



Summary of laboratory data for γ_{HO_2} plotted as a function of temperature. Filled symbols denote the aerosol was doped with Cu. The colours represent composition as follows: red indicates sulfuric aerosol; green is Cl (or Br) containing salts i.e. sea salt; black is soot; yellow is ammonium nitrate; blue is water. The solid lines indicate temperature dependencies as found by Gershenson et al. (1999) on NH_4NO_3 , and Remorov et al. (2002) on solid NaCl. Error bars are given if quoted in the reference, and arrows indicate greater than/less than. The dot-dash line indicates the temperature dependence of the parameterisation in this work (assuming 50% relative humidity). The black dotted line indicates a value of 0.2, as recommended by Jacob (2000), and the dashed black line indicates the parameterisation of Thornton et al. (2008) (assuming $\text{pH}=5$, $r=100$ nm, $\alpha=1$, $[\text{HO}_2]=10^8$ cm⁻³), used by Mao et al. (2010). The letters indicate references as follows: (a) Mozurkewich et al., 1987 (b) Hanson et al., 1992 (c) Gershenson et al., 1995 (d) Cooper and Abbatt, 1996 (e) Gershenson et al., 1999 (f) Thornton and Abbatt, 2005 (g) Taketani et al., 2008 (h) Taketani et al., 2009 (i) Loukhovitskaya et al., 2009 (j) Bedjanian et al., 2005 (k) Saathoff et al., 2001.