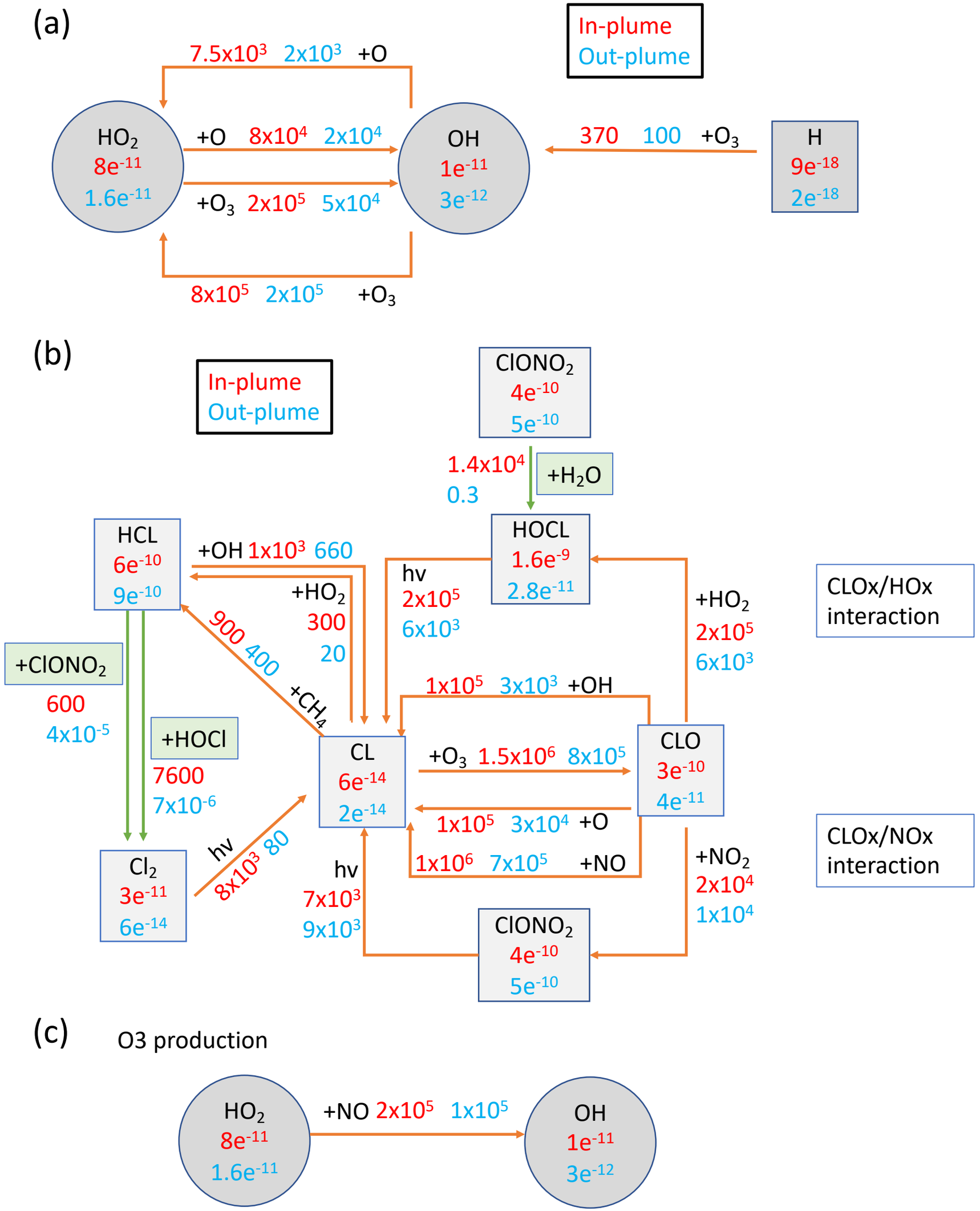
(a)
In-plume
Out-plume
7.5x10^3 2x10^3 +O
HO2
8e-11
1.6e-11
+O 8x10^4 2x10^4
+O3 2x10^5 5x10^4
OH
1e-11
3e-12
370 100 +O3
H
9e-18
2e-18
8x10^5 2x10^5 +O3
(b)
In-plume
Out-plume
ClONO2
4e-10
5e-10
1.4x10^4
0.3
+H2O
HOCL
1.6e-9
2.8e-11
HCL
6e-10
9e-10
+OH 1x10^3 660
+HO2
300
20
hv
2x10^5
6x10^3
+HO2
2x10^5
6x10^3
CLOx/HOx interaction
+ClONO2
600
4x10^-5
900 400
+CH4
1x10^5 3x10^3 +OH
+HOCl
7600
7x10^-6
CL
6e-14
2e-14
+O3 1.5x10^6 8x10^5
CLO
3e-10
4e-11
1x10^5 3x10^4 +O
1x10^6 7x10^5 +NO
CLOx/NOx interaction
Cl2
3e-11
6e-14
hv
8x10^3 80
hv
7x10^3
9x10^3
+NO2
2x10^4
1x10^4
ClONO2
4e-10
5e-10
(c)
O3 production
HO2
8e-11
1.6e-11
+NO 2x10^5 1x10^5
OH
1e-11
3e-12