

Model	Aerosol species	Fe	Aerosol size representation	Soil mineralogy	Atmospheric processing	Aqueous-phase median
CAM4	TFeD, LFeD,	TFeC, LFeC	Four bins for each Fe type with diameters of 0.1–1.0, 1.0–2.5, 2.5–5.0 and 5.0–10.0 $\mu\text{m}$	Claquin et al. (1999)	Proton- and ligand-dissolution of dust and combustion aerosols	Aerosol water, cloud droplets
GEOS-Chem	TFeD, LFeD		Four bins for TFeD with diameters of 0.2–2.0, 2.0–3.6, 3.6–6.0 and 6.0–12.0 $\mu\text{m}$ one bulk for LFeD	Nickovic et al. (2012)	Proton- and dissolution of dust aerosols	Aerosol water, cloud droplets
IMPACT	TFeD, LFeD,	TFeC, LFeC	Four bins for each Fe type with diameters of < 1.26, 1.26–2.5, 2.5–5 and 5–20 $\mu\text{m}$	Journet et al. (2014)	Proton-, ligand- and photoinduced dissolution of dust and combustion aerosols	Aerosol water
TM4-ECPL	TFeD, LFeD,	TFeC, LFeC	Two modes for each Fe type, with mass median radii (lognormal standard deviation) of 0.34 $\mu\text{m}$ (1.59) and 1.75 $\mu\text{m}$ (2.00) for dust aerosols and 0.04 $\mu\text{m}$ (1.8) and 0.5 $\mu\text{m}$ (2.00) for combustion aerosols	Nickovic et al. (2012)	Proton- and ligand-dissolution of dust aerosols	Aerosol water, cloud droplets