

Supplement of Geosci. Model Dev., 9, 2143–2151, 2016
<http://www.geosci-model-dev.net/9/2143/2016/>
doi:10.5194/gmd-9-2143-2016-supplement
© Author(s) 2016. CC Attribution 3.0 License.



Geoscientific
Model Development



Supplement of

Development of aroCACM/MPMPO 1.0: a model to simulate secondary organic aerosol from aromatic precursors in regional models

Matthew L. Dawson et al.

Correspondence to: Donald Dabdub (ddabdub@uci.edu)

The copyright of individual parts of the supplement might differ from the CC-BY 3.0 licence.

Table S1. Component species and surrogate structures of SOA groups in the original and updated CIT model. Surrogate species are indicated with a (*).

SOA Group	Original CIT Model	aroCACM/MPMPO	SOA Group	Original CIT Model	aroCACM/MPMPO
A1	UR21 UR28*	UR21* UR28	B4	AP11 AP12* UR20 UR34	AP12*
A2	RP13 RP17 RP18* UR29 UR30 UR26	RP13 RP17 RP18 UR29 UR30 UR3*	B5	AP8 UR5 UR6 AP7*	AP8 UR5 UR6 AP7*
A3	RPR9* RP12	RPR9* RP12	B6		AP11*
A4	UR3* UR23 UR8	UR26* UR23 UR8	B7		UR20*
A5	UR17* UR7	UR17* UR7	C1		UR75* UR24 UR72
B1	AP1 AP6* UR31	AP1 AP6* UR31	C2		UR77* RP98 RPR4 UR22 UR66 UR57 UR58 UR65
B2	ADAC RPR7* RP14 RP19 UR2 UR14 UR27	ADAC RPR7* RP14 RP19 UR2 UR14 UR27	C3		PN11* PN12 PN13 PN14
B3	AP10* UR11 UR15	AP10* UR11 UR15	C4		R102* UR76
			C5		RP30* RP29 RP31

Table S2. Domain and 24 hour average concentrations of aromatic-derived lumped SOA species C1 – C5 in the 30% each *m*-xylene and toluene scenario.

	Average ($\mu\text{g}/\text{m}^3$)	1 Standard Deviation ($\mu\text{g}/\text{m}^3$)
C1	2.36E-01	4.24E-01
C2	3.54E-02	6.18E-02
C3	1.03E-01	1.30E-01
C4	9.42E-03	1.88E-02
C5	1.55E-02	2.00E-02