Figures

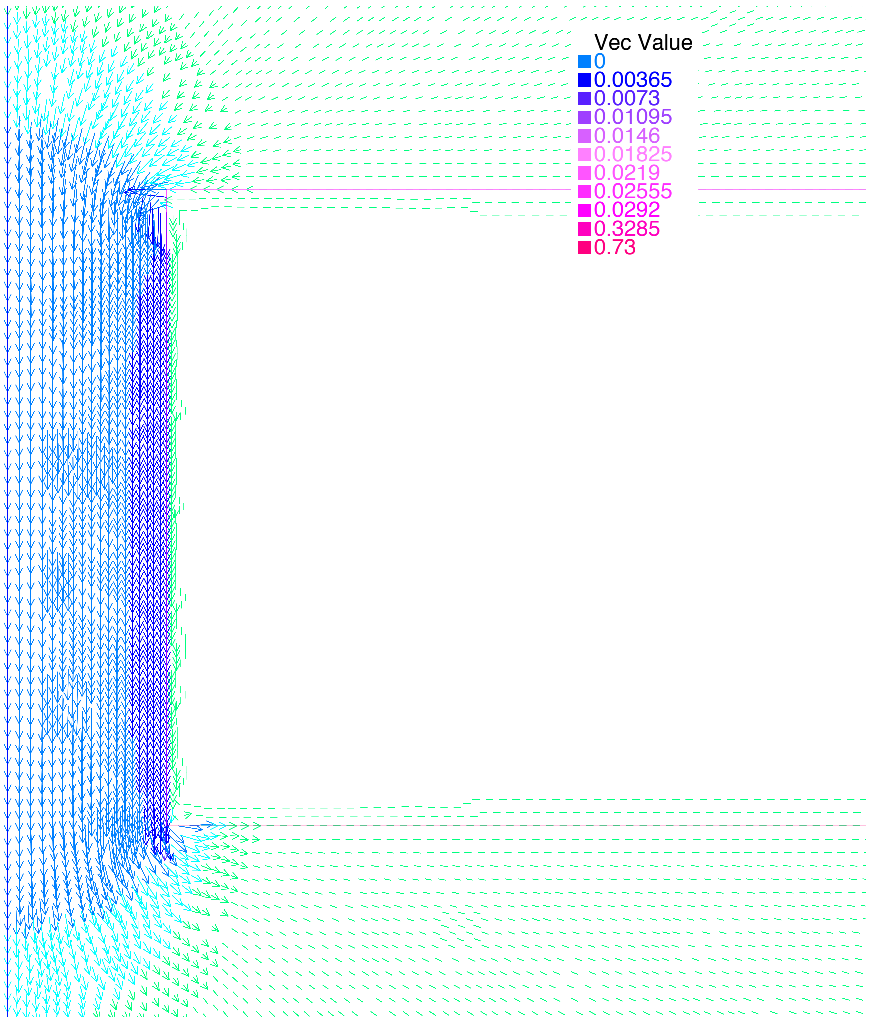

Fig. 1a – Scaled fluid velocity using $E_0 = 10\,V/mm$, pore radius $2\mu m$, pore depth $8\ \mu m$

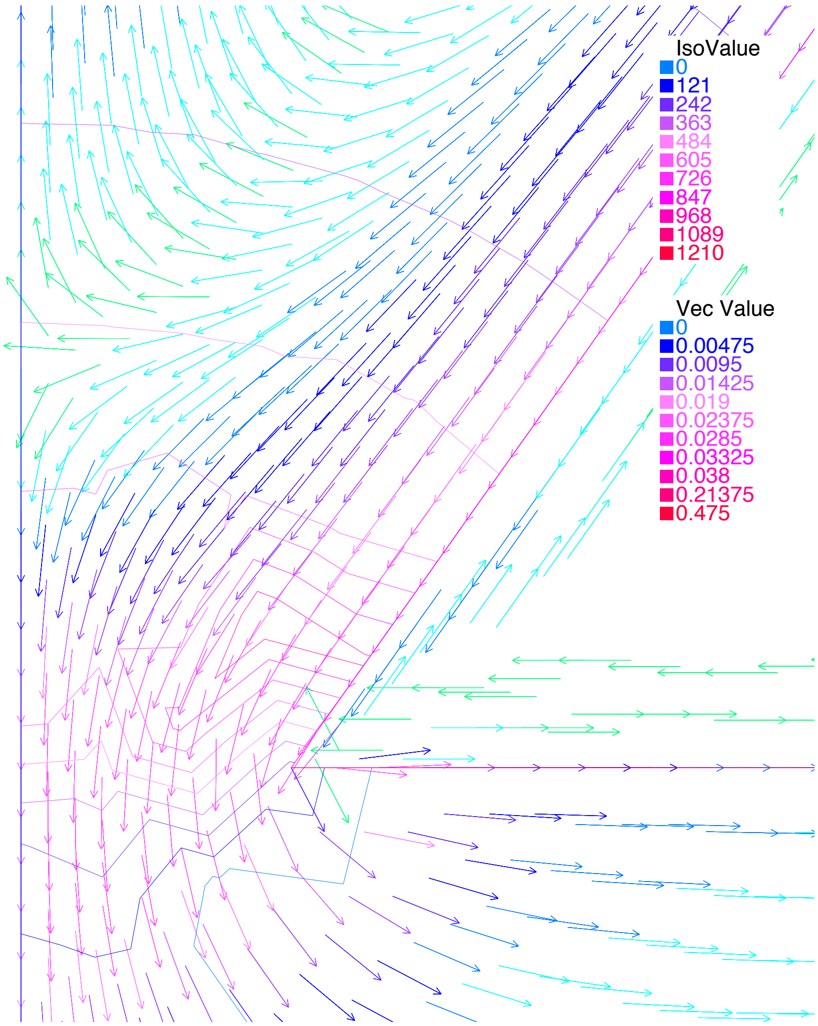

Fig. 1b – Scaled fluid velocity using $E_0 = 10\, V/mm$, minimum pore radius 0.1 μm , pore depth 2 μm

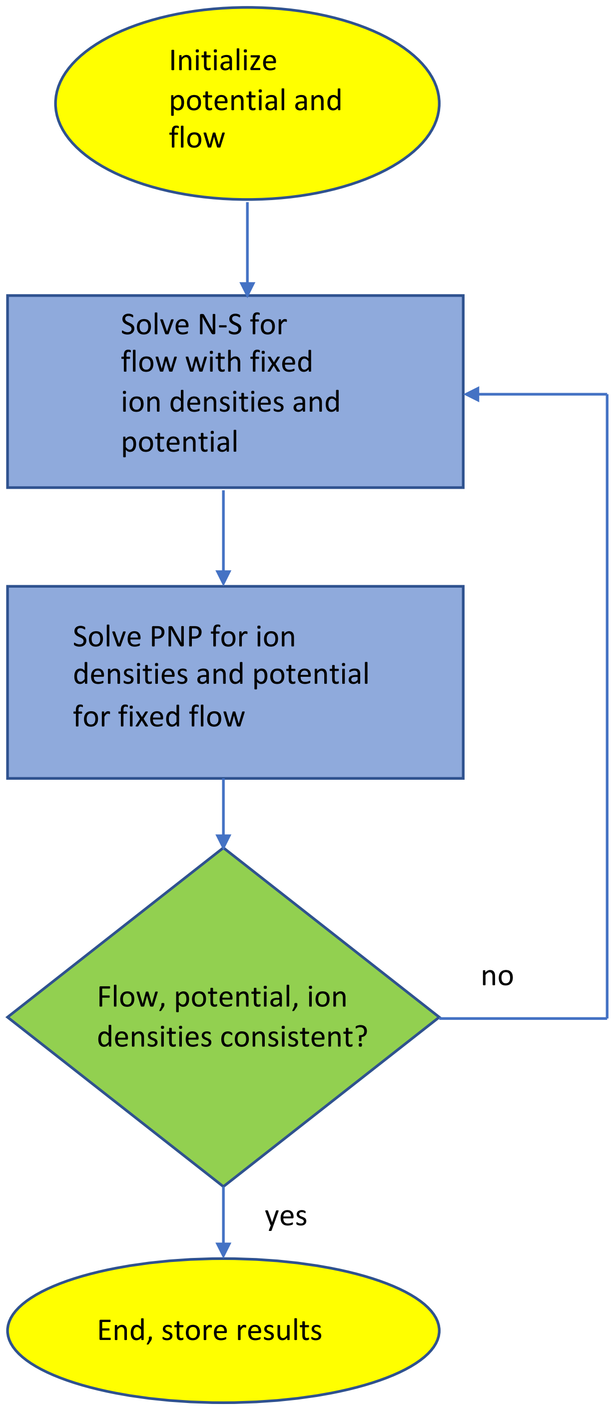

Fig. 2 – Computational flow diagram.

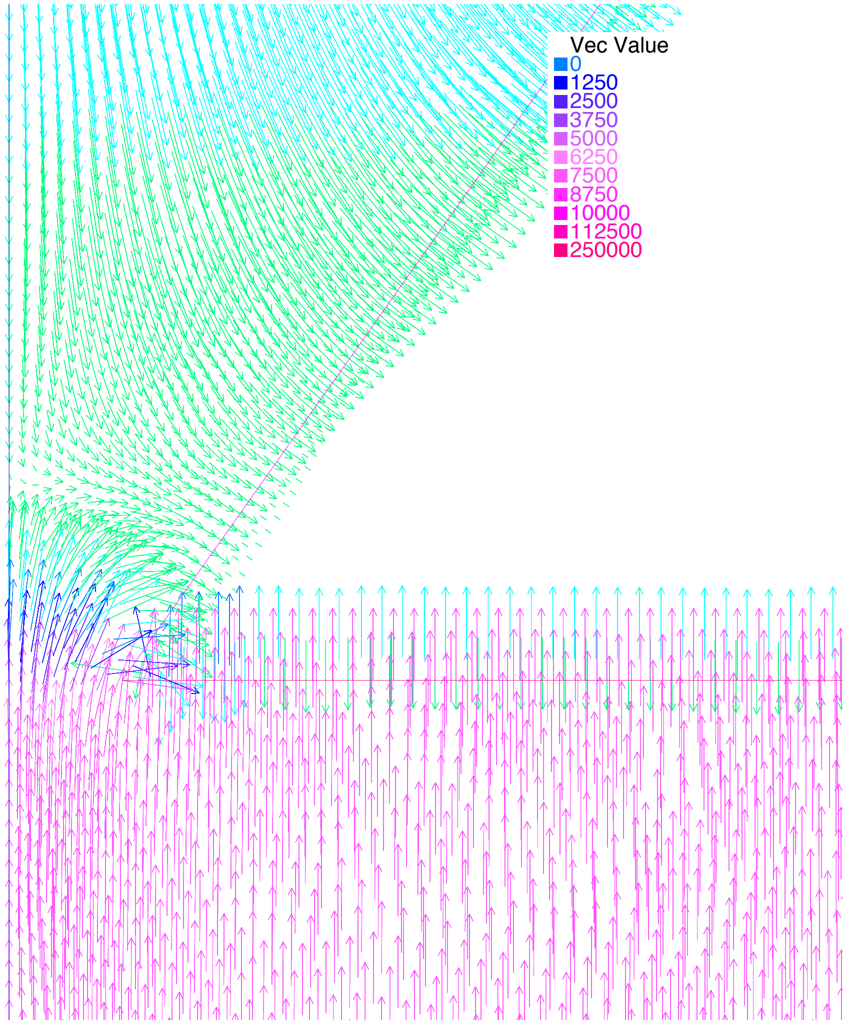

Fig. 3a – Electric field for inverted cone, minimum radius 0.2 micron, depth 2 microns, constant zeta potential, 10 V/mm external field.

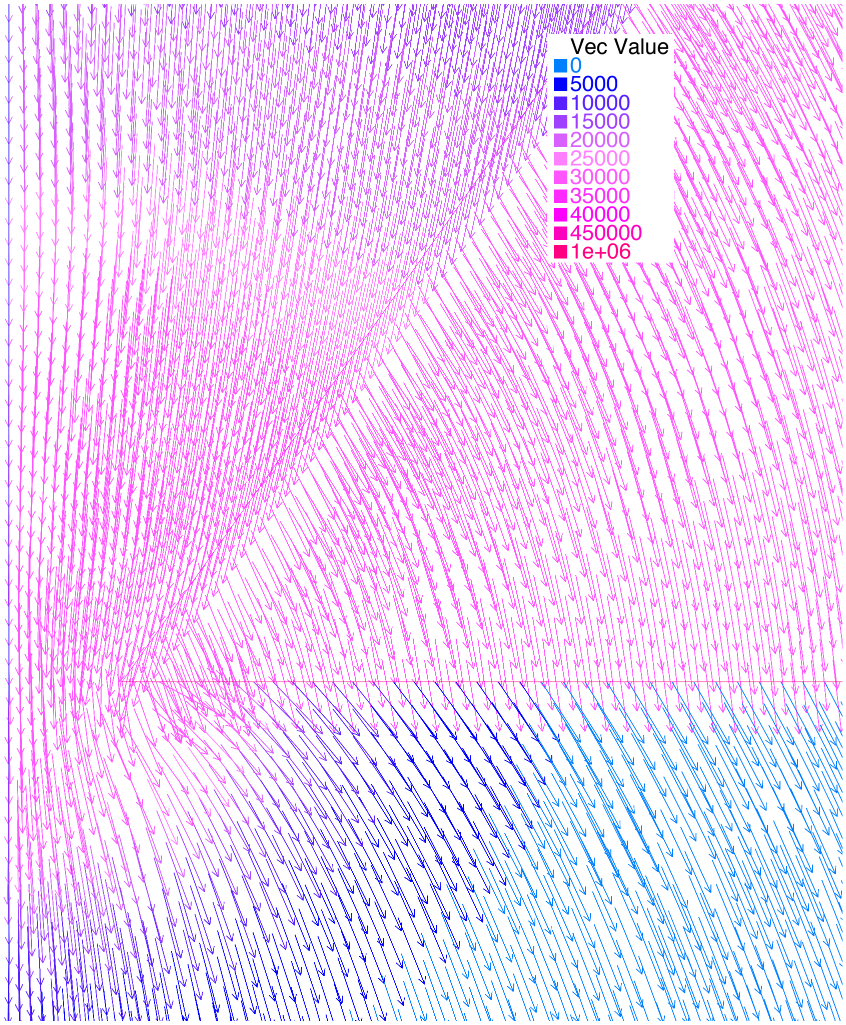

Fig. 3b – Electric field, same geometry as Fig. 3a except constant surface charge equivalent to the constant zeta potential. Note factor of 4 scale change and field direction in the pore.

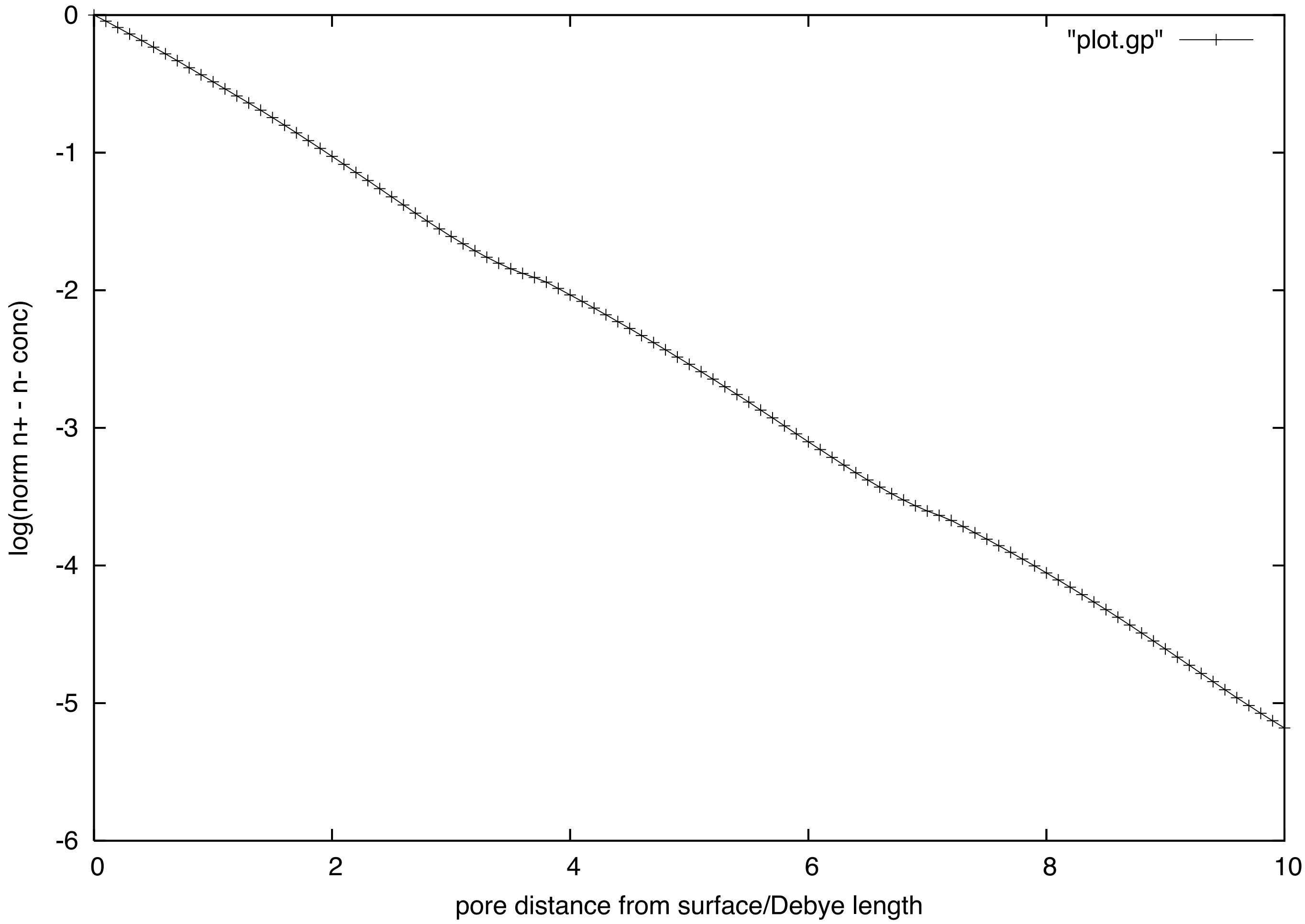

Fig. 4 – Log of the electrolyte net charge density close to the interface surface slip plane

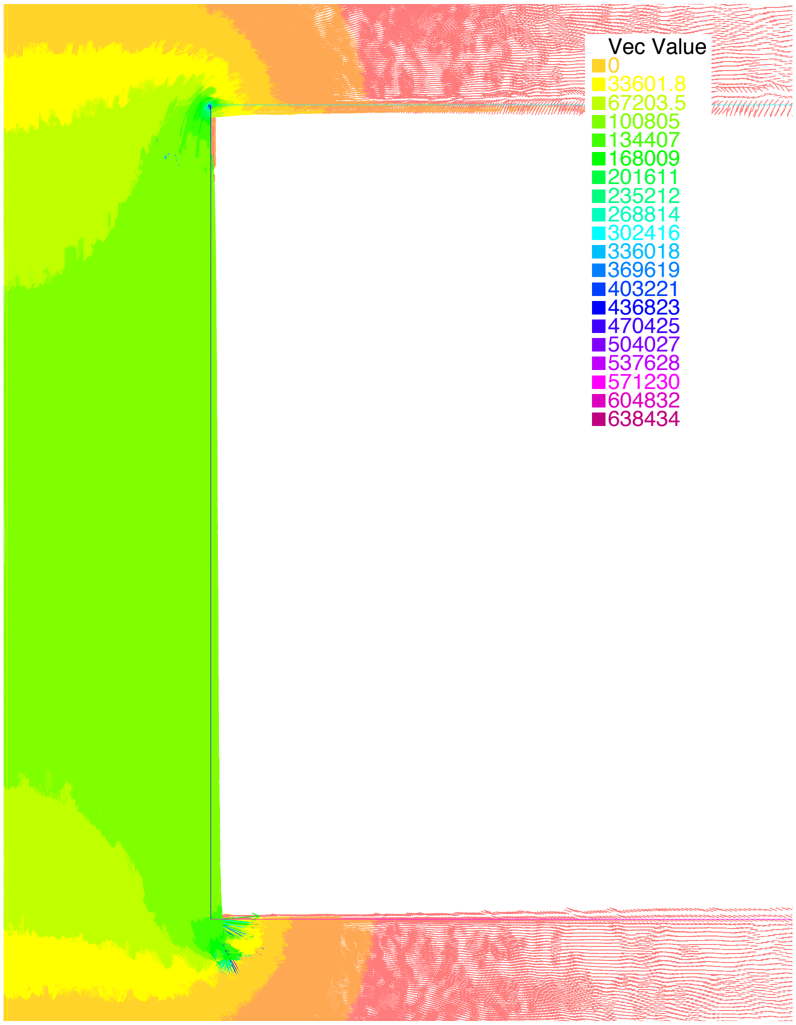

Fig. 5a – Scaled electric field for cylinder (radius 2 microns, depth 8 microns, external field 10 V/mm).

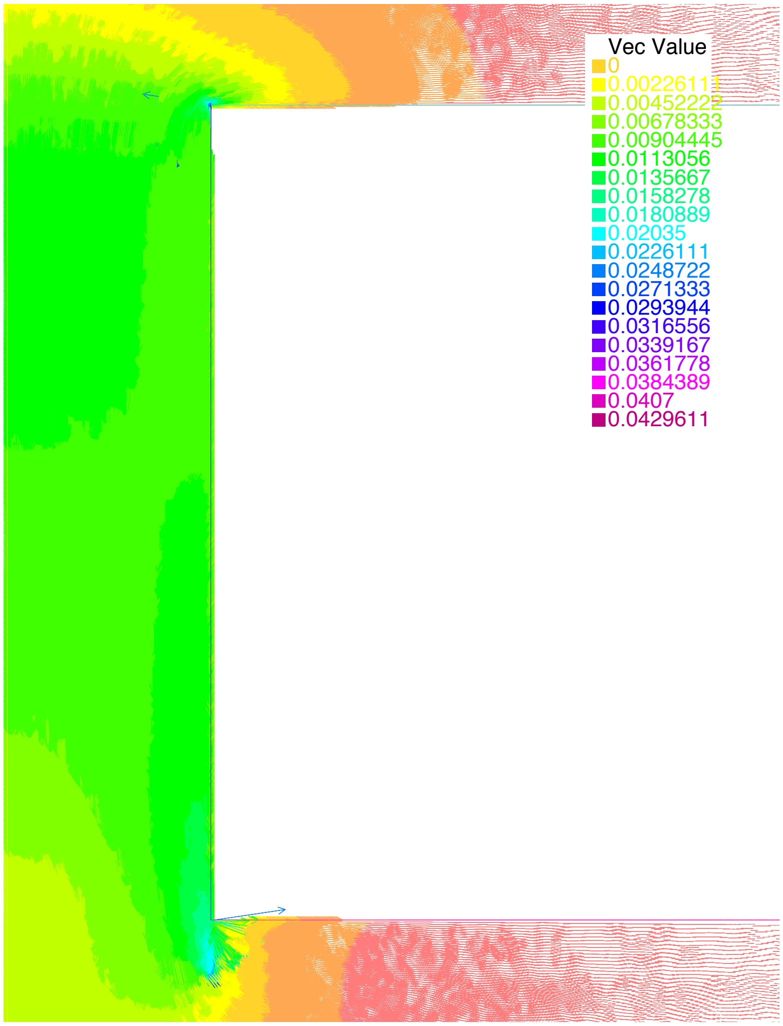

Fig. 5a – Scaled fluid velocity for cylinder (radius 2 microns, depth 8 microns, external field 10 V/mm).

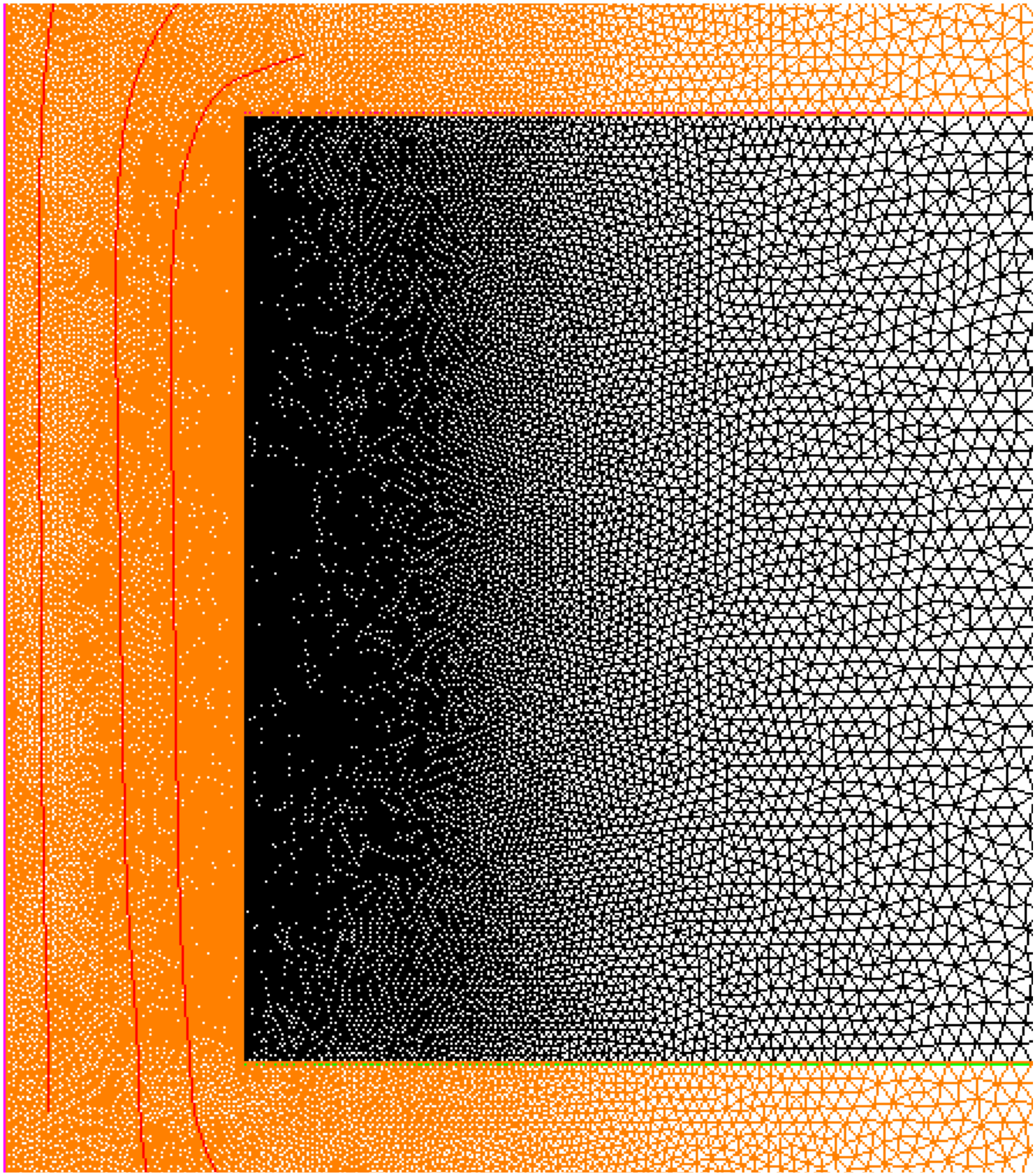

Fig. 5c – Three representative orbits for pore cylinder geometry.

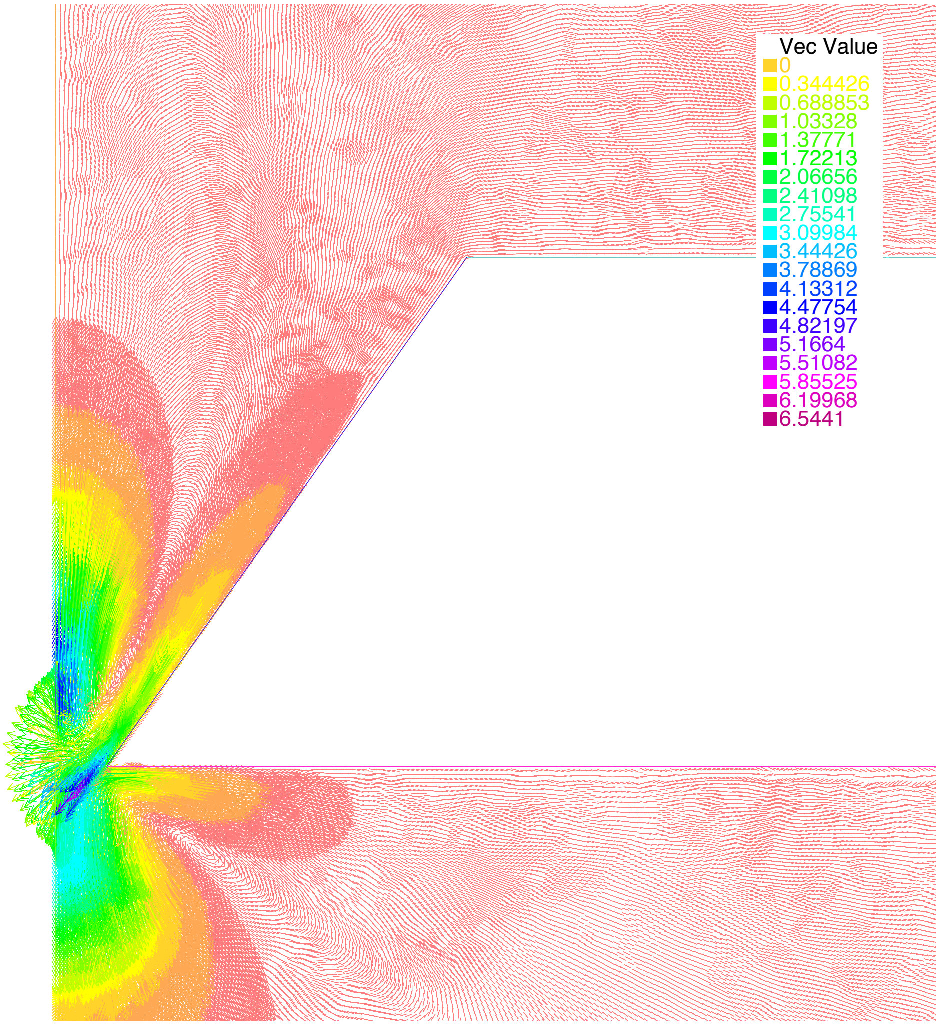

Fig. 6a – Scaled fluid velocity for inverted cone geometry, external field 20 V/mm.

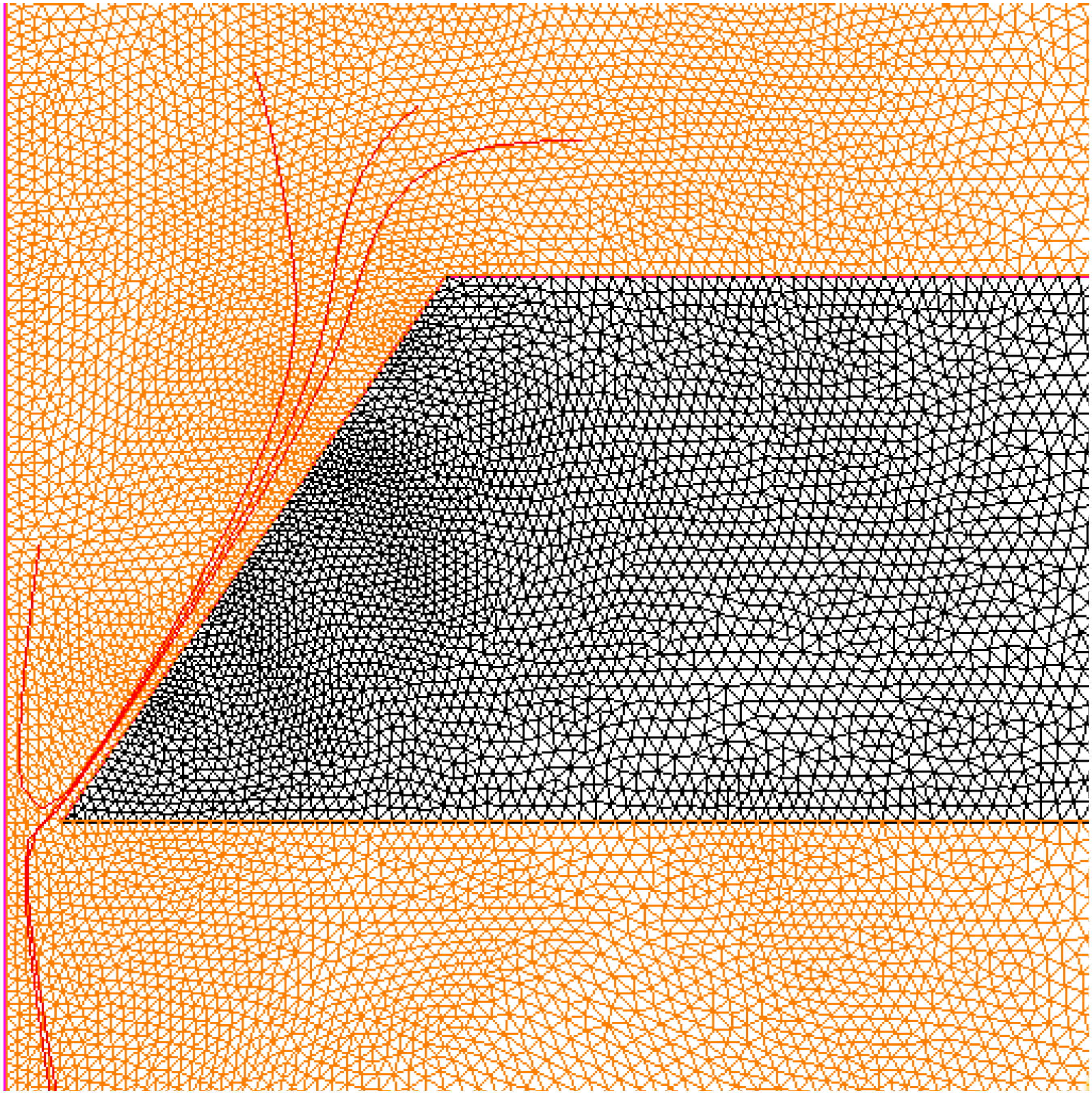

Fig. 6b – Three representative orbits for inverted cone, external field 20 V/mm. Note that the orbits for captured particles are close together near the surface and that particles starting nearer the pore axis do not exit the pore.