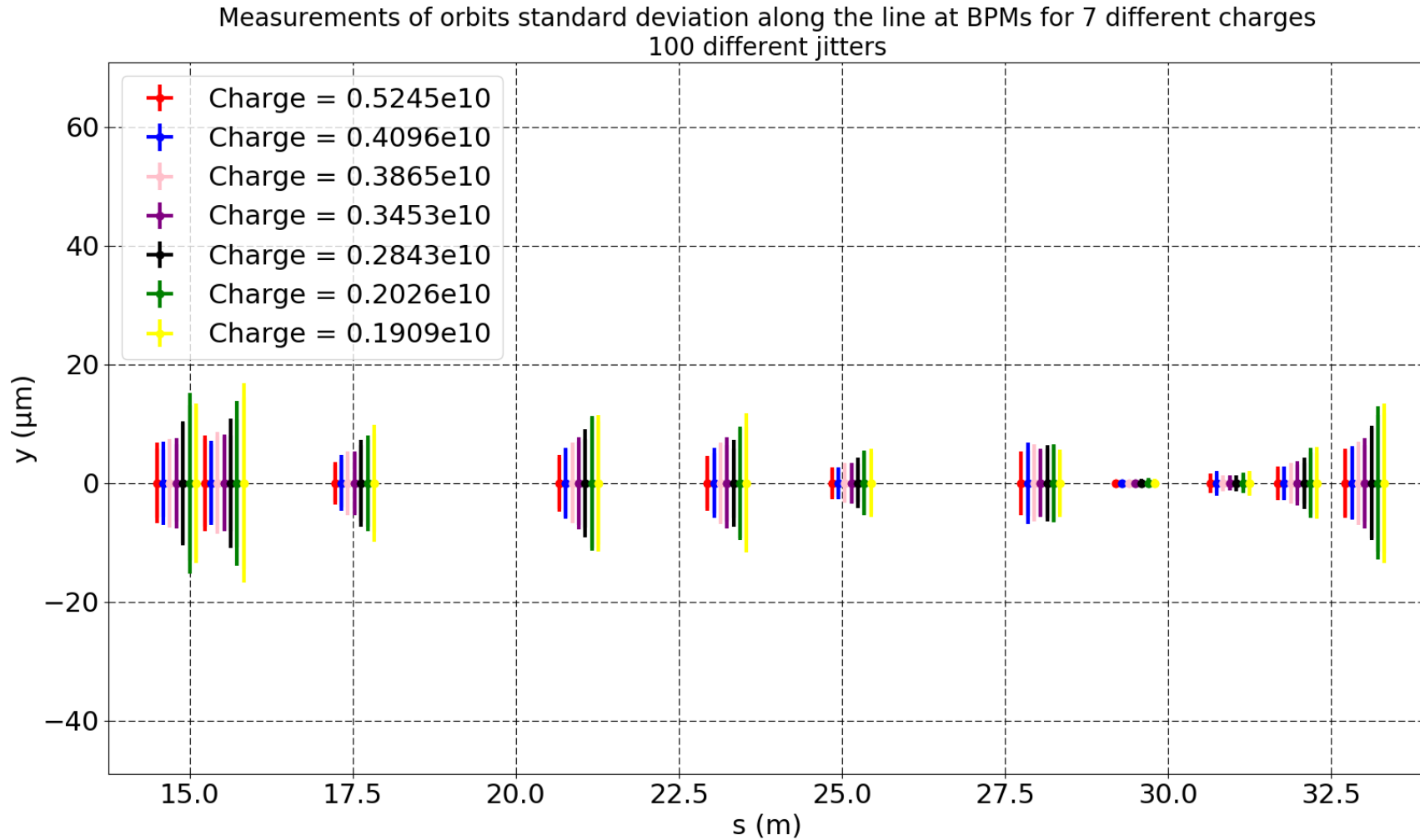
BPMs simulations



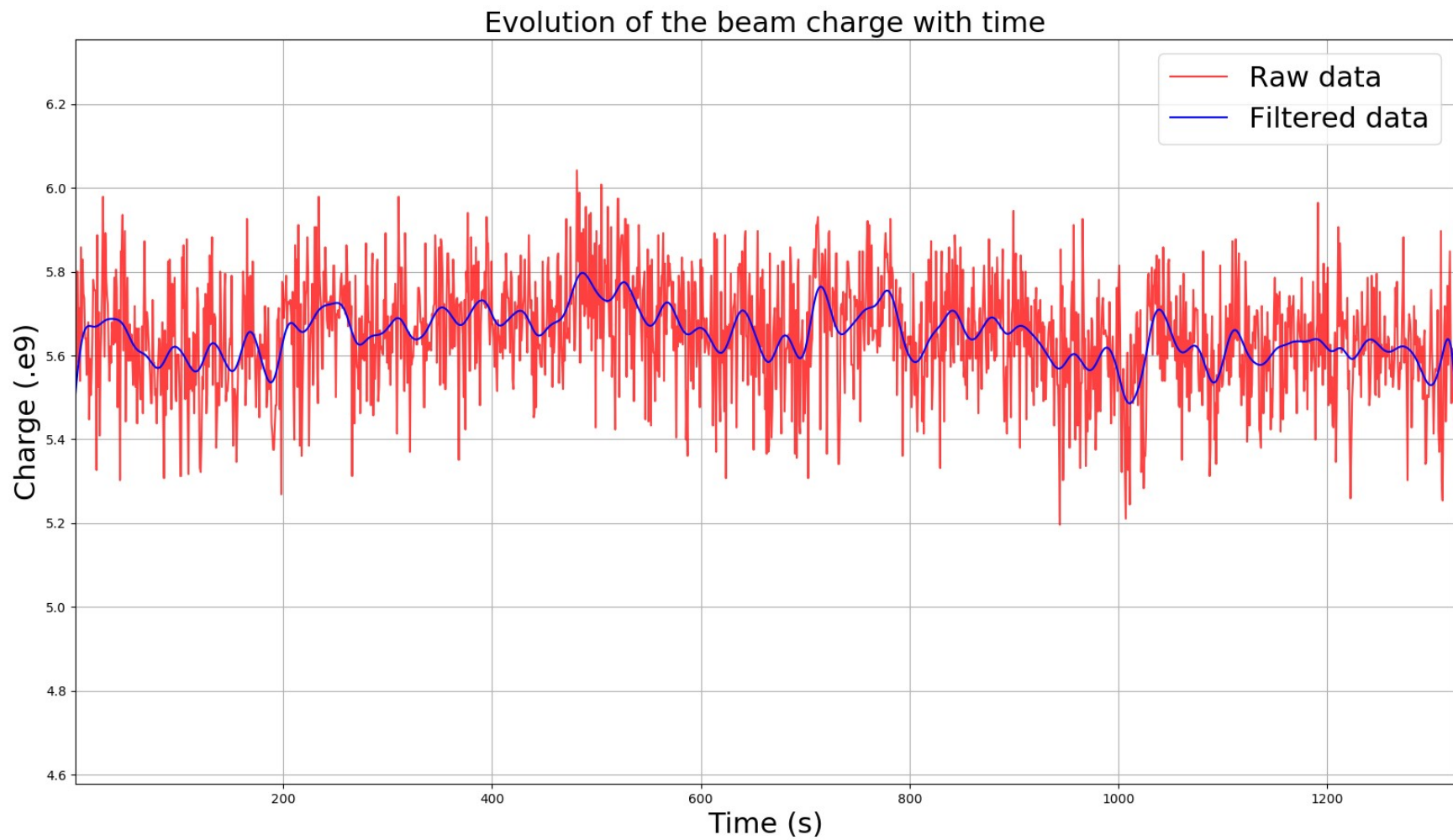
BPMs measurements



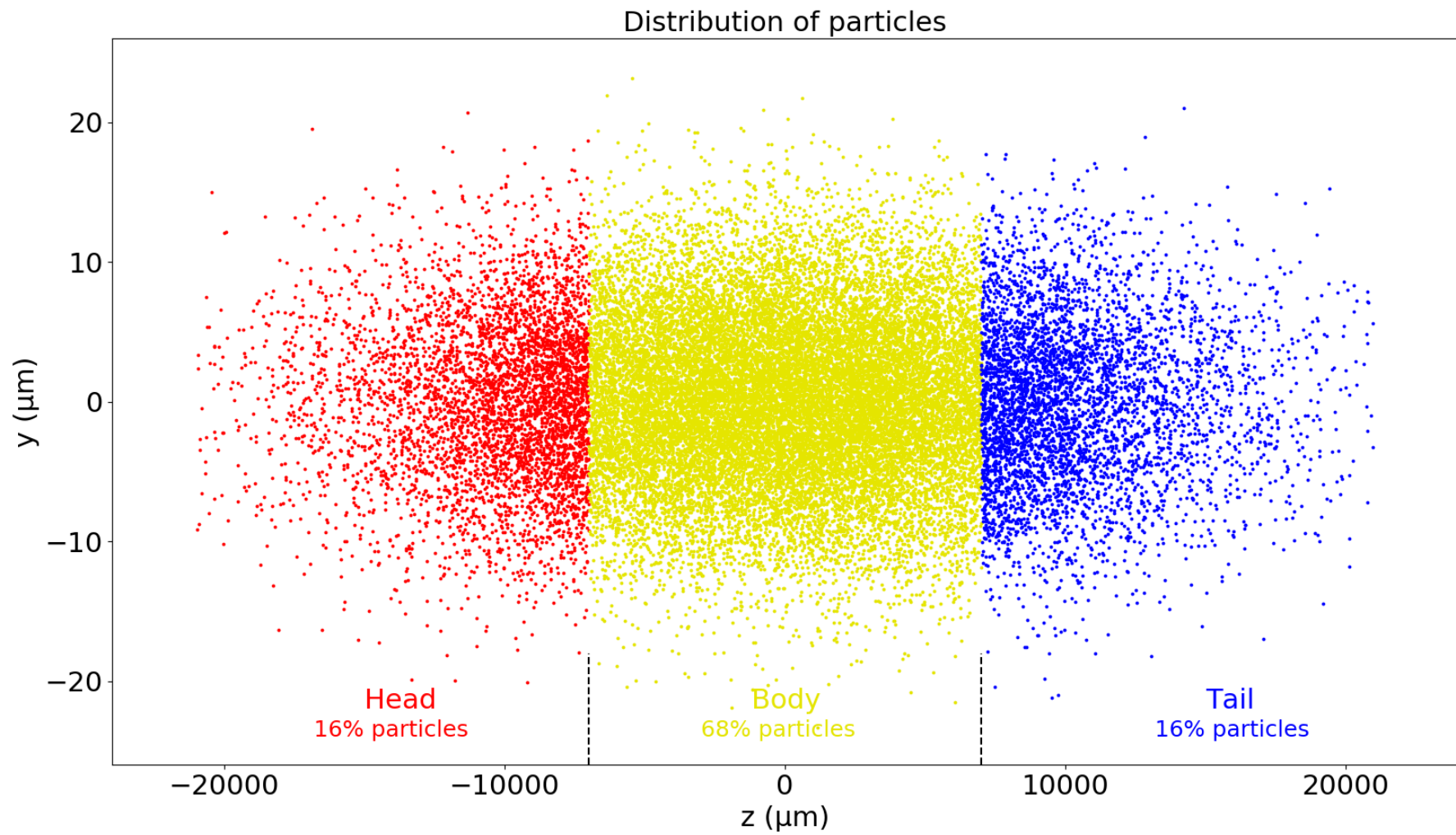
BPMs measurements



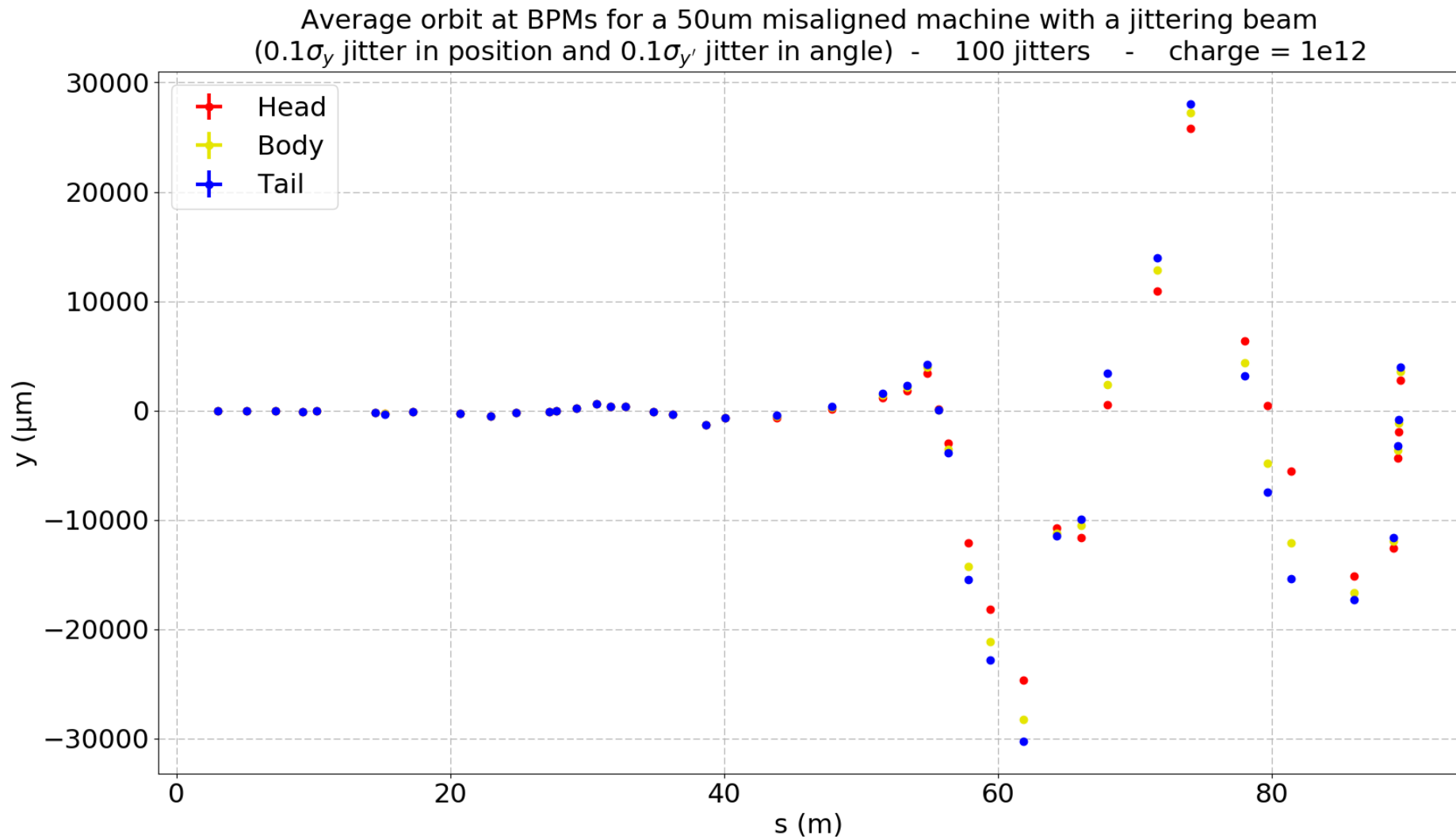
BPMs simulations



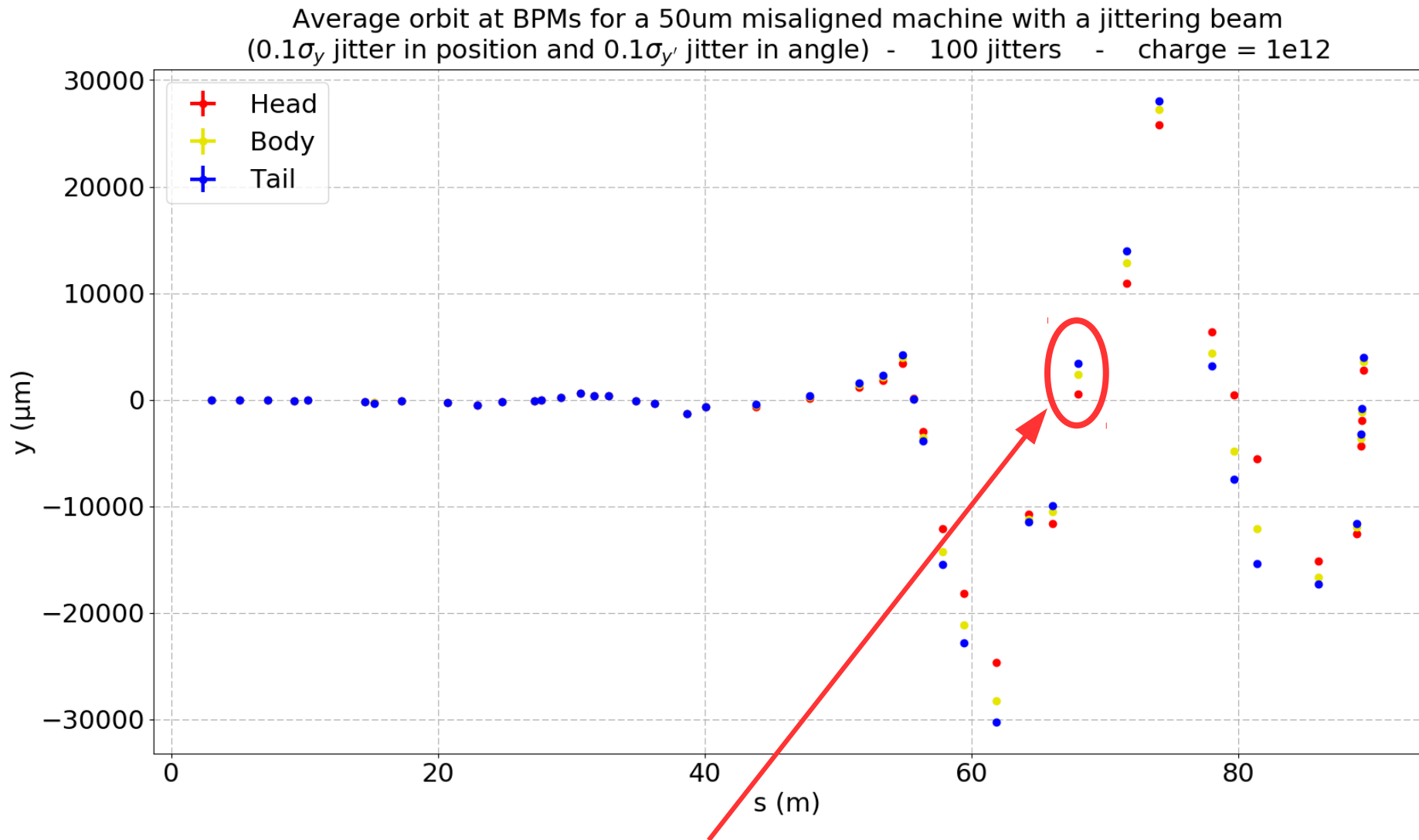
BPMs simulations



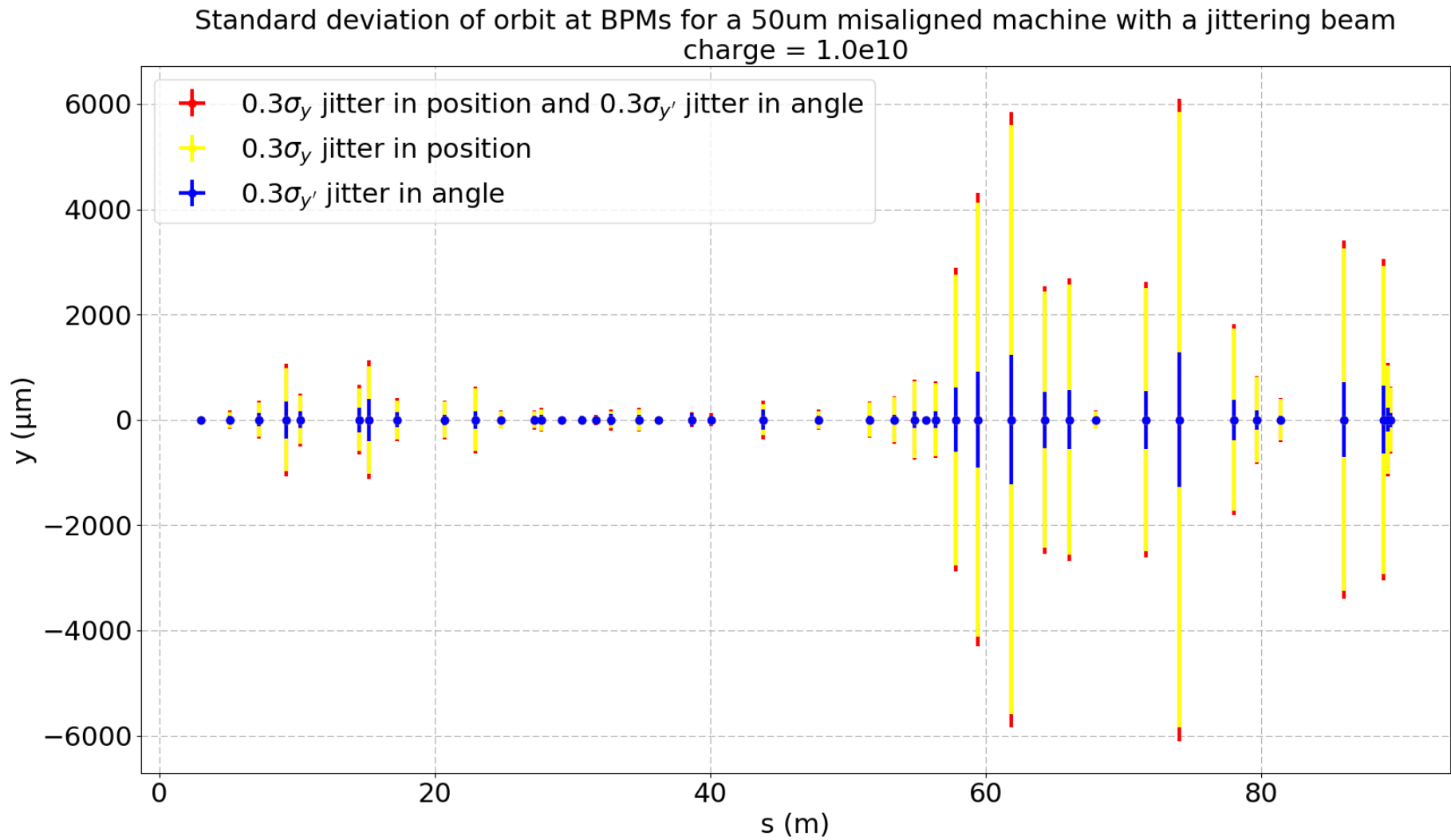
BPMs simulations



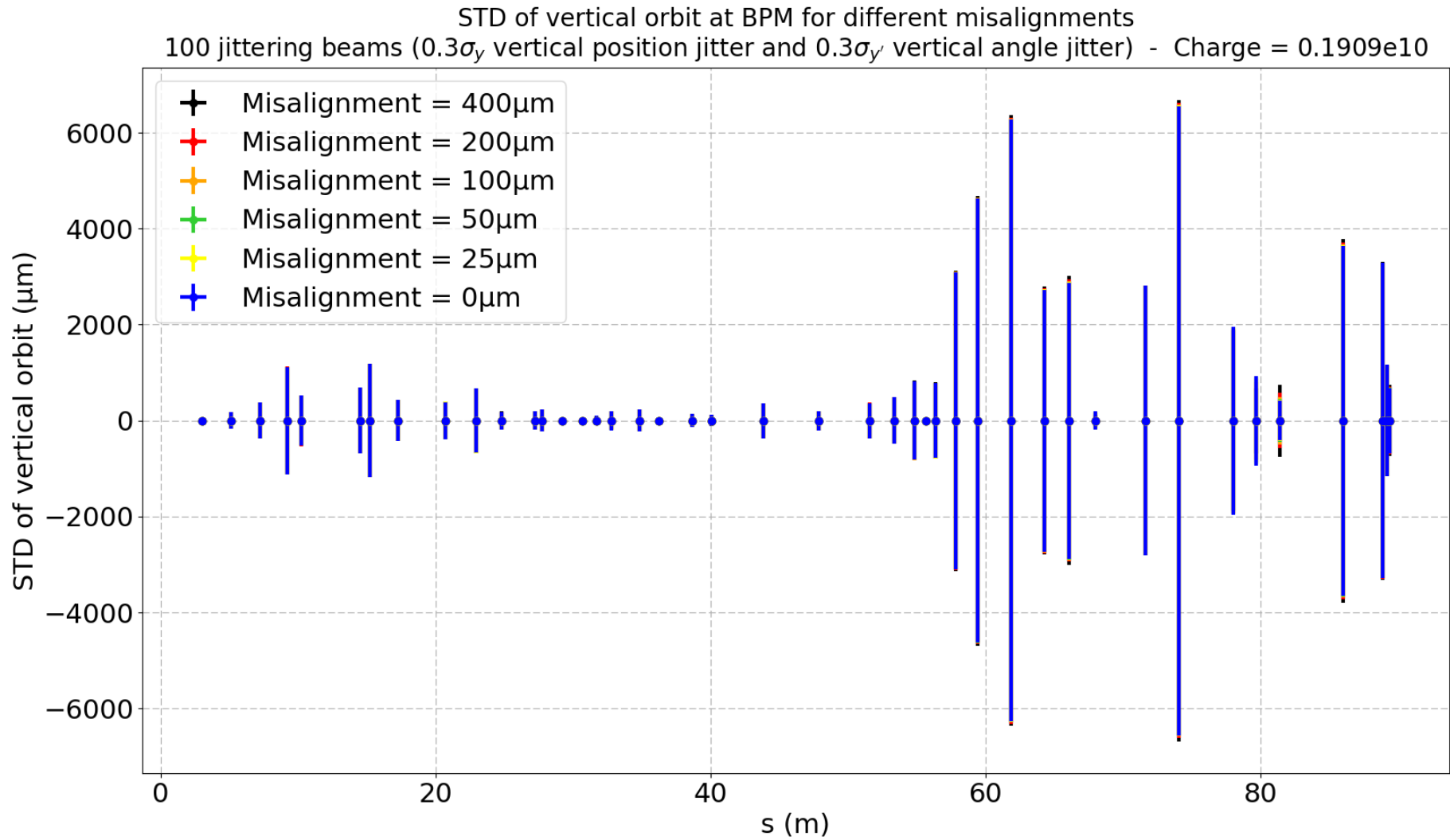
BPMs simulations



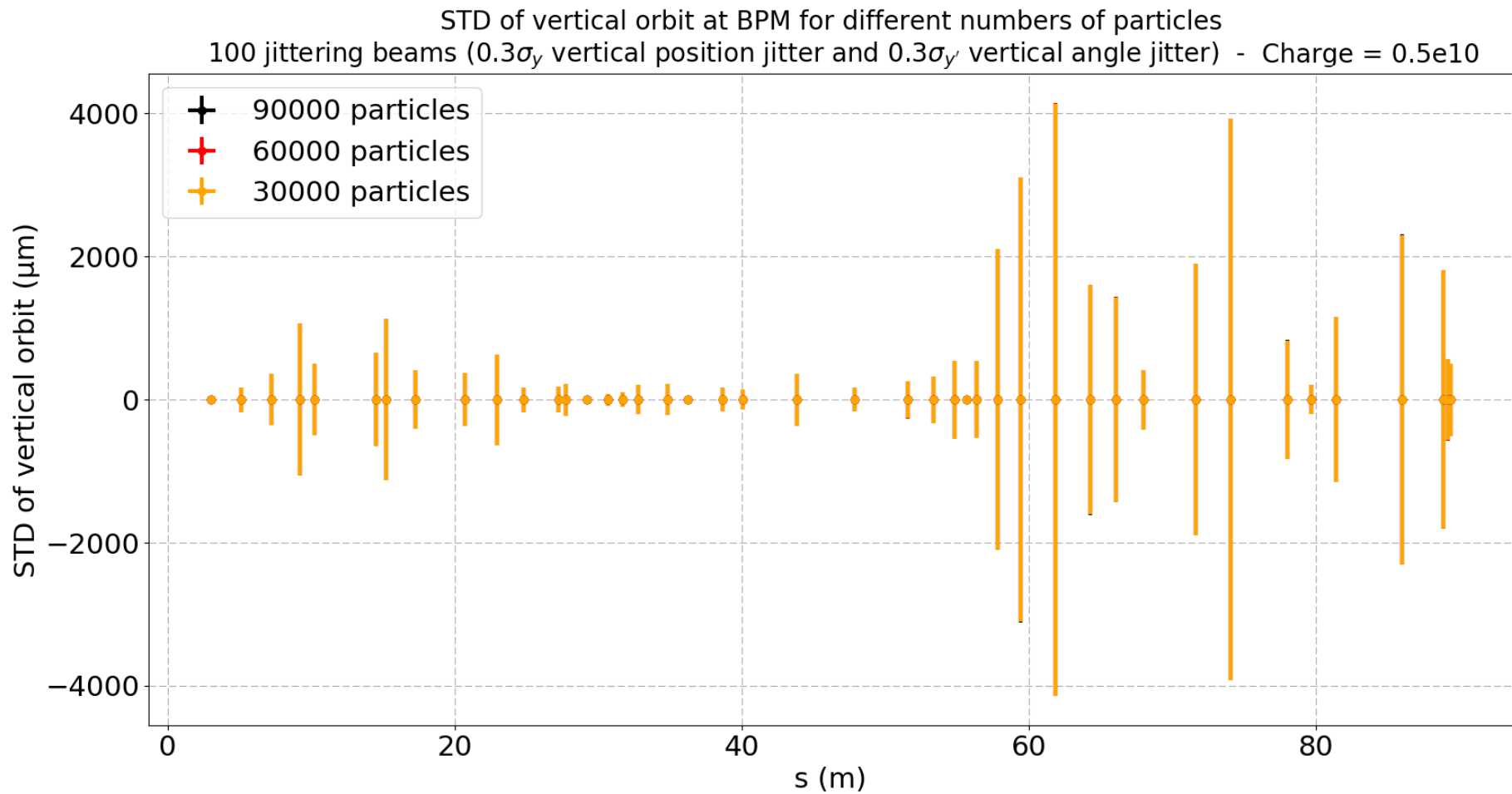
BPMs simulations



BPMs simulations

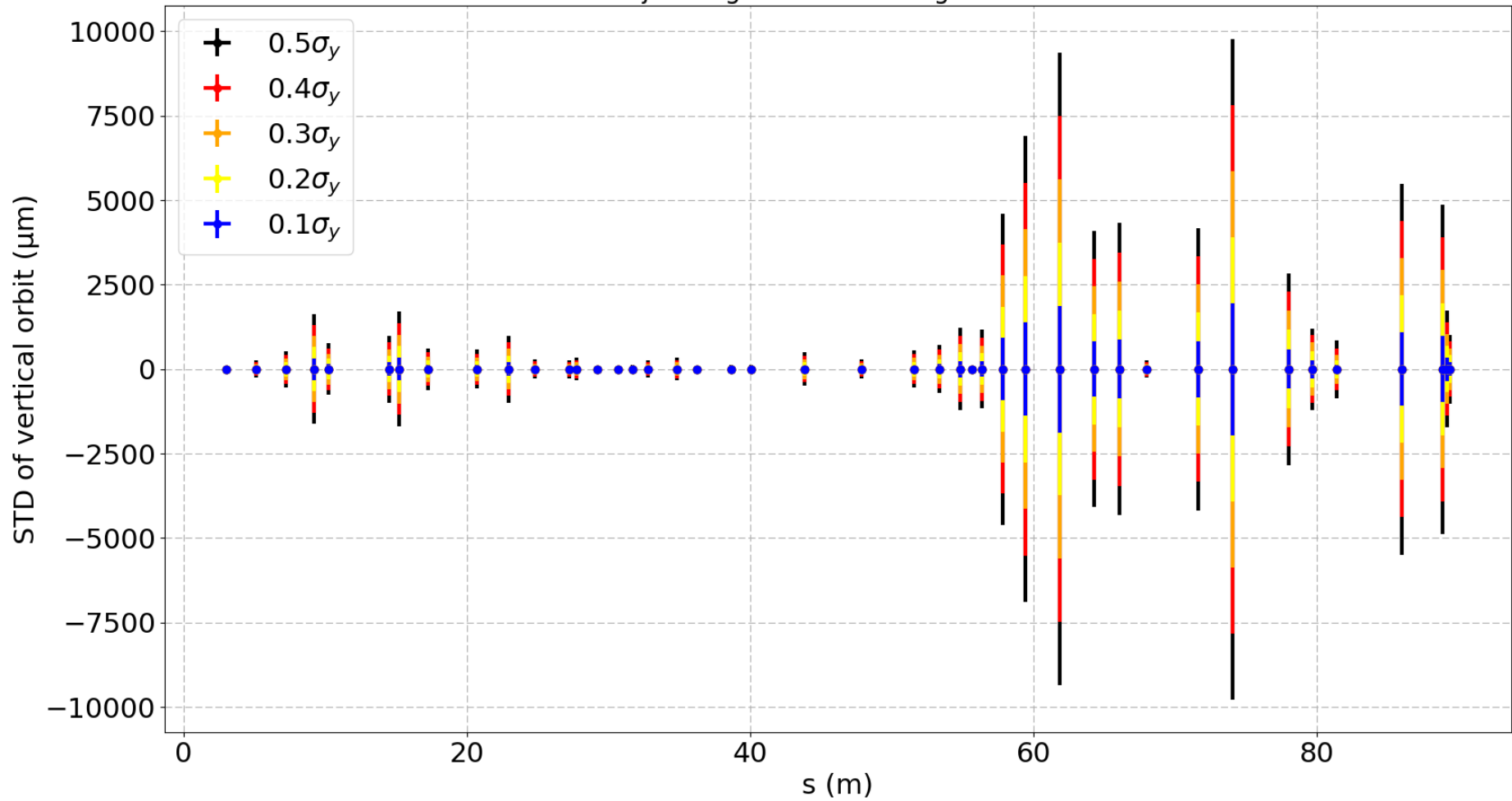


BPMs simulations

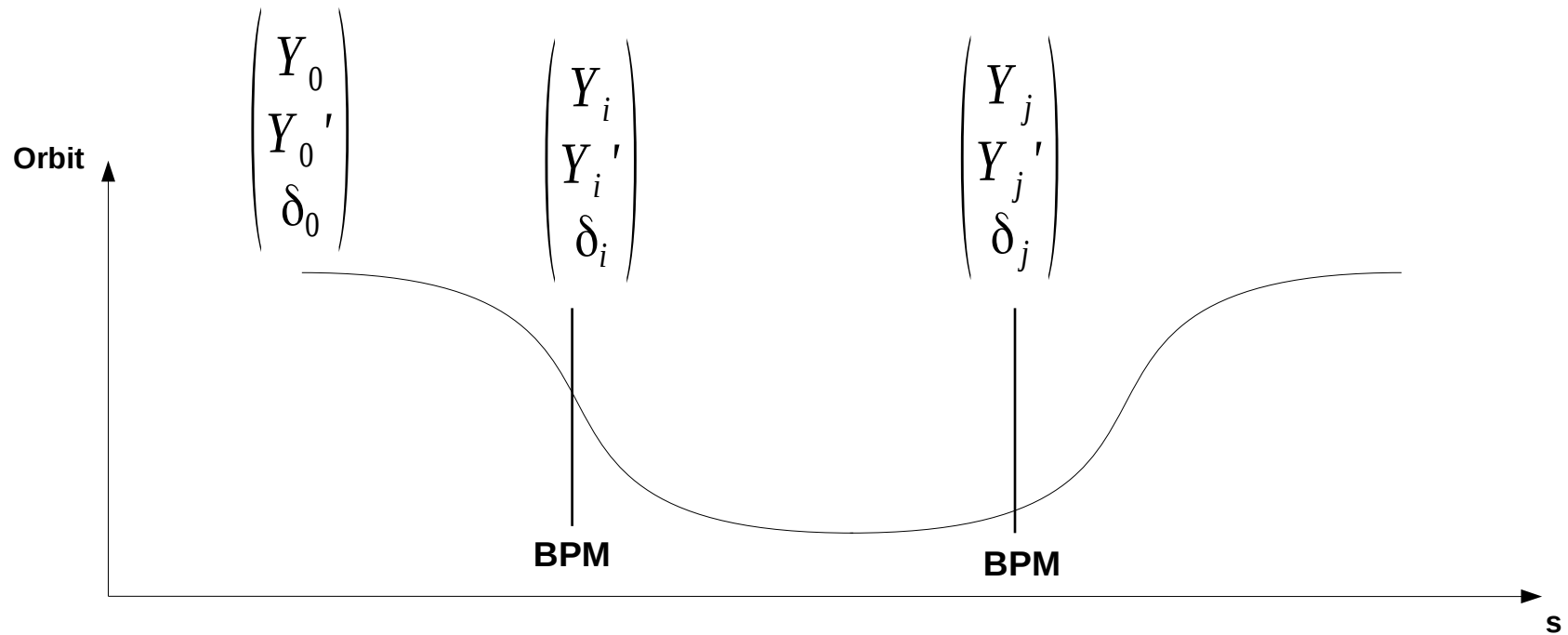


BPMs simulations

STD of vertical orbit at BPM for different vertical position jitter amplitudes
100 jittering beams - Charge = $0.5e10$



BPMs simulations



$$\begin{pmatrix} Y_i \\ Y_i' \\ \delta_i \end{pmatrix} = R_{0 \rightarrow i} \begin{pmatrix} Y_0 \\ Y_0' \\ \delta_0 \end{pmatrix} \quad \begin{pmatrix} Y_j \\ Y_j' \\ \delta_j \end{pmatrix} = R_{0 \rightarrow j} \begin{pmatrix} Y_0 \\ Y_0' \\ \delta_0 \end{pmatrix}$$

BPMs simulations

$$\begin{pmatrix} Y_1 \\ Y_2 \\ \cdot \\ \cdot \\ \cdot \\ Y_n \end{pmatrix} = \begin{pmatrix} R_{0 \rightarrow 1,11} & R_{0 \rightarrow 1,12} & R_{0 \rightarrow 1,16} \\ R_{0 \rightarrow 2,16} & R_{0 \rightarrow 2,16} & R_{0 \rightarrow 2,16} \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ \cdot & \cdot & \cdot \\ R_{0 \rightarrow n,11} & R_{0 \rightarrow n,12} & R_{0 \rightarrow n,16} \end{pmatrix} \begin{pmatrix} Y_0 \\ Y_0' \\ \delta_0 \end{pmatrix}$$

$$\vec{Y} \qquad R \qquad \vec{Y}_0$$

$$\vec{Y}_0 = R \setminus \vec{Y}$$