Base Chemistry Scheme with Low Photolysis Rates, at Low Tide, with First I2 Emission Scenario

pH, dry mole fraction and Cl-:Na+ ratio for the
seasalt and non-seasalt aerosol modes

Seasalt Mode
0.5 m
8 m
60 m
250 m
650 m
pH
Na+
Cl−:Na+
Br−
dry radius [m]
1e−05
1e−06
1e−07
11
11.5
12
Time [hours]
10
8
6
4
2
0.5
0.45
0.4
0.35
1
0.8
0.6
0.4
0.2
0.0001
1e−06
1e−08

Seasalt Mode
0.5 m
8 m
60 m
250 m
650 m
I⁻
NH4+
NO3−
SULP
dry radius [m]
1e−05
1e−06
1e−07
11
11.5
12
Time [hours]
1e−09
1e−10
1e−11
1e−12
1e−13
0.01
0.0001
1e−06
1e−08
0.1
0.01
0.001
0.01
0.001
0.0001

Non-Seasalt Mode
0.5m
8m
60m
250m
650m
pH
HSO_4^-
SO_4^{2-}
NH_4^+
dry radius [m]
2e−07
1e−07
5e−08
11
11.5
12
Time [hours]
1.6
1.4
1.2
1
0.8
0.02
0.015
0.01
0.005
0.26
0.24
0.22
0.2
0.18
0.62
0.6
0.58

Non-Seasalt Mode
0.5m
8m
60m
250m
650m
NO_3^-
Cl^-
Br^-
I^-
dry radius [m]
2e−07
1e−07
5e−08
11
11.5
12
Time [hours]
0.14
0.12
0.1
0.08
0.06
0.04
0.02
1e−07
1e−08
1e−09
1e−10
x 10^−12
8
6
4
2