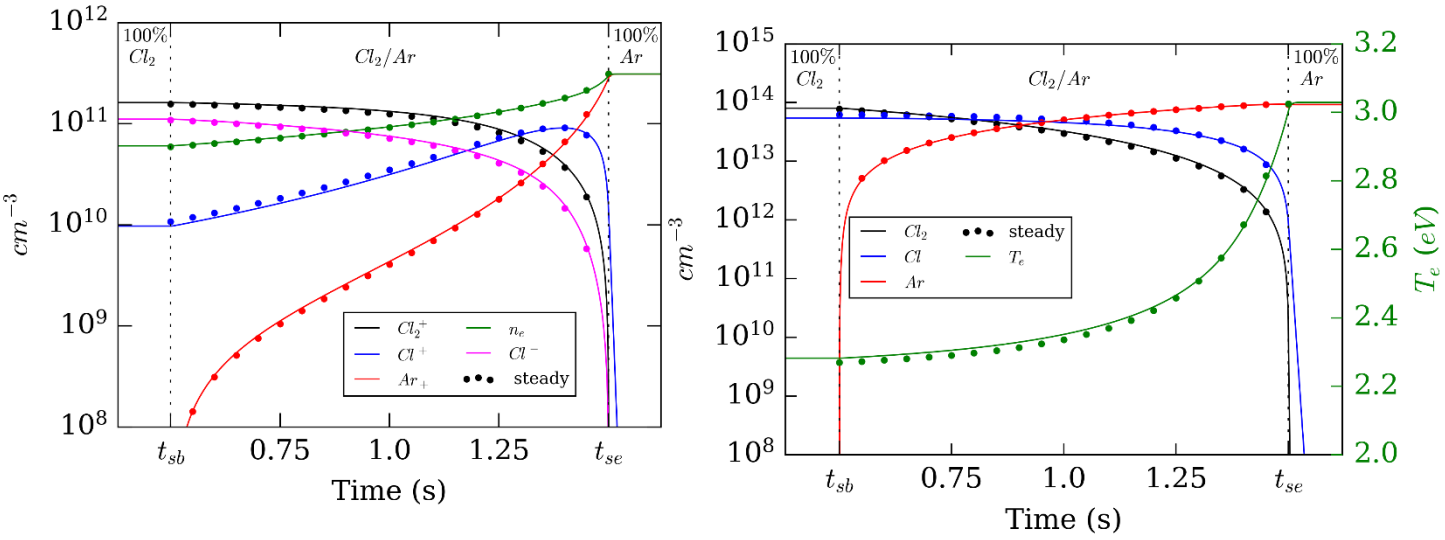

Figure 1: Comparison of results by steady-state (dotted) and dynamic modes switch from Cl_2 to Ar plasma (lines). The switch is a linear time ramp corresponding to a change in the feedgas composition from pure Cl_2 to pure Ar which begins at t_{sb}=0.5 s and end at t_{se}=1.5s. Charged species (left) and neutrals densities and electron temperature (right) during the switch are presented for a pressure P=10mTorr, RF power P_{RF} =800W, constant feedgas flow rate Q=60sccm, wall temperature T_w=300K and a time switch $t_s=t_{sb}-t_{se}$=1s. Cl^+ cations and Cl radicals are dominant in low chlorinated plasma due to the increase of T_e and n_e.

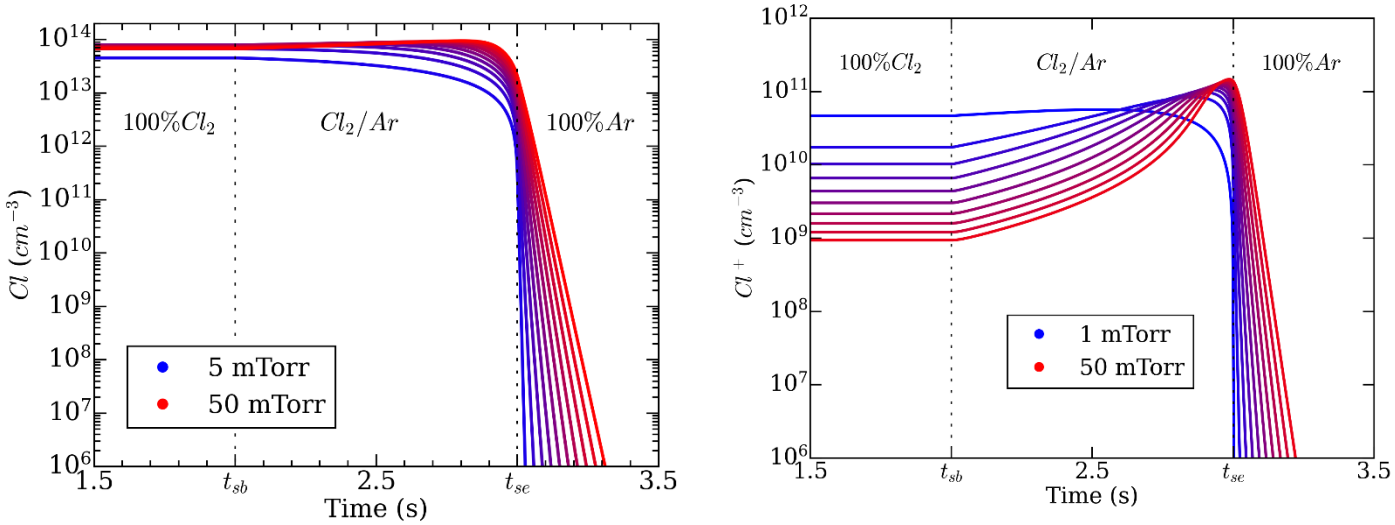

Figure 2: Cl density (left) and Cl^+ density (right) evolution versus time for pressure from 1mTorr to 50mTorr at, RF power P_{RF} =800W, total feedgas flowrate Q=60sccm, T_w=300K and fort_s=1s. There is an increase of the residence time with pressure. Cl^+ reaches a similar maximum in low chlorinated plasmas (end of the feedgas switch) for any pressure, although before the feedgas switch, in pure Cl_2 plasma, the Cl^+ density decreases with increasing pressure.