

Table 1 – Aerosol direct radiative forcing from global and US anthropogenic sources (2010)^a

	Emissions (Tg a ⁻¹) ^b		Burden (Gg) ^c		AOD × 1000 ^d		Direct Radiative Forcing External Mixture (W m ⁻²)		Direct Radiative Forcing Internal Mixture (W m ⁻²)	
	Global	Global	Eastern US	Global	Eastern US	Global	Eastern US	Global	Eastern US	
Sulfate	80.3 (8%)	390 (6.5%)	8.9 (65%)	34.2 (6.6%)	83.2 (67%)	-0.65 (6.9%)	-1.85 (66%)	-0.62 (7.0%)	-1.82 (64%)	
Nitrate	35.6 (15%)	46.1 (2.0%)	1.1 (58%)	6.1 (2.7%)	18.1 (65%)	-0.11 (2.7%)	-0.35 (63%)	-0.10 (2.9%)	-0.33 (63%)	
Black Carbon	4.3 (7.1%)	69.1 (6.3%)	1.5 (66%)	0.9 (6.6%)	1.9 (64%)	+0.19 (5.5%)	+0.32 (65%)	+0.30 (5.0%)	+0.49 (67%)	
Primary Organic Aerosol	8.1 (5.5%)	110 (6.1%)	2.3 (69%)	1.4 (6.7%)	3.2 (69%)	-0.14 (6.1%)	-0.25 (67%)	-0.11 (5.5%)	-0.20 (68%)	
Total	-----	-----	-----	42.6 (6.1%)	106 (66%)	-0.67 (6.5%)	-2.13 (65%)	-0.54 (6.1%)	-1.88 (64%)	

^a Model values for anthropogenic perturbations (excluding biomass burning) averaged globally and over the eastern US (east of 100°W). The contribution from US anthropogenic sources is shown in parentheses.

^b Sulfate emissions as precursor SO₂ (Tg S a⁻¹); nitrate emissions as precursor NO_x (Tg N a⁻¹); black carbon (Tg C a⁻¹); primary organic aerosol (Tg C a⁻¹)

^c Sulfate burden as Gg S; nitrate burden as Gg N; black carbon burden as Gg C; organic carbon burden as Gg C

^d Aerosol optical depth (AOD) computed for an external mixture