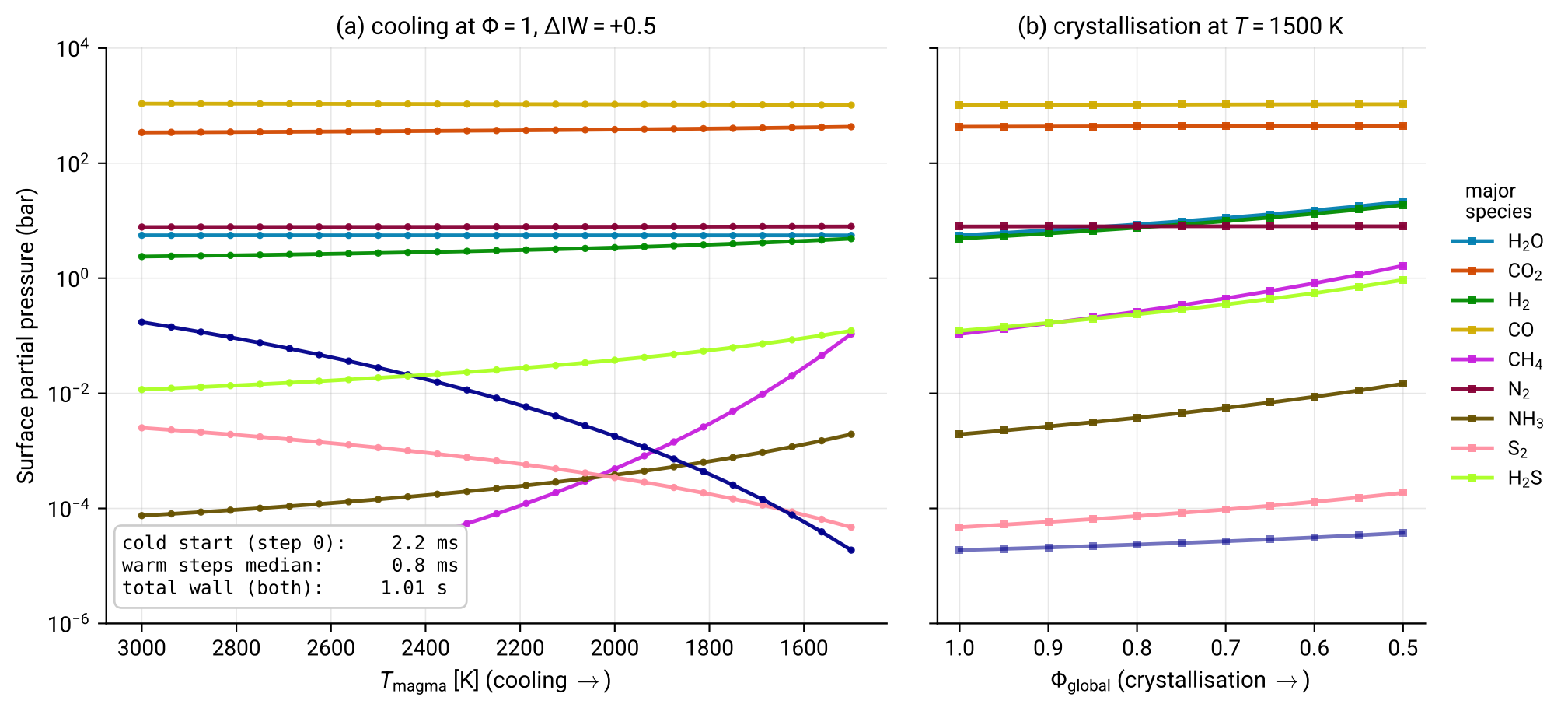

(a) cooling at Φ = 1, ΔIW = +0.5
(b) crystallisation at T = 1500 K
Surface partial pressure (bar)
10^4
10^2
10^0
10^-2
10^-4
10^-6
3000
2800
2600
2400
2200
2000
1800
1600
T_magma [K] (cooling →)
1.0
0.9
0.8
0.7
0.6
0.5
Φ_global (crystallisation →)
cold start (step 0): 2.2 ms
warm steps median: 0.8 ms
total wall (both): 1.01 s
major species
H2O
CO2
H2
CO
CH4
N2
NH3
S2
H2S