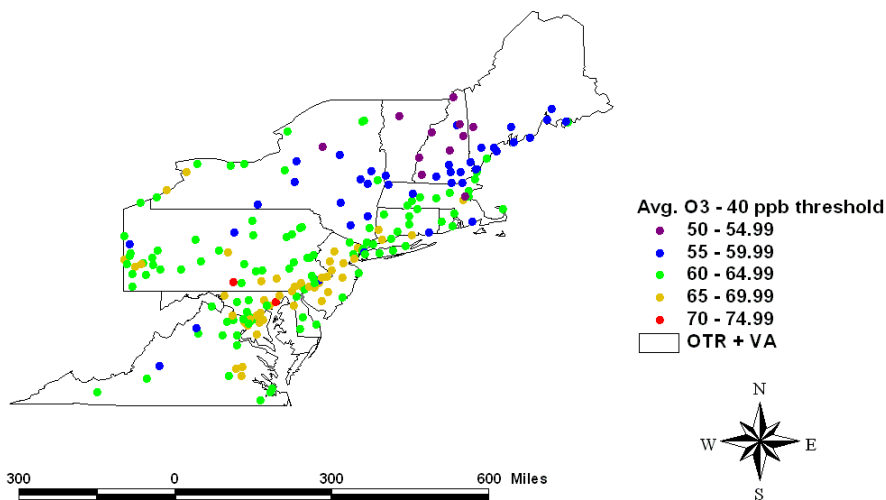


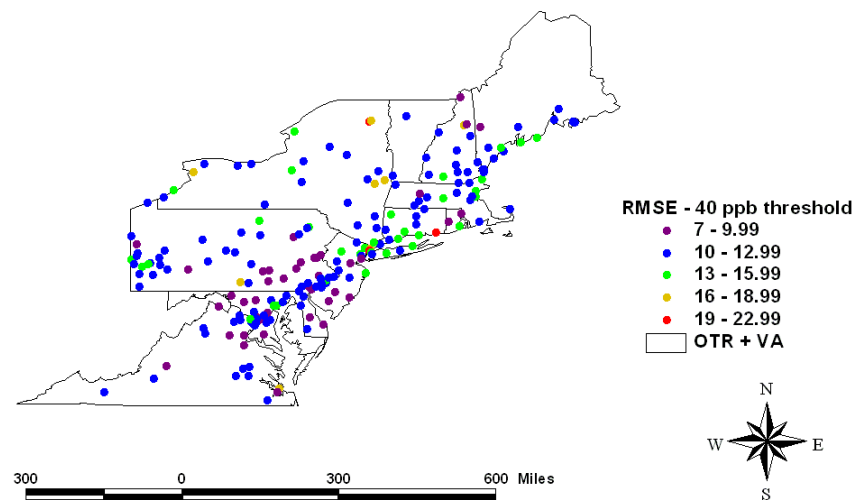
Preliminary evaluation of the 2002 Base B1 CMAQ simulation: Spatial Analysis

- A more complete statistical evaluation, including diurnal variations, of the summer portion (May 15 – September 30, 2002) is available on the NYSDEC FTP site → ftp://ftp.dec.state.ny.us/dar/air_research/kevin
- Here we present a subset of the analysis of selected species on a **spatial basis**
- Daily maximum 8-hour O₃, FRM PM_{2.5}, and major speciation (EPA STN) data
- Only data from AQS are considered here; analysis of IMPROVE, CASTNet & special data are on the FTP site

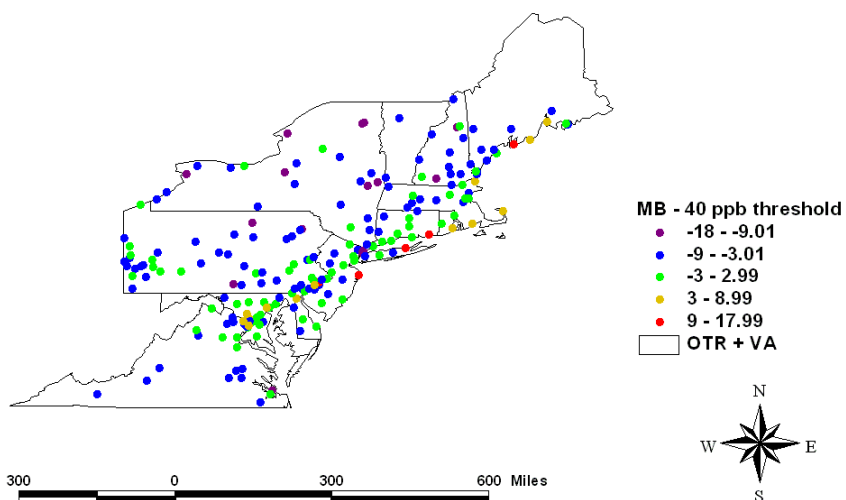
(A)



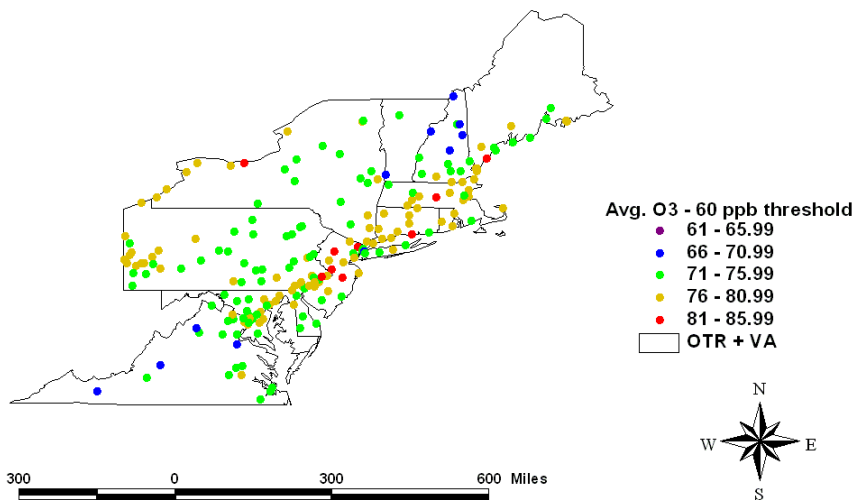
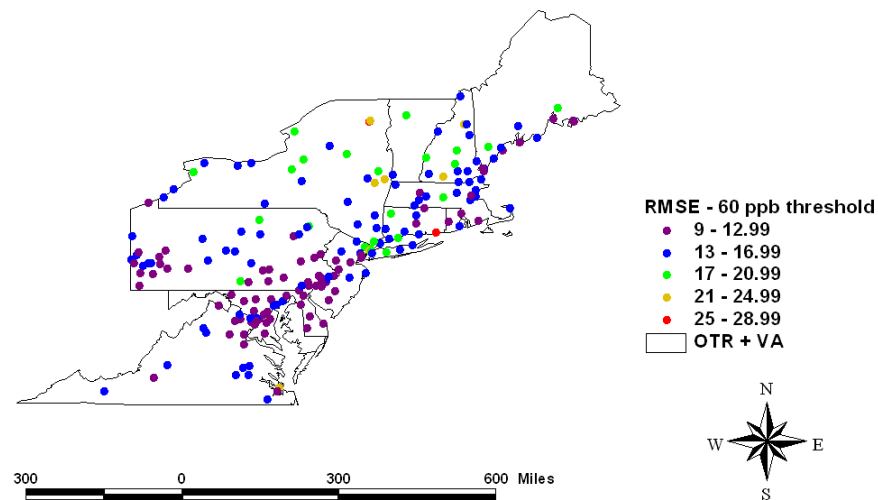
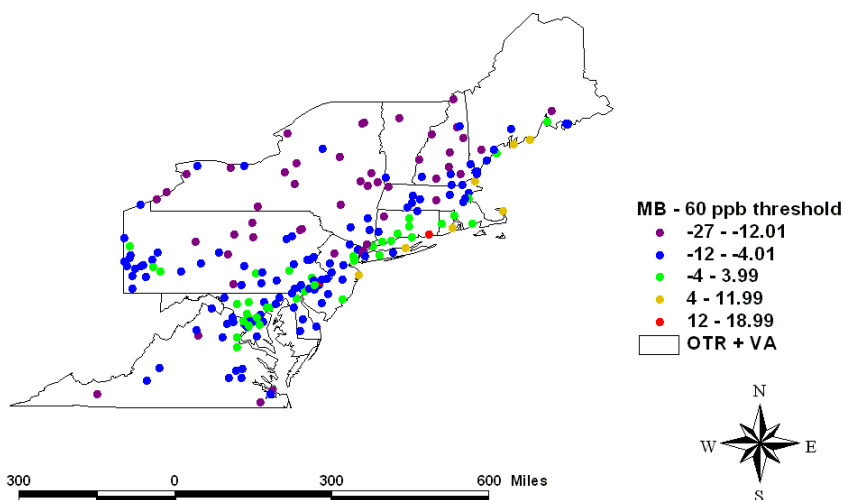
(B)



(C)

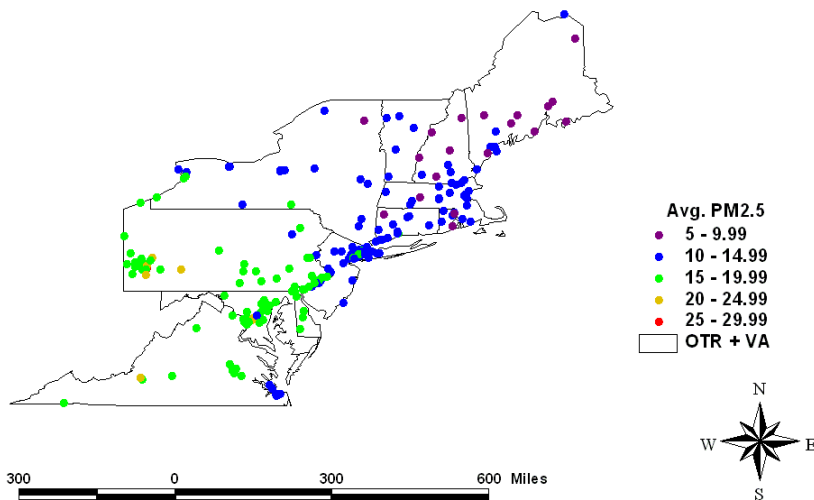


Daily maximum 8-hour average O₃ with a minimum observed threshold of 40 ppb at 208 SLAMS/NAMS sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

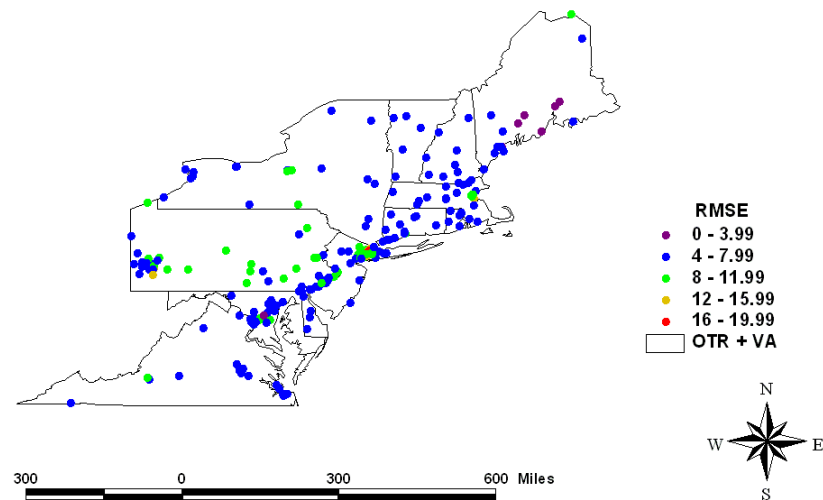
(A)**(B)****(C)**

Daily maximum 8-hour average O₃ with a minimum observed threshold of 60 ppb at 208 SLAMS/NAMS sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

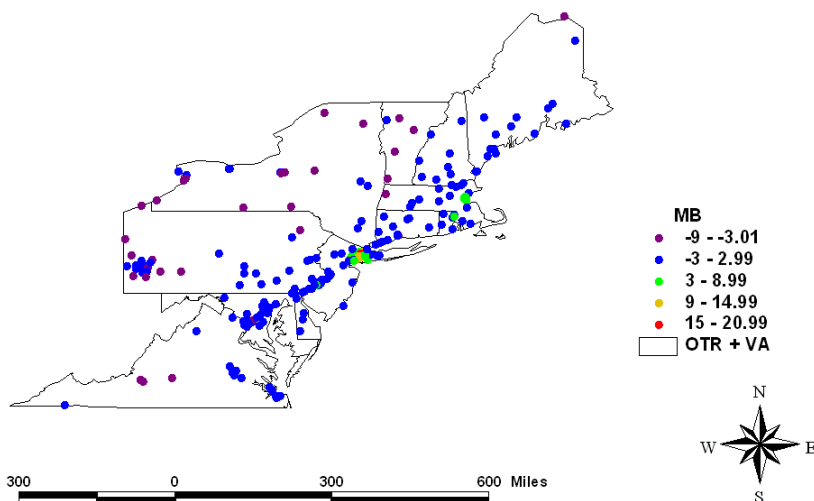
(A)



(B)

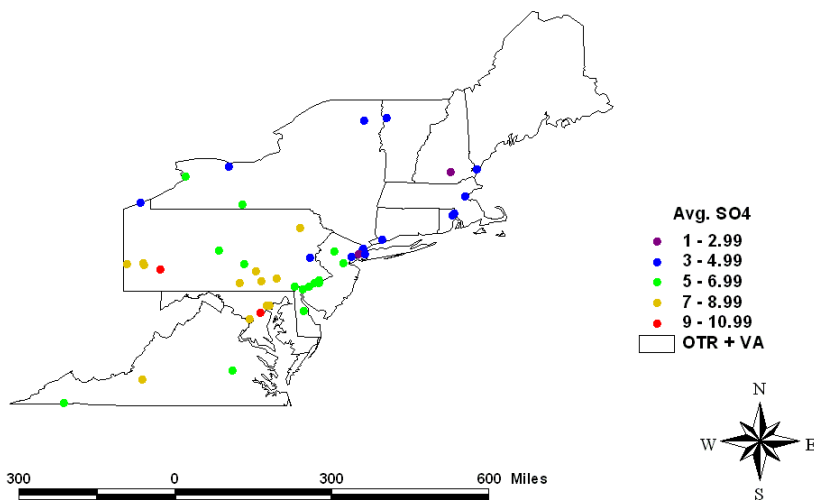


(C)

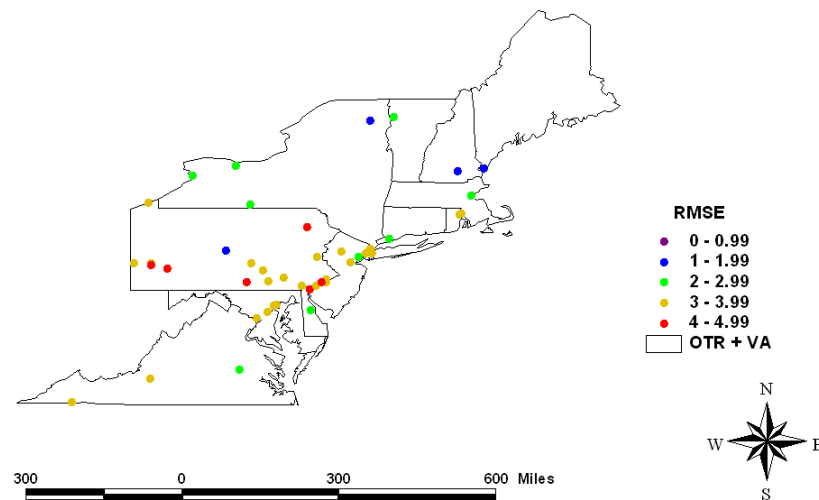


Daily average FRM PM_{2.5} mass at 257 SLAMS/NAMS sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

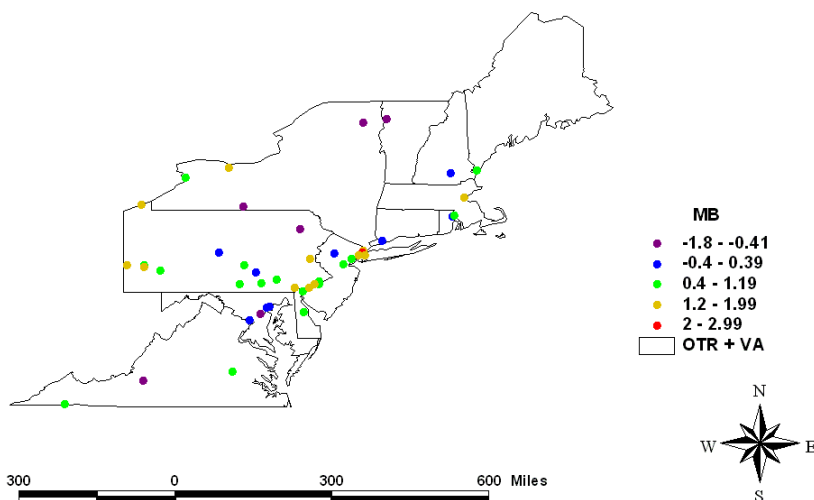
(A)



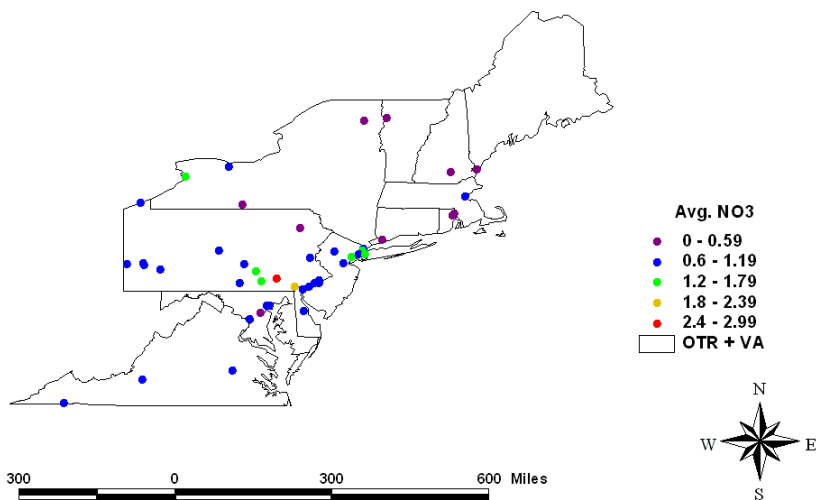
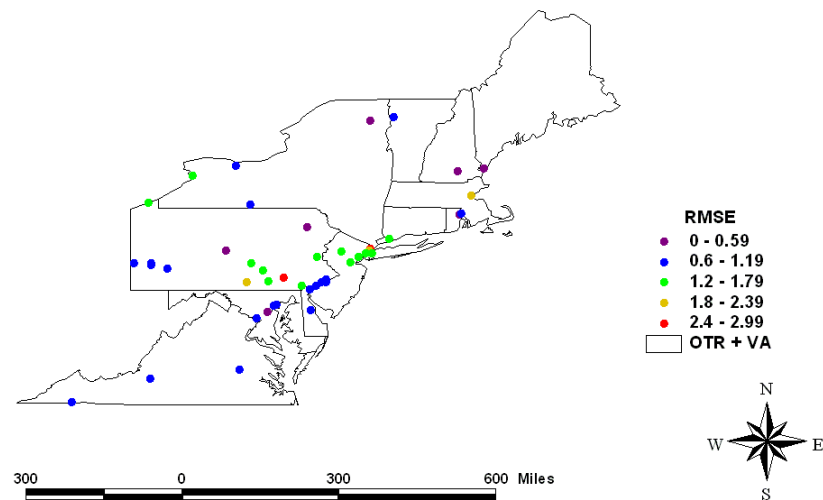
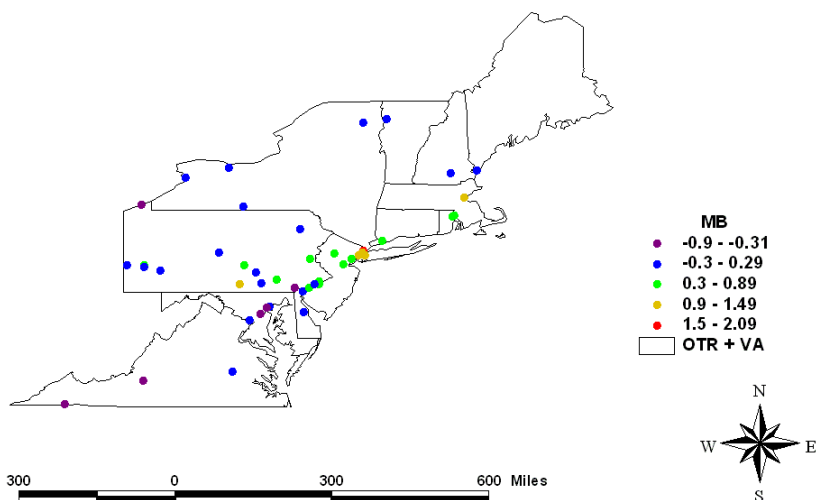
(B)



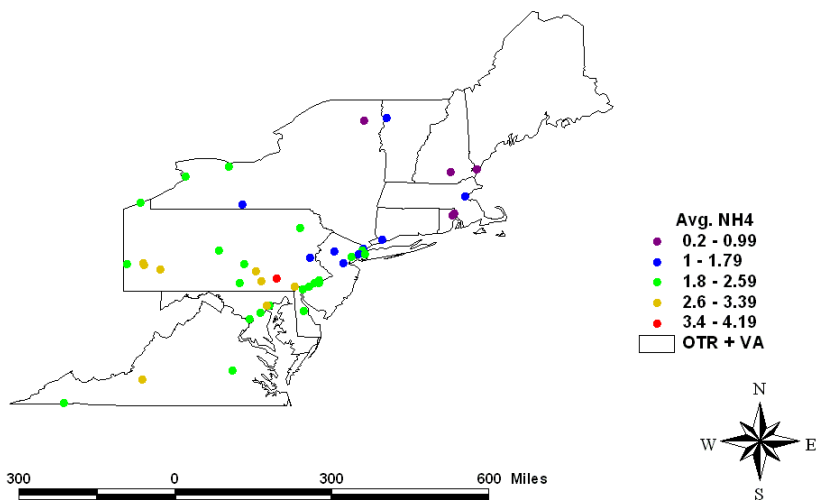
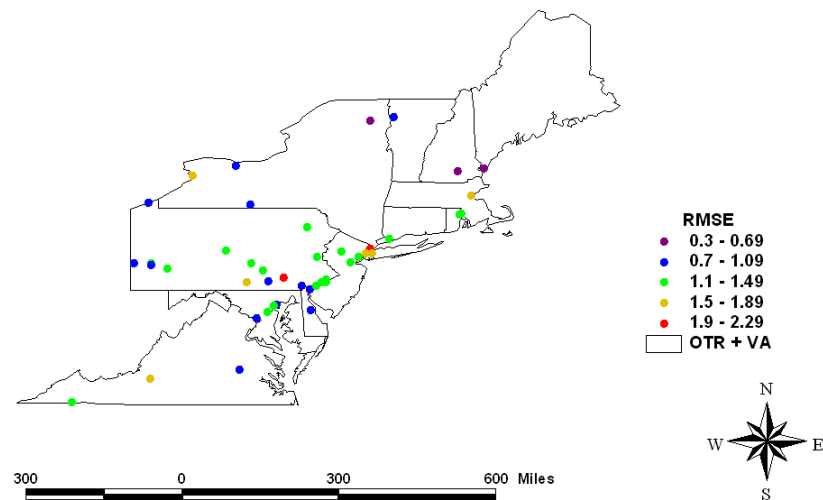
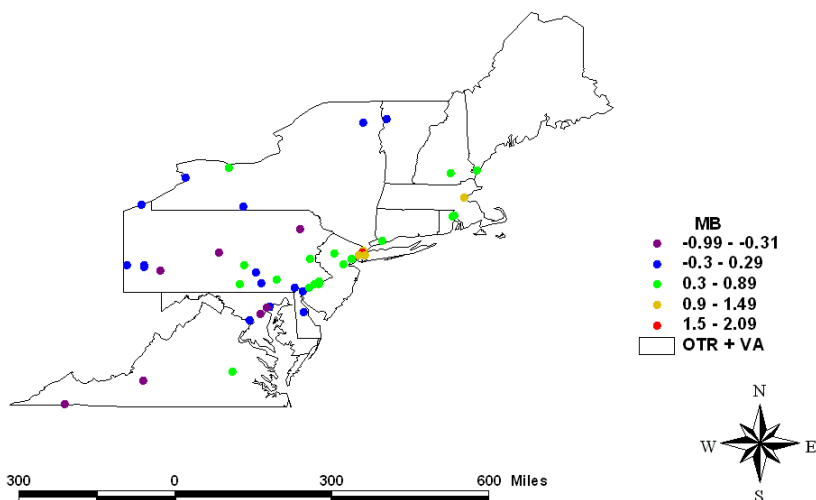
(C)



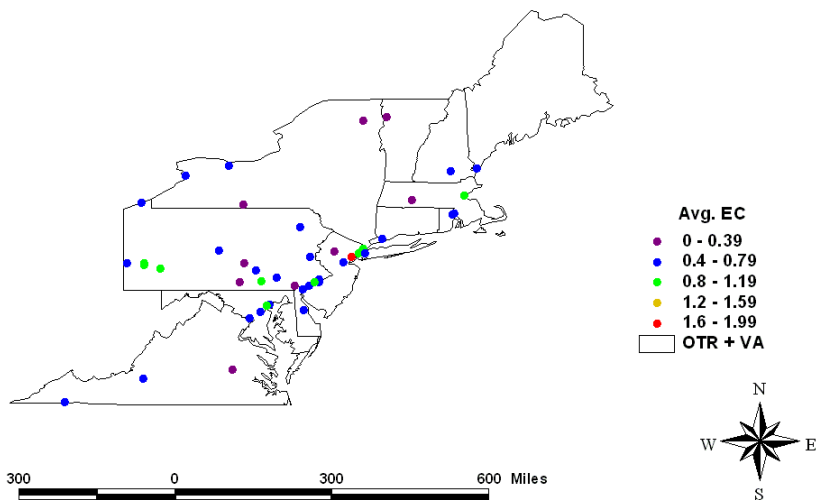
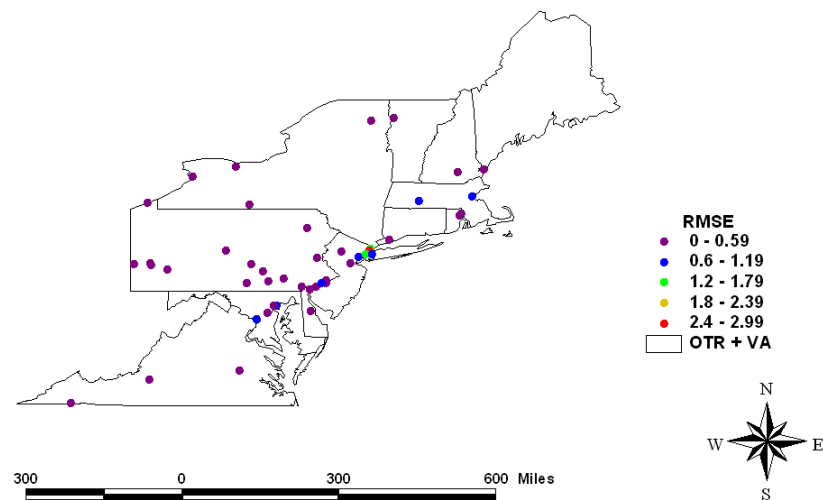
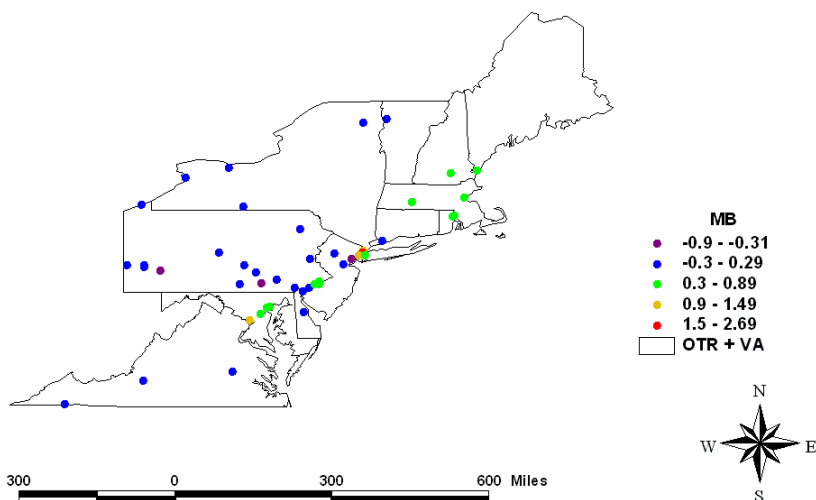
Daily average SO₄ mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

(A)**(B)****(C)**

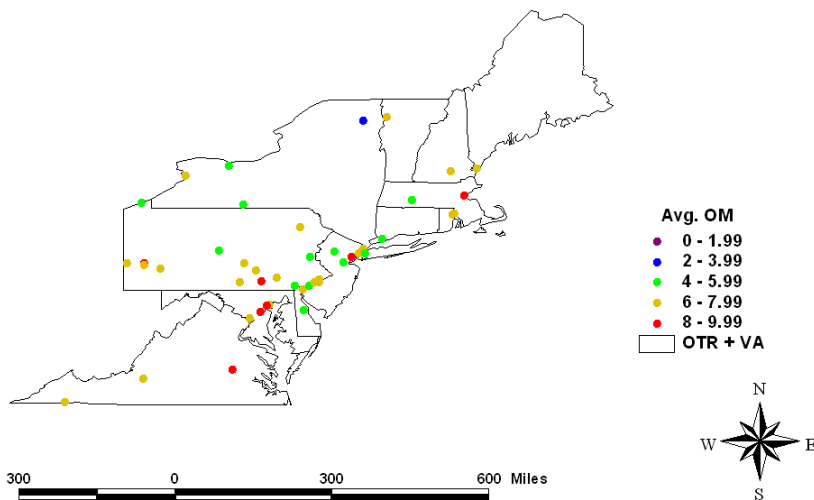
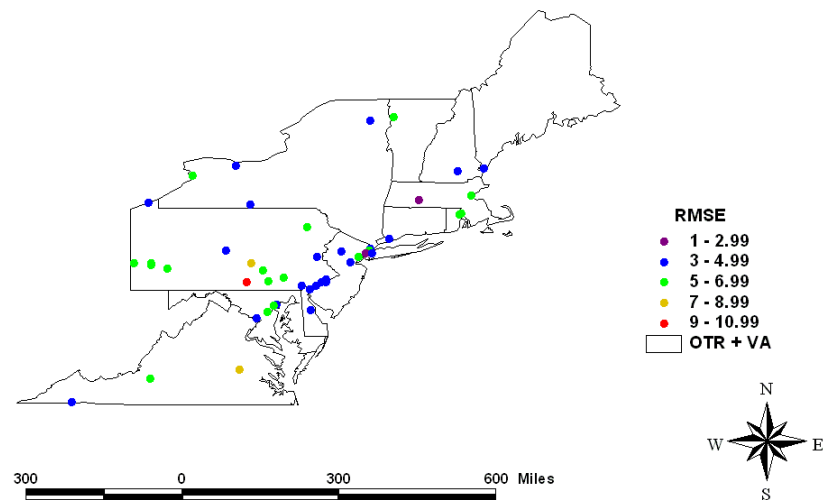
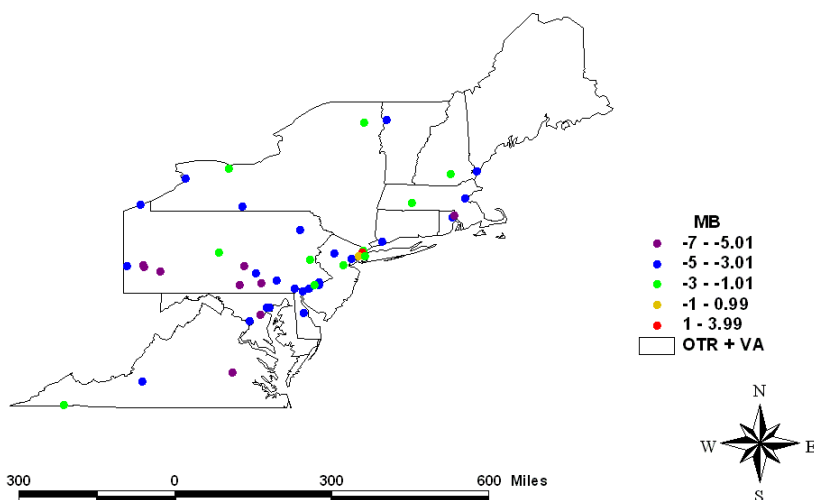
Daily average NO₃ mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

(A)**(B)****(C)**

Daily average NH₄ mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

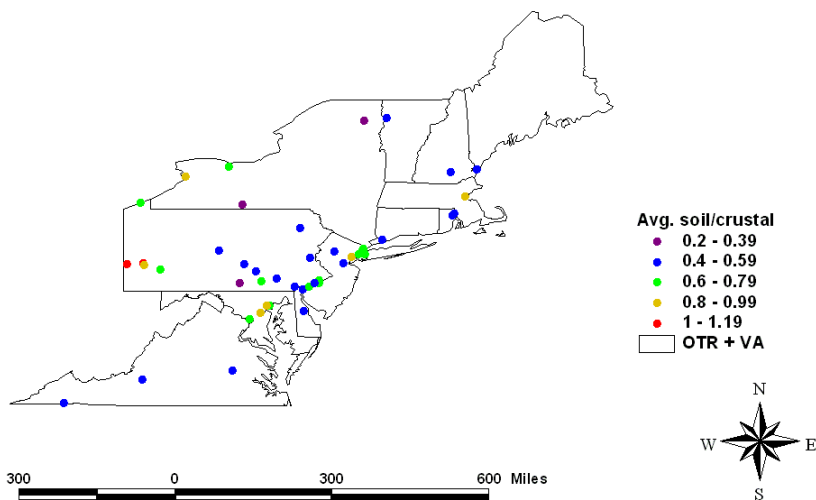
(A)**(B)****(C)**

Daily average EC mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias (MB=P-O). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

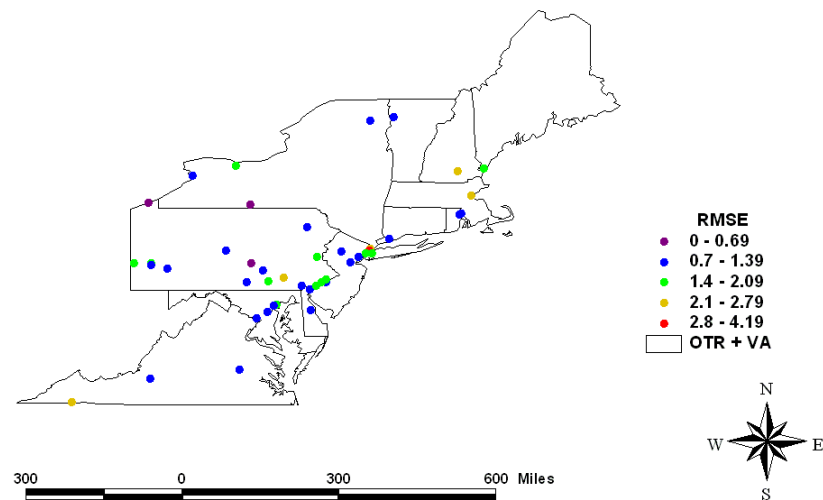
(A)**(B)****(C)**

Daily average OM ($=1.8 \times \text{blank-corrected OC}$) mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias ($MB=P-O$). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.

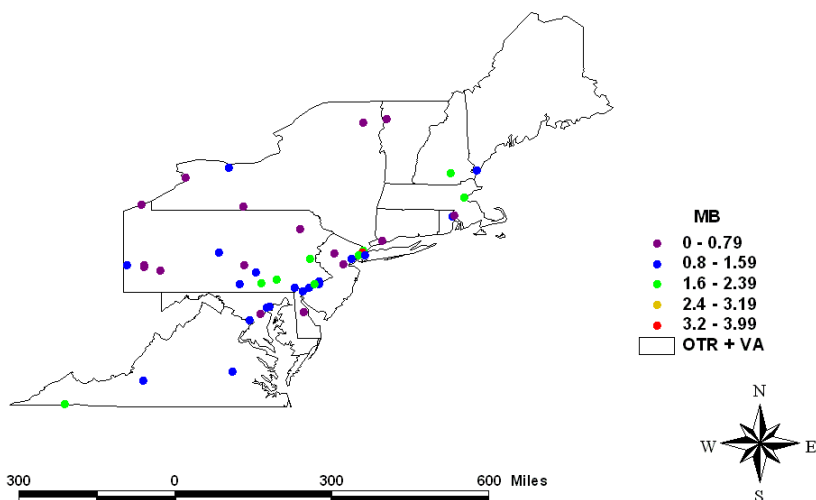
(A)



(B)



(C)



Daily average soil/crustal mass at 49 EPA/STN sites across the OTR and Virginia: (A) observed averages, (B) root mean square error (RMSE), and (C) mean bias ($MB=P-O$). At least 10 days were required for displaying the statistics at a given site, and only those days when the observed and predicted mass agreed to within a factor of 25 are included. Data from the July 6-9 period are excluded since they may be affected by the Canadian forest fires.