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Supplement of

Radiative forcing and climate metrics for ozone precursor emissions: the impact of multi-model averaging

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Table S1: RF , Wm-2 for a) total, b) methane component, c) Ozone Pm component, d) Short-lived ozone.

a) TOTAL

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-TS	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%	short-lived ozone-methane RF r-squared
SR2	-1.70E-01	-1.84E-01	-1.75E-01	-1.82E-01	-1.68E-01	-1.67E-01	-1.73E-01	-1.78E-01	-1.80E-01	-1.70E-01	-1.96E-01	-1.65E-01	-1.77E-01	-1.89E-01	6.84	-1.68E-01	-1.77E-01	-1.85E-01	4.77	
SR3NA	1.22E-03	1.98E-03	1.57E-03	3.04E-03	9.06E-04	1.72E-03	7.04E-04	1.54E-03	1.44E-03	2.05E-03		4.69E-03	1.65E-03	-1.38E-03	-183.35	3.97E-03	1.62E-03	-7.34E-04	-145.35	0.83
SR3SA	7.86E-04	1.15E-03	1.46E-03	1.36E-03	5.90E-04	1.06E-03	1.83E-04	1.02E-03	1.34E-03	1.27E-03		3.18E-03	1.05E-03	-1.09E-03	-203.90	2.79E-03	1.02E-03	-7.40E-04	-172.39	0.86
SR3EA	9.02E-05	1.00E-03	1.37E-03	2.21E-03	4.88E-04	9.51E-04	1.54E-04	9.22E-04	1.47E-03	1.54E-03		3.32E-03	1.05E-03	-1.23E-03	-216.96	2.60E-03	1.02E-03	-5.65E-04	-155.42	0.56
SR3EU	1.86E-03	1.80E-03	1.20E-03	2.01E-03	1.06E-03	1.77E-03	8.22E-04	1.33E-03	1.44E-03	1.74E-03		3.04E-03	1.52E-03	9.42E-06	-99.69	2.63E-03	1.50E-03	3.79E-04	-74.77	0.67
SR4NA	-2.49E-03	-2.02E-03	-3.25E-05	-1.42E-03	-1.40E-03	-4.28E-04	-2.62E-03	-1.12E-03	-2.64E-03	-2.18E-03	-2.32E-04	-8.09E-05	-1.50E-03	-2.91E-03	94.07	-2.28E-04	-1.50E-03	-2.78E-03	84.96	0.01
SR4SA	-1.24E-03	-1.89E-03	-2.38E-04	-1.10E-03		-7.00E-04	-1.17E-03	-1.15E-03	-2.13E-03	-1.73E-03	-2.29E-04	-3.48E-04	-1.15E-03	-1.94E-03	69.24	-4.80E-04	-1.16E-03	-1.84E-03	58.52	0.52
SR4EA	-1.63E-03	-2.64E-03	-5.48E-05	-1.39E-03	-9.30E-04	-4.94E-04	-1.80E-03	-1.55E-03	-3.10E-03	-2.72E-03	-1.07E-04	-2.28E-04	-1.48E-03	-2.72E-03	84.25	-3.73E-04	-1.49E-03	-2.61E-03	75.00	0.41
SR4EU	-4.40E-03	-2.67E-03	-2.41E-05	-6.52E-04	-1.09E-03	-7.64E-04	-2.05E-03	-1.55E-03	-3.26E-03	-3.01E-03	-5.47E-04	-1.11E-04	-1.82E-03	-3.50E-03	93.12	-3.22E-04	-1.82E-03	-3.32E-03	82.33	0.27
SR5NA	-3.42E-03	-3.45E-03	-5.03E-03	-3.86E-03	-1.81E-03	-2.48E-03	-1.91E-03	-2.36E-03	-3.56E-03	-3.44E-03	-2.08E-03	-1.58E-03	-3.04E-03	-4.49E-03	47.92	-1.82E-03	-3.03E-03	-4.25E-03	40.18	0.00
SR5SA	-3.00E-03	-2.41E-03	-2.80E-03	-3.27E-03	-2.35E-03	-1.86E-03	-2.69E-03	-1.76E-03	-2.39E-03	-2.27E-03	-2.88E-03	-1.65E-03	-2.53E-03	-3.40E-03	34.55	-1.90E-03	-2.52E-03	-3.13E-03	24.31	0.00
SR5EA	-5.21E-03	-3.52E-03	-7.36E-03	-6.35E-03	-3.06E-03	-2.82E-03	-3.28E-03	-2.43E-03	-3.52E-03	-3.40E-03	-2.89E-03	-2.02E-03	-4.00E-03	-5.99E-03	49.57	-2.37E-03	-3.99E-03	-5.61E-03	40.58	0.63
SR5EU	-2.24E-03	-2.42E-03	-3.17E-03	-3.08E-03	-1.65E-03	-2.58E-03	-1.65E-03	-1.63E-03	-2.25E-03	-2.34E-03	-1.60E-03	-1.36E-03	-2.24E-03	-3.12E-03	39.28	-1.56E-03	-2.24E-03	-2.92E-03	30.46	0.01

b) METHANE

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-TS	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.41E-01	-1.40E-01	-1.40E-01	-1.40E-01	0.00	-1.41E-01	-1.41E-01	-1.41E-01	0.01
SR3NA	4.85E-03	3.53E-03	2.56E-03	5.71E-03	3.68E-03	4.41E-03	3.77E-03	3.56E-03	3.74E-03	5.99E-03		5.13E-03	4.13E-03	3.13E-03	-24.14	5.19E-03	4.18E-03	3.17E-03	-24.10
SR3SA	2.20E-03	2.19E-03	1.91E-03	2.93E-03	1.90E-03	2.31E-03	1.67E-03	2.09E-03	2.37E-03	4.41E-03		3.10E-03	2.37E-03	1.63E-03	-31.05	3.14E-03	2.40E-03	1.65E-03	-31.00
SR3EA	3.18E-03	2.71E-03	2.77E-03	3.92E-03	2.91E-03	2.90E-03	2.63E-03	2.39E-03	3.07E-03	4.81E-03		3.77E-03	3.09E-03	2.42E-03	-21.89	3.81E-03	3.13E-03	2.44E-03	-21.86
SR3EU	3.09E-03	2.37E-03	1.48E-03	2.90E-03	2.26E-03	2.56E-03	2.03E-03	2.42E-03	2.67E-03	3.31E-03		2.98E-03	2.48E-03	1.98E-03	-20.11	3.01E-03	2.51E-03	2.00E-03	-20.09
SR4NA	-1.78E-03	-5.94E-04	1.38E-04	-6.35E-04	-3.31E-04	-9.62E-05	-5.51E-04	-1.81E-04	-4.65E-04	-9.17E-04	-1.18E-04	-7.54E-06	-4.97E-04	-9.86E-04	98.50	-7.66E-06	-5.03E-04	-9.99E-04	98.48	
SR4SA	-7.08E-04	-6.09E-04	-6.89E-05	-3.34E-04		-2.40E-04	-3.34E-04	-3.02E-04	-8.21E-04	-6.17E-04	-1.07E-04	-1.67E-04	-4.09E-04	-6.51E-04	59.18	-1.69E-04	-4.14E-04	-6.59E-04	59.17	
SR4EA	-9.55E-04	-6.83E-04	2.41E-04	-4.29E-04	-9.04E-05	-7.99E-05	-4.18E-04	-2.12E-04	-9.60E-04	-9.52E-04	-3.21E-05	-1.25E-05	-4.10E-04	-8.08E-04	96.96	-1.27E-05	-4.16E-04	-8.18E-04	96.93	
SR4EU	-2.82E-03	-9.35E-04	1.38E-04	-2.54E-04	-3.01E-04	-2.88E-04	-6.68E-04	-3.02E-04	-1.30E-03	-1.30E-03	-2.67E-04	3.26E-05	-7.45E-04	-1.52E-03	104.41	3.32E-05	-7.55E-04	-1.54E-03	104.39	
SR5NA	-2.17E-03	-1.88E-03	-3.13E-03	-2.11E-03	-1.13E-03	-1.56E-03	-4.51E-04	-1.21E-03	-1.52E-03	-2.09E-03	-1.05E-03	-9.62E-04	-1.64E-03	-2.32E-03	41.44	-9.75E-04	-1.66E-03	-2.35E-03	41.42	
SR5SA	-1.78E-03	-1.14E-03	-1.68E-03	-1.56E-03	-1.40E-03	-1.09E-03	-1.27E-03	-7.85E-04	-1.15E-03	-1.18E-03	-1.09E-03	-9.89E-04	-1.27E-03	-1.55E-03	22.02	-1.00E-03	-1.28E-03	-1.57E-03	21.97	
SR5EA	-3.10E-03	-1.79E-03	-4.36E-03	-3.29E-03	-1.88E-03	-1.72E-03	-1.48E-03	-1.15E-03	-1.78E-03	-1.94E-03	-1.32E-03	-1.21E-03	-2.14E-03	-3.07E-03	43.58	-1.22E-03	-2.17E-03	-3.11E-03	43.56	
SR5EU	-1.45E-03	-1.36E-03	-2.04E-03	-1.71E-03	-1.05E-03	-1.68E-03	-6.52E-04	-8.45E-04	-1.18E-03	-1.46E-03	-8.97E-04	-8.89E-04	-1.29E-03	-1.68E-03	30.87	-9.00E-04	-1.30E-03	-1.70E-03	30.86	

c) O3PM

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-TS	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2	-2.86E-02	-4.31E-02	-3.33E-02	-4.08E-02	-2.64E-02	-2.55E-02	-3.15E-02	-3.68E-02	-3.87E-02	-2.82E-02	-5.49E-02	-2.50E-02	-3.70E-02	-4.92E-02	32.67	-2.69E-02	-3.53E-02	-4.37E-02	23.84
SR3NA	1.07E-03	1.13E-03	6.54E-04	1.82E-03	7.46E-04	8.82E-04	8.94E-04	1.03E-03	1.13E-03	1.26E-03		1.51E-03	1.09E-03	6.81E-04	-38.33	1.37E-03	1.06E-03	7.53E-04	-29.03
SR3SA	4.90E-04	7.11E-04	4.90E-04	9.44E-04	3.90E-04	4.56E-04	4.03E-04	5.99E-04	7.14E-04	9.34E-04		8.98E-04	6.25E-04	3.65E-04	-42.64	8.08E-04	6.13E-04	4.18E-04	-31.85
SR3EA	7.03E-04	8.75E-04	7.06E-04	1.26E-03	5.93E-04	5.75E-04	6.28E-04	6.96E-04	9.18E-04	1.02E-03		1.12E-03	8.15E-04	5.24E-04	-36.72	1.00E-03	7.97E-04	5.90E-04	-25.92
SR3EU	6.84E-04	7.67E-04	3.82E-04	9.34E-04	4.63E-04	5.05E-04	4.86E-04	7.00E-04	7.99E-04	7.06E-04		8.85E-04	6.51E-04	4.30E-04	-34.99	8.09E-04	6.43E-04	4.76E-04	-25.94
SR4NA	-3.98E-04	-2.01E-04	3.56E-05	-2.03E-04	-6.76E-05	-1.91E-05	-1.35E-04	-5.24E-05	-1.41E-04	-2.04E-04	-5.02E-05	-2.92E-06	-1.30E-04	-2.56E-04	97.38	-1.62E-05	-1.30E-04	-2.45E-04	87.59	
SR4SA	-1.58E-04	-2.06E-04	-1.77E-05	-1.07E-04		-4.78E-05	-8.19E-05	-8.73E-05	-2.49E-04	-1.37E-04	-4.57E-05	-1.14E-04	-1.11E-04	-4.16E-05	-32.71	-4.36E-05	-1.14E-04	-1.84E-04	61.68	
SR4EA	-2.13E-04	-2.31E-04	6.23E-05	-1.37E-04	-1.87E-05	-1.60E-05	-1.02E-04	-6.12E-05	-2.91E-04	-2.12E-04	-1.38E-05	6.60E-06	-1.10E-04	-2.26E-04	105.52	-4.46E-06	-1.12E-04	-2.20E-04	96.02	
SR4EU	-6.25E-04	-3.15E-04	3.56E-05	-8.13E-05	-6.20E-05	-5.73E-05	-1.63E-04	-8.73E-05	-3.92E-04	-2.90E-04	-1.14E-04	5.68E-06	-1.95E-04	-3.94E-04	102.49	-1.24E-05	-1.96E-04	-3.79E-04	93.65	
SR5NA	-4.83E-04	-6.29E-04	-8.02E-04	-6.65E-04	-2.33E-04	-3.11E-04	-1.11E-04	-3.47E-04	-4.57E-04	-4.63E-04	-4.46E-04	-2.10E-04	-4.57E-04	-7.06E-04	54.21	-2.60E-04	-4.50E-04	-6.39E-04	42.19	
SR5SA	-3.98E-04	-3.85E-04	-4.33E-04	-4.99E-04	-2.89E-04	-2.16E-04	-3.10E-04	-2.27E-04	-3.46E-04	-2.63E-04	-4.64E-04	-2.22E-04	-3.52E-04	-4.83E-04	37.07	-2.57E-04	-3.48E-04	-4.39E-04	26.22	
SR5EA	-6.86E-04	-6.00E-04	-1.11E-03	-1.03E-03	-3.88E-04	-3.42E-04	-3.62E-04	-3.30E-04	-5.34E-04	-4.28E-04	-5.62E-04	-2.57E-04	-5.92E-04	-9.28E-04	56.63	-3.23E-04	-5.79E-04	-8.36E-04	44.25	
SR5EU	-3.23E-04	-4.59E-04	-5.25E-04	-5.43E-04	-2.18E-04	-3.33E-04	-1.59E-04	-2.44E-04	-3.56E-04	-3.24E-04	-3.83E-04	-1.97E-04	-3.56E-04	-5.16E-04	44.75	-2.36E-04	-3.52E-04	-4.67E-04	32.94	

d) o3 short-lived

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-TS	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2																			
SR3NA	-4.69E-03	-2.68E-03	-1.64E-03	-4.49E-03	-3.52E-03	-3.57E-03	-3.96E-03	-3.05E-03	-3.43E-03	-5.20E-03		-1.96E-03	-3.56E-03	-5.20E-03	45.45	-2.59E-03	-3.62E-03	-4.66E-03	28.61	
SR3SA	-1.90E-03	-1.75E-03	-9.35E-04	-2.51E-03	-1.70E-03	-1.70E-03	-1.89E-03	-1.67E-03	-1.74E-03	-4.07E-03		-8.25E-04	-1.95E-03	-3.09E-03	58.01	-1.16E-03	-1.99E-03	-2.81E-03	41.52	
SR3EA	-3.79E-03	-2.58E-03	-2.10E-03	-2.97E-03	-3.01E-03	-2.52E-03	-3.10E-03	-2.16E-03	-2.52E-03	-4.29E-03		-1.57E-03	-2.86E-03	-4.16E-03	45.32	-2.21E-03	-2.91E-03	-3.60E-03	23.91	
SR3EU	-1.91E-03	-1.33E-03	-6.61E-04	-1.82E-03	-1.67E-03	-1.30E-03	-1.69E-03	-1.79E-03	-2.03E-03	-2.27E-03		-8.17E-04	-1.61E-03	-2.40E-03	49.25	-1.19E-03	-1.65E-03	-2.10E-03	27.56	
SR4NA	-3.04E-04	-1.23E-03	-2.06E-04	-5.79E-04	-9.99E-04	-3.12E-04	-1.93E-03	-8.84E-04	-2.03E-03	-1.06E-03	-6.40E-05	-7.05E-05	-8.74E-04	-1.66E-03	91.05	-2.04E-04	-8.72E-04	-1.54E-03	76.56	
SR4SA	-3.79E-04	-1.07E-03	-1.52E-04	-6.58E-04		-4.13E-04	-7.53E-04	-7.59E-04	-1.06E-03	-9.77E-04	-7.61E-05	-6.67E-05	-6.30E-04	-1.25E-03	93.73	-2.68E-04	-6.30E-04	-9.93E-04	57.52	
SR4EA	-4.65E-04	-1.73E-03	-3.58E-04	-8.19E-04	-8.21E-04	-3.98E-04	-1.28E-03	-1.27E-03	-1.85E-03	-1.55E-03	-6.13E-05	-2.22E-04	-9.61E-04	-1.69E-03	76.38	-3.56E-04	-9.64E-04	-1.57E-03	63.11	
SR4EU	-9.50E-04	-1.42E-03	-1.97E-04	-3.16E-04	-7.30E-04	-4.19E-04	-1.22E-03	-1.16E-03	-1.56E-03	-1.42E-03	-1.65E-04	-1.49E-04	-8.78E-04	-1.58E-03	81.46	-3.42E-04	-8.69E-04	-1.40E-03	60.60	
SR5NA	-7.67E-04	-9.39E-04	-1.09E-03	-1.09E-03	-4.45E-04	-6.04E-04	-1.35E-03	-8.02E-04	-1.58E-03	-8.82E-04	-5.84E-04	-4.11E-04	-9.37E-04	-1.46E-03	56.22	-5.81E-04	-9.22E-04	-1.26E-03	36.97	
SR5SA	-8.15E-04	-8.78E-04	-6.88E-04	-1.21E-03	-6.63E-04	-5.63E-04	-1.11E-03	-7.51E-04	-9.02E-04	-8.24E-04	-1.33E-03	-4.35E-04	-9.10E-04	-1.36E-03	51.06	-6.46E-04	-8.84E-04	-1.12E-03	26.97	
SR5EA	-1.42E-03	-1.12E-03	-1.90E-03	-2.03E-03	-8.00E-04	-7.54E-04	-1.44E-03	-9.53E-04	-1.21E-03	-1.04E-03	-1.01E-03	-5.53E-04	-1.27E-03	-1.99E-03	56.36	-8.24E-04	-1.24E-03	-1.66E-03	33.67	
SR5EU	-4.70E-04	-5.98E-04	-6.08E-04	-8.25E-04	-3.84E-04	-5.71E-04	-8.41E-04	-5.46E-04	-7.23E-04	-5.57E-04	-3.18E-04	-2.74E-04	-5.98E-04	-9.21E-04	54.08	-4.21E-04	-5.86E-04	-7.50E-04	28.09	

Table S2: RF normalised by species mass emissions change, Wm-2/Tg , for a) total, b) methane component, c) Ozone Pm component, d) Short-lived ozone.

a) TOTAL

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-T5a
SR2	2.29E-03	2.08E-03	2.28E-03	2.19E-03	1.96E-03	2.03E-03	2.20E-03	1.95E-03	2.10E-03	2.28E-03	1.59E-03
SR3NA	-8.48E-04	-1.36E-03	-1.05E-03	-2.03E-03	-6.38E-04	-9.77E-04	-4.95E-04	-1.04E-03	-9.88E-04	-1.44E-03	
SR3SA	-1.51E-03	-2.74E-03	-3.18E-03	-2.84E-03	-1.34E-03	-2.52E-03	-4.35E-04	-2.31E-03	-3.05E-03	-2.88E-03	
SR3EA	-7.52E-05	-9.09E-04	-7.38E-04	-2.04E-03	-4.52E-04	-1.01E-03	-1.42E-04	-8.23E-04	-1.34E-03	-1.38E-03	
SR3EU	-1.18E-03	-1.22E-03	-7.99E-04	-1.48E-03	-8.40E-04	-1.07E-03	-6.63E-04	-8.62E-04	-9.58E-04	-1.15E-03	
SR4NA	5.12E-04	6.48E-04	9.80E-06	5.71E-04	2.88E-04	3.24E-04	6.20E-04	3.58E-04	7.45E-04	7.68E-04	4.64E-04
SR4SA	5.98E-04	8.28E-04	9.85E-05	6.31E-04		4.27E-04	7.31E-04	5.04E-04	7.56E-04	8.41E-04	4.57E-04
SR4EA	4.72E-04	6.89E-04	1.38E-05	5.25E-04	2.67E-04	3.17E-04	6.40E-04	4.02E-04	6.42E-04	7.63E-04	2.82E-04
SR4EU	5.64E-04	6.26E-04	5.48E-06	5.26E-04	2.67E-04	3.60E-04	6.01E-04	3.58E-04	6.64E-04	7.64E-04	5.47E-04
SR5NA	1.35E-04	1.82E-04	2.26E-04	1.69E-04	1.35E-04	1.24E-04	1.43E-04	1.21E-04	1.85E-04	1.74E-04	9.44E-05
SR5SA	1.41E-04	1.94E-04	2.09E-04	1.80E-04	1.37E-04	1.30E-04	1.58E-04	1.40E-04	1.96E-04	1.80E-04	1.26E-04
SR5EA	1.38E-04	1.85E-04	2.17E-04	1.75E-04	1.34E-04	1.26E-04	1.39E-04	1.25E-04	1.85E-04	1.75E-04	1.05E-04
SR5EU	1.32E-04	1.81E-04	2.30E-04	1.69E-04	1.33E-04	1.16E-04	1.35E-04	1.18E-04	1.68E-04	1.70E-04	8.32E-05

	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2	2.24E-03	2.10E-03	1.93E-03	-7.41	2.29E-03	2.10E-03	1.89E-03	-9.49
SR3NA	-3.37E-03	-1.11E-03	8.73E-04	-190.59	-2.86E-03	-1.09E-03	4.64E-04	-152.44
SR3SA	-7.60E-03	-2.33E-03	2.27E-03	-211.52	-6.66E-03	-2.28E-03	1.55E-03	-179.88
SR3EA	-3.57E-03	-8.97E-04	8.71E-04	-247.70	-2.80E-03	-8.73E-04	4.02E-04	-183.49
SR3EU	-2.28E-03	-1.04E-03	-5.91E-06	-109.38	-1.97E-03	-1.03E-03	-2.38E-04	-84.23
SR4NA	3.46E-05	4.46E-04	6.61E-04	70.23	9.76E-05	4.47E-04	6.33E-04	59.87
SR4SA	2.98E-04	6.08E-04	7.41E-04	36.48	4.12E-04	6.12E-04	7.01E-04	23.68
SR4EA	8.92E-05	4.36E-04	6.42E-04	63.48	1.46E-04	4.39E-04	6.16E-04	53.54
SR4EU	4.62E-05	4.49E-04	6.14E-04	63.25	1.34E-04	4.49E-04	5.82E-04	49.95
SR5NA	9.97E-05	1.56E-04	1.95E-04	30.56	1.14E-04	1.56E-04	1.85E-04	22.55
SR5SA	1.35E-04	1.67E-04	1.88E-04	15.78	1.56E-04	1.66E-04	1.73E-04	5.06
SR5EA	1.11E-04	1.58E-04	1.84E-04	22.99	1.30E-04	1.57E-04	1.72E-04	13.19
SR5EU	1.13E-04	1.49E-04	1.73E-04	20.09	1.30E-04	1.49E-04	1.62E-04	10.91

b) METHANE

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-T5a
SR2	1.90E-03	1.60E-03	1.85E-03	1.70E-03	1.66E-03	1.72E-03	1.80E-03	1.54E-03	1.65E-03	1.90E-03	1.14E-03
SR3NA	-3.37E-03	-2.42E-03	-1.71E-03	-3.81E-03	-2.59E-03	-2.50E-03	-2.65E-03	-2.40E-03	-2.56E-03	-4.22E-03	
SR3SA	-4.23E-03	-5.21E-03	-4.15E-03	-6.10E-03	-4.31E-03	-5.49E-03	-3.98E-03	-4.74E-03	-5.40E-03	-1.00E-02	
SR3EA	-2.65E-03	-2.46E-03	-1.49E-03	-3.63E-03	-2.69E-03	-3.08E-03	-2.43E-03	-2.13E-03	-2.79E-03	-4.30E-03	
SR3EU	-1.95E-03	-1.60E-03	-9.85E-04	-2.13E-03	-1.79E-03	-1.54E-03	-1.63E-03	-1.57E-03	-1.78E-03	-2.18E-03	
SR4NA	3.67E-04	1.90E-04	-4.14E-05	2.56E-04	6.81E-05	7.29E-05	1.31E-04	5.81E-05	1.31E-04	3.23E-04	2.35E-04
SR4SA	3.40E-04	2.67E-04	2.85E-05	1.92E-04		1.46E-04	2.09E-04	1.32E-04	2.91E-04	3.00E-04	2.14E-04
SR4EA	2.76E-04	1.78E-04	-6.04E-05	1.62E-04	2.60E-05	5.12E-05	1.48E-04	5.51E-05	1.99E-04	2.67E-04	8.44E-05
SR4EU	3.62E-04	2.20E-04	-3.13E-05	2.05E-04	7.34E-05	1.36E-04	1.95E-04	6.99E-05	2.65E-04	3.31E-04	2.67E-04
SR5NA	8.55E-05	9.91E-05	1.41E-04	9.25E-05	8.41E-05	7.82E-05	3.37E-05	6.22E-05	7.89E-05	1.06E-04	4.75E-05
SR5SA	8.42E-05	9.21E-05	1.25E-04	8.59E-05	8.12E-05	7.54E-05	7.46E-05	6.23E-05	9.39E-05	9.37E-05	4.77E-05
SR5EA	8.21E-05	9.44E-05	1.28E-04	9.05E-05	8.23E-05	7.69E-05	6.29E-05	5.91E-05	9.36E-05	9.98E-05	4.79E-05
SR5EU	8.53E-05	1.02E-04	1.48E-04	9.41E-05	8.49E-05	7.55E-05	5.34E-05	6.12E-05	8.77E-05	1.06E-04	4.67E-05

		RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2	-0.25	1.90E-03	1.65E-03	1.43E-03	-14.34	1.92E-03	1.68E-03	1.45E-03	-14.27
SR3NA	0.76	-3.69E-03	-2.78E-03	-1.98E-03	-30.72	-3.73E-03	-2.81E-03	-2.01E-03	-30.68
SR3SA	0.80	-7.42E-03	-5.29E-03	-3.42E-03	-37.90	-7.51E-03	-5.35E-03	-3.46E-03	-37.85
SR3EA	0.76	-4.06E-03	-2.65E-03	-1.72E-03	-44.16	-4.10E-03	-2.68E-03	-1.74E-03	-44.12
SR3EU	0.69	-2.23E-03	-1.69E-03	-1.24E-03	-29.14	-2.26E-03	-1.71E-03	-1.26E-03	-29.12
SR4NA	0.91	3.23E-06	1.48E-04	2.24E-04	74.93	3.28E-06	1.49E-04	2.27E-04	74.91
SR4SA	0.84	1.43E-04	2.16E-04	2.49E-04	24.45	1.45E-04	2.19E-04	2.52E-04	24.44
SR4EA	0.95	4.89E-06	1.21E-04	1.90E-04	76.93	4.98E-06	1.22E-04	1.93E-04	76.90
SR4EU	0.89	-1.36E-05	1.84E-04	2.68E-04	76.38	-1.38E-05	1.86E-04	2.71E-04	76.38
SR5NA	0.82	6.06E-05	8.44E-05	1.01E-04	23.85	6.14E-05	8.55E-05	1.02E-04	23.84
SR5SA	0.68	8.12E-05	8.39E-05	8.57E-05	2.68	8.22E-05	8.49E-05	8.67E-05	2.62
SR5EA	0.73	6.65E-05	8.43E-05	9.42E-05	16.45	6.73E-05	8.53E-05	9.53E-05	16.43
SR5EU	0.81	7.40E-05	8.56E-05	9.34E-05	11.34	7.49E-05	8.67E-05	9.46E-05	11.33

c) O3PM

	0.999707879	0.999883104	0.99965581	0.999781459	0.999733037	0.999772401	0.999770573	0.999722155	0.999787825	0.999946219	0.999597126
	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-T5a
SR2	3.86E-04	4.87E-04	4.35E-04	4.91E-04	3.09E-04	3.10E-04	4.01E-04	4.02E-04	4.51E-04	3.80E-04	4.44E-04
SR3NA	-7.40E-04	-7.77E-04	-4.36E-04	-1.21E-03	-5.26E-04	-5.01E-04	-6.29E-04	-6.95E-04	-7.73E-04	-8.88E-04	
SR3SA	-9.42E-04	-1.69E-03	-1.07E-03	-1.97E-03	-8.86E-04	-1.09E-03	-9.59E-04	-1.36E-03	-1.62E-03	-2.12E-03	
SR3EA	-5.86E-04	-7.96E-04	-3.80E-04	-1.16E-03	-5.49E-04	-6.12E-04	-5.81E-04	-6.22E-04	-8.35E-04	-9.09E-04	
SR3EU	-4.33E-04	-5.18E-04	-2.54E-04	-6.87E-04	-3.67E-04	-3.04E-04	-3.92E-04	-4.54E-04	-5.33E-04	-4.64E-04	
SR4NA	8.19E-05	6.43E-05	-1.07E-05	8.19E-05	1.39E-05	1.45E-05	3.20E-05	1.68E-05	3.98E-05	7.18E-05	1.00E-04
SR4SA	7.60E-05	9.02E-05	7.30E-06	6.13E-05		2.92E-05	5.12E-05	3.83E-05	8.82E-05	6.67E-05	9.13E-05
SR4EA	6.17E-05	6.01E-05	-1.57E-05	5.19E-05	5.37E-06	1.02E-05	3.63E-05	1.59E-05	6.03E-05	5.95E-05	3.63E-05
SR4EU	8.02E-05	7.40E-05	-8.09E-06	6.55E-05	1.51E-05	2.70E-05	4.78E-05	2.02E-05	8.01E-05	7.35E-05	1.14E-04
SR5NA	1.90E-05	3.31E-05	3.61E-05	2.92E-05	1.74E-05	1.55E-05	8.25E-06	1.79E-05	2.38E-05	2.34E-05	2.03E-05
SR5SA	1.88E-05	3.10E-05	3.23E-05	2.74E-05	1.68E-05	1.50E-05	1.82E-05	1.80E-05	2.84E-05	2.08E-05	2.03E-05
SR5EA	1.82E-05	3.16E-05	3.26E-05	2.83E-05	1.70E-05	1.53E-05	1.53E-05	1.70E-05	2.81E-05	2.21E-05	2.04E-05
SR5EU	1.90E-05	3.42E-05	3.81E-05	2.98E-05	1.76E-05	1.50E-05	1.31E-05	1.77E-05	2.65E-05	2.35E-05	1.99E-05

	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2	3.41E-04	4.39E-04	5.03E-04	18.49	3.66E-04	4.19E-04	4.47E-04	9.67
SR3NA	3.20E-04	1.67E-03	2.85E-03	76.01	-9.85E-04	-7.14E-04	-4.76E-04	-35.63
SR3SA	-1.74E-04	2.95E-03	5.69E-03	99.30	-1.93E-03	-1.37E-03	-8.74E-04	-38.70
SR3EA	4.84E-04	1.75E-03	2.59E-03	60.09	-1.08E-03	-6.82E-04	-4.20E-04	-48.36
SR3EU	-5.10E-05	6.53E-04	1.24E-03	98.62	-6.06E-04	-4.39E-04	-2.99E-04	-35.02
SR4NA	3.14E-05	2.98E-04	4.36E-04	67.91	6.93E-06	3.87E-05	5.57E-05	62.90
SR4SA	1.55E-04	3.92E-04	4.93E-04	43.11	3.73E-05	6.01E-05	7.02E-05	27.38
SR4EA	8.43E-05	3.15E-04	4.52E-04	58.33	1.74E-06	3.30E-05	5.18E-05	75.93
SR4EU	5.98E-05	2.65E-04	3.47E-04	54.13	5.17E-06	4.83E-05	6.65E-05	63.51
SR5NA	3.91E-05	7.17E-05	9.42E-05	38.46	1.64E-05	2.31E-05	2.78E-05	24.63
SR5SA	5.40E-05	8.34E-05	1.02E-04	28.95	2.11E-05	2.30E-05	2.43E-05	7.05
SR5EA	4.46E-05	7.35E-05	8.94E-05	30.49	1.78E-05	2.28E-05	2.56E-05	17.19
SR5EU	3.92E-05	6.35E-05	7.98E-05	31.88	1.96E-05	2.34E-05	2.59E-05	13.49

d) o3 short-lived

	CAMCHEM-3311	FRSGCUCI-v01	GISS-PUCCINI-m	GMI-v02f	INCA-vSSz	MOZARTGFDL-v	MOZECH-v16	STOC-HadAM3-v	TM5-JRC-cy2-ipc	UM-CAM-v01	LLNL-IMPACT-T5a
SR2											
SR3NA	3.26E-03	1.84E-03	1.10E-03	2.99E-03	2.48E-03	2.03E-03	2.79E-03	2.06E-03	2.35E-03	3.66E-03	
SR3SA	3.66E-03	4.16E-03	2.03E-03	5.23E-03	3.86E-03	4.05E-03	4.51E-03	3.79E-03	3.96E-03	9.25E-03	
SR3EA	3.16E-03	2.35E-03	1.13E-03	2.75E-03	2.79E-03	2.68E-03	2.87E-03	1.93E-03	2.29E-03	3.83E-03	
SR3EU	1.21E-03	8.99E-04	4.41E-04	1.34E-03	1.32E-03	7.80E-04	1.36E-03	1.16E-03	1.35E-03	1.49E-03	
SR4NA	6.25E-05	3.93E-04	6.20E-05	2.33E-04	2.06E-04	2.37E-04	4.57E-04	2.83E-04	5.74E-04	3.73E-04	1.28E-04
SR4SA	1.82E-04	4.70E-04	6.28E-05	3.78E-04		2.52E-04	4.70E-04	3.33E-04	3.77E-04	4.74E-04	1.52E-04
SR4EA	1.34E-04	4.51E-04	8.99E-05	3.10E-04	2.36E-04	2.55E-04	4.55E-04	3.31E-04	3.83E-04	4.36E-04	1.61E-04
SR4EU	1.22E-04	3.32E-04	4.48E-05	2.55E-04	1.78E-04	1.98E-04	3.57E-04	2.68E-04	3.19E-04	3.60E-04	1.65E-04
SR5NA	3.02E-05	4.94E-05	4.92E-05	4.77E-05	3.32E-05	3.02E-05	1.01E-04	4.14E-05	8.25E-05	4.46E-05	2.65E-05
SR5SA	3.84E-05	7.08E-05	5.13E-05	6.65E-05	3.85E-05	3.91E-05	6.52E-05	5.96E-05	7.39E-05	6.54E-05	5.81E-05
SR5EA	3.76E-05	5.91E-05	5.58E-05	5.58E-05	3.51E-05	3.37E-05	6.09E-05	4.91E-05	6.38E-05	5.34E-05	3.65E-05
SR5EU	2.77E-05	4.46E-05	4.41E-05	4.53E-05	3.09E-05	2.57E-05	6.90E-05	3.96E-05	5.40E-05	4.03E-05	1.66E-05

	RF EN mean+sigma	Mean	mean-sigma	sigma/ mean /%	True mean RF mean+sigma	Mean	mean-sigma	sigma/ mean /%
SR2								
SR3NA	7.21E-04	2.43E-03	4.08E-03	68.98	1.86E-03	2.44E-03	2.95E-03	22.24
SR3SA	4.68E-04	4.41E-03	8.22E-03	87.99	2.78E-03	4.44E-03	5.88E-03	34.99
SR3EA	9.63E-04	2.47E-03	3.55E-03	52.41	2.38E-03	2.49E-03	2.56E-03	3.64
SR3EU	2.10E-04	1.12E-03	1.94E-03	77.46	8.93E-04	1.12E-03	1.32E-03	18.90
SR4NA	3.67E-05	2.51E-04	3.38E-04	59.88	8.74E-05	2.59E-04	3.50E-04	50.74
SR4SA	8.98E-05	2.92E-04	3.59E-04	46.20	2.29E-04	3.33E-04	3.79E-04	22.50
SR4EA	7.81E-05	2.72E-04	3.68E-04	53.31	1.39E-04	2.84E-04	3.71E-04	40.87
SR4EU	6.27E-05	2.13E-04	2.46E-04	43.08	1.42E-04	2.14E-04	2.45E-04	23.93
SR5NA	2.66E-05	4.52E-05	5.18E-05	27.90	3.66E-05	4.74E-05	5.48E-05	19.23
SR5SA	4.08E-05	5.98E-05	6.68E-05	21.81	5.30E-05	5.85E-05	6.22E-05	7.82
SR5EA	3.11E-05	4.86E-05	5.23E-05	21.76	4.54E-05	4.90E-05	5.10E-05	5.67
SR5EU	2.74E-05	3.97E-05	4.22E-05	18.72	3.50E-05	3.90E-05	4.16E-05	8.44

Table S3: Ensemble mean GWP and GTP for the Fry mean and the true mean and standard deviaton. a) total, b) methane component, c) Ozone Pm component, d) Short-lived Ozone, e) methane lifetime .

		GWP20						GWP100						GTP20						GTP100					
		EN			TRUE		sigma/	EN		sigma/	TRUE		sigma/	EN		sigma/	TRUE		sigma/	EN		sigma/	TRUE		sigma/
	TOT	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%	mean	stdev	mean /%
a)	**SR2**	64.27	5.18	8.06	64.88	4.17	6.42	22.69	1.56	6.86	22.99	2.41	10.48	54.84	3.77	6.88	55.28	5.49	9.93	3.55	0.27	7.59	3.62	0.45	12.31
	SR3NA	-11.43	41.18	-360.21	-9.76	15.50	-158.94	-11.19	12.01	-107.29	-10.84	4.77	-44.01	-62.92	19.06	-30.29	-62.78	16.59	-26.43	-2.22	1.75	-79.08	-2.20	0.79	-36.12
	SR3SA	-30.08	98.04	-325.95	-27.41	34.09	-124.37	-23.66	28.86	-121.96	-23.10	9.83	-42.54	-122.33	46.78	-38.24	-122.15	36.34	-29.75	-4.55	4.23	-92.81	-4.53	1.64	-36.25
	SR3EA	-4.15	41.20	-991.71	-2.64	20.66	-783.91	-8.75	11.82	-135.16	-8.62	6.58	-76.36	-57.83	17.14	-29.64	-59.34	19.05	-32.10	-1.84	1.71	-92.66	-1.87	1.04	-55.64
	SR3EU	-21.46	20.12	-93.78	-20.61	7.85	-38.10	-10.93	5.86	-53.64	-10.73	2.67	-24.86	-42.83	9.50	-22.19	-42.83	8.38	-19.56	-1.93	0.86	-44.53	-1.92	0.44	-23.21
	SR4NA	16.32	11.67	71.49	17.60	8.10	46.04	5.04	3.52	69.87	5.45	2.54	46.71	8.25	5.57	67.47	8.98	4.61	51.27	0.74	0.51	69.14	0.81	0.38	47.36
	SR4SA	22.06	13.83	62.70	21.25	8.20	38.57	6.86	4.06	59.13	6.62	2.57	38.75	11.54	5.62	48.72	11.19	4.31	38.50	1.01	0.58	57.49	0.98	0.38	38.86
	SR4EA	16.22	10.47	64.53	16.92	7.99	47.19	4.94	3.14	63.54	5.17	2.54	49.13	7.66	4.80	62.60	7.99	4.49	56.19	0.72	0.46	63.04	0.76	0.38	50.28
	SR4EU	16.03	10.56	65.92	17.19	7.42	43.16	5.05	3.33	65.98	5.40	2.41	44.68	8.93	6.24	69.81	9.44	4.68	49.61	0.75	0.50	66.20	0.81	0.37	45.68
	SR5NA	5.32	1.86	34.90	5.22	1.20	22.91	1.74	0.59	34.07	1.72	0.42	24.50	3.49	1.16	33.16	3.39	0.92	27.13	0.26	0.09	33.86	0.26	0.07	25.46
	SR5SA	5.78	1.63	28.11	5.59	0.98	17.50	1.87	0.49	26.29	1.82	0.34	18.45	3.62	0.79	21.85	3.52	0.70	19.84	0.28	0.07	25.56	0.28	0.05	19.04
	SR5EA	5.39	1.94	35.99	5.27	1.09	20.59	1.76	0.62	35.23	1.73	0.38	22.13	3.50	1.21	34.55	3.43	0.80	23.37	0.27	0.09	35.04	0.26	0.06	22.91
	SR5EU	5.03	1.47	29.18	4.99	1.24	24.83	1.66	0.47	28.07	1.66	0.45	26.86	3.42	0.90	26.27	3.39	0.97	28.58	0.25	0.07	27.76	0.25	0.07	27.89
	CH4																								
b)	**SR2**	50.81	0.00	0.00	52.10	4.79	9.19	17.94	0.00	0.00	18.49	2.46	13.29	43.53	0.00	0.00	44.63	5.62	12.60	2.83	0.00	0.00	2.94	0.44	14.92
	SR3NA	-85.87	-20.72	24.13	-86.96	21.86	-25.14	-30.70	-7.41	24.13	-31.16	8.31	-26.66	-74.18	-17.90	24.13	-75.14	19.59	-26.07	-4.87	-1.18	24.13	-4.97	1.38	-27.74
	SR3SA	-163.24	-50.68	31.05	-165.25	52.16	-31.57	-58.36	-18.12	31.05	-59.19	19.70	-33.27	-141.03	-43.78	31.05	-142.76	46.53	-32.59	-9.26	-2.88	31.05	-9.43	3.25	-34.49
	SR3EA	-81.75	-17.89	21.89	-85.28	23.15	-27.14	-29.23	-6.40	21.89	-30.53	8.62	-28.24	-70.62	-15.46	21.89	-73.65	20.49	-27.82	-4.64	-1.02	21.89	-4.86	1.41	-29.03
	SR3EU	-52.25	-10.50	20.10	-52.97	10.28	-19.40	-18.68	-3.76	20.10	-18.94	3.79	-20.02	-45.14	-9.07	20.10	-45.72	9.03	-19.74	-2.96	-0.60	20.10	-3.01	0.62	-20.62
	SR4NA	4.61	-4.54	-98.48	5.07	3.77	74.40	1.63	-1.60	-98.48	1.79	1.37	76.40	3.95	-3.89	-98.48	4.32	3.27	75.61	0.26	-0.25	-98.48	0.29	0.22	77.85
	SR4SA	6.75	-3.99	-59.18	6.60	2.82	42.76	2.38	-1.41	-59.18	2.34	1.03	44.17	5.78	-3.42	-59.18	5.63	2.46	43.72	0.38	-0.22	-59.18	0.37	0.17	45.12
	SR4EA	3.77	-3.65	-96.95	3.90	3.14	80.47	1.33	-1.29	-96.95	1.39	1.16	83.29	3.23	-3.13	-96.95	3.35	2.77	82.55	0.21	-0.20	-96.95	0.22	0.19	84.76
	SR4EU	5.75	-6.00	-104.38	5.94	3.66	61.62	2.03	-2.12	-104.38	2.10	1.32	62.79	4.92	-5.14	-104.38	5.05	3.14	62.18	0.32	-0.33	-104.38	0.33	0.21	63.89
	SR5NA	2.64	-1.09	-41.43	2.56	0.85	33.11	0.93	-0.39	-41.43	0.91	0.32	35.39	2.26	-0.94	-41.43	2.20	0.77	34.92	0.15	-0.06	-41.43	0.14	0.05	36.45
	SR5SA	2.62	-0.58	-22.03	2.58	0.56	21.56	0.92	-0.20	-22.03	0.92	0.22	24.11	2.24	-0.49	-22.03	2.22	0.52	23.67	0.15	-0.03	-22.03	0.15	0.04	25.20
	SR5EA	2.63	-1.15	-43.56	2.59	0.63	24.35	0.93	-0.40	-43.56	0.92	0.25	26.74	2.25	-0.98	-43.56	2.22	0.58	26.31	0.15	-0.06	-43.56	0.15	0.04	27.77
	SR5EU	2.67	-0.83	-30.87	2.66	0.81	30.59	0.94	-0.29	-30.87	0.95	0.31	32.96	2.29	-0.71	-30.87	2.28	0.74	32.48	0.15	-0.05	-30.87	0.15	0.05	34.03
	O3PM																								
c)	**SR2**	13.46	4.40	32.67	12.78	2.14	16.77	4.75	-1.55	-32.67	4.50	0.67	14.92	11.31	-3.69	-32.67	10.66	1.61	15.12	0.72	-0.24	-32.67	0.68	0.10	14.53
	SR3NA	-22.56	8.65	-38.33	-22.17	6.96	-31.39	-8.06	3.09	-38.33	-7.92	2.47	-31.22	-19.11	7.33	-38.33	-18.76	5.86	-31.27	-1.23	0.47	-38.33	-1.21	0.38	-31.25
	SR3SA	-43.06	18.36	-42.64	-42.36	14.00	-33.05	-15.39	6.56	-42.64	-15.12	5.00	-33.09	-36.49	15.56	-42.64	-35.82	11.83	-33.03	-2.35	1.00	-42.64	-2.31	0.77	-33.34
	SR3EA	-21.54	7.91	-36.72	-21.74	6.99	-32.16	-7.70	2.83	-36.72	-7.76	2.47	-31.83	-18.25	6.70	-36.72	-18.38	5.87	-31.94	-1.18	0.43	-36.72	-1.19	0.38	-31.71
	SR3EU	-13.73	4.80	-34.99	-13.64	3.93	-28.84	-4.91	1.72	-34.99	-4.86	1.36	-27.92	-11.63	4.07	-34.99	-11.52	3.25	-28.20	-0.75	0.26	-34.99	-0.74	0.20	-27.40
	SR4NA	1.21	-1.18	-97.38	1.45	1.16	79.65	0.43	-0.41	-97.38	0.51	0.39	77.61	1.01	-0.99	-97.38	1.20	0.92	77.30	0.06	-0.06	-97.38	0.08	0.06	77.41
	SR4SA	1.83	-0.60	-32.71	1.89	0.93	49.36	0.65	-0.21	-32.71	0.66	0.31	47.14	1.54	-0.50	-32.71	1.56	0.74	47.21	0.10	-0.03	-32.71	0.10	0.05	46.48
	SR4EA	1.01	-1.07	-105.52	1.08	0.83	76.49	0.36	-0.38	-105.52	0.38	0.30	77.96	0.85	-0.90	-105.52	0.90	0.70	77.76	0.05	-0.06	-105.52	0.06	0.05	78.95
	SR4EU	1.50	-1.54	-102.49	1.69	1.19	70.41	0.53	-0.54	-102.49	0.59	0.40	67.33	1.26	-1.29	-102.49	1.39	0.94	67.13	0.08	-0.08	-102.49	0.09	0.06	66.57
	SR5NA	0.73	-0.40	-54.21	0.69	0.25	36.17	0.26	-0.14	-54.21	0.24	0.09	36.76	0.62	-0.33	-54.21	0.58	0.21	36.76	0.04	-0.02	-54.21	0.04	0.01	37.25
	SR5SA	0.73	-0.27	-37.12	0.70	0.19	27.24	0.26	-0.10	-37.07	0.25	0.07	27.42	0.61	-0.23	-37.07	0.59	0.16	27.54	0.04	-0.01	-37.07	0.04	0.01	27.66
	SR5EA	0.73	-0.41	-56.63	0.70	0.21	29.48	0.26	-0.15	-56.63	0.25	0.07	29.68	0.61	-0.35	-56.63	0.58	0.17	29.79	0.04	-0.02	-56.63	0.04	0.01	29.93
	SR5EU	0.74	-0.33	-44.75	0.72	0.25	34.51	0.26	-0.12	-44.75	0.25	0.09	35.21	0.62	-0.28	-44.75	0.60	0.21	35.22	0.04	-0.02	-44.75	0.04	0.01	35.72
	O3S																								
d)	**SR2**	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
	SR3NA	96.99	-44.13	-45.50	99.37	30.41	30.60	27.57	-12.54	-45.50	28.25	8.64	30.60	30.37	-13.82	-45.50	31.12	9.52	30.60	3.88	-1.77	-45.50	3.98	1.22	30.60
	SR3SA	176.22	-102.12	-57.95	180.20	75.65	41.98	50.09	-29.03	-57.95	51.22	21.50	41.98	55.18	-31.98	-57.95	56.43	23.69	41.98	7.06	-4.09	-57.95	7.22	3.03	41.98
	SR3EA	99.13	-44.93	-45.32	104.39	29.32	28.09	28.18	-12.77	-45.32	29.67	8.33	28.09	31.04	-14.07	-45.32	32.69	9.18	28.09	3.97	-1.80	-45.32	4.18	1.17	28.09
	SR3EU	44.52	-21.88	-49.15	46.01	13.32	28.96	12.66	-6.22	-49.15	13.08	3.79	28.96	13.94	-6.85	-49.15	14.41	4.17	28.96	1.78	-0.88	-49.15	1.84	0.53	28.96
	SR4NA	10.51	-9.57	-91.09	11.07	6.61	59.67	2.99	-2.72	-91.09	3.15	1.88	59.67	3.29	-3.00	-91.09	3.47	2.07	59.67	0.42	-0.38	-91.09	0.44	0.26	59.67
	SR4SA	13.48	-12.64	-93.75	12.76	5.94	46.55	3.83	-3.59	-93.75	3.63	1.69	46.55	4.22	-3.96	-93.75	4.00	1.86	46.55	0.54	-0.51	-93.75	0.51	0.24	46.55
	SR4EA	11.44	-8.74	-76.38	11.94	5.28	44.22	3.25	-2.48	-76.38	3.39	1.50	44.22	3.58	-2.74	-76.38	3.74	1.65	44.22	0.46	-0.35	-76.38	0.48	0.21	44.22
	SR4EU	8.78	-7.15	-81.47	9.57	4.19	43.78	2.49	-2.03	-81.47	2.72	1.19	43.78	2.75	-2.24	-81.47	3.00	1.31	43.78	0.35	-0.29	-81.47	0.38	0.17	43.78
	SR5NA	1.95	-1.10	-56.24	1.97	0.94	47.47	0.55	-0.31	-56.24	0.56	0.27	47.47	0.61	-0.34	-56.24	0.62	0.29	47.47	0.08	-0.04	-56.24	0.08	0.04	47.47
	SR5SA	2.44	-1.24	-51.05	2.31	0.54	23.23	0.69	-0.35	-51.05	0.66	0.15	23.23	0.76	-0.39	-51.05	0.72	0.17	23.23	0.10	-0.05	-51.05	0.09	0.02	23.23
	SR5EA	2.03	-1.14	-56.46	1.99	0.46	23.08	0.58	-0.33	-56.46	0.57	0.13	23.08	0.63	-0.36	-56.46	0.62	0.14	23.08	0.08	-0.05	-56.46	0.08	0.02	23.08
	SR5EU	1.61	-0.87	-54.10	1.61	0.58	36.30	0.46	-0.25	-54.10	0.46	0.17	36.30	0.50	-0.27	-54.10	0.50	0.18	36.30	0.06	-0.03	-54.10	0.06	0.02	36.30
	Methane Lifetime																								
e)	**SR2**		-2.74						0.10						-0.76						0.13				
	SR3NA		2.74						-0.10						0.79						-0.13				
	SR3SA		5.22						-0.18						1.50						-0.25				
	SR3EA		2.61						-0.09						0.75						-0.13				
	SR3EU		1.67						-0.06						0.48						-0.08				
	SR4NA		-0.25						0.01						-0.07						0.01				
	SR4SA		-0.37						0.01						-0.10						0.02				
	SR4EA		-0.20						0.01						-0.06						0.01				
	SR4EU		-0.31						0.01						-0.09						0.01				
	SR5NA		-0.14						0.01						-0.04						0.01				
	SR5SA		-0.14						0.01						-0.04						0.01				
	SR5EA		-0.14						0.01						-0.04						0.01				
	SR5EU		-0.15						0.01						-0.04						0.01				

Table S4: Sensitivity of the RF to changing the number of months used as input to the radiation code.

Description of work: For each model, January, April, July and October are used as input to the code, in order to reduce run-time constraints whilst remaining sufficient to resolve the annual cycle in transport and RF. To test the impact of using this reduced number of months, some selected scenarios, regions and models were run for the full year, and the mean RF for 4 months compared to the full annual cycle. The impact on short-lived ozone, PM ozone and methane was tested separately, and for the short-lived ozone cases, one scenario from each of the NOx, VOC and CO experiments was tested, to test whether the result was sensitive to the spatial structure of the ozone field.

Model	Scenario	Active Species	4 month mean RF	12 month mean RF	Percentage difference
INCA-vSSz	SR3NA	Short-Lived Ozone	-0.00352	-0.00354	-0.51
MOZECH-v16	SR4EA	Short-Lived Ozone	-0.00128	-0.00129	-0.54
GISS-PUCCINI-modelE	SR5SA	Short-Lived Ozone	-0.00069	-0.00069	0.41
Ensemble mean	SR2	PM Ozone	-0.03699	-0.03704	-0.11
UM-CAM-v01	SR2	Methane	-0.14130	-0.14128	0.01