



APPENDIX L.2

MPE Statistics for the PM_{2.5} Species

APPENDIX L.2: MPE Statistics for the PM_{2.5} Species

Table L.2.1 shows the species definitions that were used in the AMET for the model performance evaluation.

Table L.2. 1: Species Definitions for the MPE

Species name	Unit	expression
O ₃	ppbv	O3[1]*1000
SO ₄	µg/m ³	PSO4[1]
NO ₃	µg/m ³	PNO3[1]
NH ₄	µg/m ³	PNH4[1]
EC	µg/m ³	PEC[1]
OC	µg/m ³	POA[1]/1.6+SOA1[1]/2.0+SOA2[1]/2+SOA3[1]/1.7+SOA4[1]/1.7+SOA[1]/2.1+SOPB[1]/2.1
PM ₂₅ _TOT	µg/m ³	PSO4[1]+PNO3[1]+PNH4[1]+POA[1]+SOA1[1]+SOA2[1]+SOA3[1]+SOA4[1]+SOPA[1]+SOPB[1]+PEC[1]+NA[1]+PCL[1]+FPRM[1]+FCRS[1]

Figures L.2.1 through L.2.50 show spatial plots both annual and seasonal scenarios for the PM_{2.5} species for the normalized mean bias and normalized mean error. Also, Figures L.2.51 through L.2.60 show boxplots of observed and modeled data for the PM_{2.5} species. Tables L.2.2 through L.2.6 show MPE statistical parameters such as correlation, fractional bias, fractional error, normalized mean bias etc. for the HEGL1, MACA1, MING1, SHRO1, SIPS1, and WIMO1 Class I locations. Also, Figures L.2.61 through L.2.66 show the model performance for visibility light extinction in Mm⁻¹ for the Class I areas located outside of Arkansas.

Figure L.2. 1: Annual Spatial Plots of SO₄ for the NMB (%)

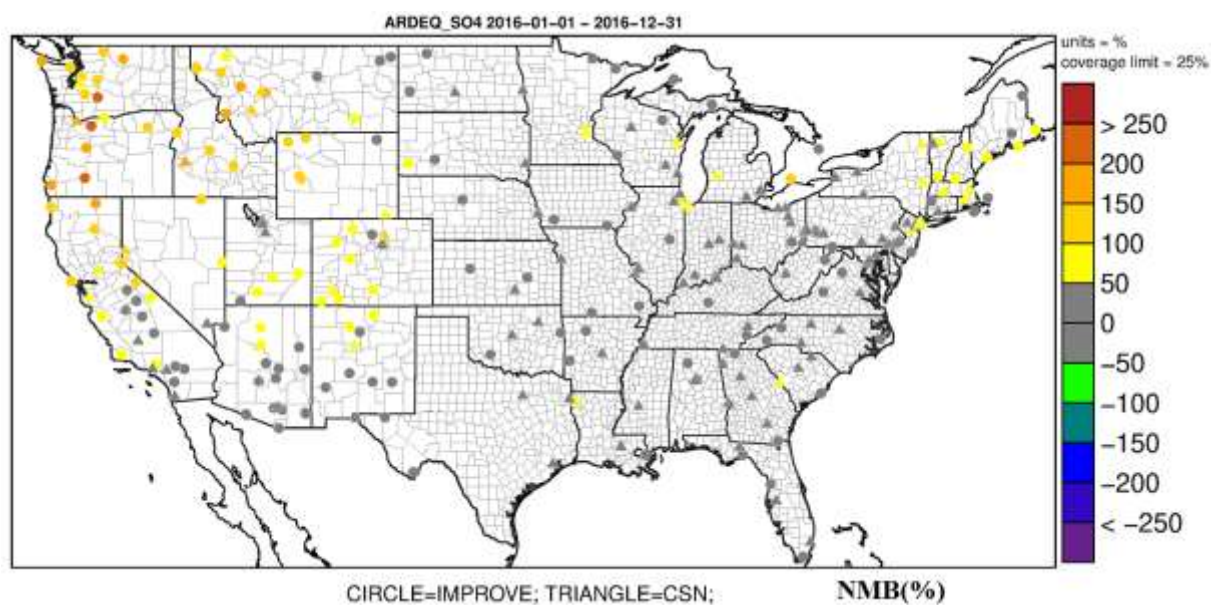


Figure L.2. 2: Annual Spatial Plots of SO₄ for the NME (%)

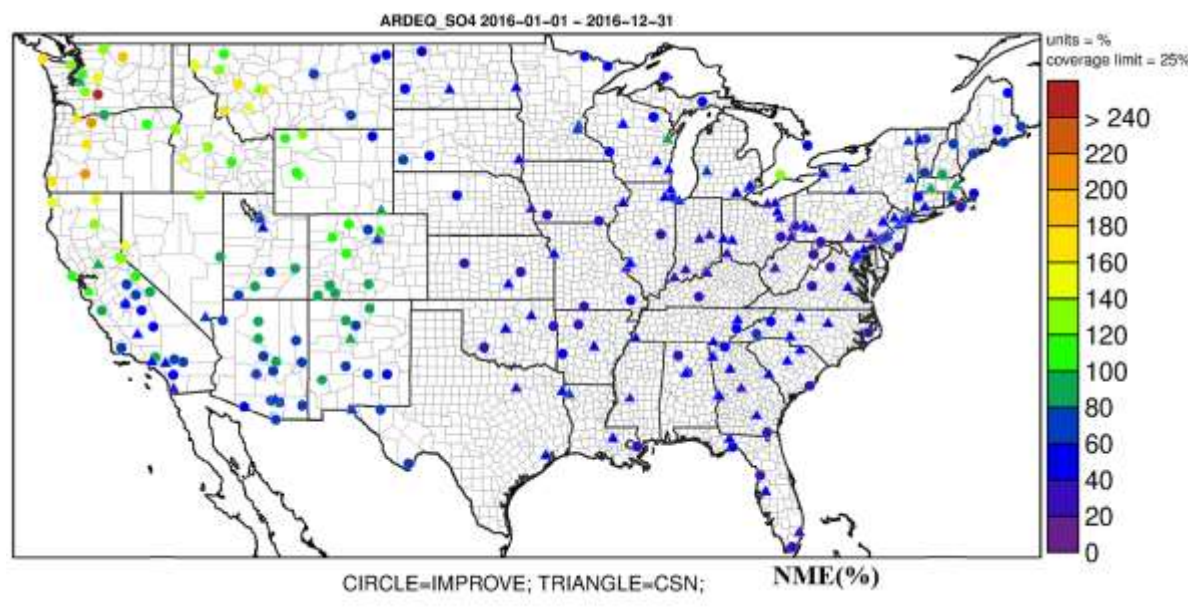


Figure L.2. 3: Annual Spatial Plots of NH_4 for the NMB (%)

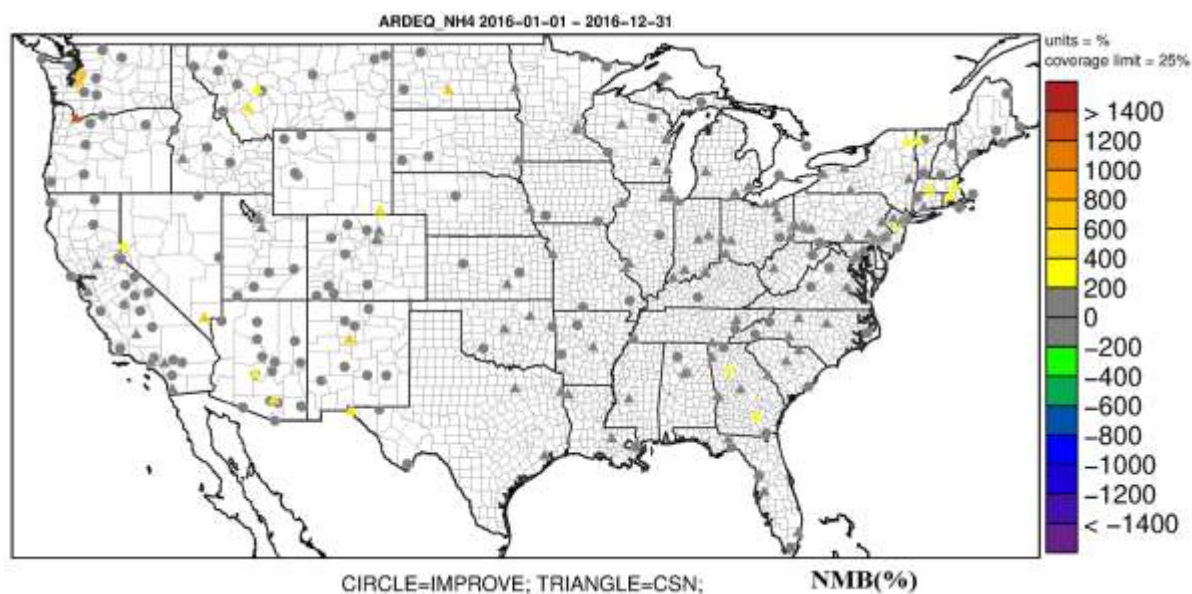


Figure L.2. 4: Annual Spatial Plots of NH_4 for the NME (%)

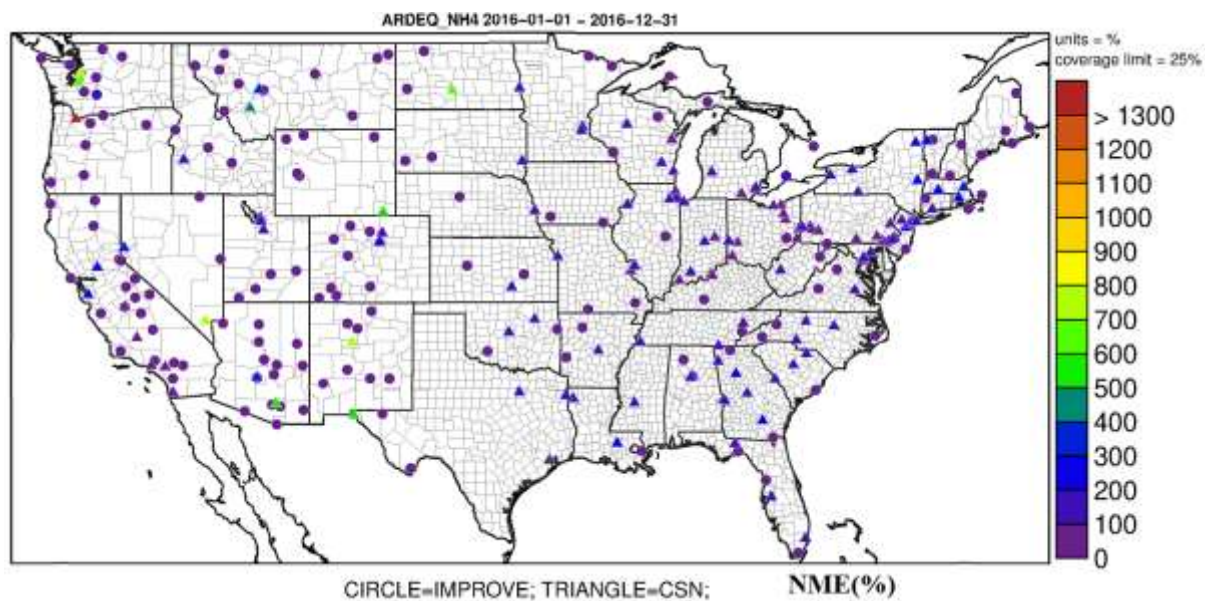


Figure L.2. 5: Annual Spatial Plots of NO₃ for the NMB (%)

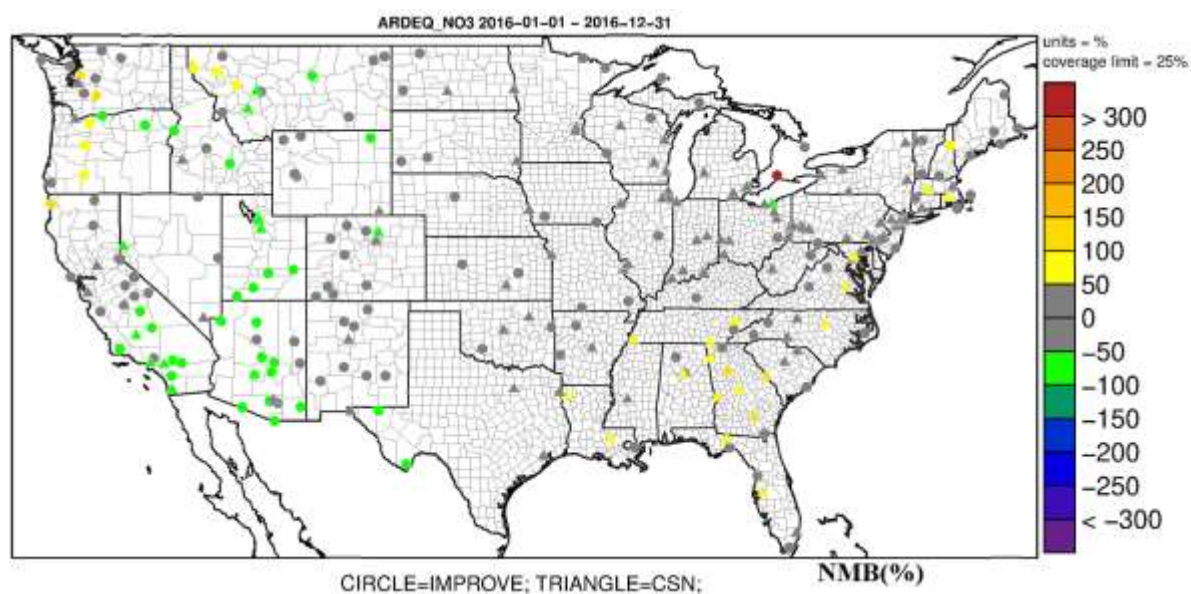


Figure L.2. 6: Annual Spatial Plots of NO₃ for the NME (%)

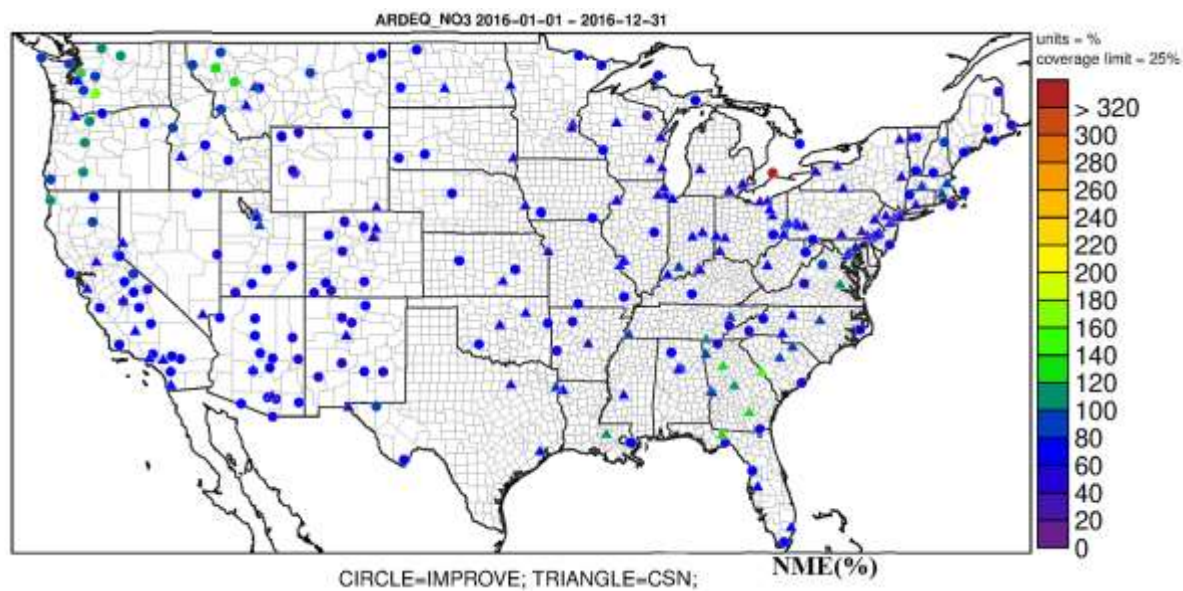


Figure L.2. 7: Annual Spatial Plots of OC for the NMB (%)

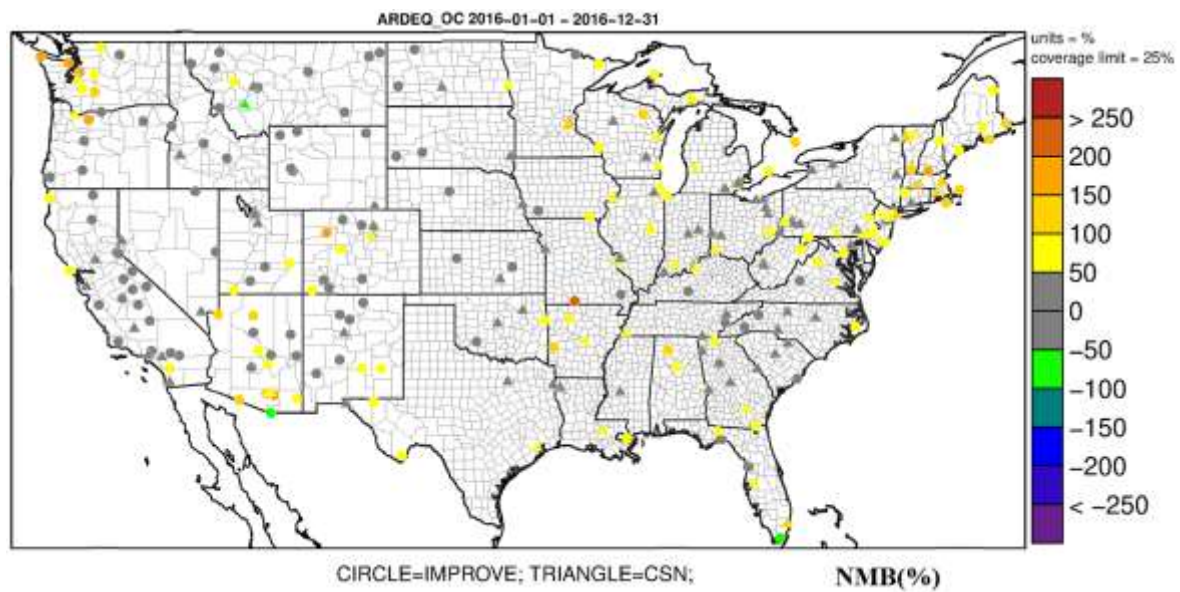


Figure L.2. 8: Annual Spatial Plots of OC for the NME (%)

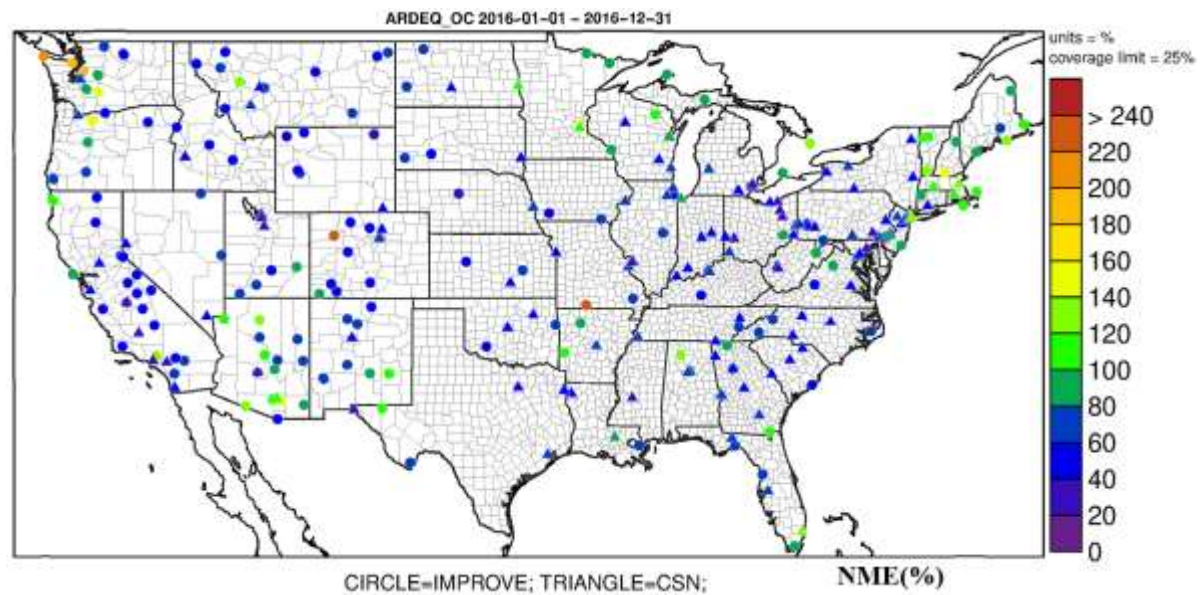


Figure L.2. 9: Annual Spatial Plots of EC for the NMB (%)

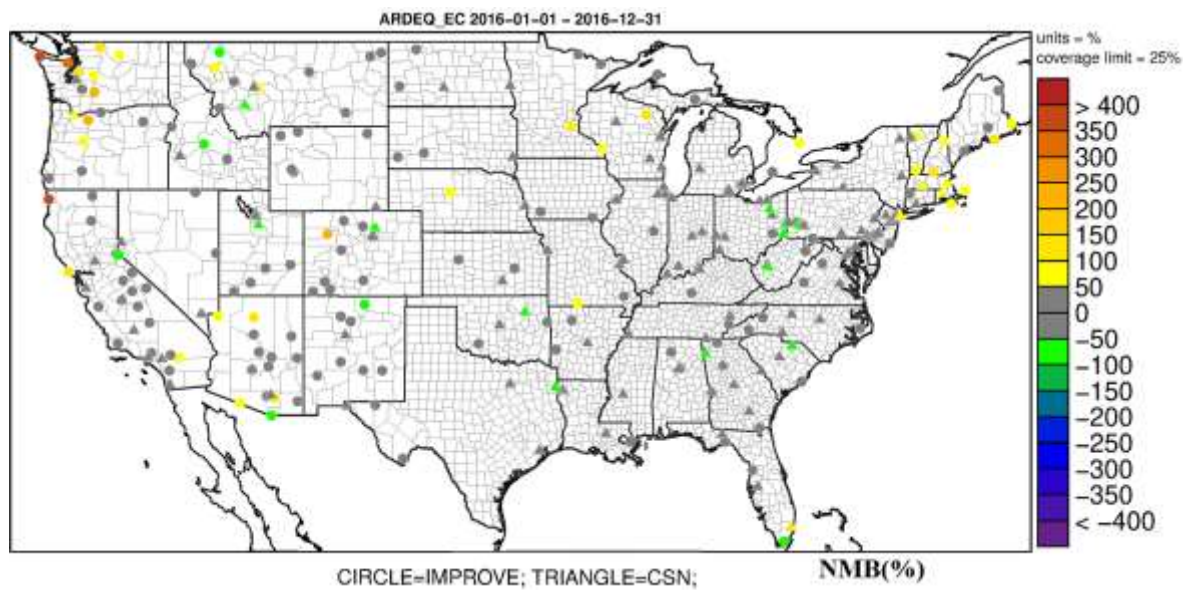


Figure L.2. 10: Annual Spatial Plots of EC for the NME (%)

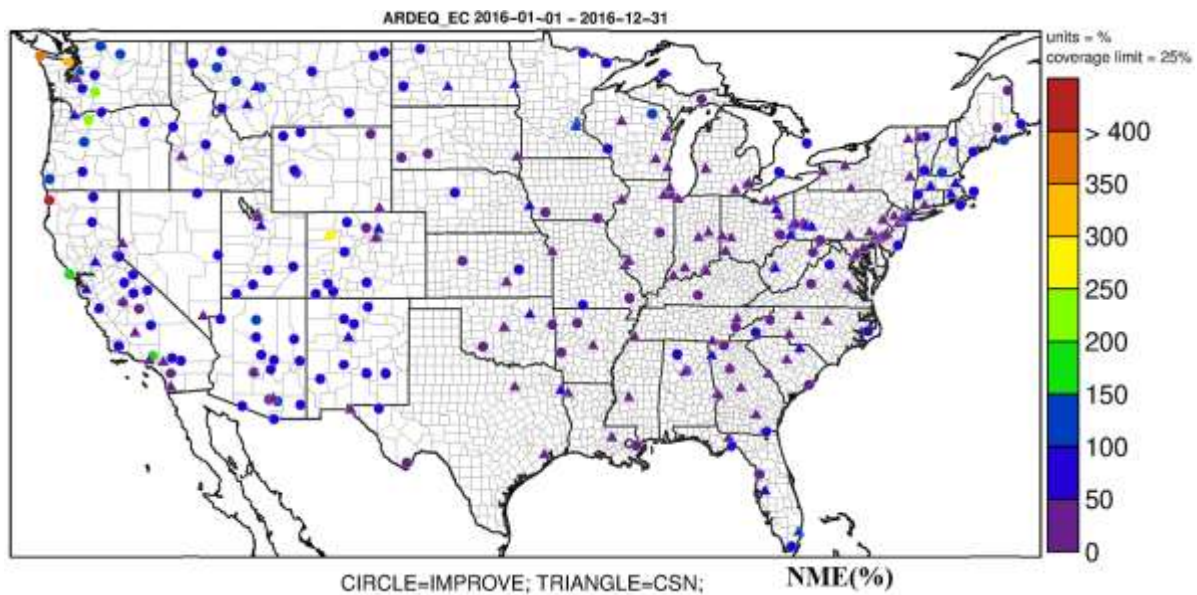


Figure L.2. 11: Seasonal (Spring) Spatial Plots of SO₄ for the NMB (%)

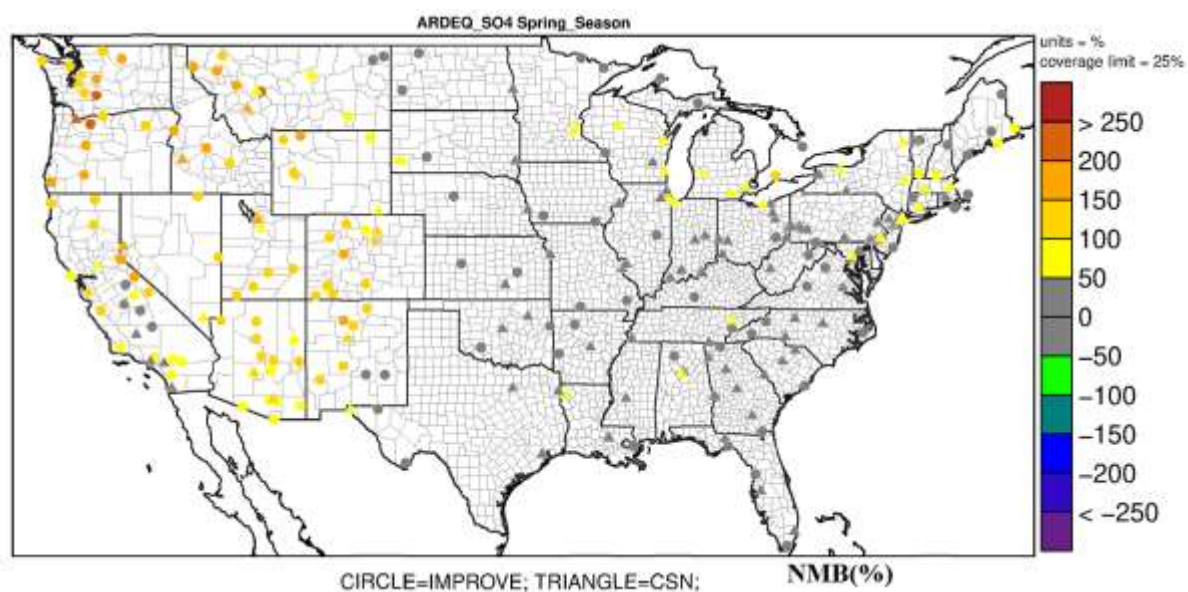


Figure L.2. 12: Seasonal (Spring) Spatial Plots of SO₄ for the NME (%)

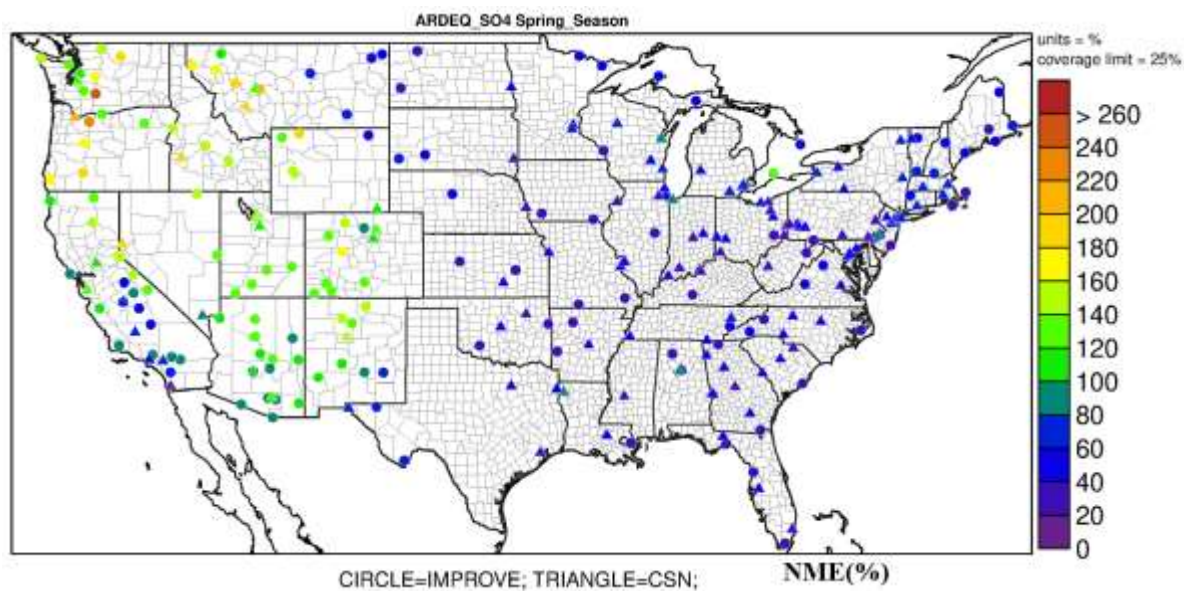


Figure L.2. 13: Seasonal (Spring) Spatial Plots of NH_4 for the NMB (%)

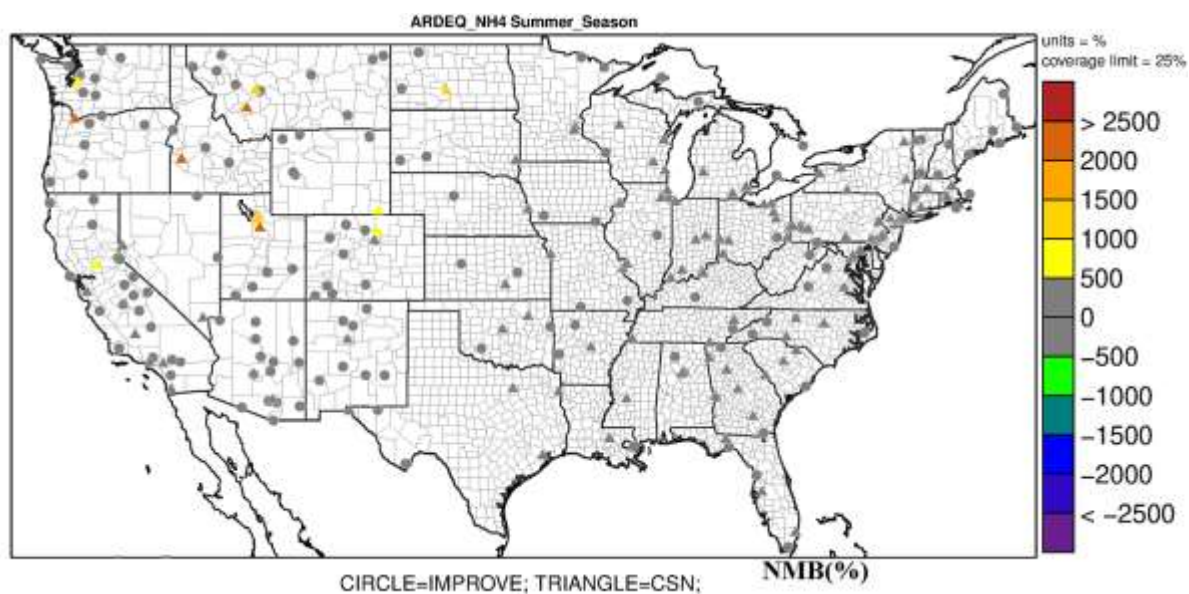


Figure L.2. 14: Seasonal (Spring) Spatial Plots of NH_4 for the NME (%)

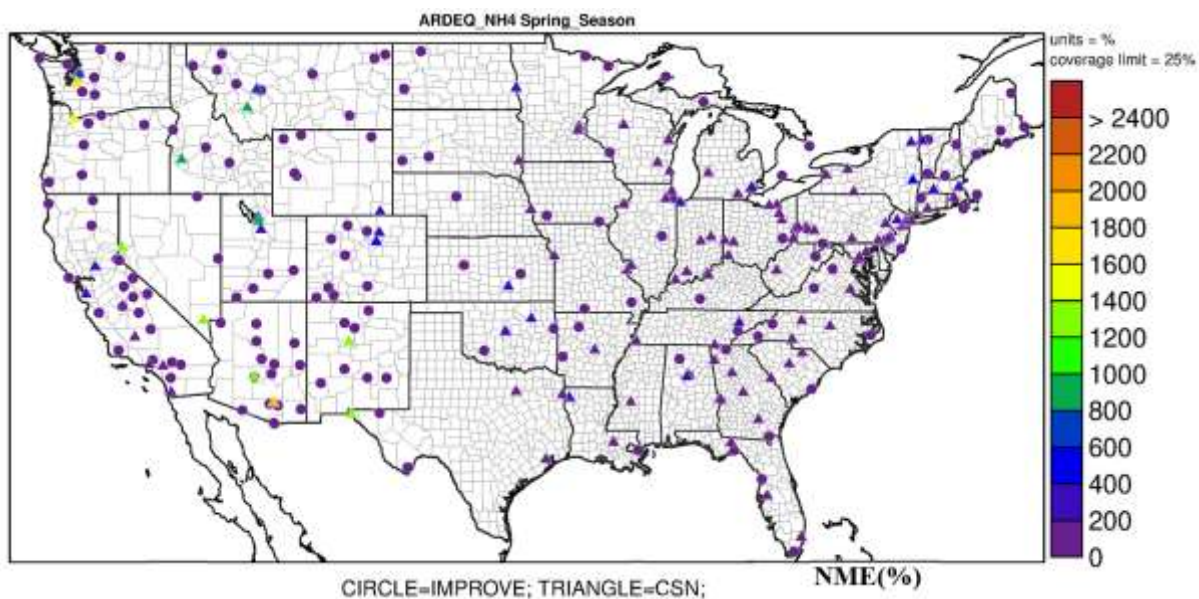


Figure L.2. 15: Seasonal (Spring) Spatial Plots of NO₃ for the NMB (%)

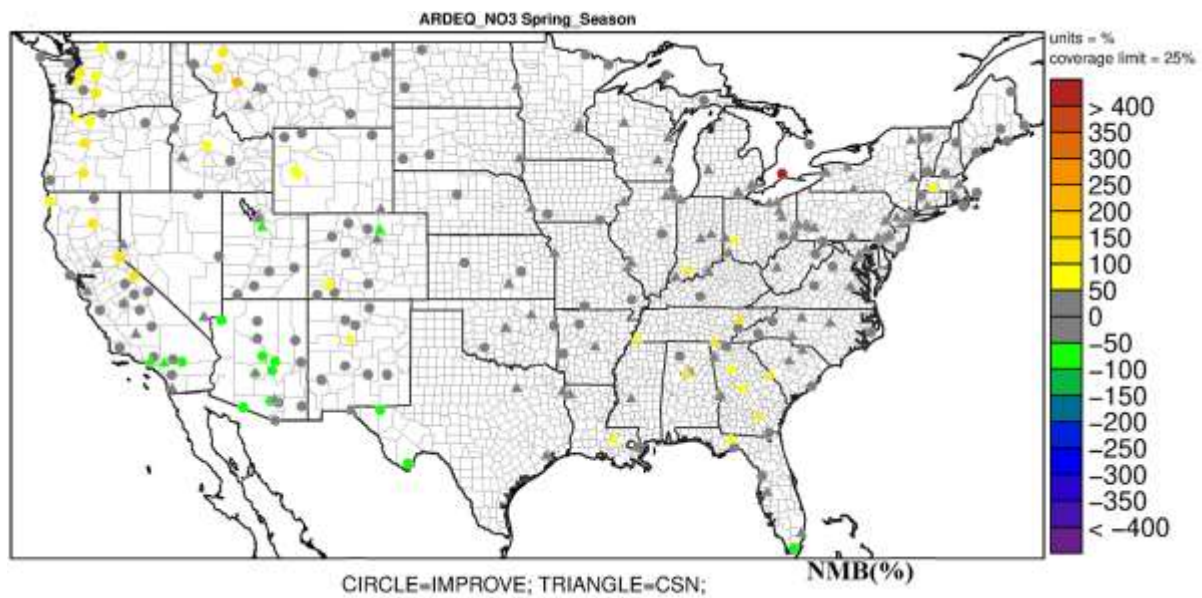


Figure L.2. 16: Seasonal (Spring) Spatial Plots of NO₃ for the NME (%)

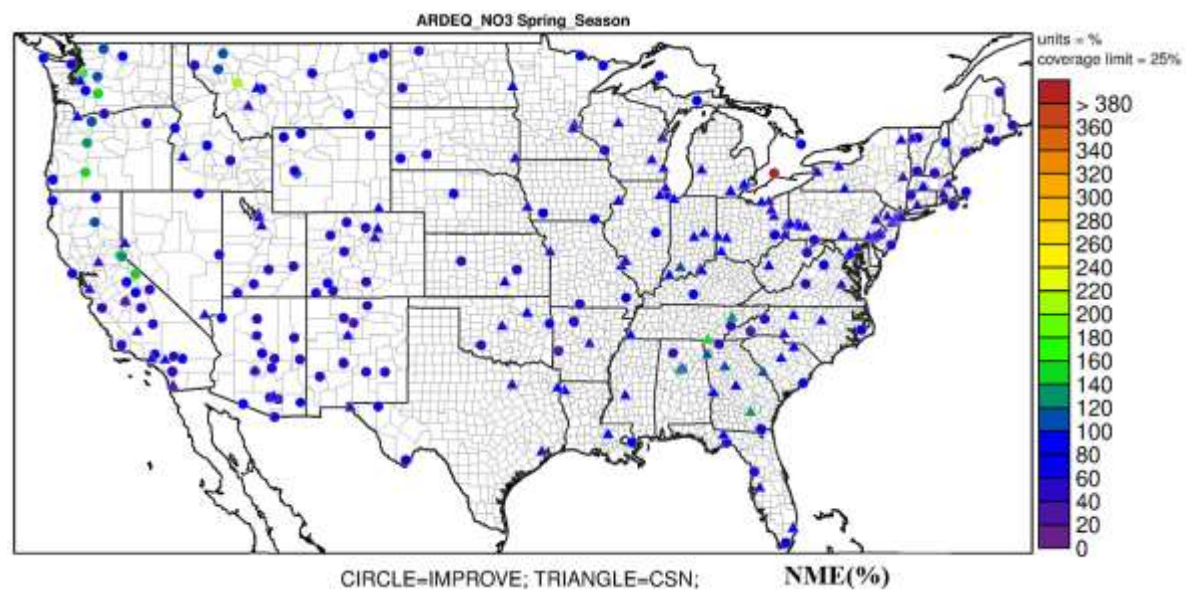


Figure L.2. 17: Seasonal (Spring) Spatial Plots of OC for the NMB (%)

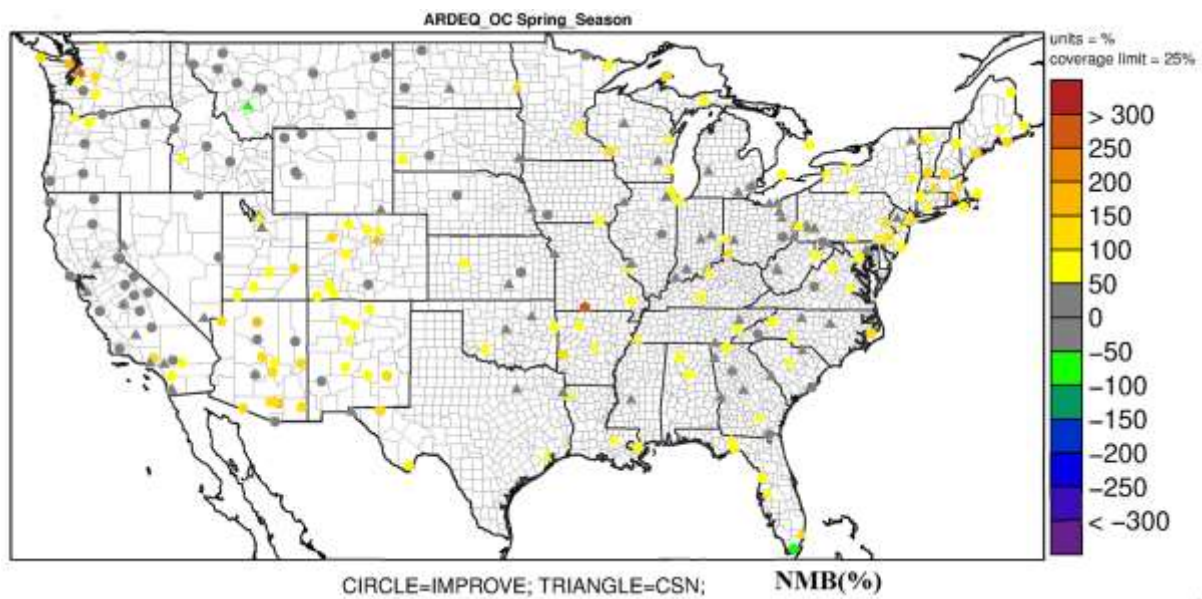


Figure L.2. 18: Seasonal (Spring) Spatial Plots of OC for the NME (%)

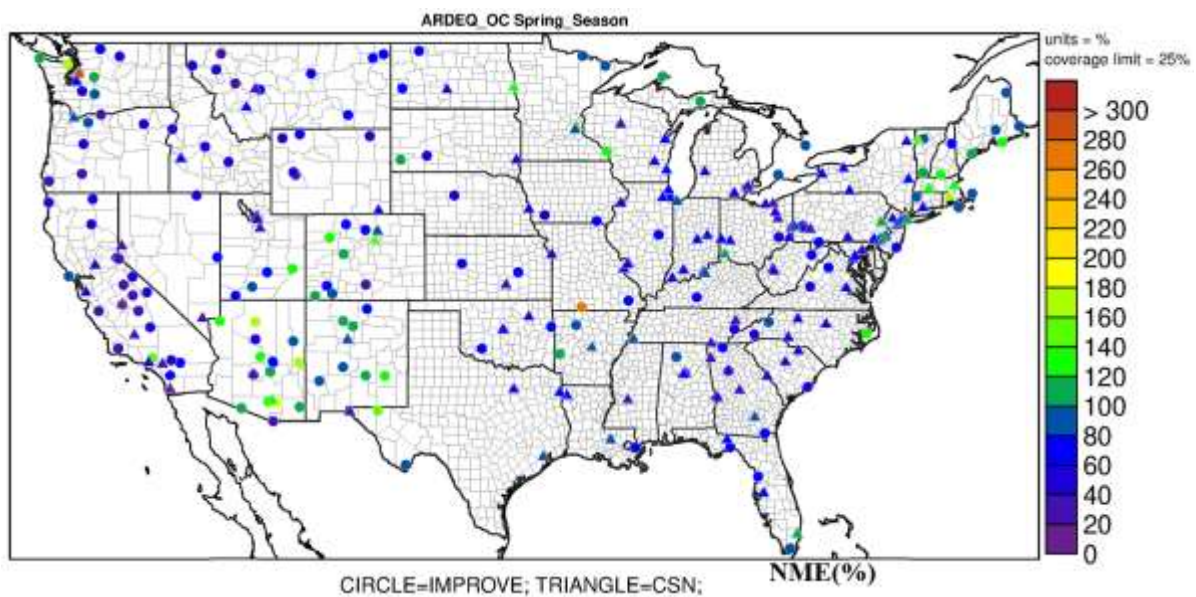


Figure L.2. 19: Seasonal (Spring) Spatial Plots of EC for the NMB (%)

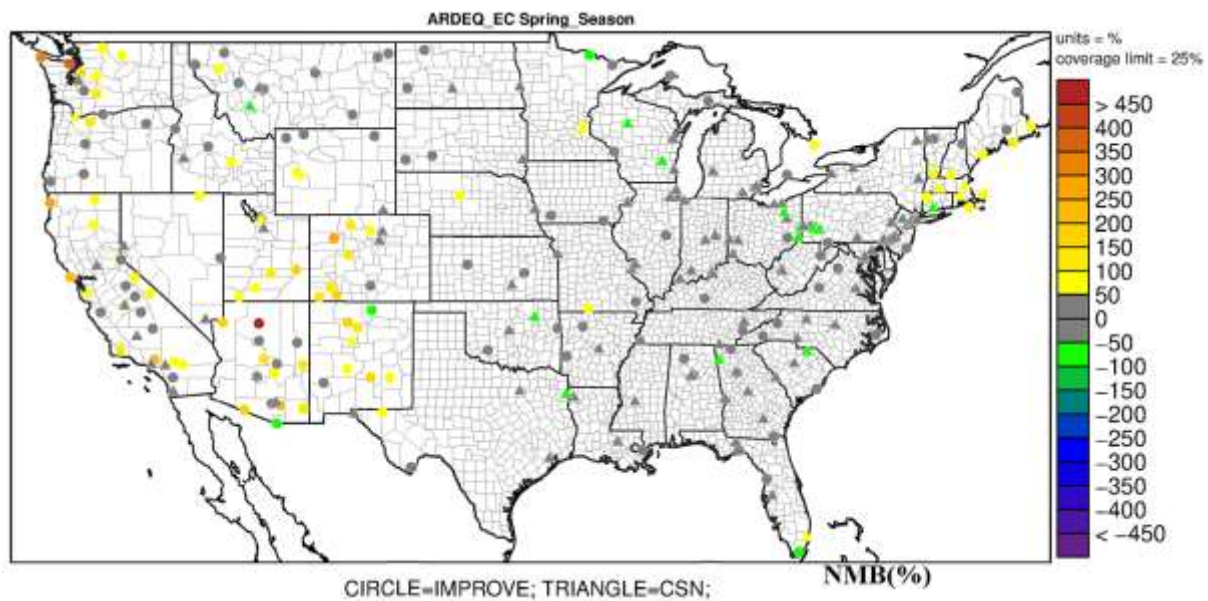


Figure L.2. 20: Seasonal (Spring) Spatial Plots of EC for the NME (%)

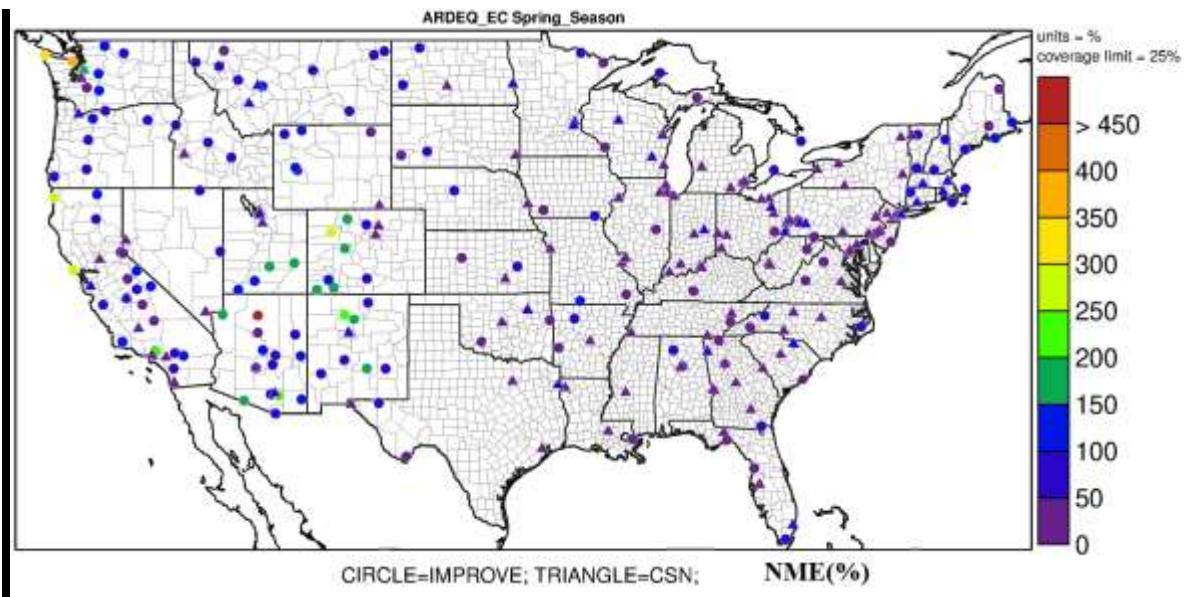


Figure L.2. 21: Seasonal (Summer) Spatial Plots of SO₄ for the NMB (%)

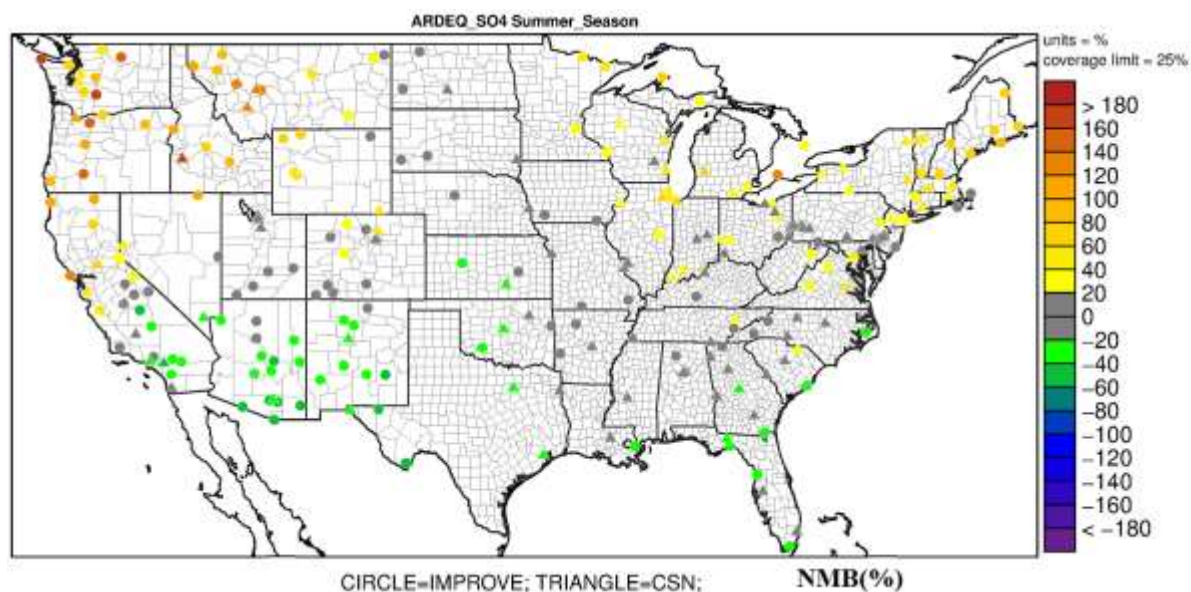


Figure L.2. 22: Seasonal (Summer) Spatial Plots of SO₄ for the NME (%)

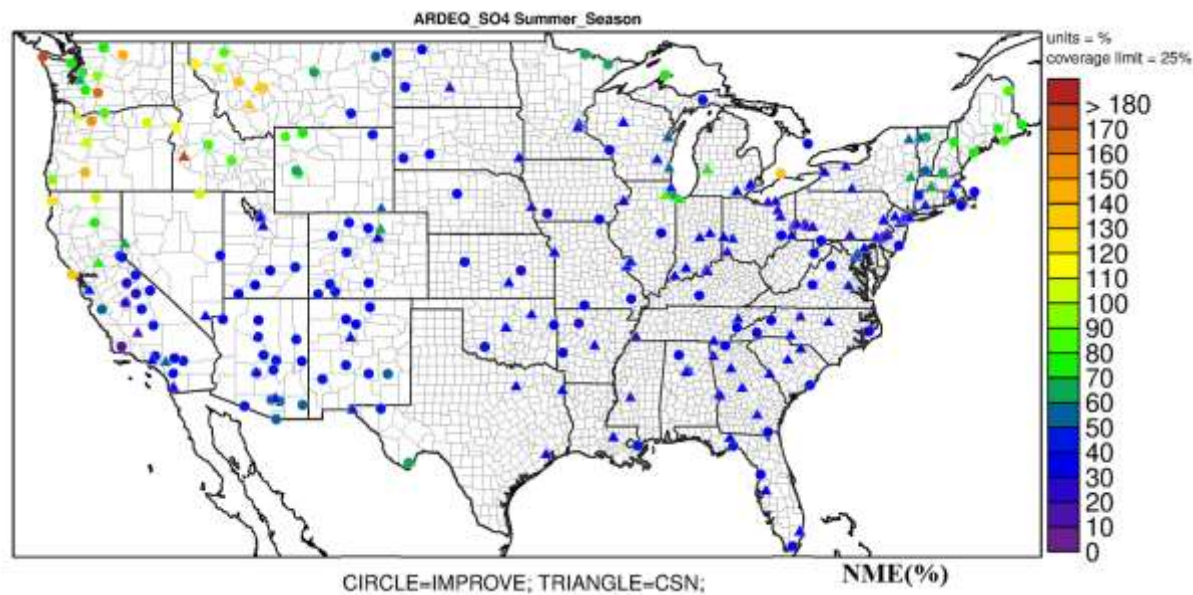


Figure L.2. 23: Seasonal (Summer) Spatial Plots of NH_4 for the NMB (%)

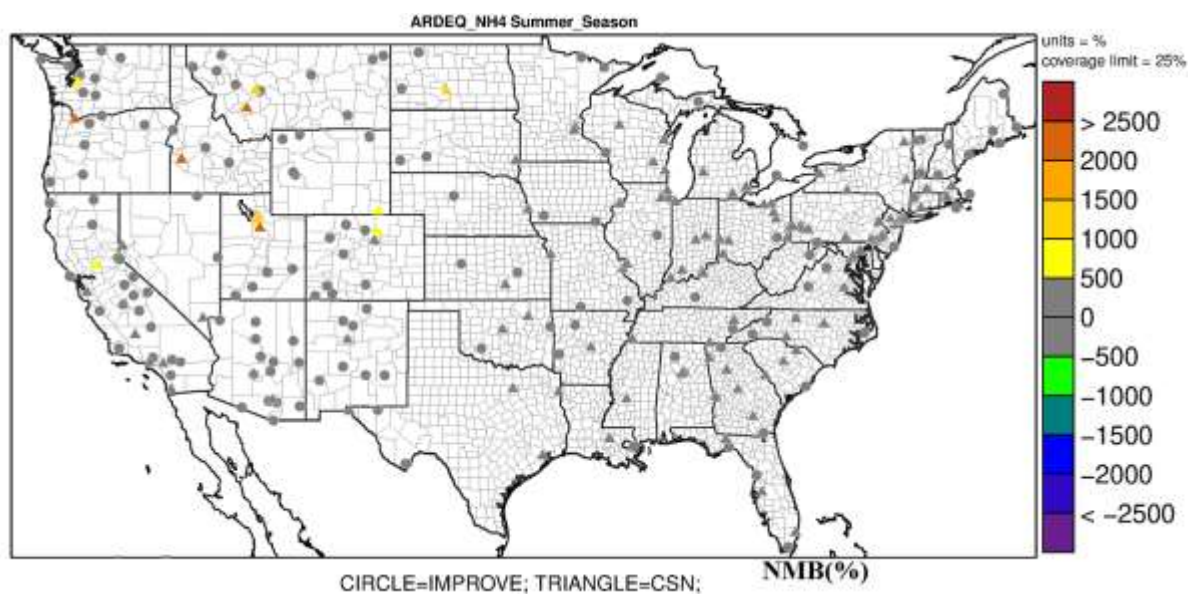


Figure L.2. 24: Seasonal (Summer) Spatial Plots of NH_4 for the NME (%)

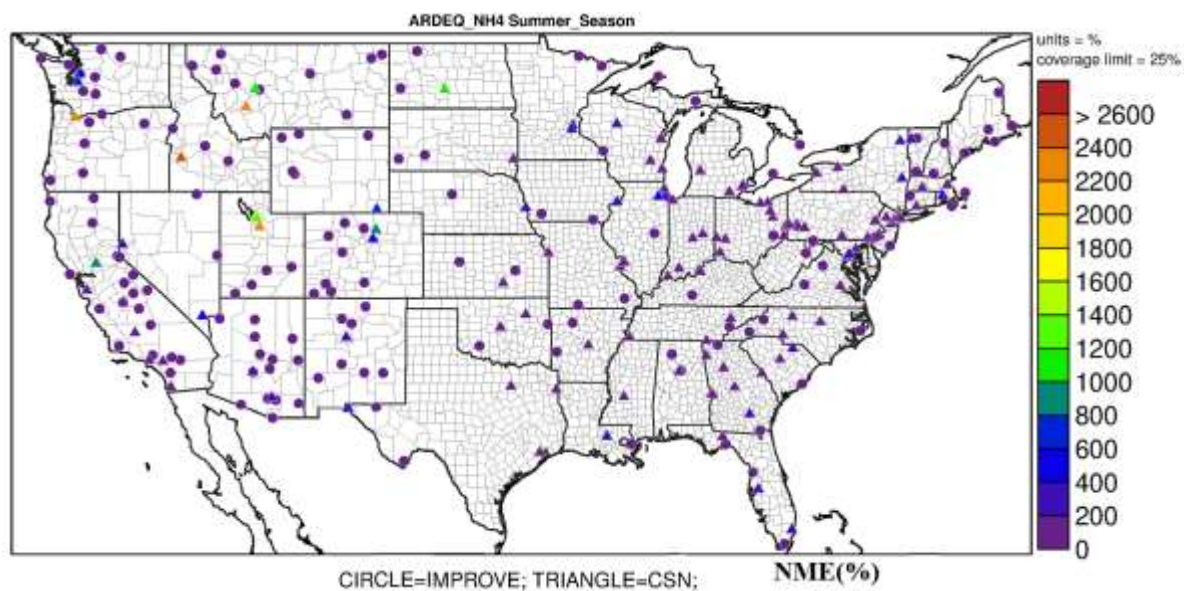


Figure L.2. 25: Seasonal (Summer) Spatial Plots of NO₃ for the NMB (%)

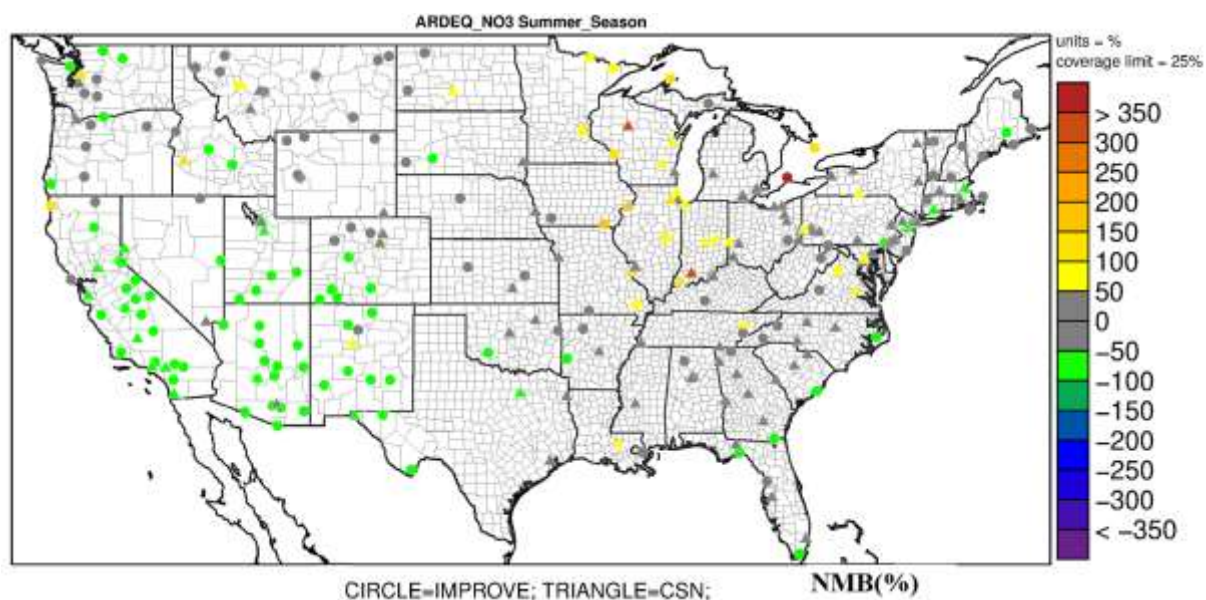


Figure L.2. 26: Seasonal (Summer) Spatial Plots of NO₃ for the NME (%)

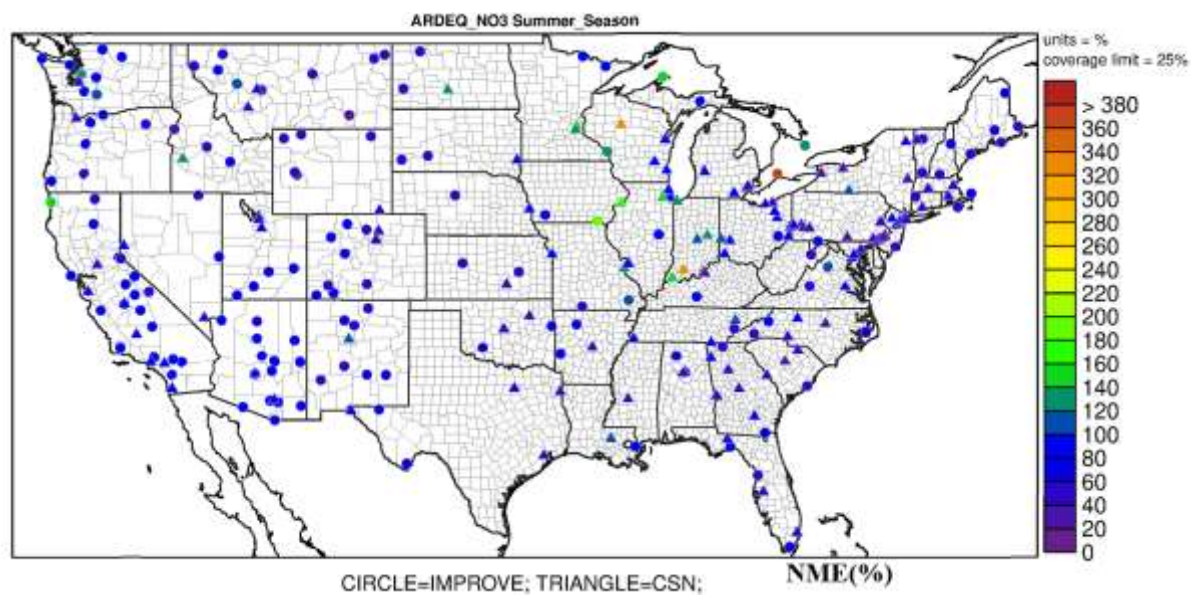


Figure L.2. 27: Seasonal (Summer) Spatial Plots of OC for the NMB (%)

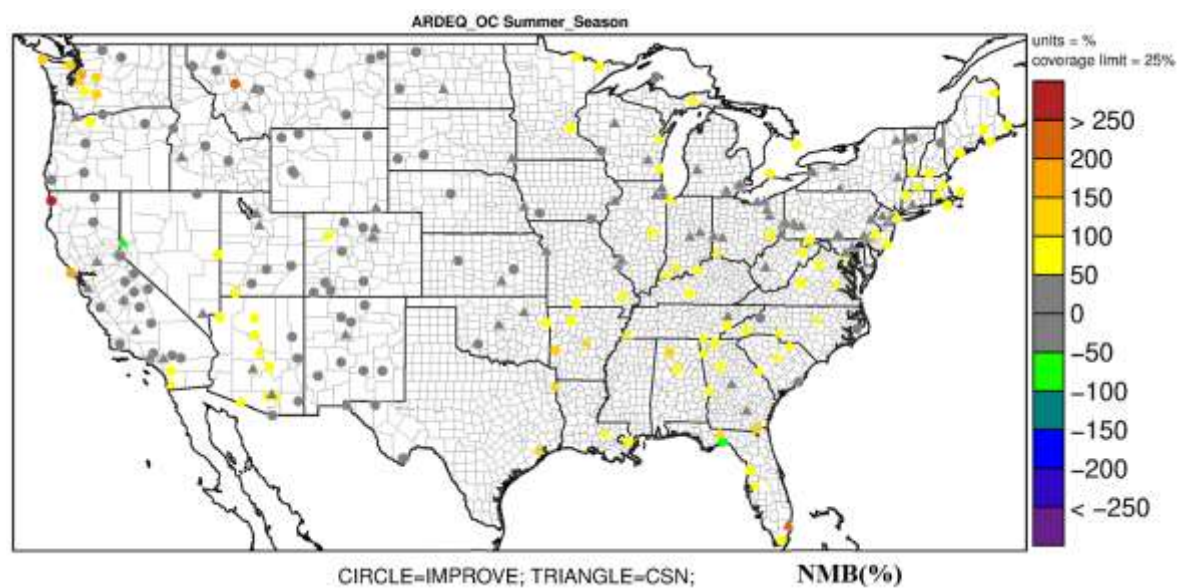


Figure L.2. 28: Seasonal (Summer) Spatial Plots of OC for the NME (%)

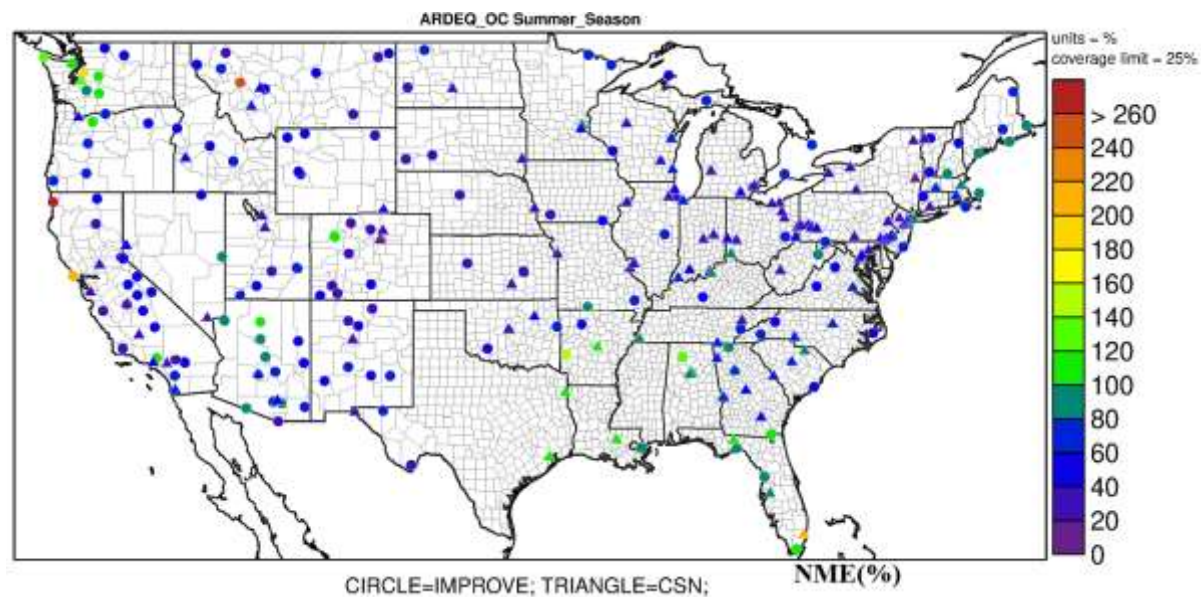


Figure L.2. 29: Seasonal (Summer) Spatial Plots of EC for the NMB (%)

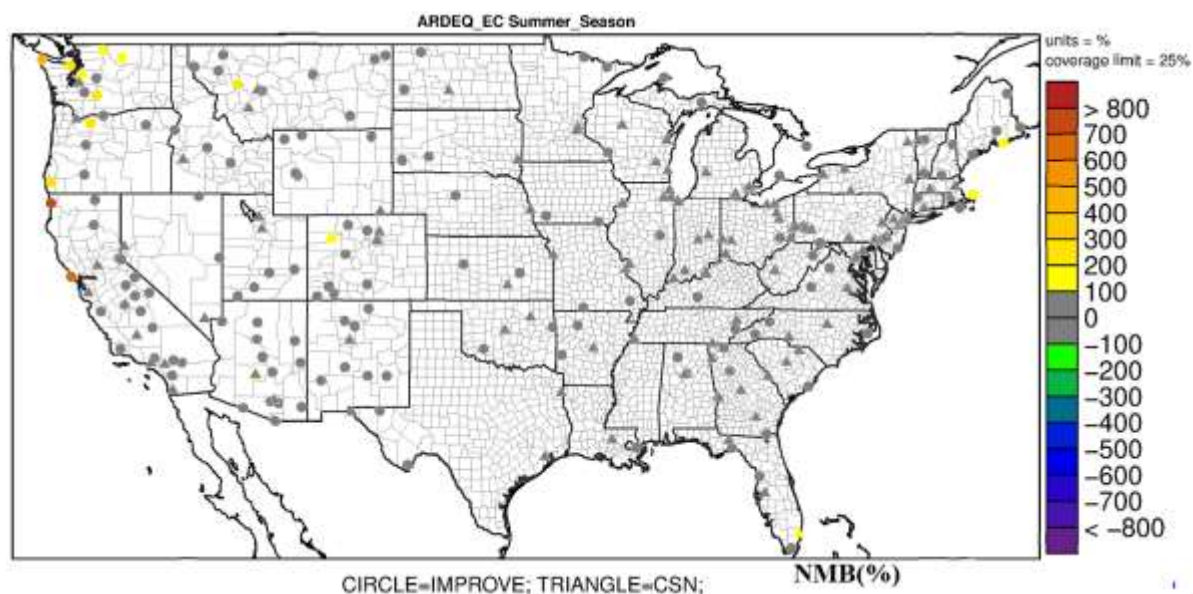


Figure L.2. 30: Seasonal (Summer) Spatial Plots of EC for the NME (%)

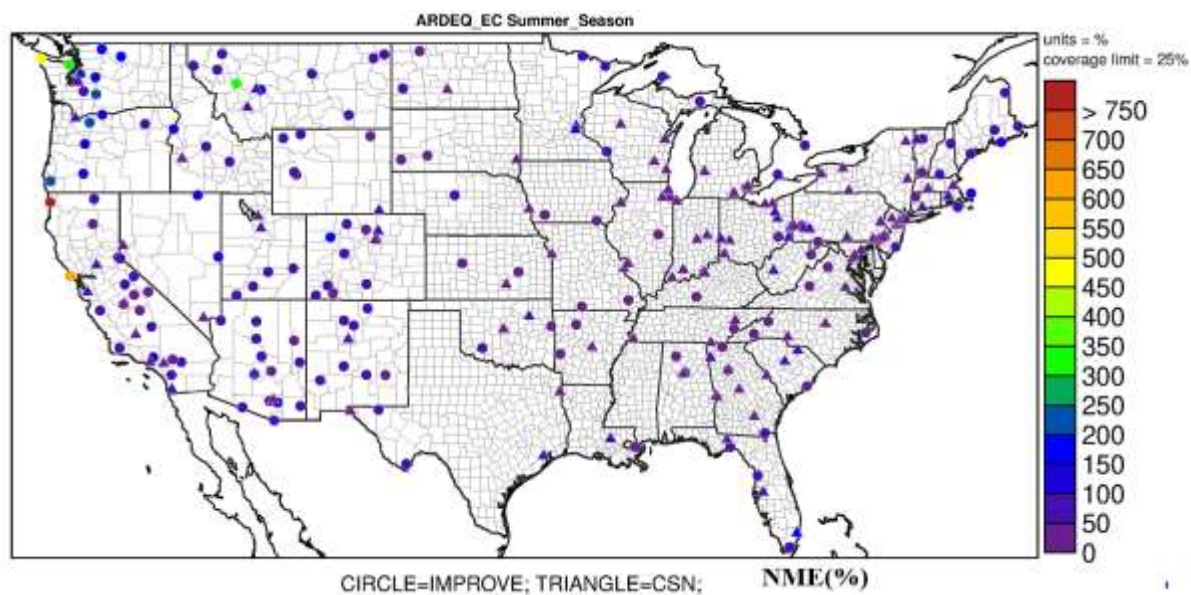


Figure L.2. 31: Seasonal (Fall) Spatial Plots of SO₄ for the NMB (%)

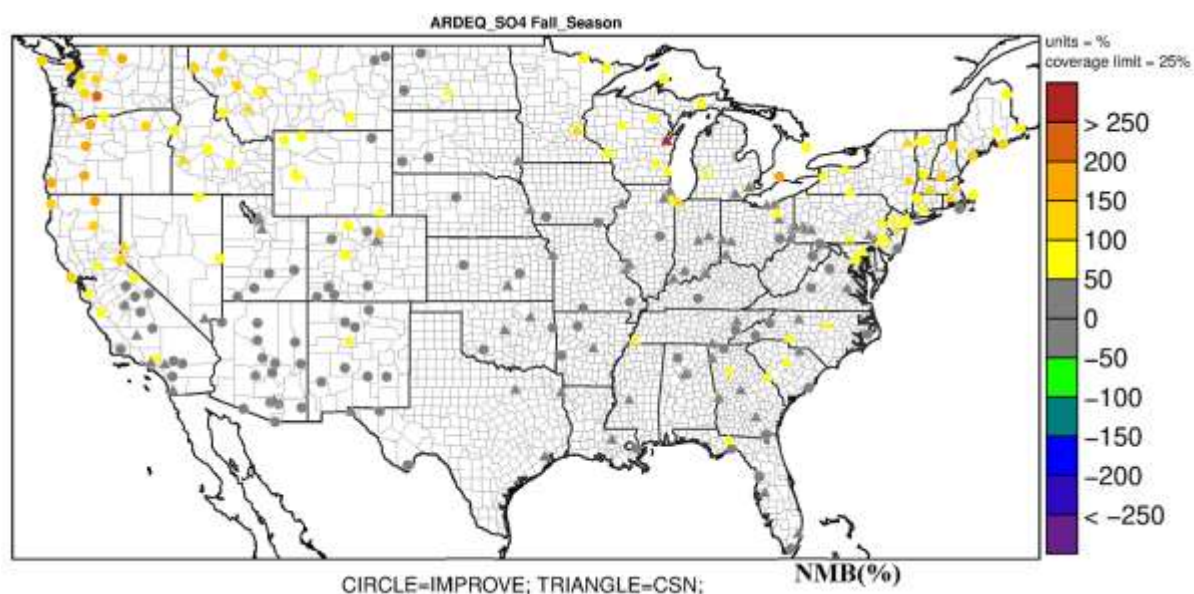


Figure L.2. 32: Seasonal (Fall) Spatial Plots of SO₄ for the NME (%)

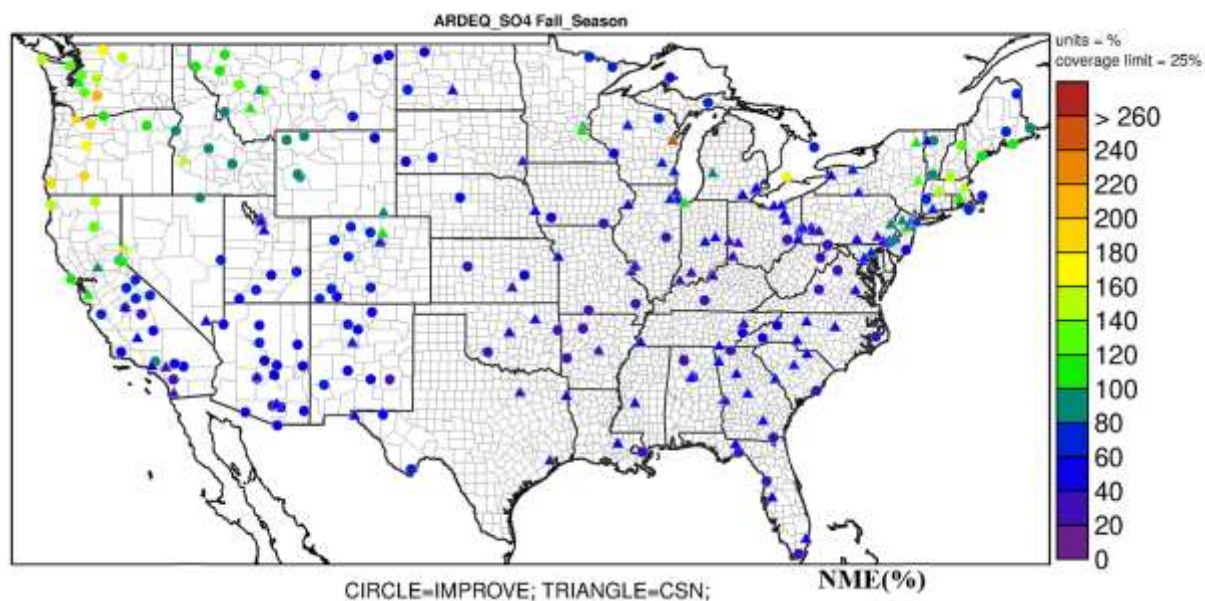


Figure L.2. 33: Seasonal (Fall) Spatial Plots of NH_4 for the NMB (%)

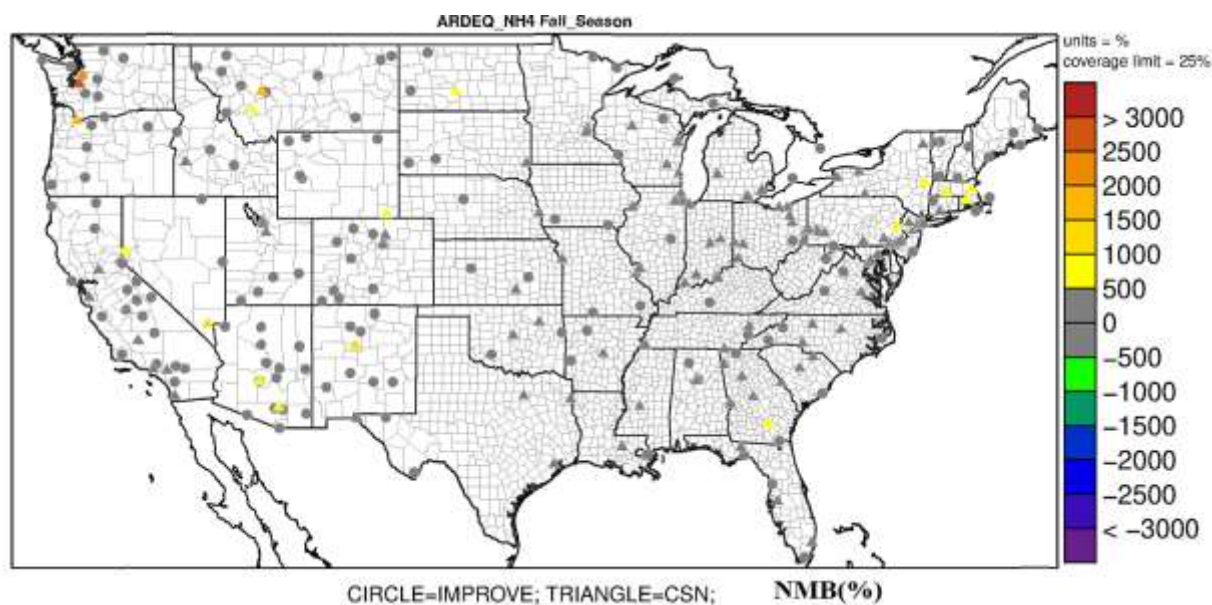


Figure L.2. 34: Seasonal (Fall) Spatial Plots of NH_4 for the NME (%)

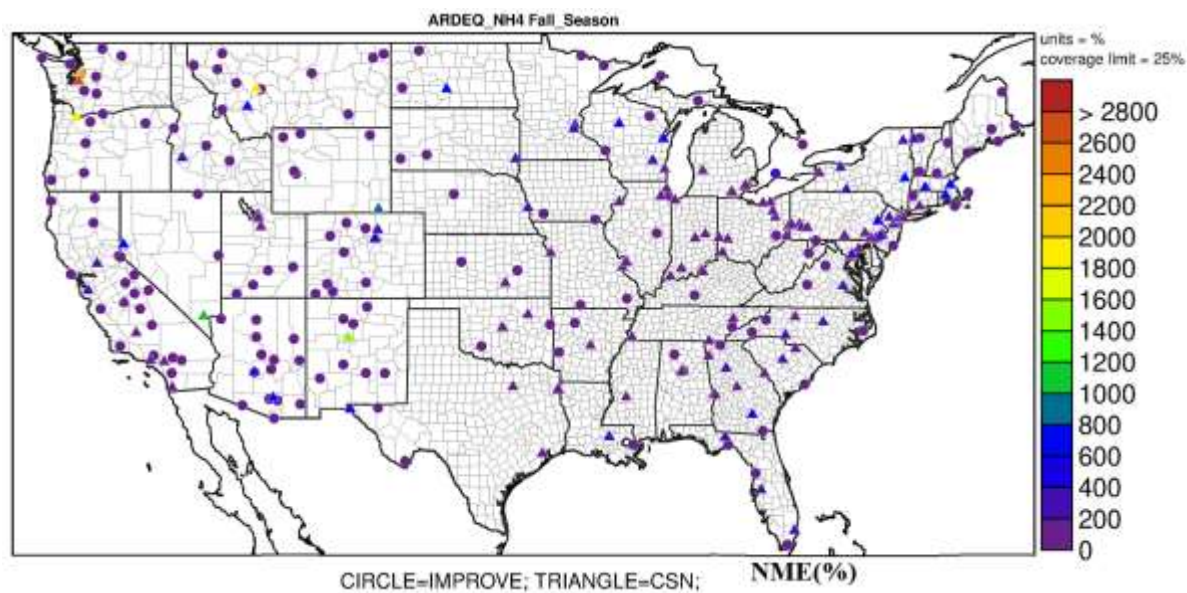


Figure L.2. 35: Seasonal (Fall) Spatial Plots of NO₃ for the NMB (%)

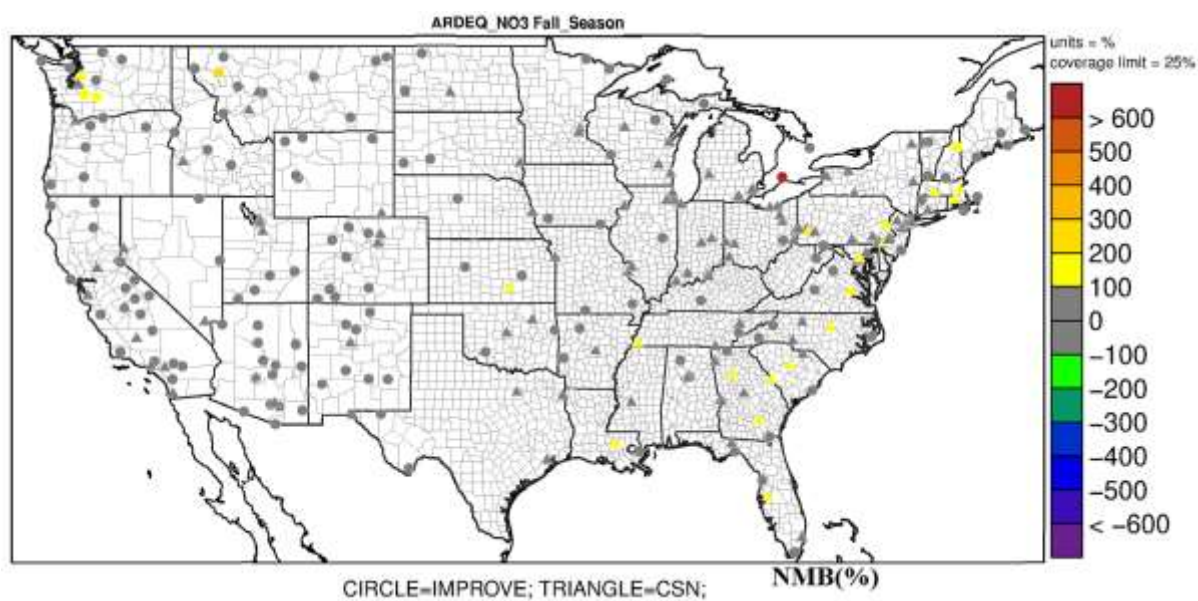


Figure L.2. 36: Seasonal (Fall) Spatial Plots of NO₃ for the NME (%)

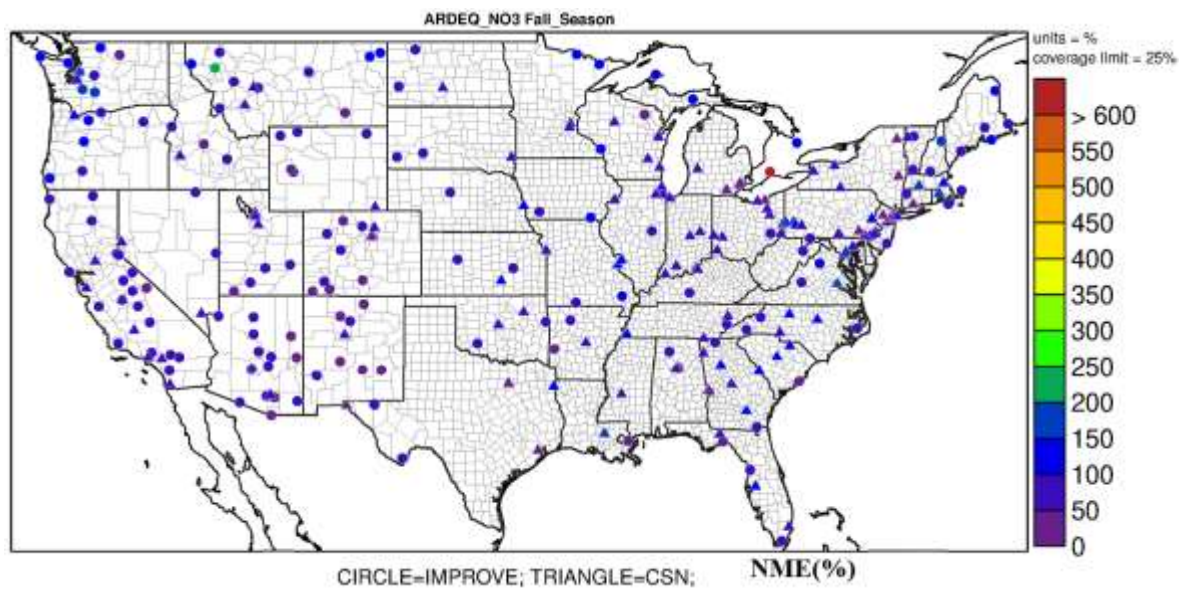


Figure L.2. 37: Seasonal (Fall) Spatial Plots of OC for the NMB (%)

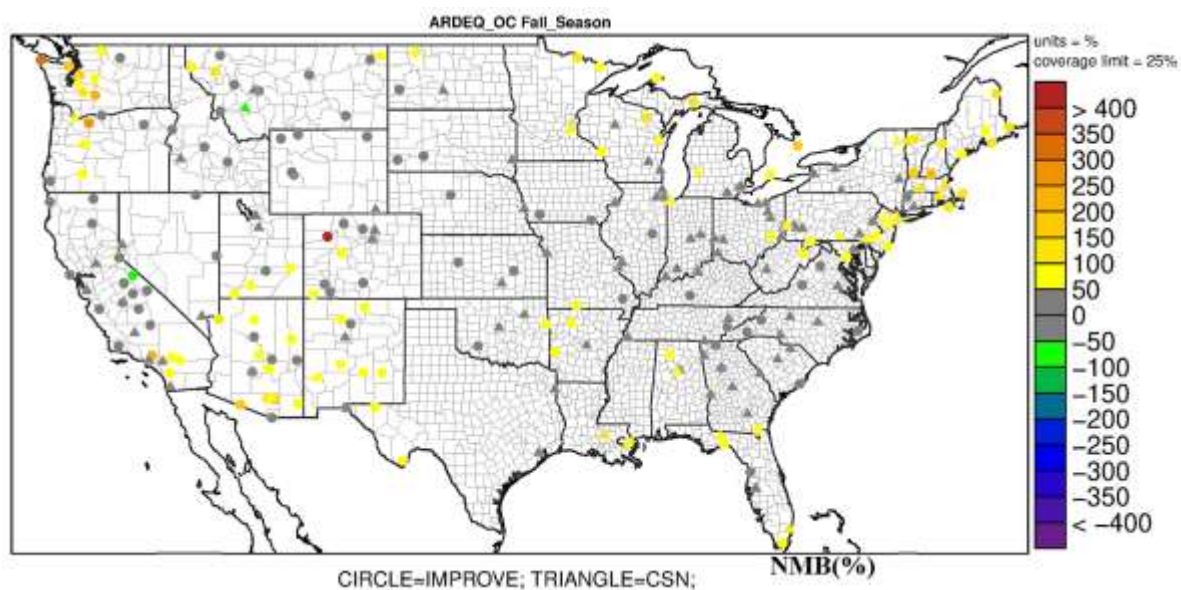


Figure L.2. 38: Seasonal (Fall) Spatial Plots of OC for the NME (%)

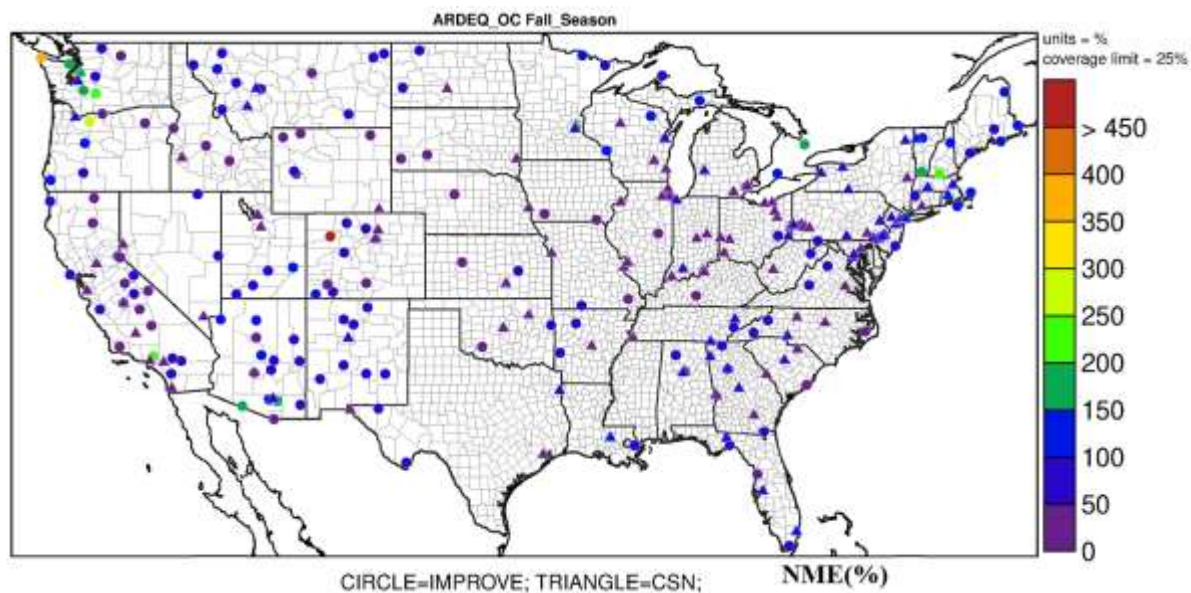


Figure L.2. 39: Seasonal (Fall) Spatial Plots of EC for the NMB (%)

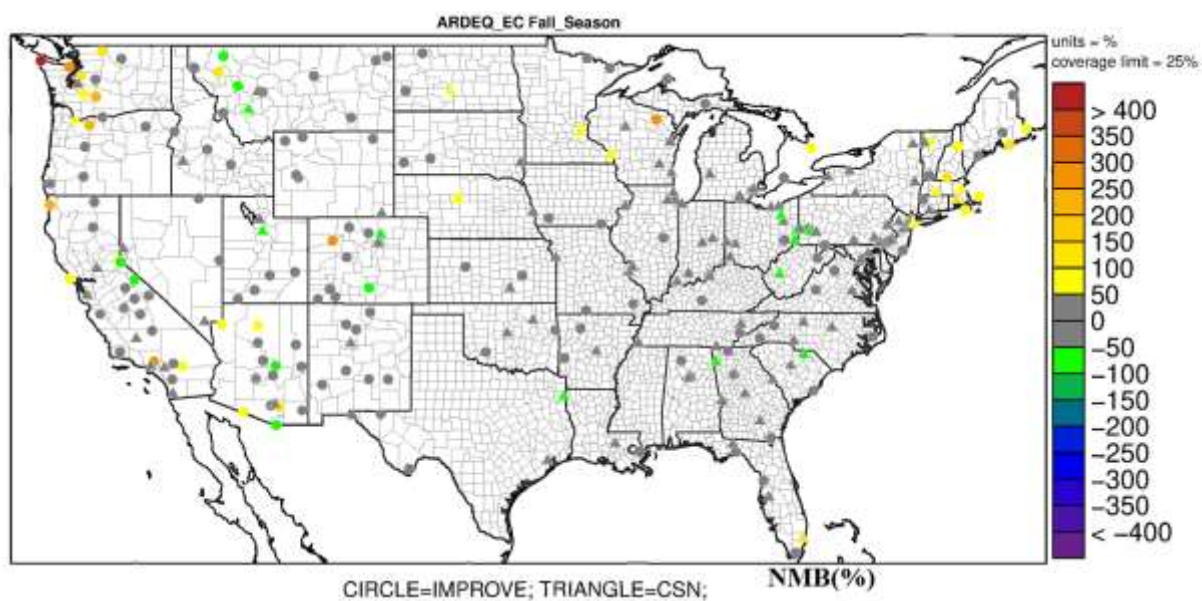


Figure L.2. 40: Seasonal (Fall) Spatial Plots of EC for the NME (%)

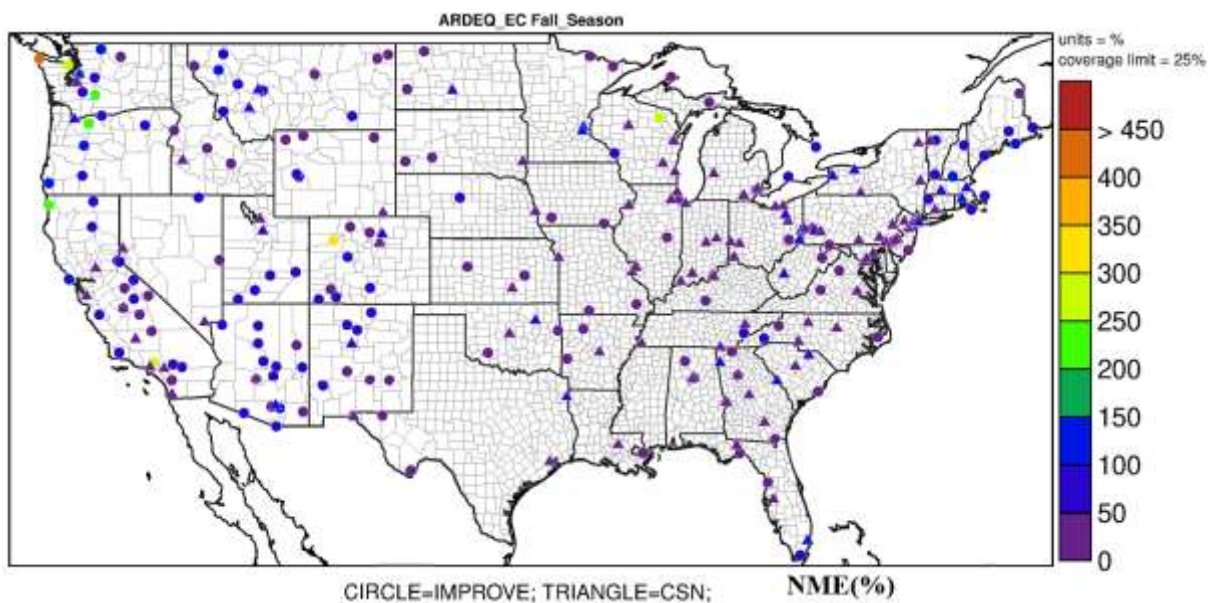


Figure L.2. 41: Seasonal (Winter) Spatial Plots of SO₄ for the NMB (%)

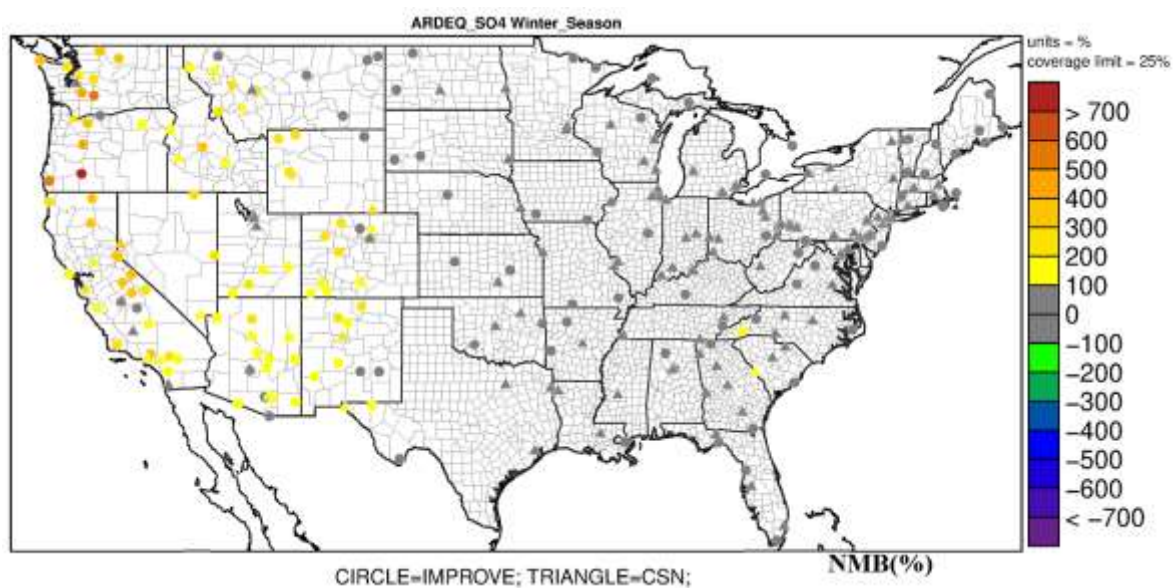


Figure L.2. 42: Seasonal (Winter) Spatial Plots of SO₄ for the NME (%)

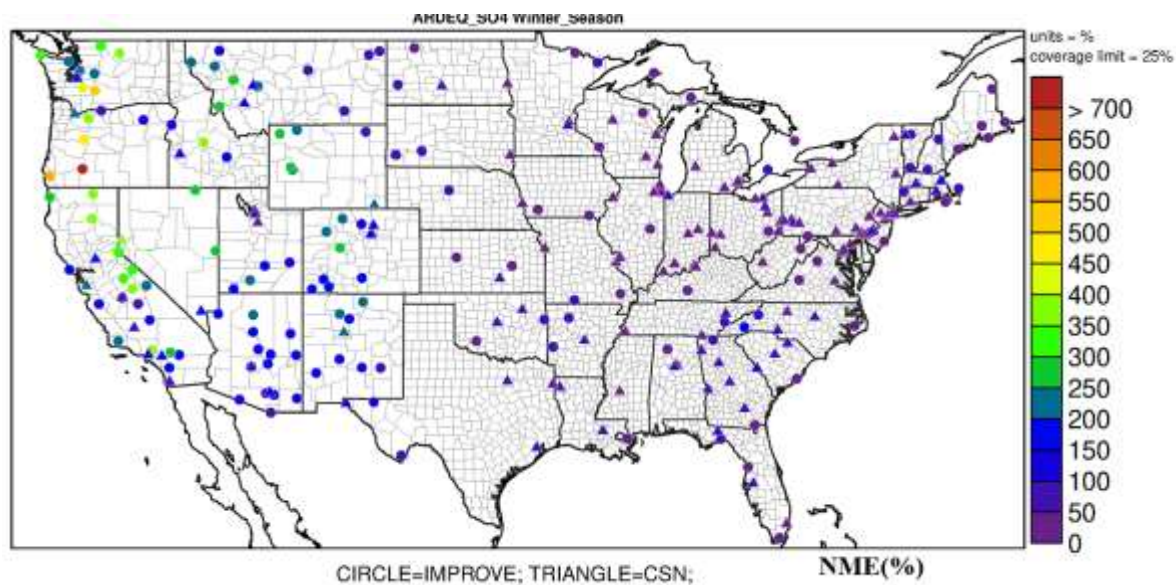


Figure L.2. 43: Seasonal (Winter) Spatial Plots of NH_4 for the NMB (%)

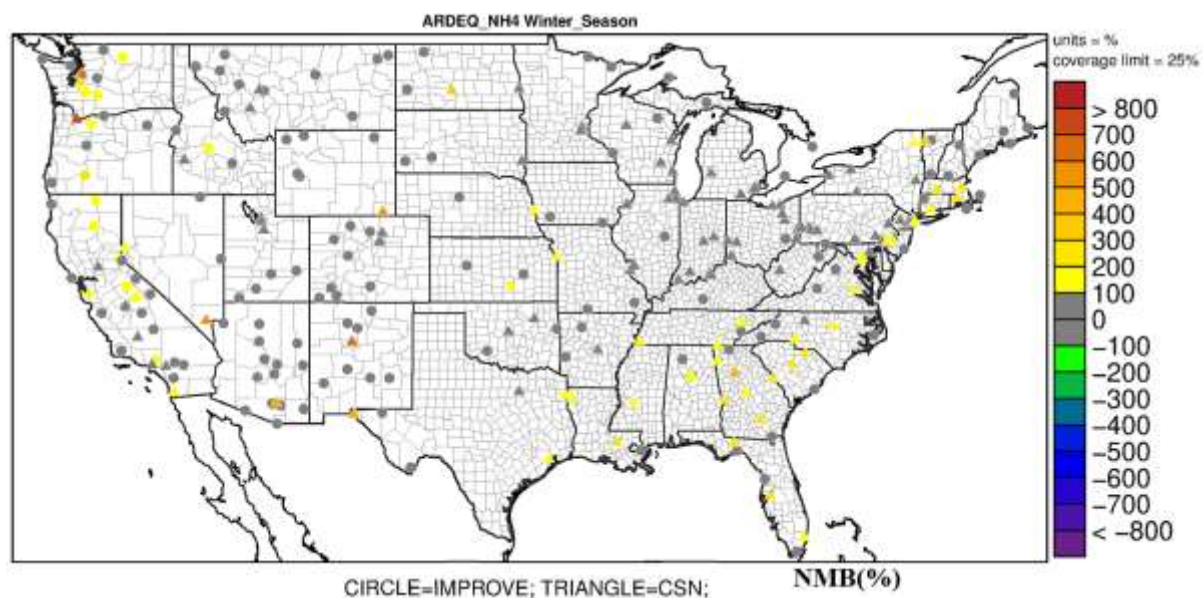


Figure L.2. 44: Seasonal (Winter) Spatial Plots of NH_4 for the NME (%)

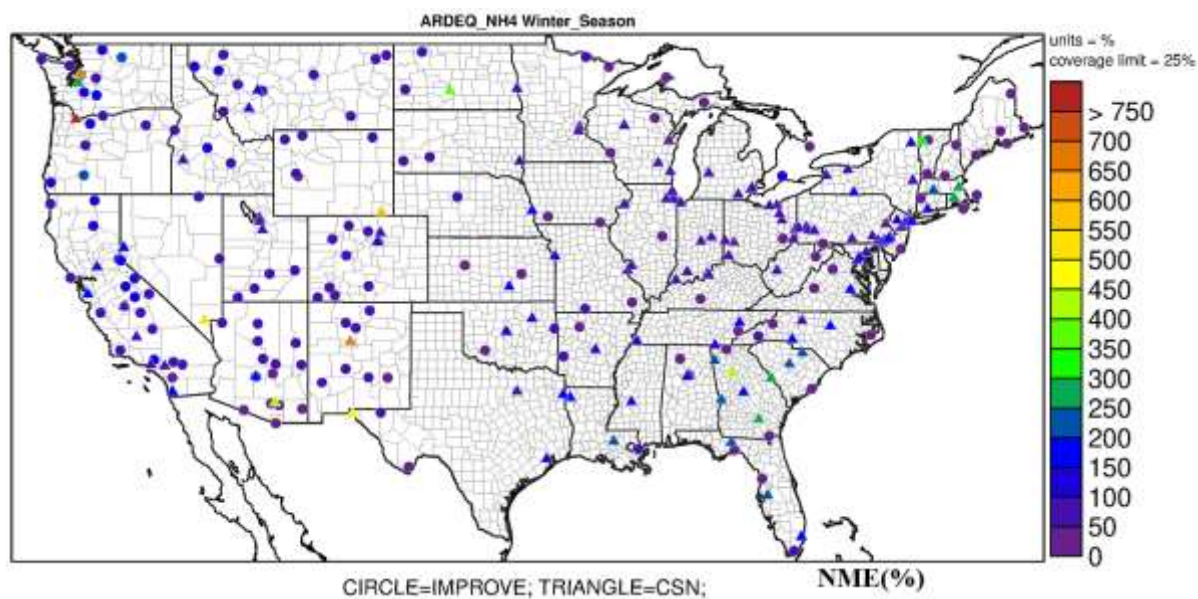


Figure L.2. 45: Seasonal (Winter) Spatial Plots of NO₃ for the NMB (%)

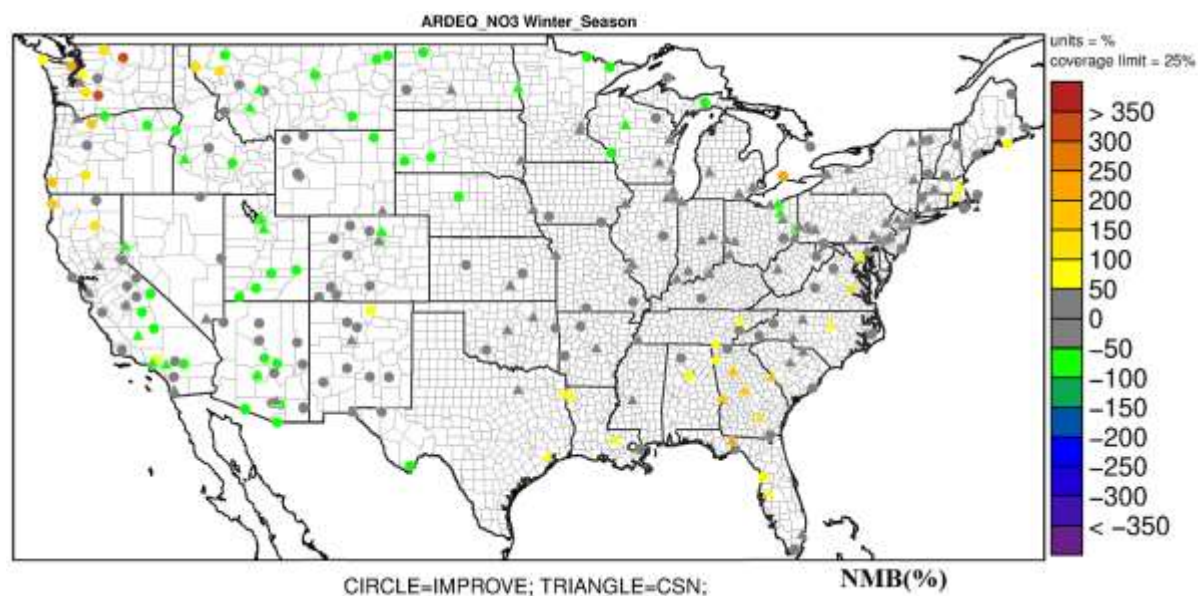


Figure L.2. 46: Seasonal (Winter) Spatial Plots of NO₃ for the NME (%)

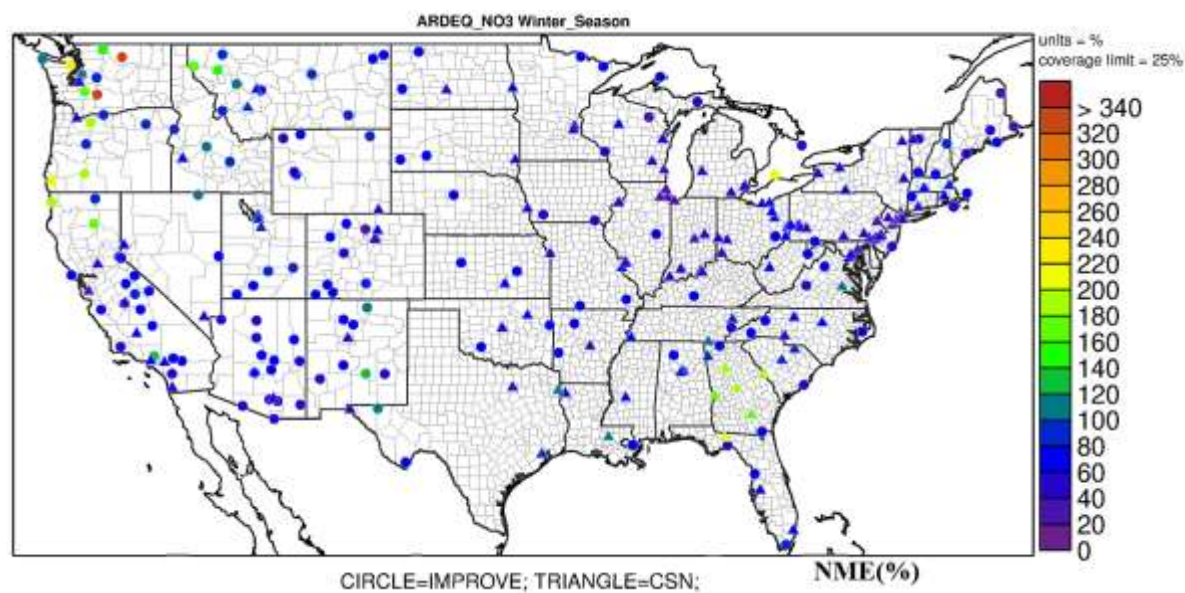


Figure L.2. 47: Seasonal (Winter) Spatial Plots of OC for the NMB (%)

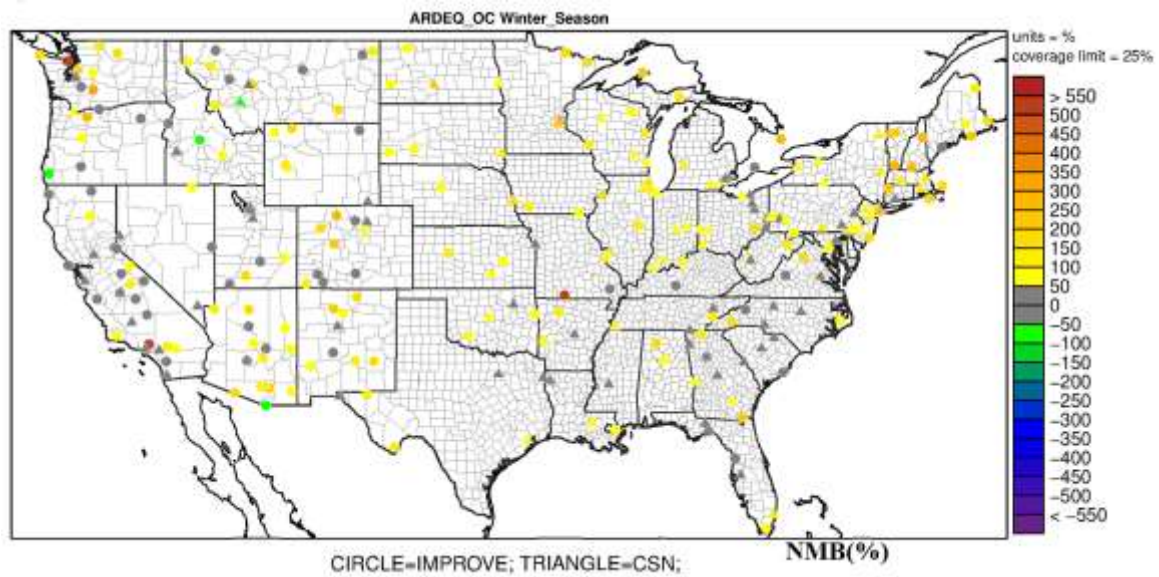


Figure L.2. 48: Seasonal (Winter) Spatial Plots of OC for the NME (%)

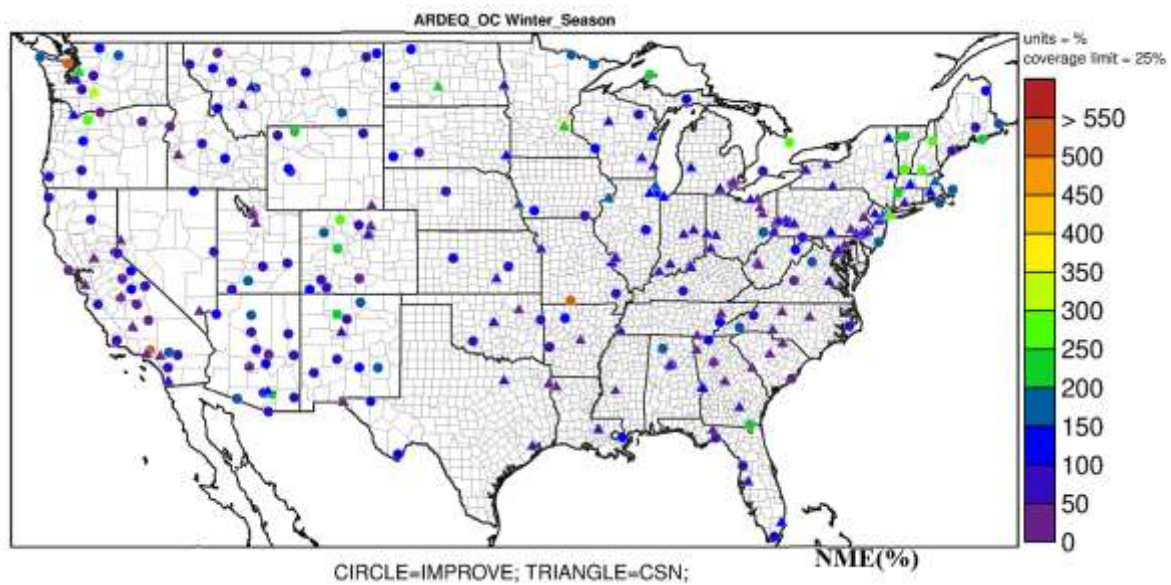


Figure L.2. 49: Seasonal (Winter) Spatial Plots of EC for the NMB (%)

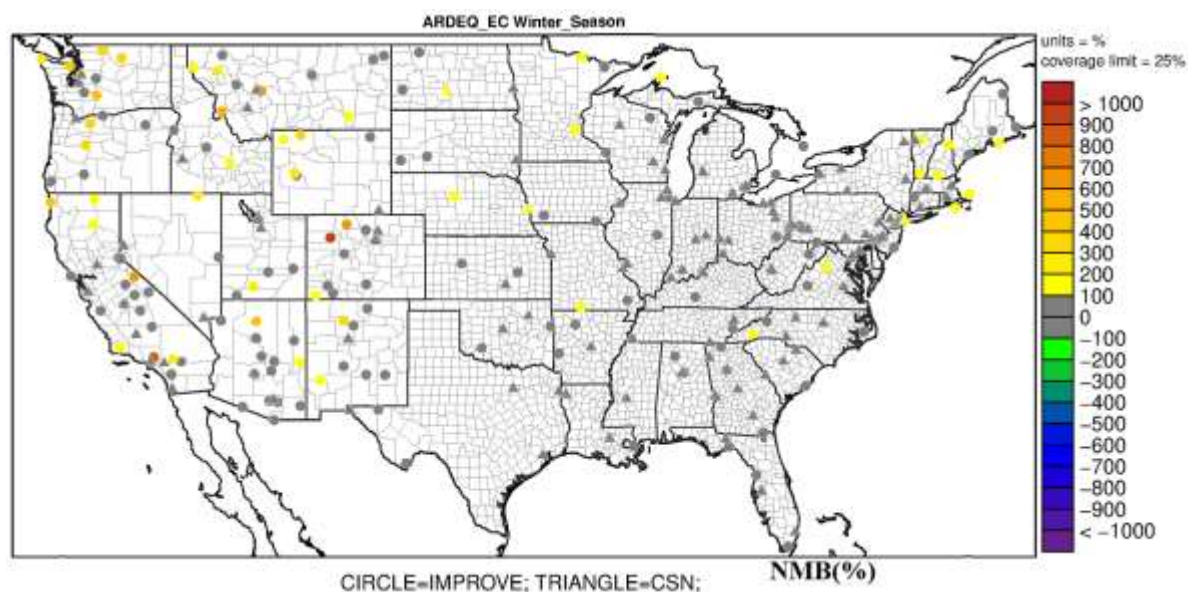


Figure L.2. 50: Seasonal (Winter) Spatial Plots of EC for the NME (%)

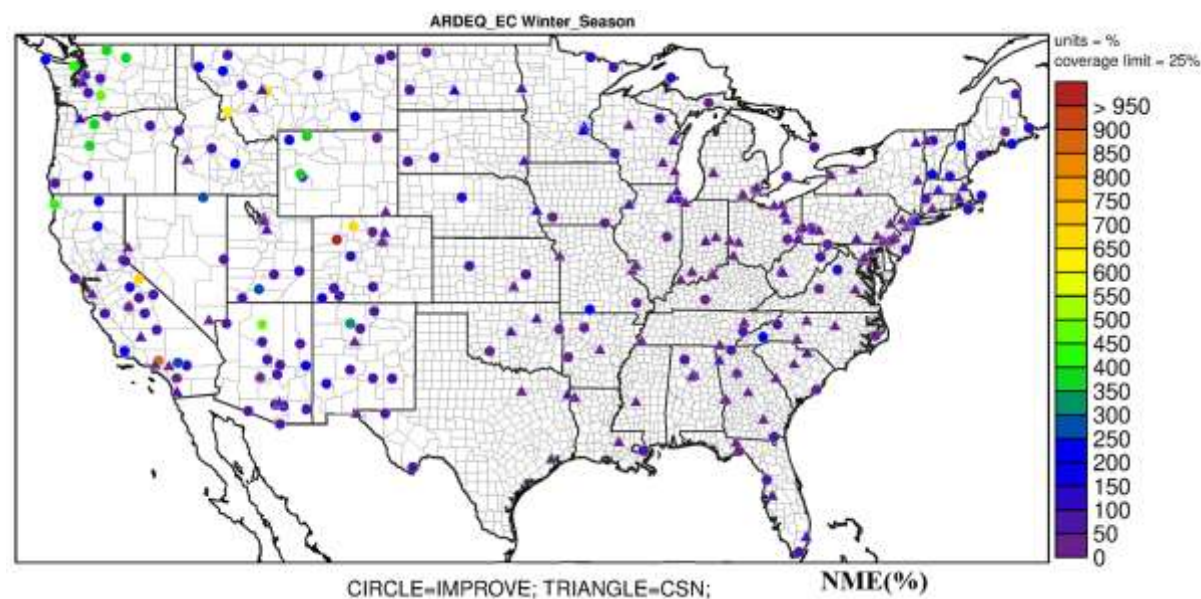


Figure L.2. 51: Box Plot Comparisons of Observed and Modeled Data of SO₄ Species at CSN Monitors

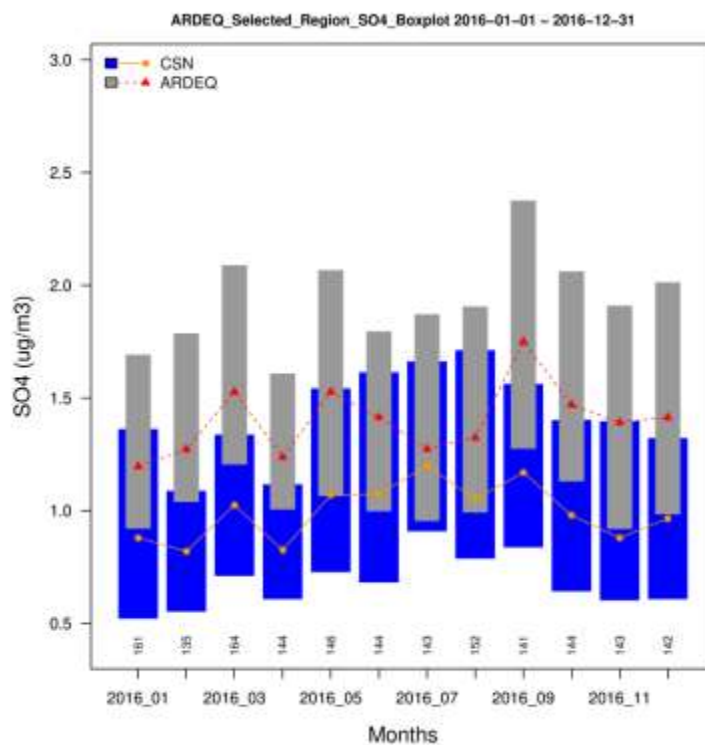


Figure L.2. 52: Box Plot Comparisons of Observed and Modeled Data of SO₄ Species at IMPROVE Monitors

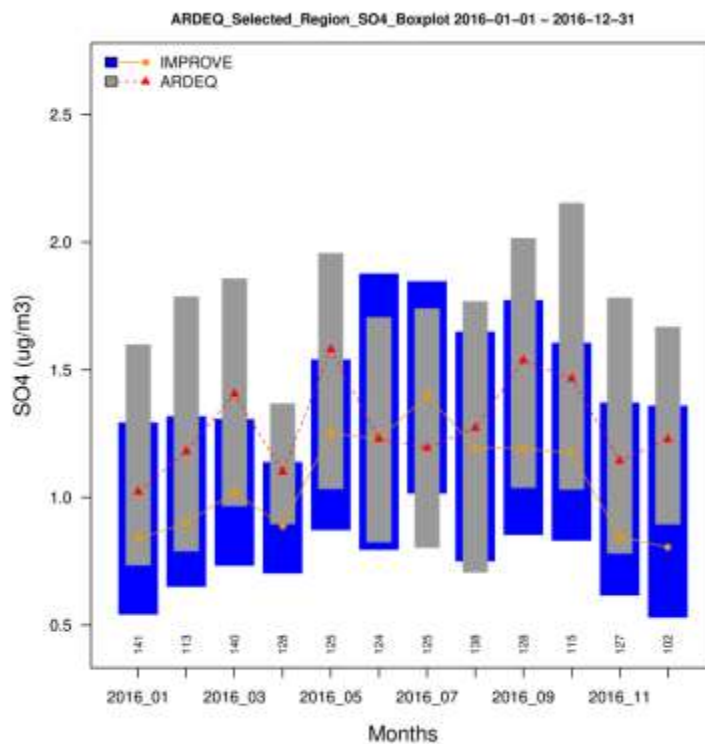


Figure L.2. 53: Box Plot Comparisons of Observed and Modeled Data of NH_4 Species at CSN Monitors

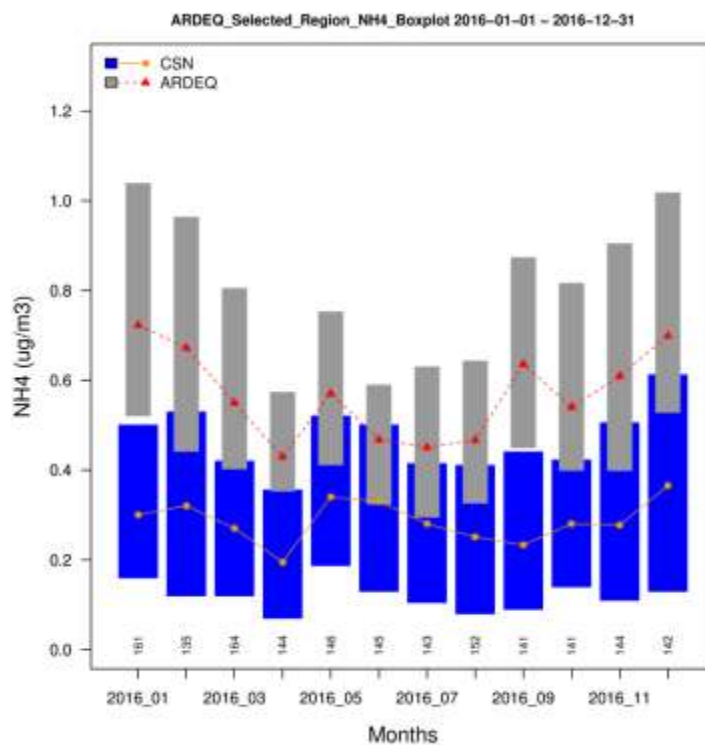


Figure L.2. 54: Box Plot Comparisons of Observed and Modeled Data of NH_4 Species at IMPROVE Monitors

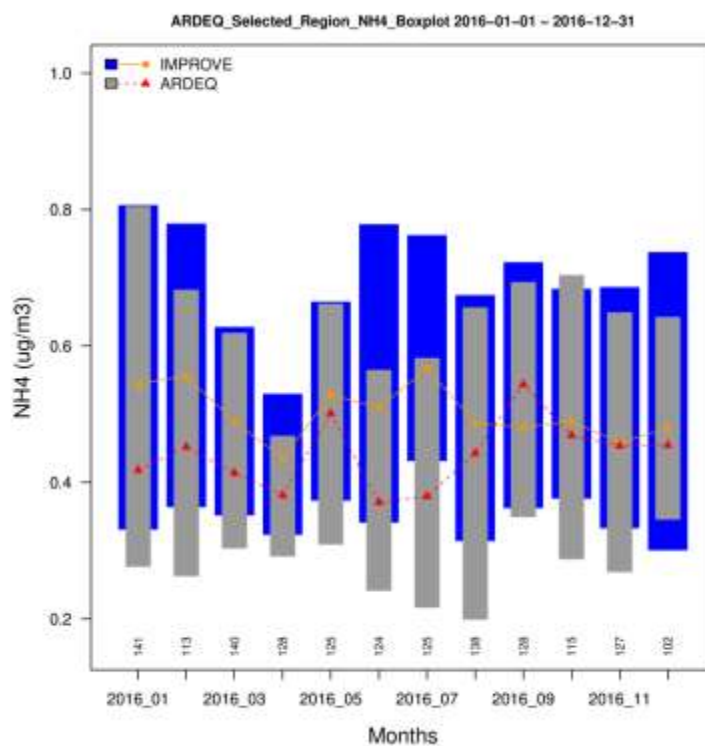


Figure L.2. 55: Box Plot Comparisons of Observed and Modeled Data of NO₃ Species at CSN Monitors

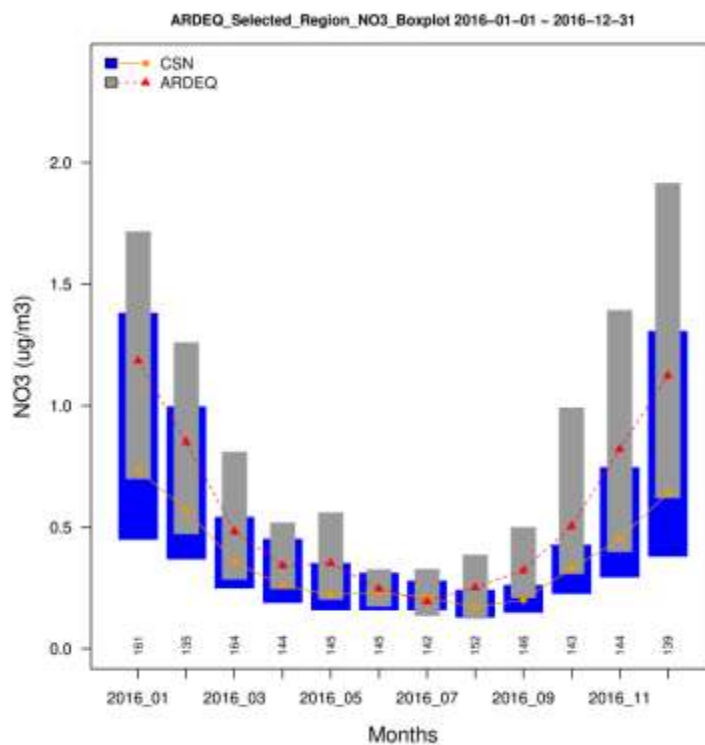


Figure L.2. 56: Box Plot Comparisons of Observed and Modeled Data of NO₃ Species at IMPROVE Monitors

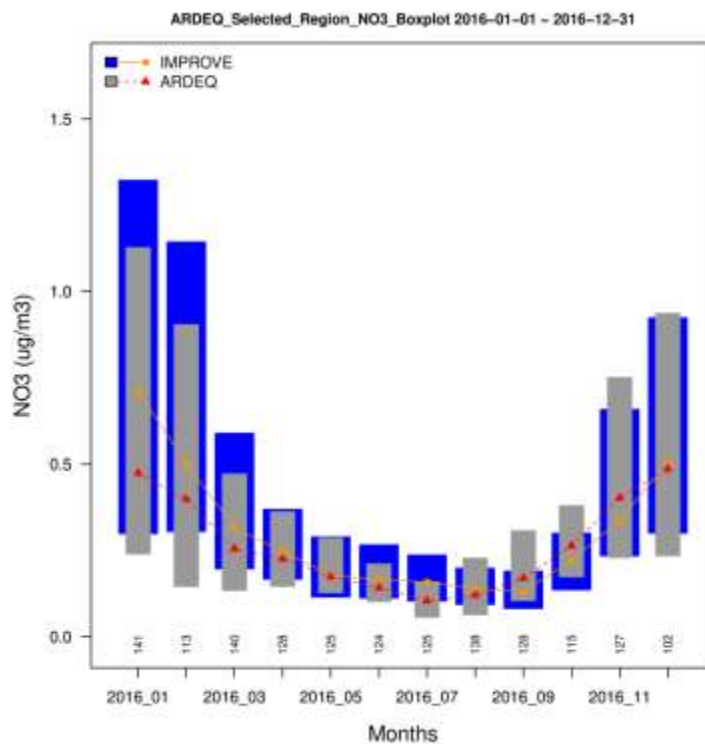


Figure L.2. 57: Box Plot Comparisons of Observed and Modeled Data of OC Species at CSN Monitors

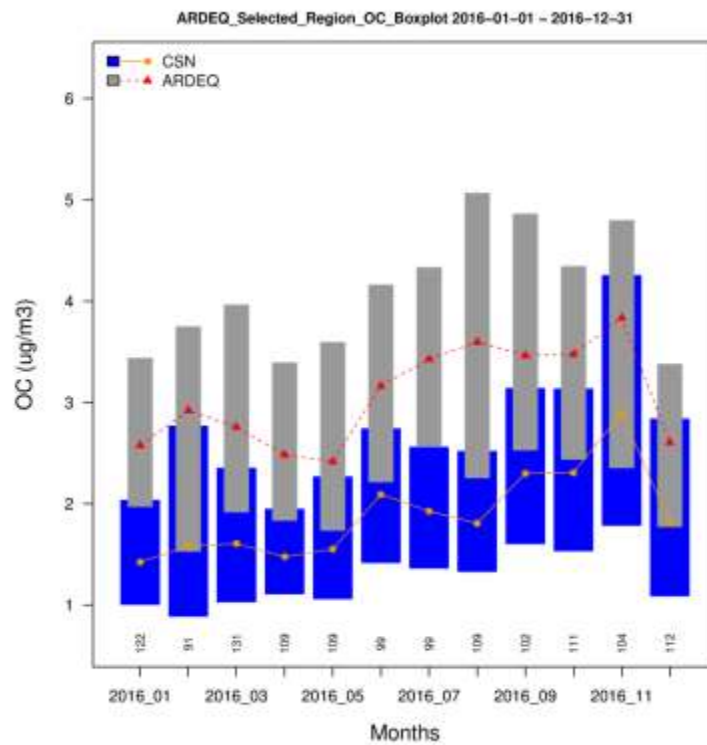


Figure L.2. 58: Box Plot Comparisons of Observed and Modeled Data of OC Species at IMPROVE Monitors

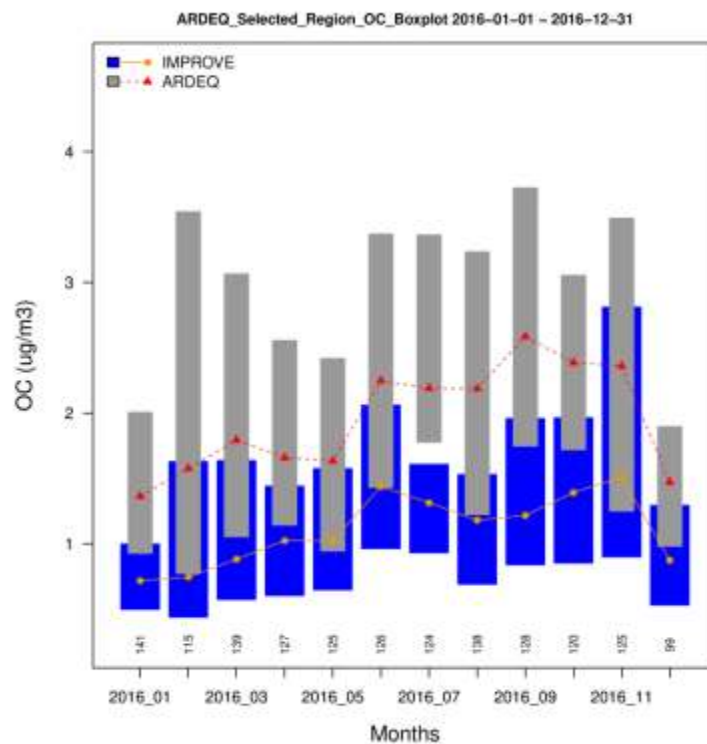


Figure L.2. 59: Box Plot Comparisons of Observed and Modeled Data of EC Species at CSN Monitors

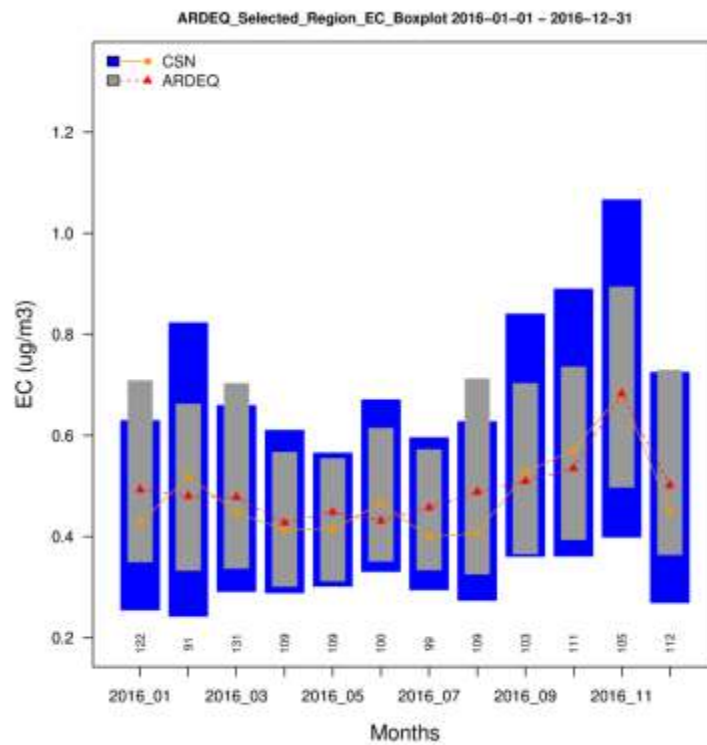


Figure L.2. 60: Box Plot Comparisons of Observed and Modeled Data of EC Species at IMPROVE Monitors

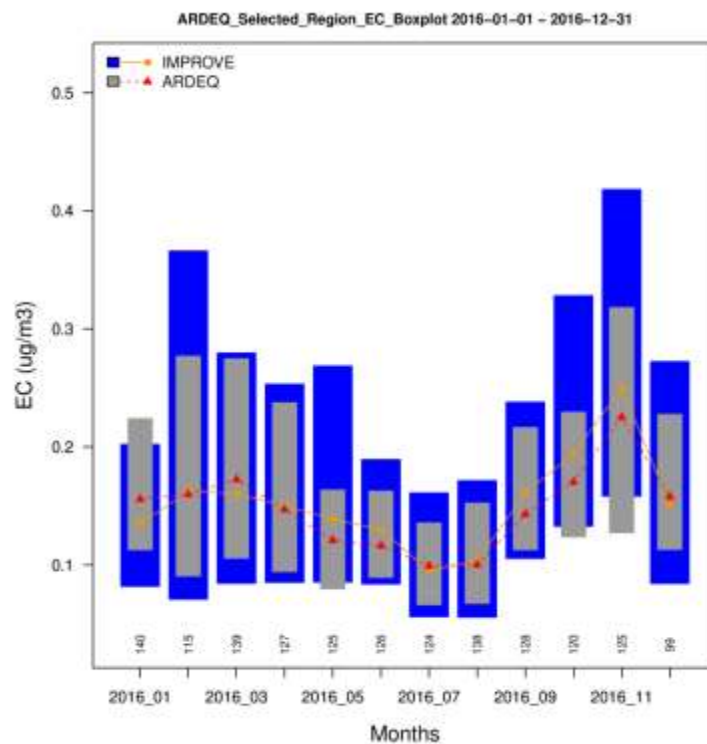


Table L.2. 2: MPE Statistics for Class I Areas Located Outside of Arkansas (Annual)

Species	Site	Annual						
		Mean_Obs	Mean_Mod	R	FB %	FE %	NMB %	NME %
PM2.5	HEGL1	5.78	10.60	0.18	28.80	41.20	83.54	98.56
	MACA1	6.23	7.31	0.73	16.20	28.20	17.42	29.76
	MING1	6.86	8.20	0.61	18.00	32.60	19.52	36.49
	SHRO	5.16	5.60	0.64	30.90	53.70	8.56	50.15
	SIPS1	6.45	9.17	0.22	27.60	37.90	42.21	55.94
	WIMO1	4.80	4.85	0.56	7.90	37.60	1.09	37.40
SO4	HEGL1	1.16	1.33	0.67	14.60	34.10	14.76	35.61
	MACA1	1.40	1.53	0.76	9.40	26.70	9.27	28.75
	MING1	1.23	1.55	0.66	21.30	35.30	26.53	41.19
	SHRO	0.83	1.24	0.62	44.30	56.50	48.97	61.73
	SIPS1	1.16	1.34	0.66	13.10	31.40	15.94	33.82
	WIMO1	1.00	0.98	0.72	9.30	38.10	-1.55	34.60
NO3	HEGL1	0.52	0.50	0.41	4.60	64.10	-4.26	71.80
	MACA1	0.65	0.48	0.40	-6.00	68.10	-26.30	65.53
	MING1	0.55	0.57	0.46	22.50	76.40	2.24	78.34
	SHRO	0.25	0.21	0.73	-22.00	62.60	-17.05	49.66
	SIPS1	0.39	0.35	0.56	-11.80	63.30	-11.02	64.68
	WIMO1	0.51	0.39	0.50	-22.50	69.60	-22.90	66.80
OC	HEGL1	1.25	3.88	0.28	58.10	62.40	211.65	216.08
	MACA1	1.33	1.99	0.78	42.40	46.30	49.44	54.95
	MING1	1.55	2.22	0.46	39.30	50.00	43.05	64.18
	SHRO	1.35	1.65	0.60	56.40	70.50	22.15	78.04
	SIPS1	1.61	3.23	0.17	58.40	66.60	100.86	120.23
	WIMO1	0.88	1.24	0.66	35.50	45.60	40.60	55.40
EC	HEGL1	0.17	0.26	0.31	4.70	45.70	55.67	98.48
	MACA1	0.21	0.19	0.77	-3.50	28.20	-9.47	26.44
	MING1	0.24	0.21	0.61	-2.70	37.10	-14.00	37.54
	SHRO	0.12	0.11	0.71	29.20	61.80	-9.93	56.41
	SIPS1	0.21	0.19	0.21	-11.90	42.20	-11.48	50.67
	WIMO1	0.12	0.10	0.66	-6.10	41.60	-19.70	36.90
NH4	HEGL1	0.59	0.54	0.52	-6.70	38.70	-7.28	37.37
	MACA1	0.71	0.59	0.53	-18.40	36.00	-17.88	34.27
	MING1	0.62	0.61	0.56	-1.30	39.00	-1.53	38.89
	SHRO	0.39	0.41	0.67	9.50	40.70	5.97	35.81
	SIPS1	0.55	0.48	0.60	-17.40	37.60	-11.90	33.65
	WIMO1	0.52	0.41	0.61	-18.80	41.30	-21.70	38.20

Table L.2. 3: MPE Statistics for Class I Areas Located Outside of Arkansas (Spring Season)

Species	Site	Spring (March, April, May)						
		Mean_Obs	Mean_Mod	R	FB %	FE %	NMB %	NME %
PM2.5	HEGL1	4.37	10.23	0.36	34.30	42.90	134.13	140.07
	MACA1	5.26	6.76	0.63	23.20	34.90	28.53	39.01
	MING1	5.12	6.11	0.46	17.40	33.60	19.46	37.12
	SHRO	4.97	6.05	0.77	30.80	38.60	21.66	35.14
	SIPS1	6.47	9.13	0.34	28.50	35.50	41.29	49.82
	WIMO1	3.74	4.69	0.78	20.20	36.70	25.50	42.30
SO4	HEGL1	0.91	1.13	0.85	23.40	27.30	24.76	27.56
	MACA1	1.21	1.44	0.76	16.40	27.20	18.42	29.44
	MING1	1.03	1.21	0.76	21.20	33.40	17.26	33.78
	SHRO	0.92	1.38	0.63	45.30	48.10	49.17	54.30
	SIPS1	1.21	1.51	0.62	20.50	26.50	24.59	31.83
	WIMO1	0.73	0.87	0.80	24.20	35.10	19.10	34.80
NO3	HEGL1	0.33	0.37	0.86	2.00	52.70	12.43	52.82
	MACA1	0.46	0.38	0.07	-6.00	64.50	-16.89	63.32
	MING1	0.37	0.32	-0.05	14.80	69.00	-12.06	71.67
	SHRO	0.29	0.25	0.80	-14.70	45.30	-12.82	34.03
	SIPS1	0.29	0.28	0.71	-7.00	49.50	-1.90	47.31
	WIMO1	0.33	0.30	0.48	-17.00	49.50	-9.72	57.80
OC	HEGL1	1.05	3.87	0.23	51.90	58.70	270.39	274.33
	MACA1	1.12	1.82	0.69	47.90	53.40	62.45	68.03
	MING1	0.98	1.58	0.33	40.40	50.00	61.41	70.47
	SHRO	1.19	1.63	0.76	47.90	53.10	37.60	50.04
	SIPS1	1.71	3.02	0.30	48.30	57.60	77.16	93.00
	WIMO1	0.78	1.23	0.84	35.50	51.80	57.50	76.10
EC	HEGL1	0.17	0.28	0.27	-1.60	49.50	69.24	119.81
	MACA1	0.19	0.18	0.76	-4.10	30.00	-7.01	24.62
	MING1	0.18	0.16	0.36	-2.00	47.20	-8.14	46.15
	SHRO	0.14	0.12	0.74	8.60	42.60	-11.10	37.03
	SIPS1	0.24	0.19	0.18	-23.50	45.10	-18.79	50.09
	WIMO1	0.12	0.10	0.80	-7.70	42.70	-12.80	36.60
NH4	HEGL1	0.44	0.44	0.85	-0.10	26.10	1.33	22.44
	MACA1	0.59	0.52	0.35	-12.80	34.00	-12.54	31.40
	MING1	0.49	0.44	0.57	-0.80	34.40	-10.63	36.32
	SHRO	0.43	0.46	0.68	13.20	30.20	7.67	27.64
	SIPS1	0.54	0.51	0.58	-13.70	32.00	-5.72	29.22
	WIMO1	0.37	0.34	0.73	-4.20	29.50	-6.43	30.80

Table L.2. 4: MPE Statistics for Class I Areas Located Outside of Arkansas (Summer Season)

Species	Site	Summer (June, July, August)						
		Mean_Obs	Mean_Mod	R	FB(%)	FE(%)	NMB(%)	NME(%)
PM2.5	HEGL1	7.36	7.37	0.57	3.40	26.40	0.21	28.69
	MACA1	6.88	7.37	0.79	5.60	16.60	7.11	18.45
	MING1	7.83	8.68	0.67	4.40	24.80	10.89	26.20
	SHRO	6.26	5.58	0.63	-10.50	40.70	-10.80	30.54
	SIPS1	6.93	9.15	0.72	20.80	33.60	32.02	40.84
	WIMO1	7.52	4.89	0.30	-42.20	46.20	-34.90	38.60
SO4	HEGL1	1.51	1.37	0.69	-9.20	33.90	-9.46	30.31
	MACA1	1.51	1.57	0.63	1.20	27.90	3.91	33.02
	MING1	1.47	1.75	0.54	10.10	40.20	19.50	45.04
	SHRO	1.02	1.12	0.66	6.40	44.80	9.55	37.89
	SIPS1	1.22	1.23	0.71	-6.60	33.90	1.24	31.07
	WIMO1	1.61	1.01	0.58	-45.30	50.00	-37.00	40.20
NO3	HEGL1	0.19	0.16	0.02	-9.50	59.70	-14.75	59.21
	MACA1	0.18	0.22	0.26	15.20	58.00	20.43	67.57
	MING1	0.19	0.32	0.08	42.00	73.00	71.72	107.10
	SHRO	0.18	0.09	0.75	-69.90	76.90	-48.22	50.13
	SIPS1	0.16	0.13	0.11	-25.00	69.30	-18.68	61.55
	WIMO1	0.27	0.10	0.24	-75.80	96.20	-61.60	73.70
OC	HEGL1	1.29	2.43	0.84	57.20	57.20	87.64	87.64
	MACA1	1.39	2.18	0.79	41.30	41.30	56.00	56.04
	MING1	1.40	2.40	0.64	44.20	49.30	71.00	73.21
	SHRO	1.19	1.84	0.66	45.00	60.20	54.88	70.11
	SIPS1	1.52	3.53	0.50	73.80	75.80	132.96	134.75
	WIMO1	1.24	1.42	0.20	15.00	34.80	14.20	42.40
EC	HEGL1	0.09	0.10	0.49	14.00	43.80	7.09	37.25
	MACA1	0.16	0.15	0.83	-1.40	19.50	-5.20	17.44
	MING1	0.16	0.16	0.77	5.00	27.50	0.76	24.65
	SHRO	0.08	0.08	0.76	14.90	54.80	-3.07	40.19
	SIPS1	0.15	0.11	0.51	-13.60	42.90	-26.59	39.18
	WIMO1	0.11	0.08	0.11	-5.30	50.90	-27.50	51.60
NH4	HEGL1	0.62	0.48	0.59	-24.70	41.60	-22.18	34.79
	MACA1	0.62	0.56	0.63	-15.40	33.80	-9.01	34.08
	MING1	0.60	0.62	0.58	-3.80	44.20	3.04	42.32
	SHRO	0.43	0.36	0.69	-21.40	47.50	-15.92	34.07
	SIPS1	0.50	0.42	0.67	-29.90	42.90	-17.50	32.96
	WIMO1	0.68	0.34	0.44	-68.50	70.60	-50.20	51.50

Table L.2. 5: MPE Statistics for Class I Areas Located Outside of Arkansas (Fall Season)

Species	Site	Fall (September, October, November)						
		Mean_Obs	Mean_Mod	R	FB %	FE %	NMB %	NME %
PM2.5	HEGL1	6.30	8.32	0.56	26.90	31.60	31.95	36.78
	MACA1	7.46	8.98	0.91	22.50	23.70	20.39	23.08
	MING1	8.59	10.52	0.66	21.60	30.20	22.43	33.59
	SHRO	7.89	7.03	0.65	19.30	50.20	-10.90	57.03
	SIPS1	7.46	9.64	0.36	33.40	41.70	29.24	53.29
	WIMO1	5.55	5.30	0.65	1.60	28.90	-4.44	28.10
SO4	HEGL1	1.23	1.52	0.75	19.90	33.00	23.10	36.20
	MACA1	1.57	1.77	0.90	15.80	23.90	12.84	23.46
	MING1	1.31	1.74	0.81	28.80	32.90	33.36	37.09
	SHRO	0.93	1.39	0.69	39.20	45.30	48.19	56.40
	SIPS1	1.10	1.40	0.73	22.30	29.40	27.69	37.32
	WIMO1	1.15	1.16	0.87	8.00	30.00	0.31	25.10
NO3	HEGL1	0.32	0.39	0.39	33.00	68.00	20.22	78.35
	MACA1	0.46	0.48	0.29	27.90	67.10	5.26	69.10
	MING1	0.38	0.61	0.19	60.20	82.70	59.11	109.62
	SHRO	0.33	0.28	0.79	-10.60	54.90	-16.67	53.91
	SIPS1	0.27	0.29	0.25	19.00	57.00	8.53	72.74
	WIMO1	0.31	0.36	0.60	11.50	64.00	16.40	67.60
OC	HEGL1	1.45	2.55	0.31	50.20	56.50	75.18	82.60
	MACA1	1.88	2.55	0.87	38.80	41.00	35.61	41.66
	MING1	2.20	2.91	0.61	29.30	42.30	32.36	49.06
	SHRO	2.64	2.20	0.64	43.50	77.50	-16.92	84.37
	SIPS1	2.16	3.39	0.28	59.30	67.80	57.02	95.67
	WIMO1	1.03	1.31	0.82	24.80	31.90	26.40	35.90
EC	HEGL1	0.21	0.18	0.31	-10.60	41.30	-12.74	40.10
	MACA1	0.30	0.24	0.81	-10.30	30.90	-19.19	29.77
	MING1	0.35	0.30	0.55	-10.50	33.60	-13.03	33.23
	SHRO	0.23	0.15	0.76	1.20	53.20	-36.73	58.00
	SIPS1	0.26	0.21	0.43	-5.80	34.50	-21.46	41.84
	WIMO1	0.14	0.10	0.75	-14.70	44.30	-28.90	39.30
NH4	HEGL1	0.56	0.57	0.71	2.00	34.90	1.83	31.93
	MACA1	0.72	0.66	0.78	-5.00	23.90	-8.44	22.38
	MING1	0.60	0.66	0.67	9.20	34.00	9.86	34.88
	SHRO	0.45	0.48	0.64	7.50	34.90	8.14	36.55
	SIPS1	0.49	0.48	0.54	-3.70	31.70	-2.54	32.13
	WIMO1	0.52	0.46	0.81	-9.20	33.80	-11.90	27.50

Table L.2. 6: MPE Statistics for Class I Areas Located Outside of Arkansas (Winter Season)

Species	Site	Winter (December, January, February)						
		Mean_Obs	Mean_Mod	R	FB(%)	FE(%)	NMB(%)	NME(%)
PM2.5	HEGL1	4.97	16.57	0.36	51.80	64.70	233.44	248.52
	MACA1	5.60	6.45	0.41	13.70	35.70	15.15	41.16
	MING1	5.90	7.52	0.44	29.60	42.20	27.43	54.85
	SHRO	1.49	3.73	0.63	85.50	85.90	150.45	150.68
	SIPS1	4.95	8.76	0.09	28.00	41.00	76.97	89.08
	WIMO1	3.56	4.58	0.73	31.10	41.20	28.70	43.80
SO4	HEGL1	0.95	1.29	0.59	25.60	43.00	35.24	52.60
	MACA1	1.34	1.37	0.71	4.00	27.40	2.39	28.79
	MING1	1.09	1.50	0.71	25.50	34.50	37.98	48.51
	SHRO	0.41	1.06	0.67	90.80	90.80	159.53	159.53
	SIPS1	1.10	1.23	0.73	19.10	36.00	12.03	35.99
	WIMO1	0.73	0.92	0.75	31.60	40.70	26.60	39.90
NO3	HEGL1	1.32	1.14	-0.06	-7.30	77.30	-13.62	77.26
	MACA1	1.50	0.85	0.15	-57.20	83.20	-43.71	65.07
	MING1	1.35	1.06	0.21	-30.90	81.60	-21.42	66.40
	SHRO	0.21	0.22	0.29	11.00	74.10	4.42	65.78
	SIPS1	0.97	0.78	0.36	-37.20	78.40	-18.99	68.42
	WIMO1	1.04	0.71	0.37	-24.30	77.70	-31.30	68.30
OC	HEGL1	1.18	6.94	0.41	74.10	78.30	488.96	495.26
	MACA1	1.01	1.49	0.55	40.70	48.20	47.45	59.53
	MING1	1.67	2.00	0.36	43.20	58.90	20.10	73.01
	SHRO	0.32	0.87	0.67	92.50	93.80	167.97	168.71
	SIPS1	1.04	2.93	0.13	50.60	64.30	182.31	194.40
	WIMO1	0.59	1.06	0.88	59.40	59.50	78.00	78.10
EC	HEGL1	0.21	0.50	0.38	17.40	48.40	140.97	173.25
	MACA1	0.21	0.20	0.66	1.20	32.70	-2.51	30.76
	MING1	0.30	0.22	0.66	-3.80	40.40	-27.76	45.00
	SHRO	0.04	0.10	0.38	97.80	100.10	154.07	161.28
	SIPS1	0.21	0.26	0.16	-4.90	46.30	21.49	71.71
	WIMO1	0.11	0.10	0.85	3.20	31.80	-10.70	24.20
NH4	HEGL1	0.74	0.69	0.24	-3.40	53.40	-6.36	53.86
	MACA1	0.94	0.62	0.42	-39.60	51.20	-33.90	44.56
	MING1	0.80	0.73	0.42	-10.20	44.00	-8.30	41.01
	SHRO	0.21	0.31	0.60	41.80	50.90	46.24	56.20
	SIPS1	0.69	0.55	0.65	-22.10	44.10	-20.04	39.48
	WIMO1	0.57	0.47	0.55	-9.50	41.00	-17.60	41.60

Figure L.2. 61: Light Extinction at HEGL1 for the Visibility Model Performance Evaluation

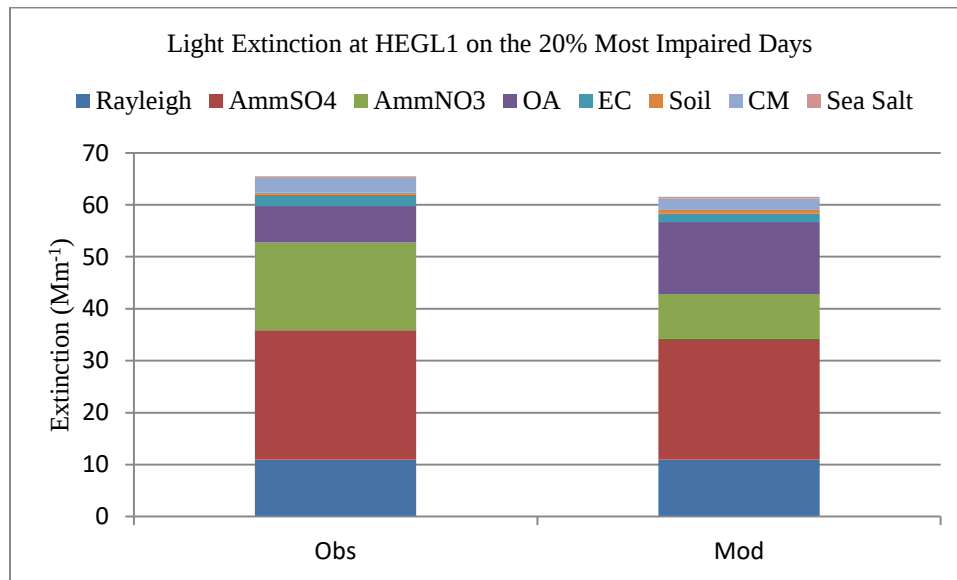


Figure L.2. 62: Light Extinction at MACA1 for the Visibility Model Performance Evaluation

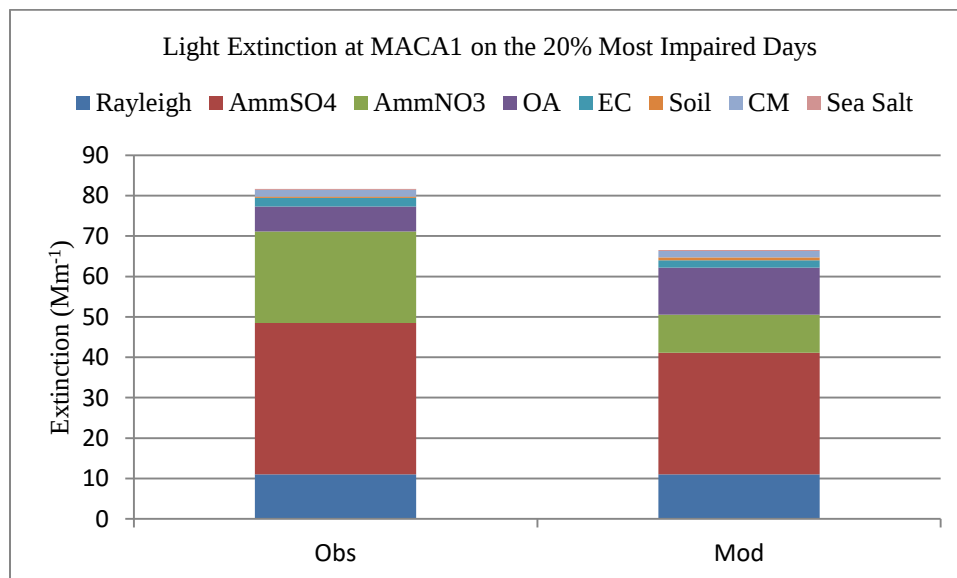


Figure L.2. 63: Light Extinction at MING1 for the Visibility Model Performance Evaluation

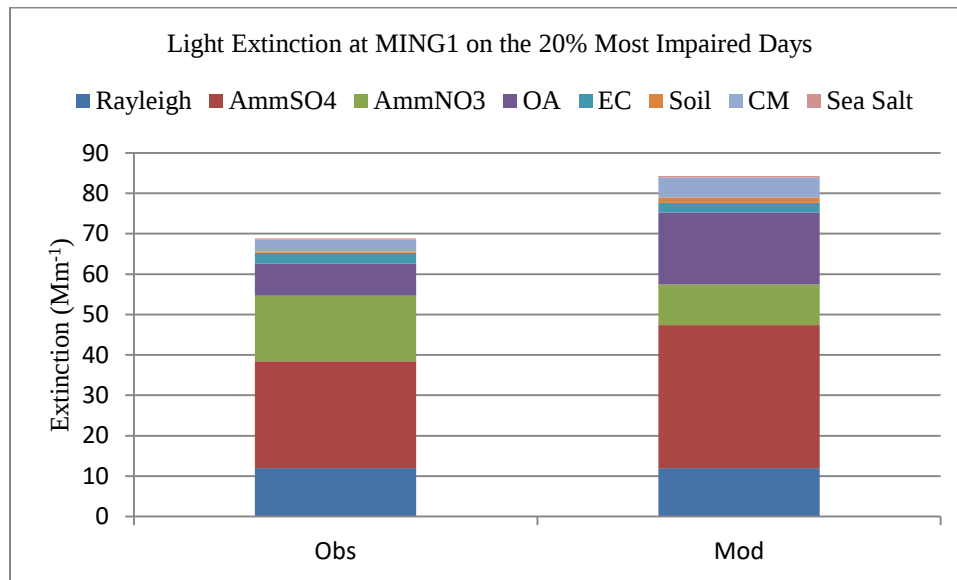


Figure L.2. 64: Light Extinction at SHRO1 for the Visibility Model Performance Evaluation

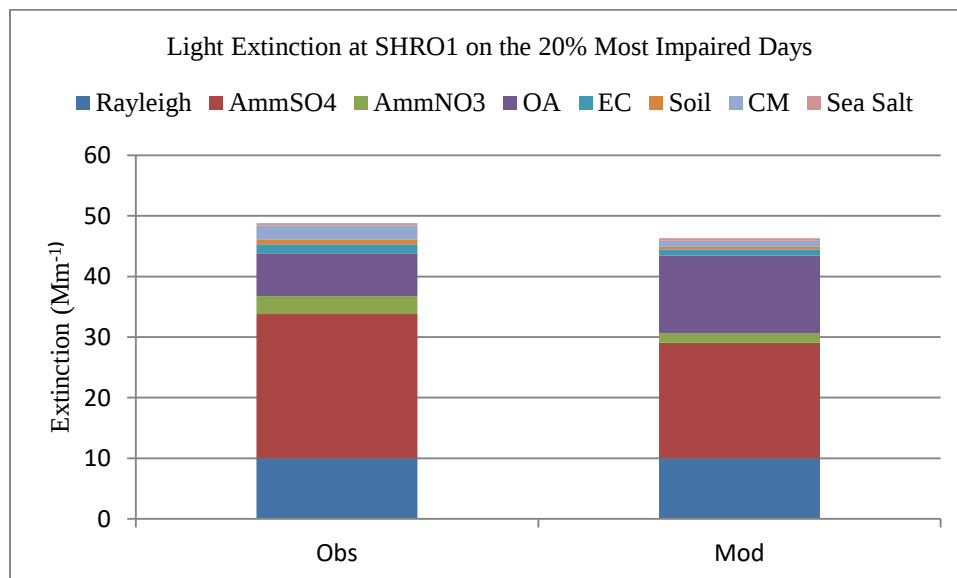


Figure L.2. 65: Light Extinction at SIPS1 for the Visibility Model Performance Evaluation

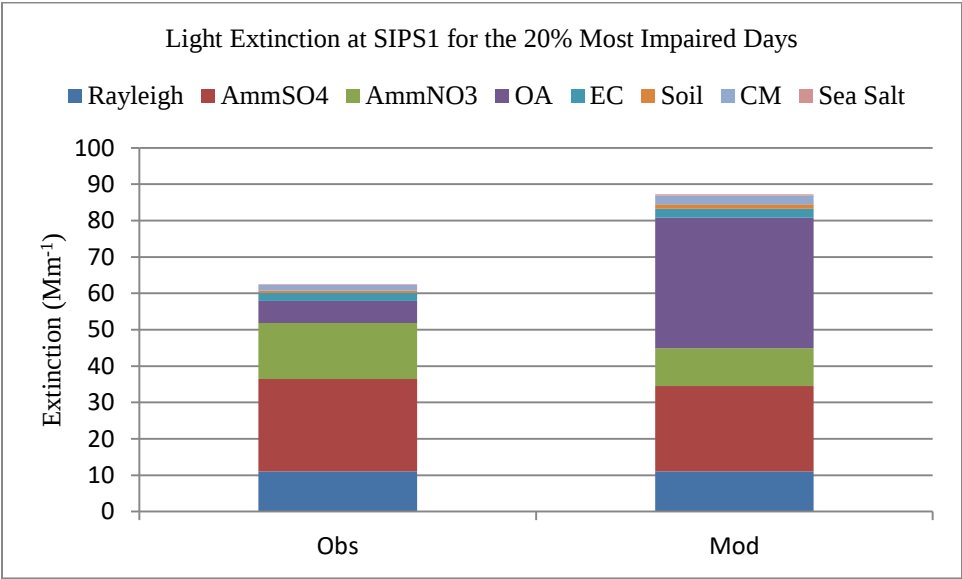


Figure L.2. 66: Light Extinction at WIMO1 for the Visibility Model Performance Evaluation

