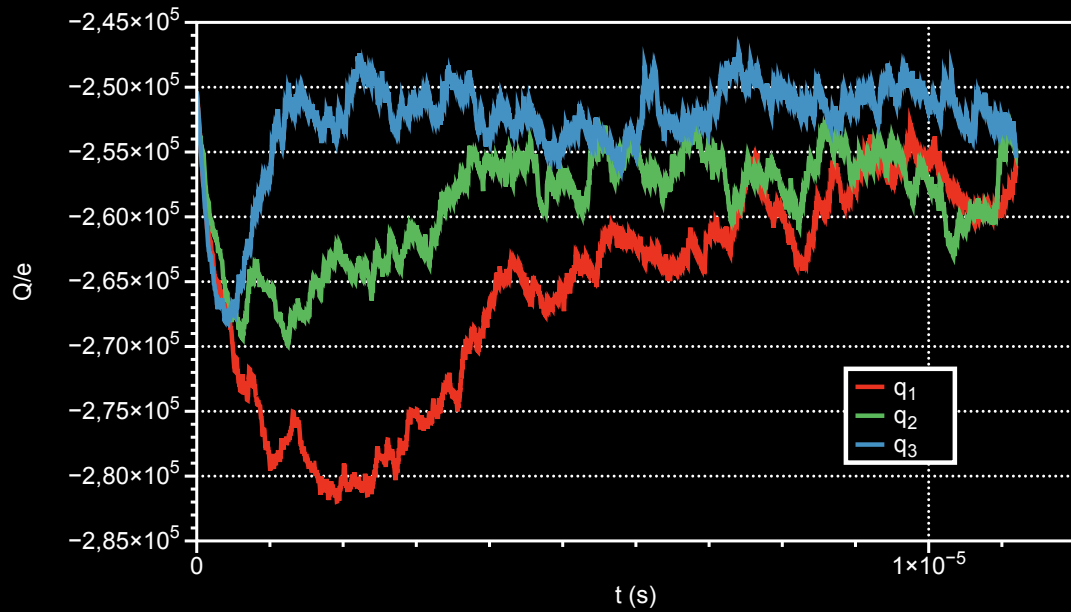


# Study of the distribution of gas discharge plasma parameters around chain structures of dust particles

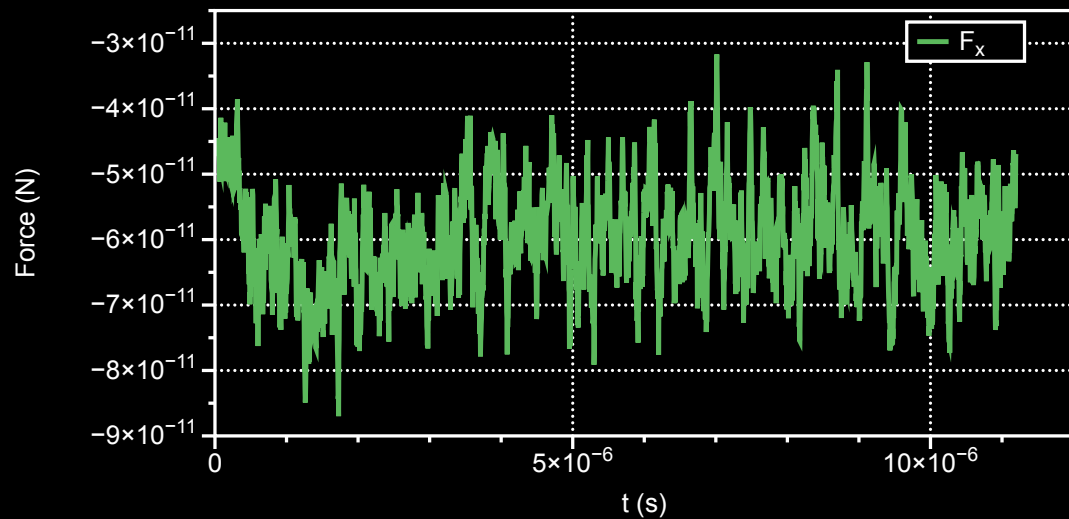
Daniil Kolotinskii, Alexei Timofeev



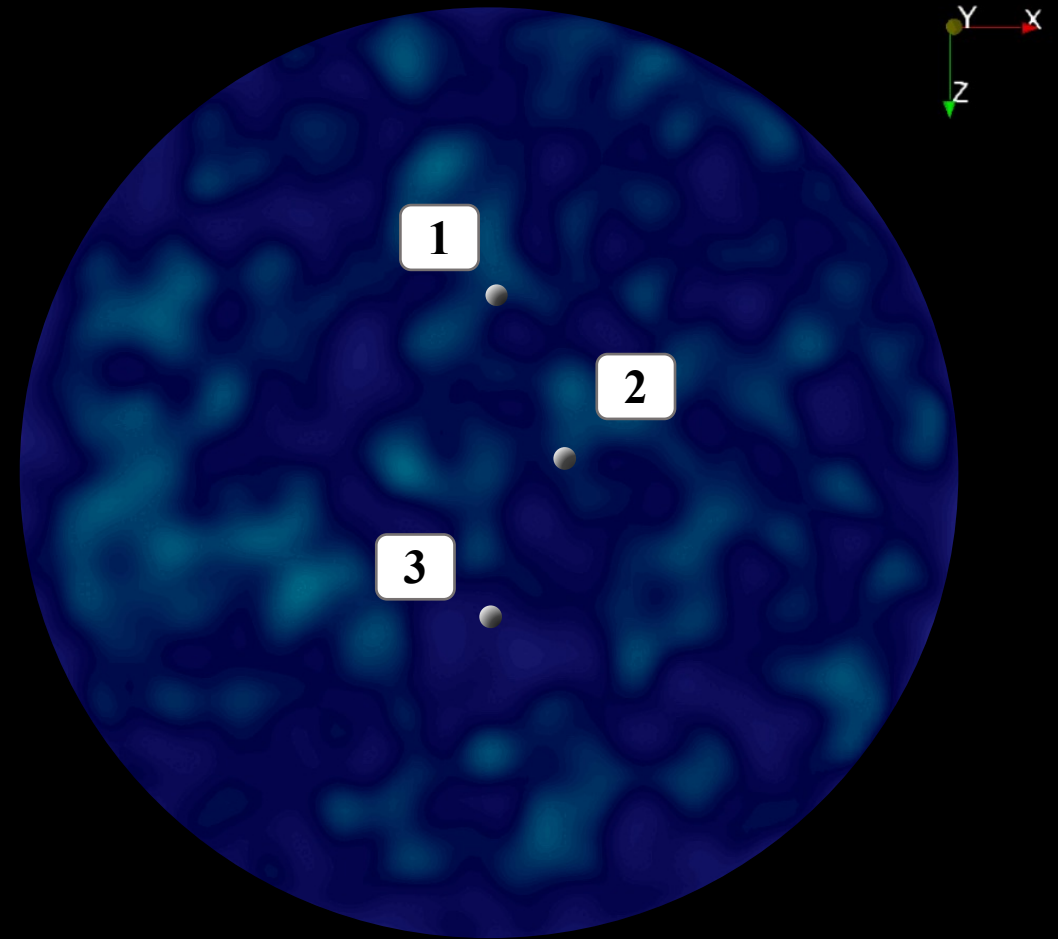
Time-evolution of dust particle charges



Horizontal force, acting on the dust particle in the middle **2**



Time-evolution of plasma charge density

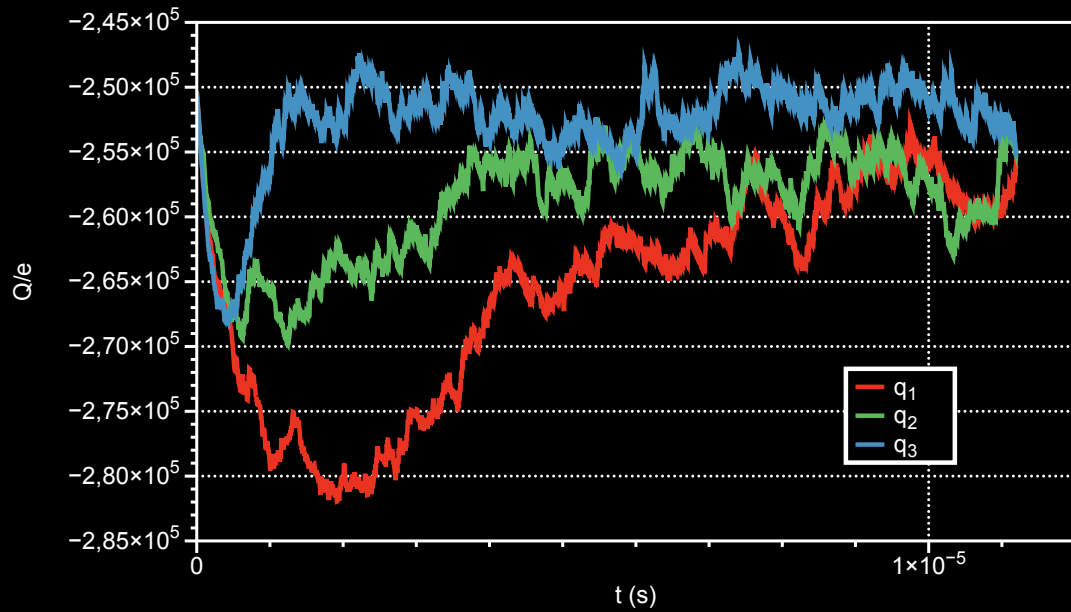


Dusty plasma parameters

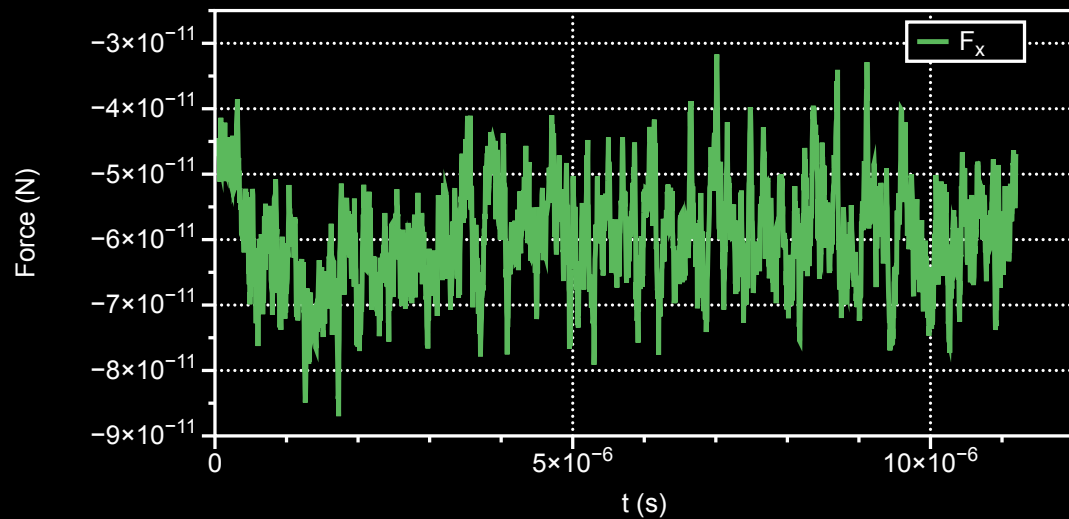
$$T_e = 29000K; T_n = 290 K \quad n_e = n_i = 1 \cdot 10^{14} \frac{1}{m^3};$$

$$E_z = 0.2 \cdot 10^3 \frac{V}{m}; v_{in} = 0.1\omega_{pi}; \quad r_p = 58\mu m$$

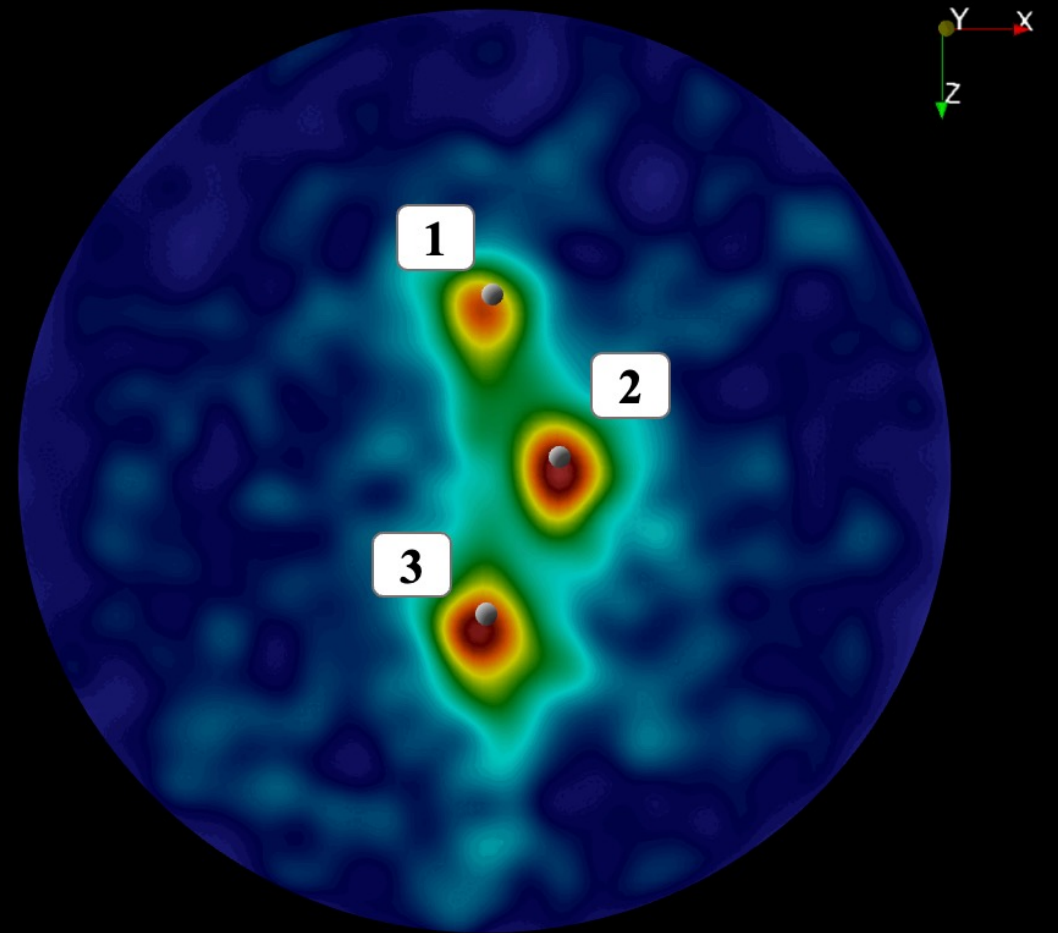
Time-evolution of dust particle charges



Horizontal force, acting on the dust particle in the middle **2**



Time-evolution of plasma charge density



Dusty plasma parameters

$$T_e = 29000K; T_n = 290 K \quad n_e = n_i = 1 \cdot 10^{14} \frac{1}{m^3};$$

$$E_z = 0.2 \cdot 10^3 \frac{V}{m}; v_{in} = 0.1 \omega_{pi}; \quad r_p = 58 \mu m$$