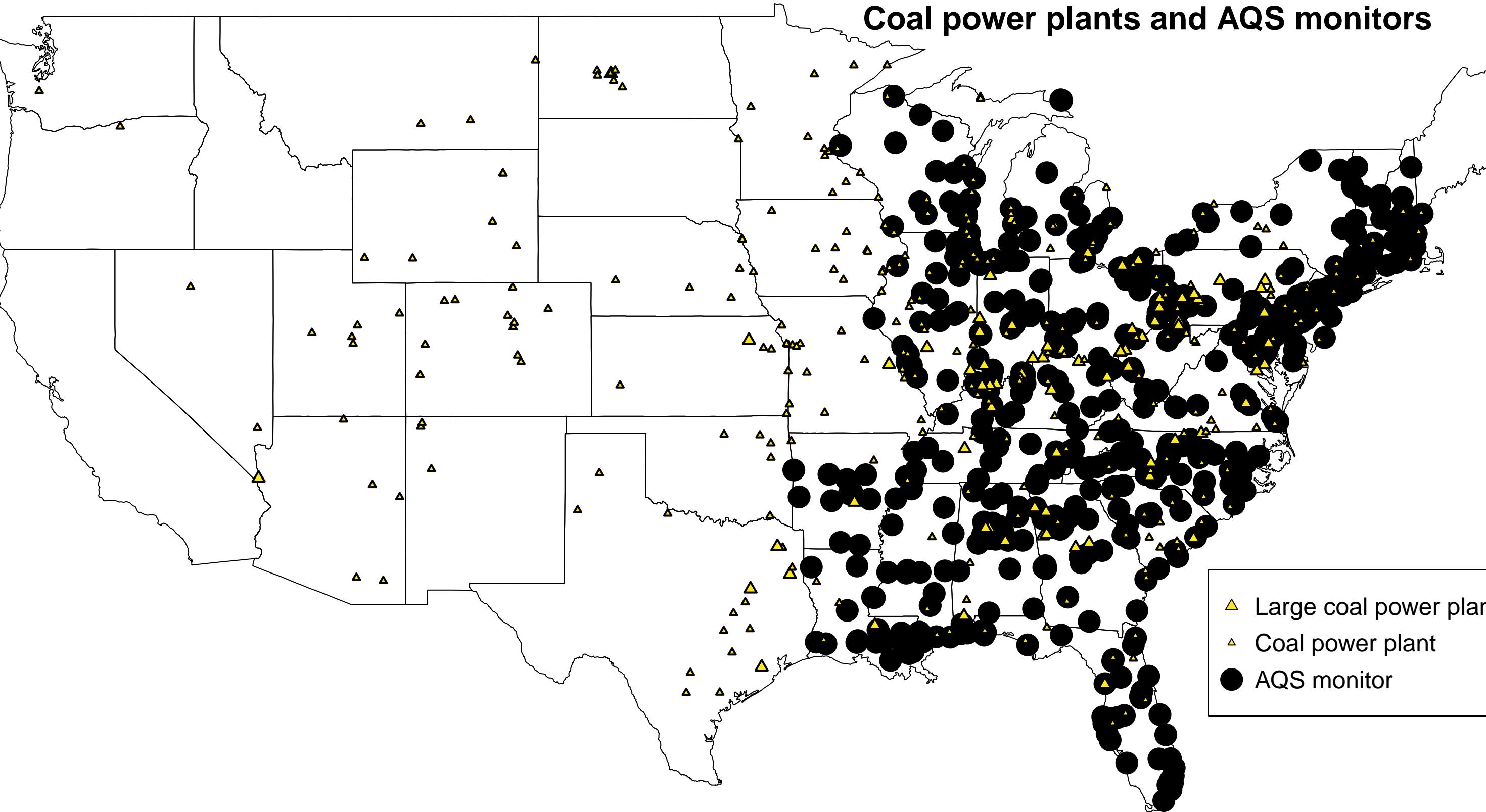
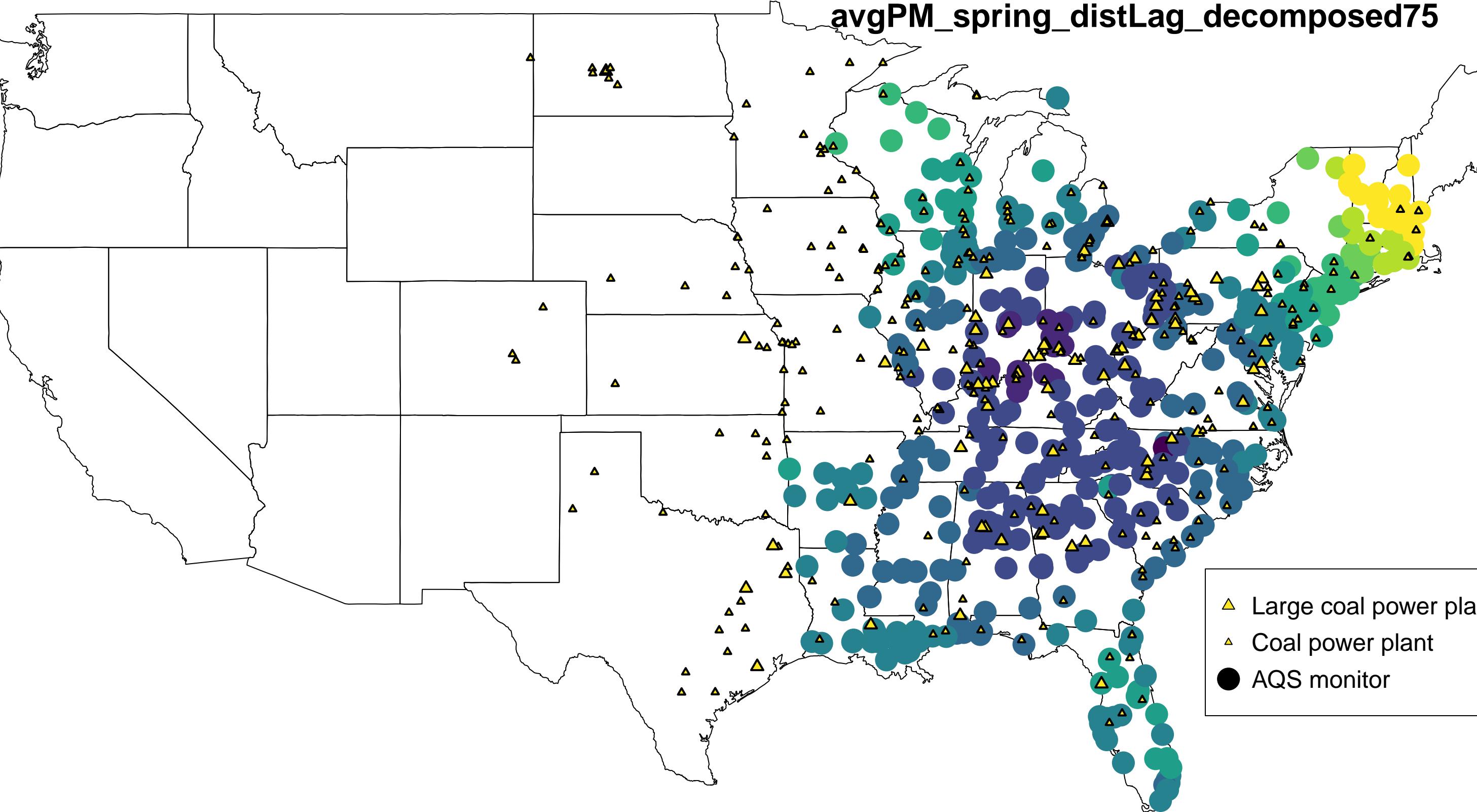


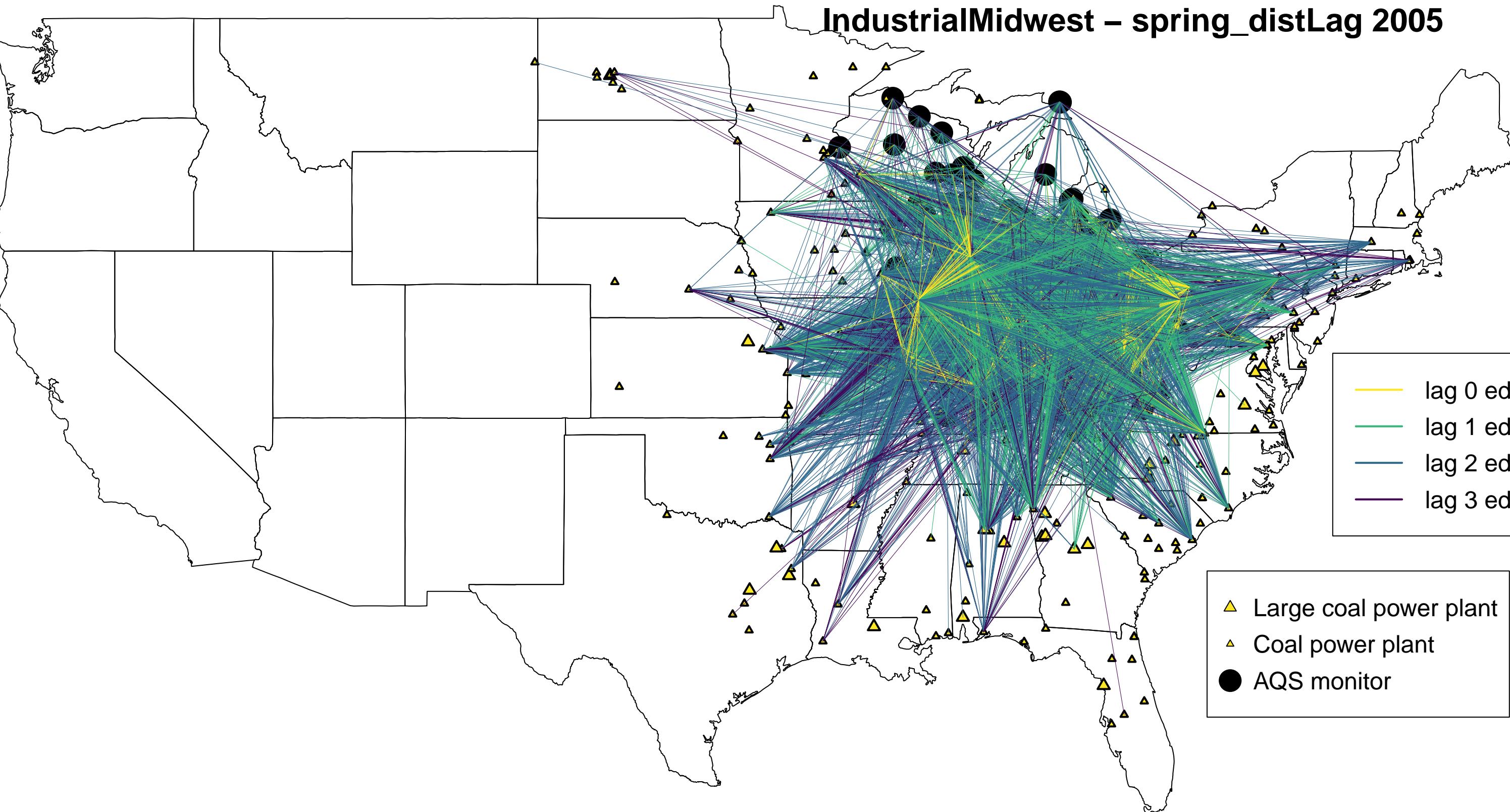
Coal power plants and AQS monitors



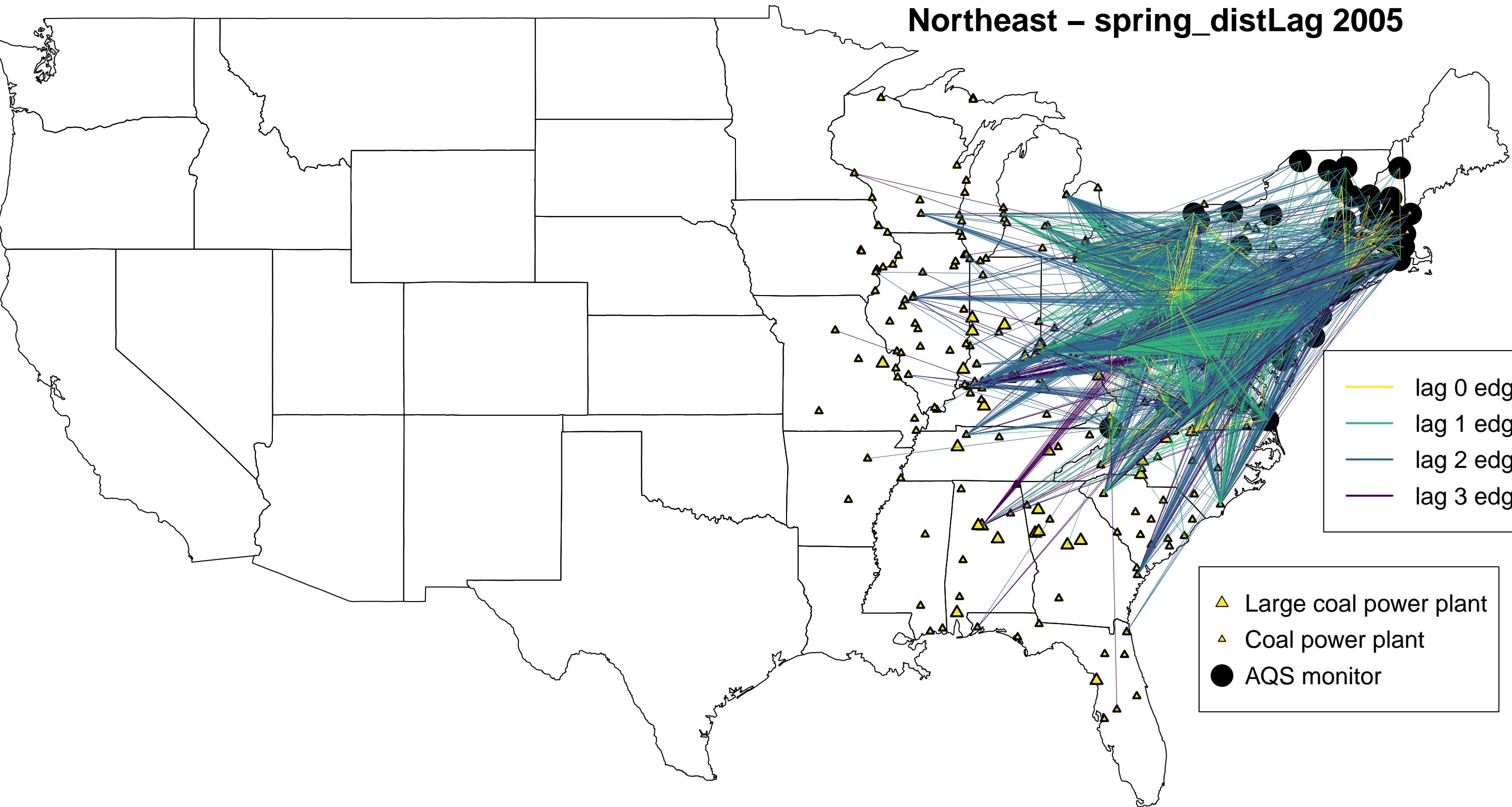
avgPM_spring_distLag_decomposed75



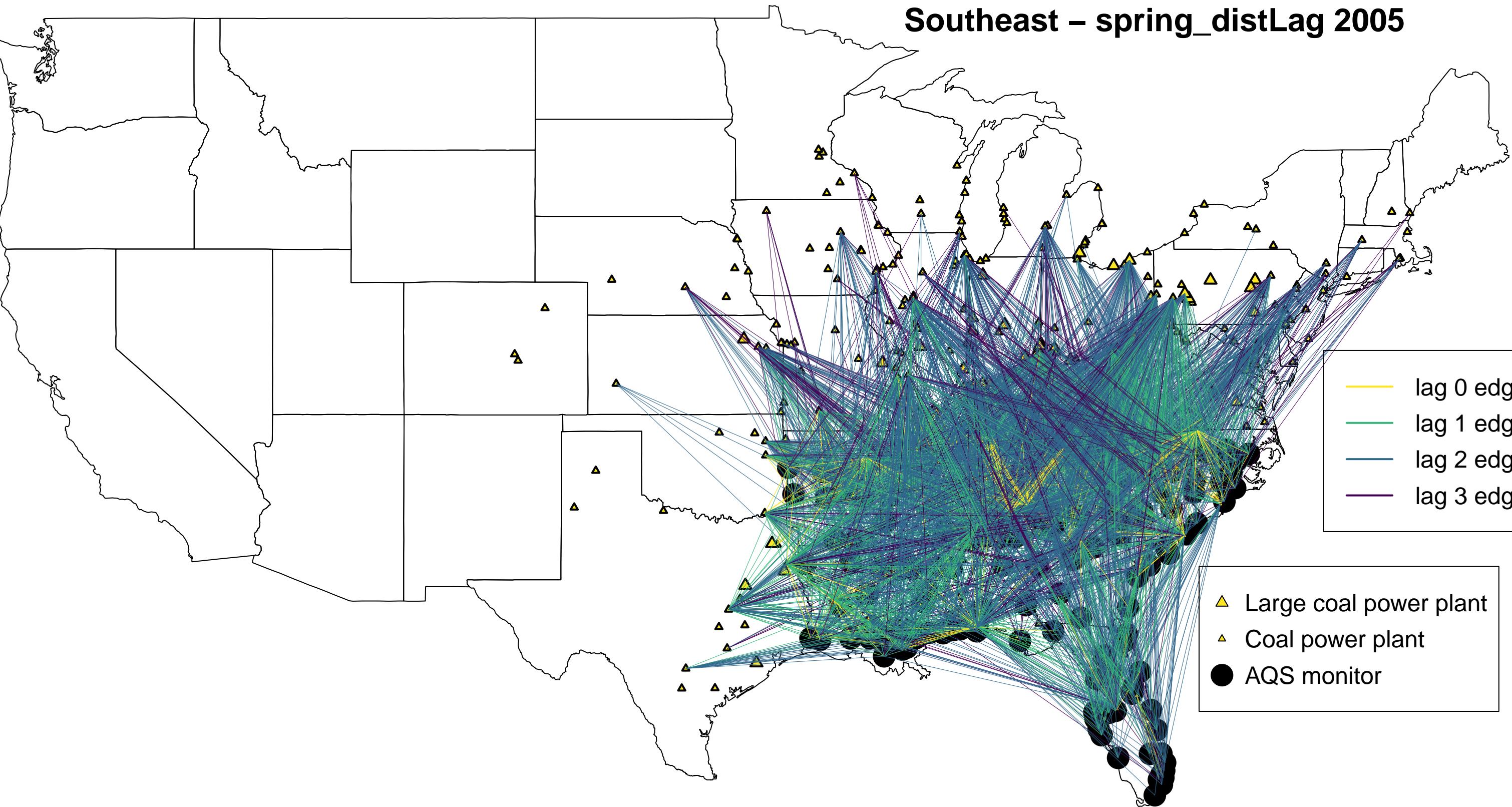
IndustrialMidwest – spring_distLag 2005



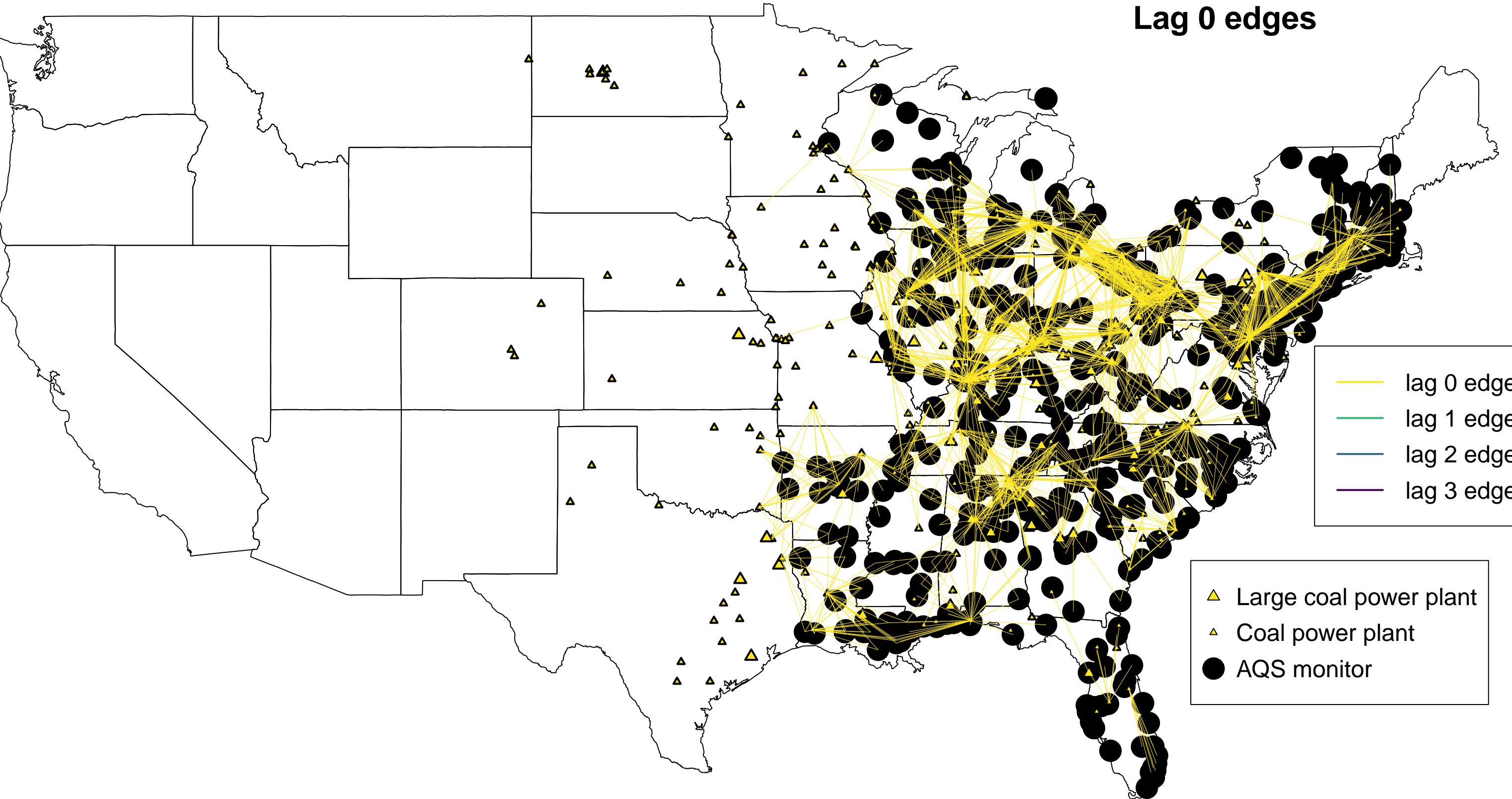
Northeast – spring_distLag 2005



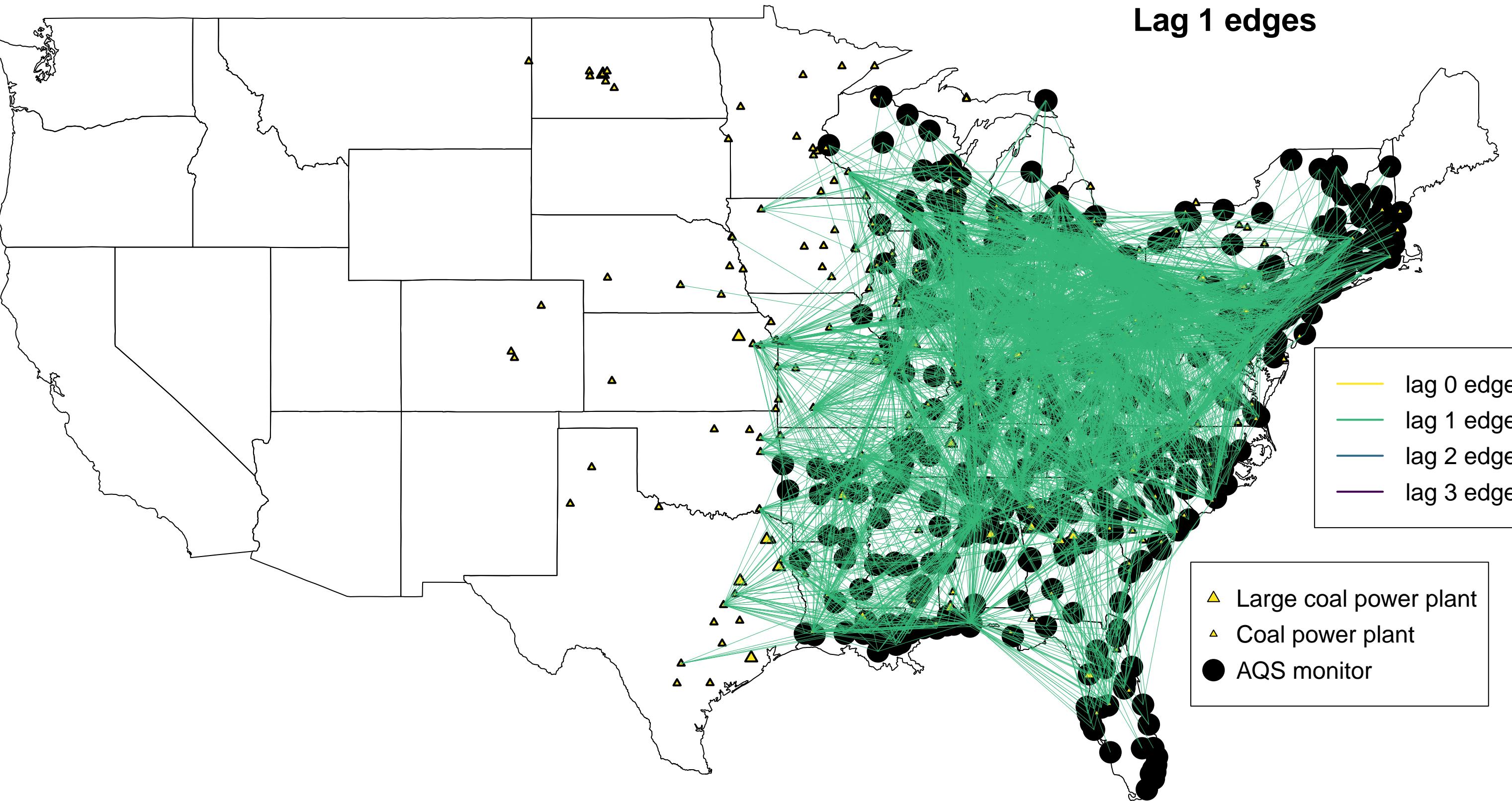
Southeast – spring_distLag 2005



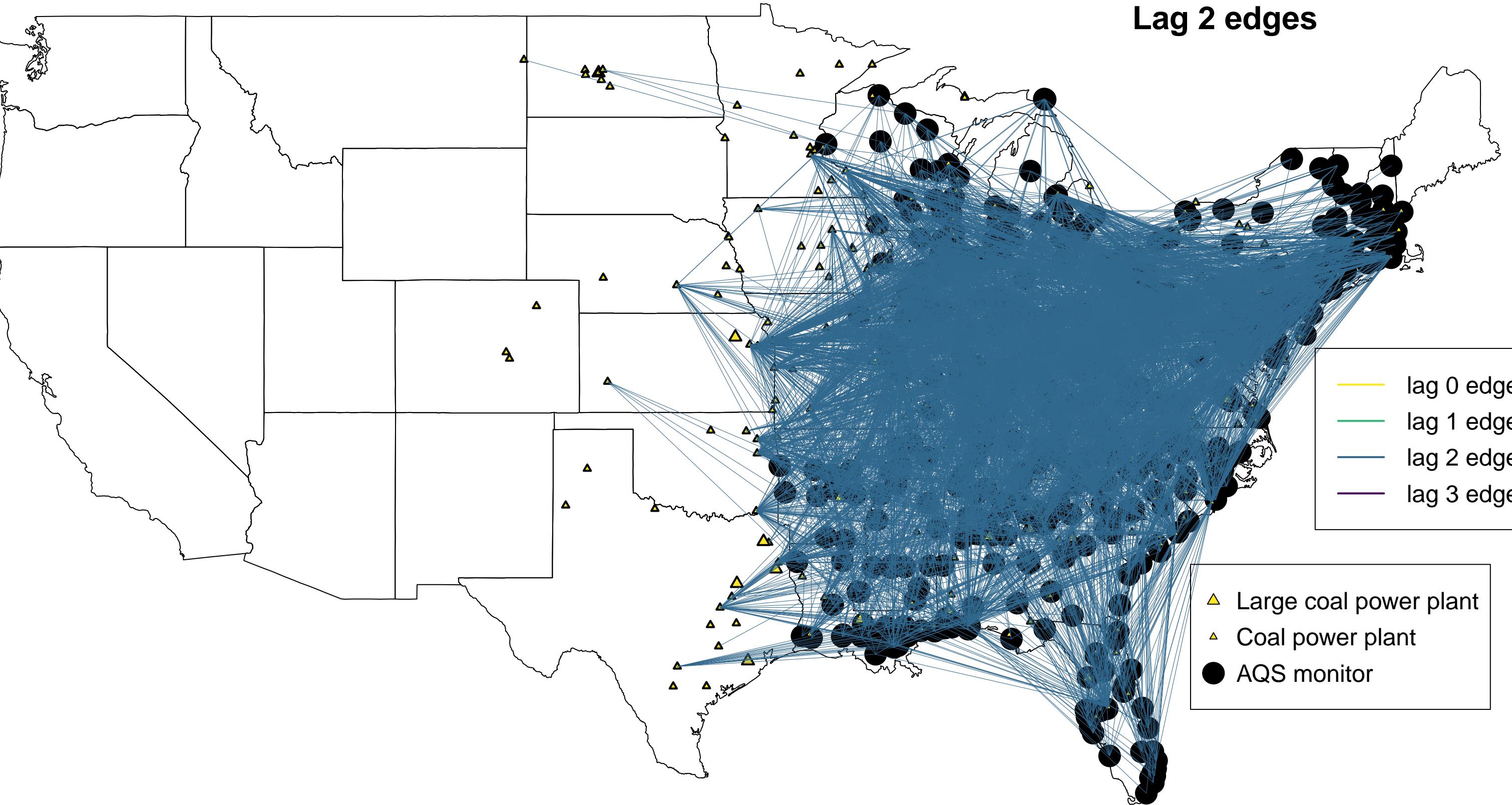
Lag 0 edges



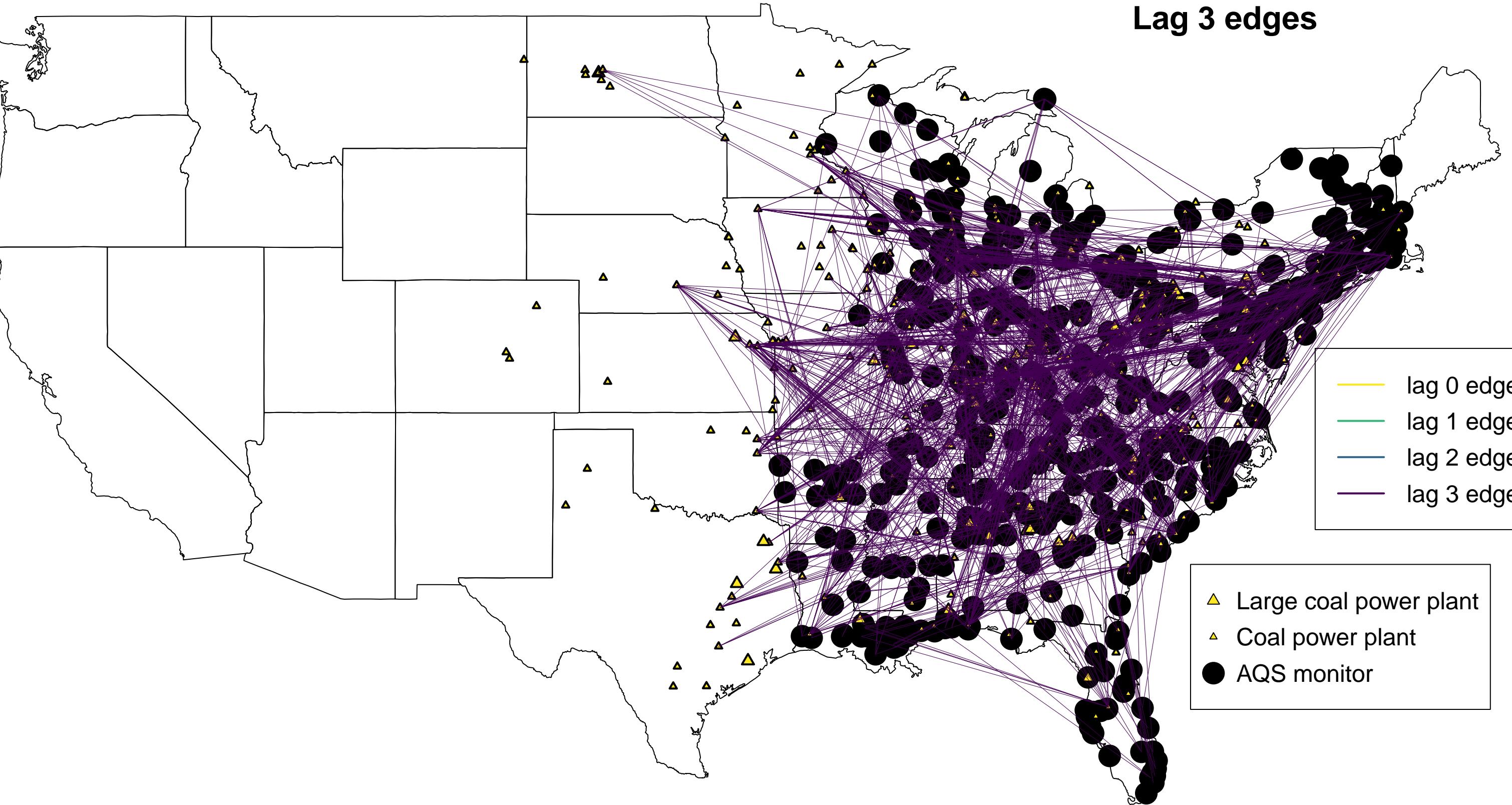
Lag 1 edges

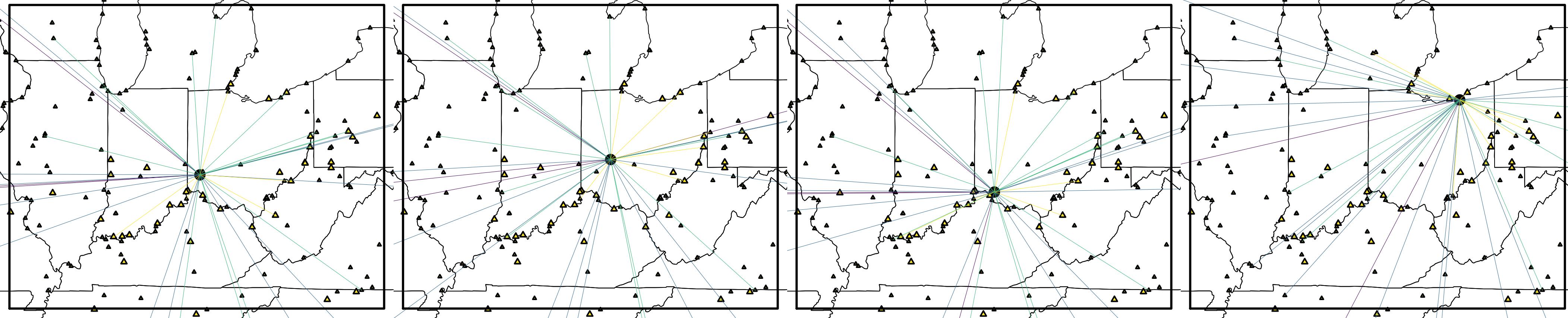
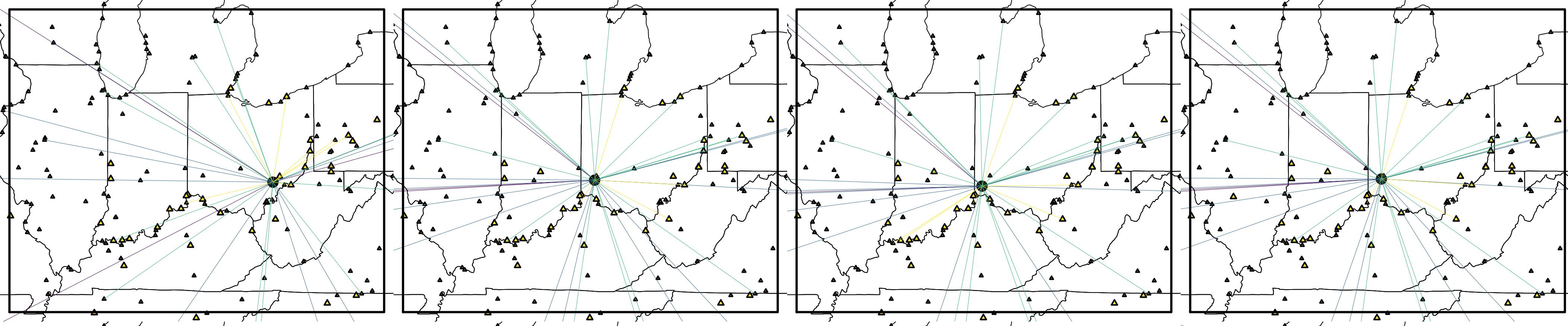


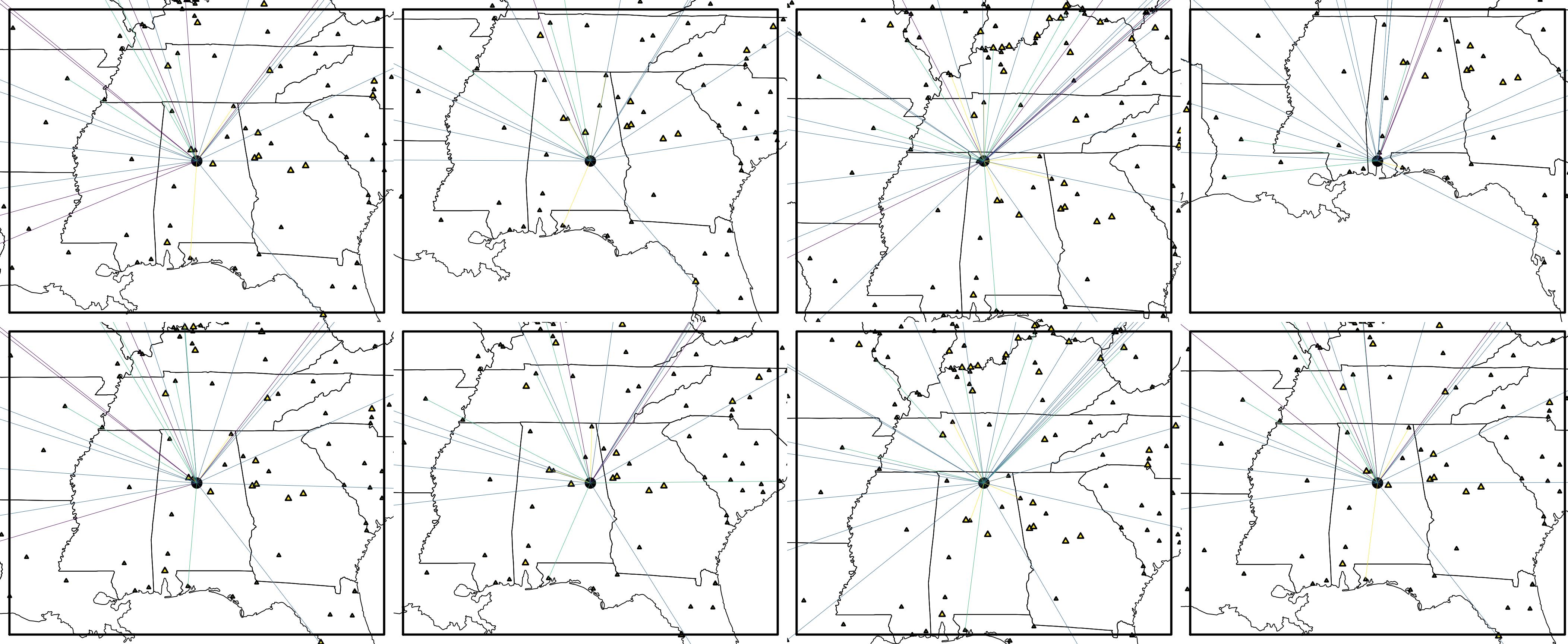
Lag 2 edges

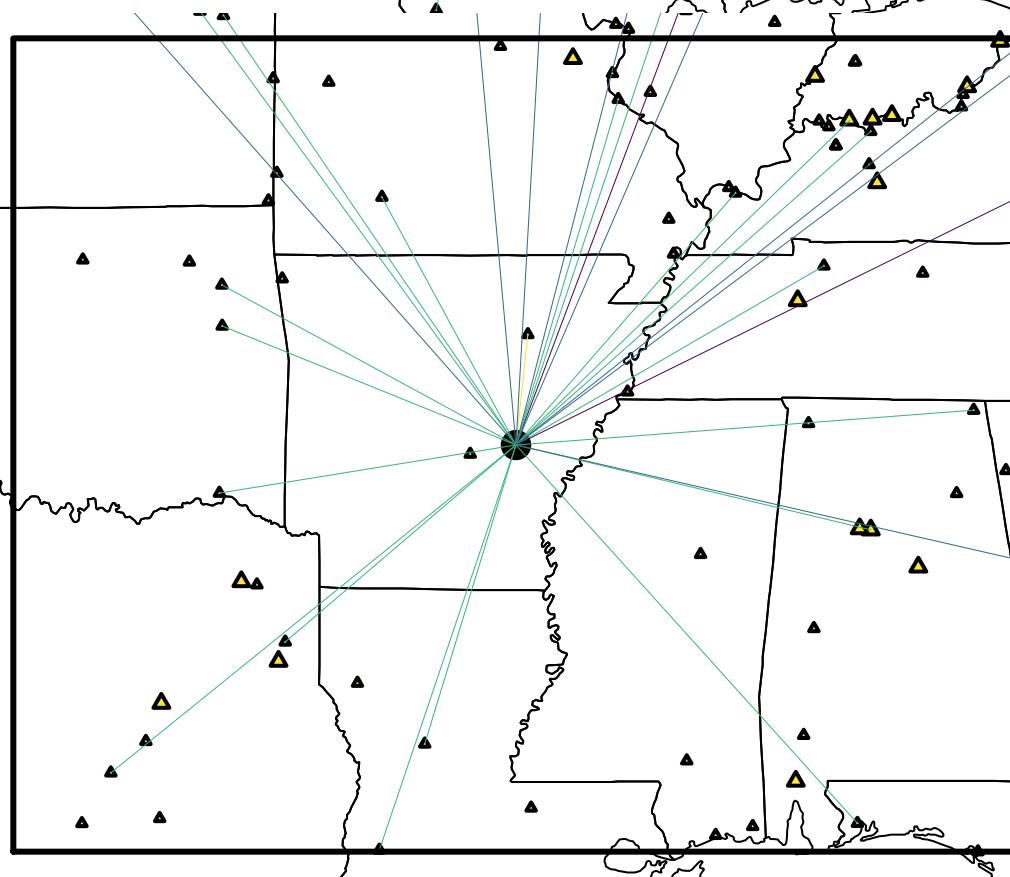
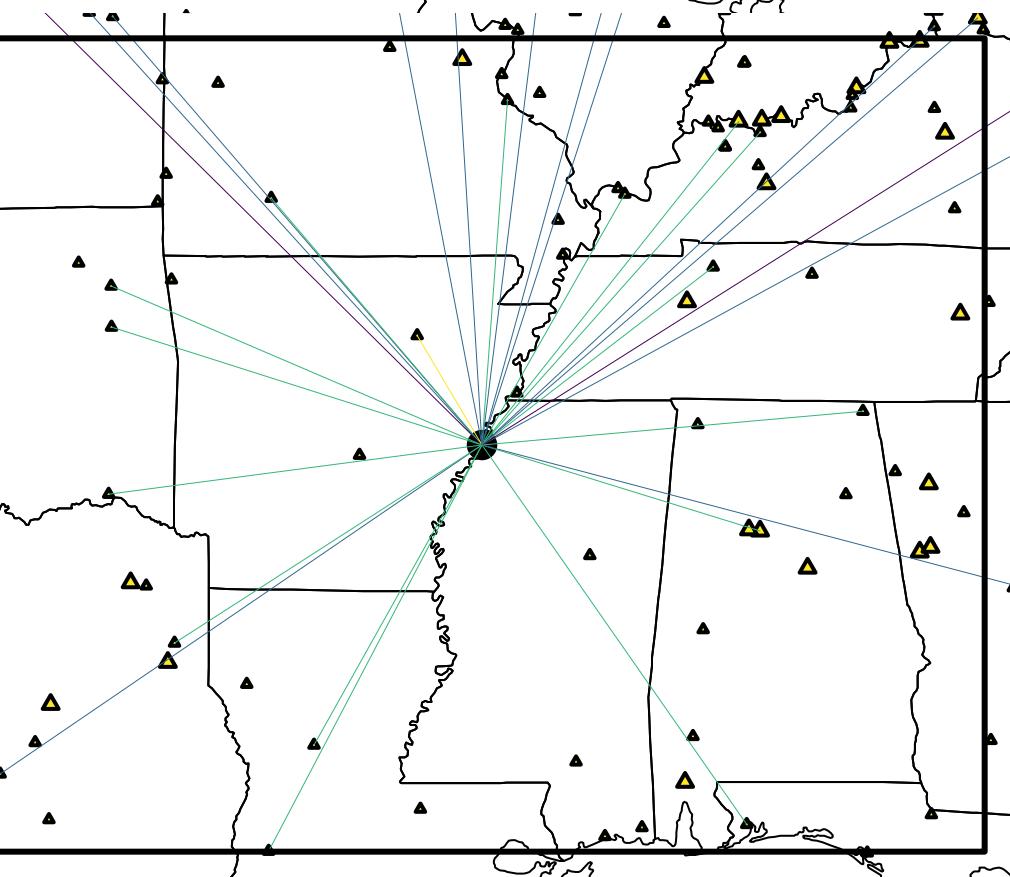
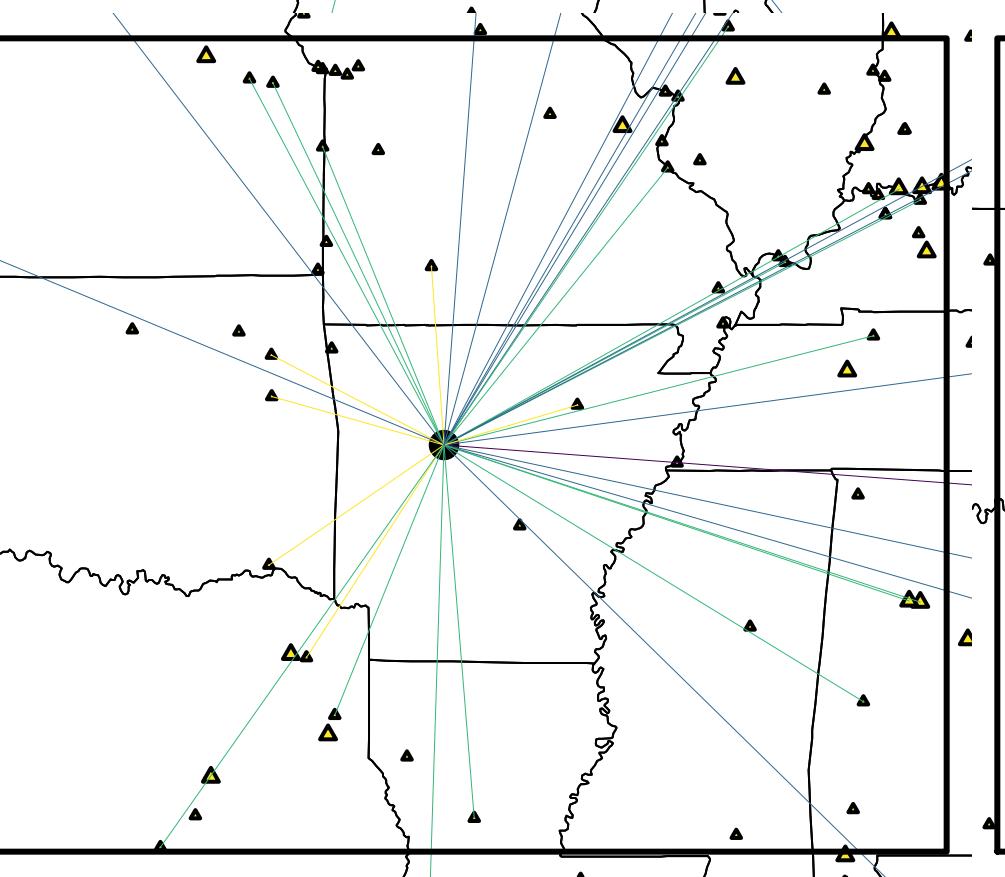
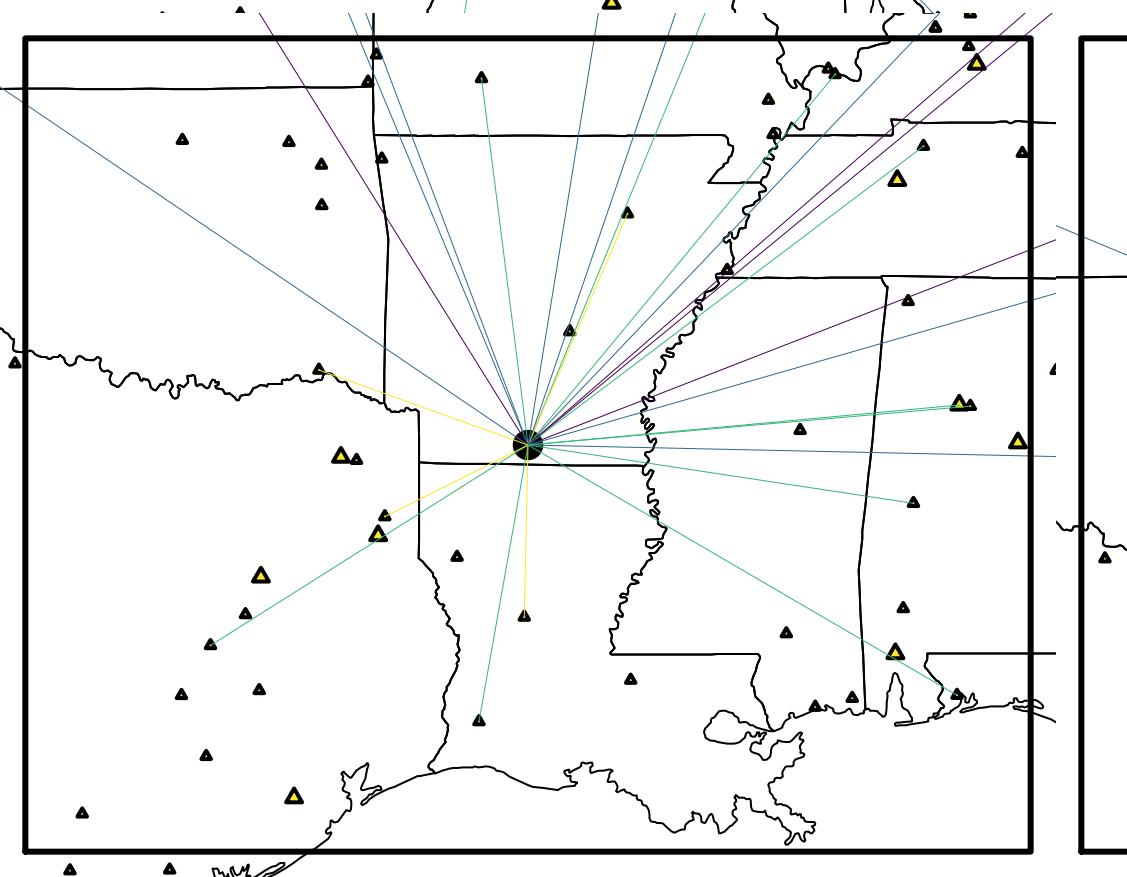
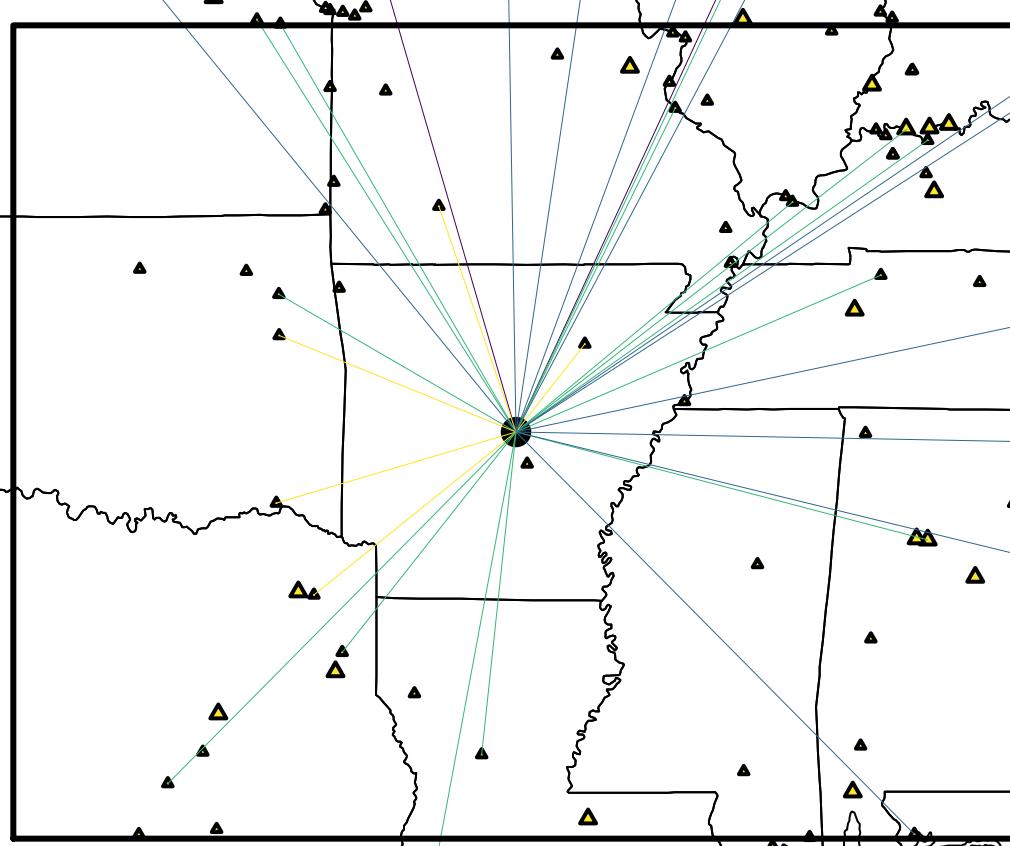
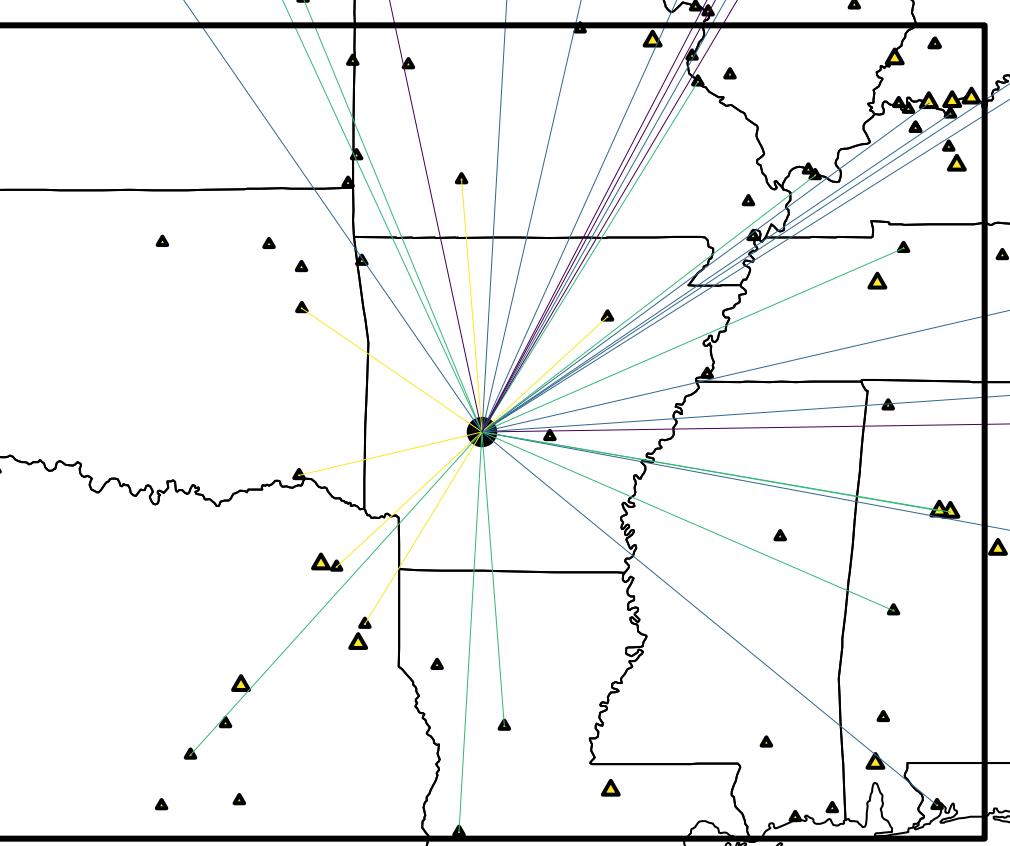
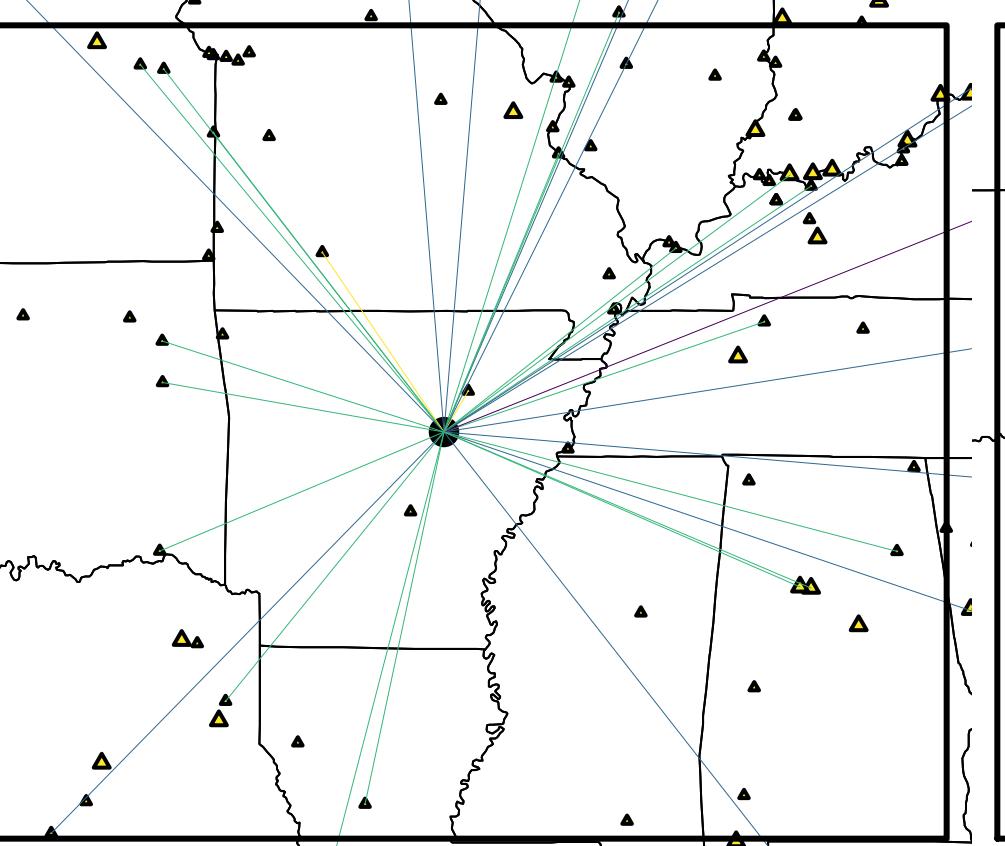
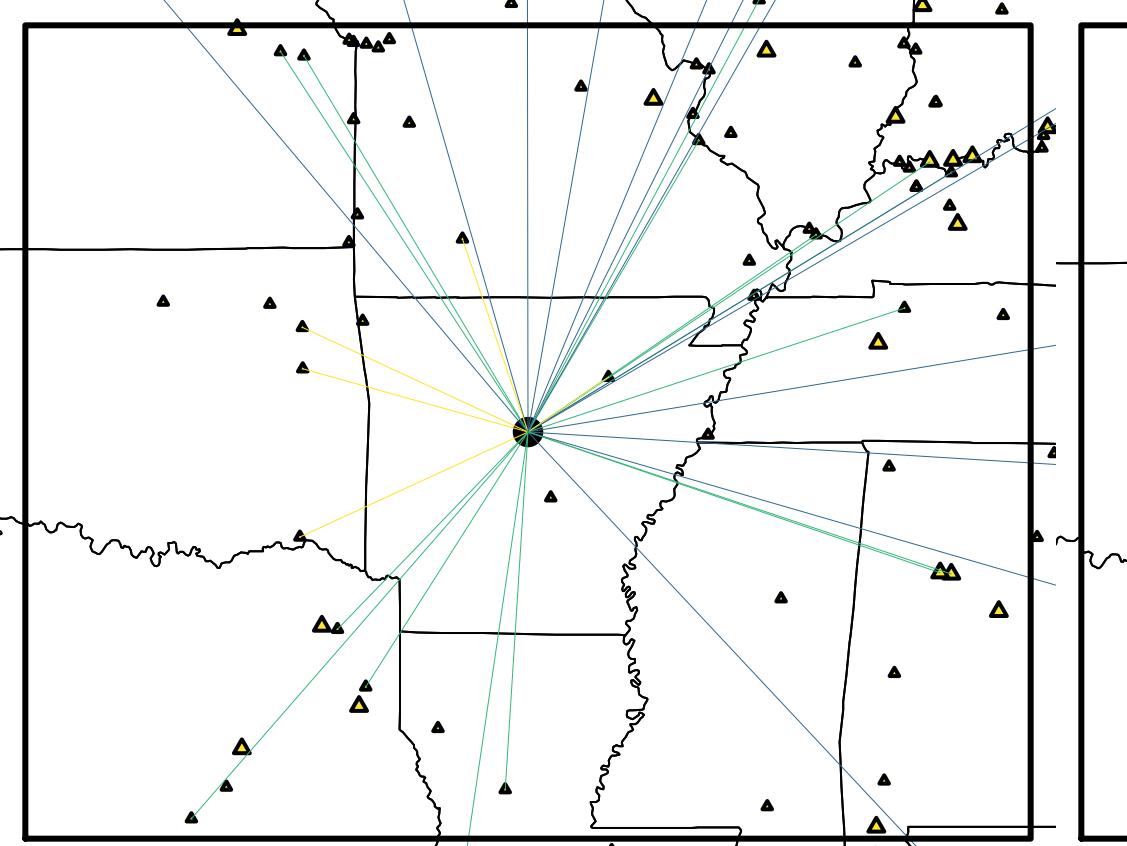


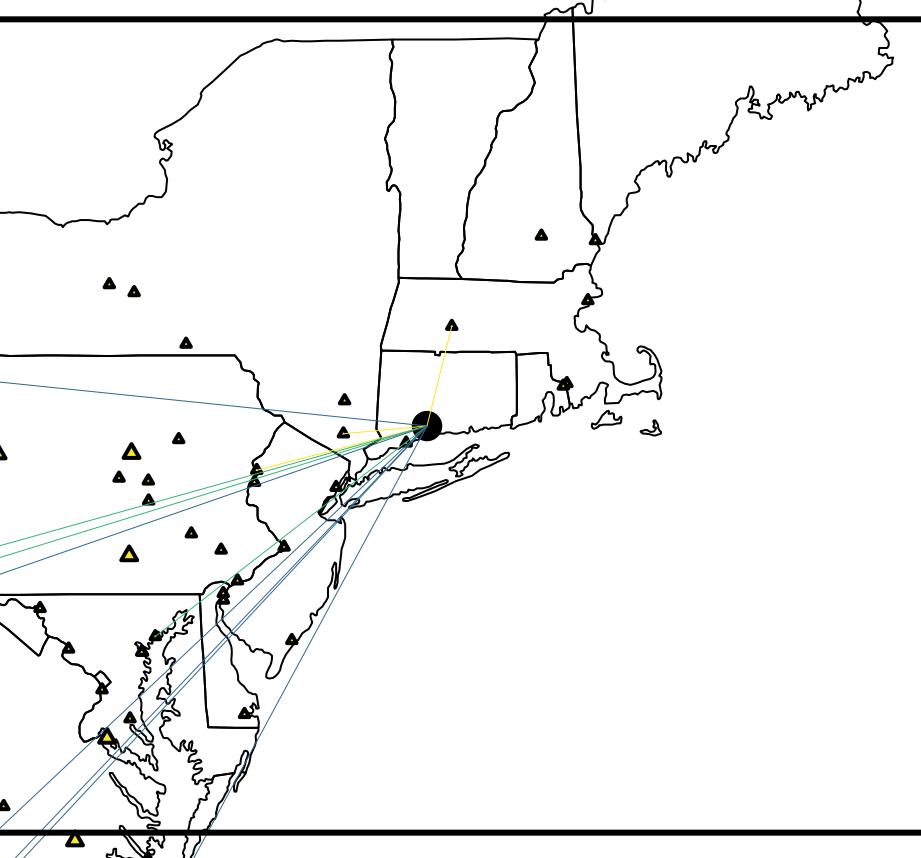
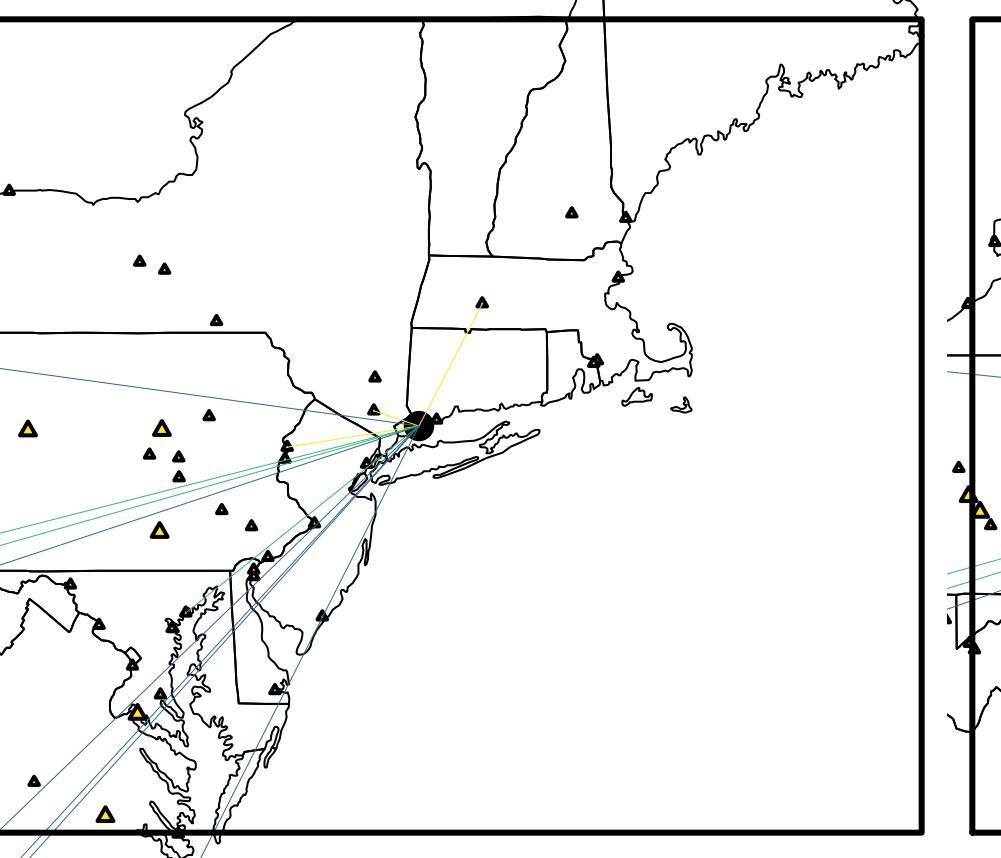
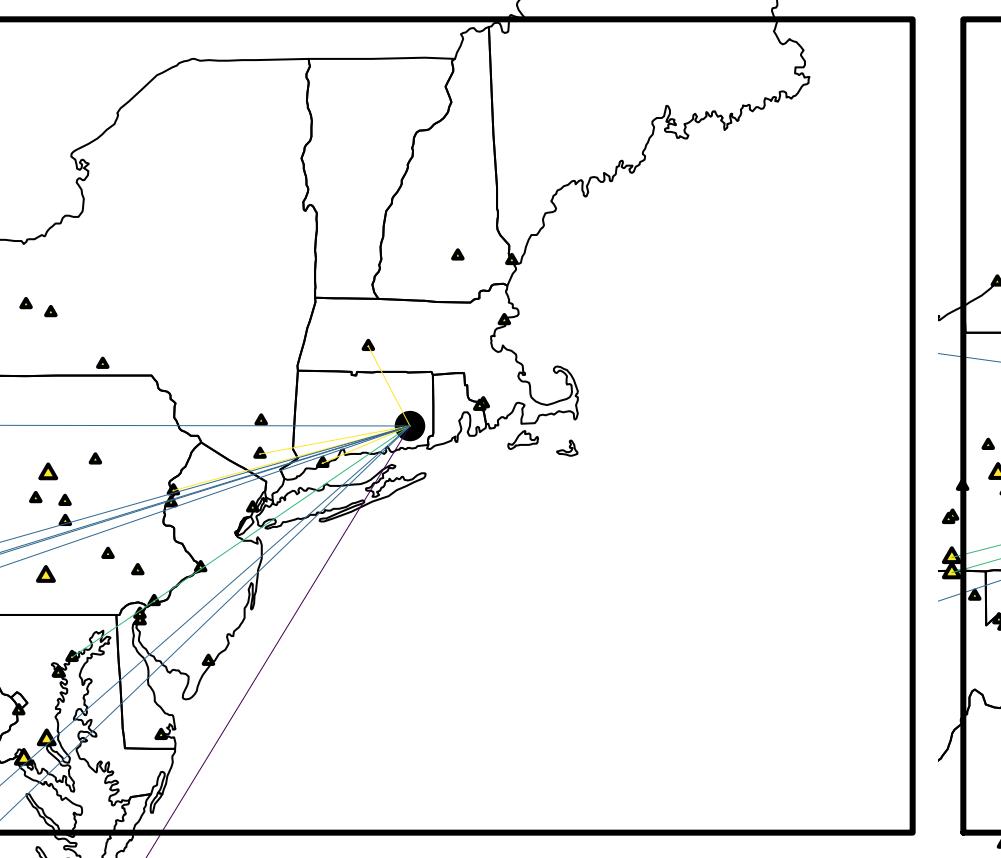
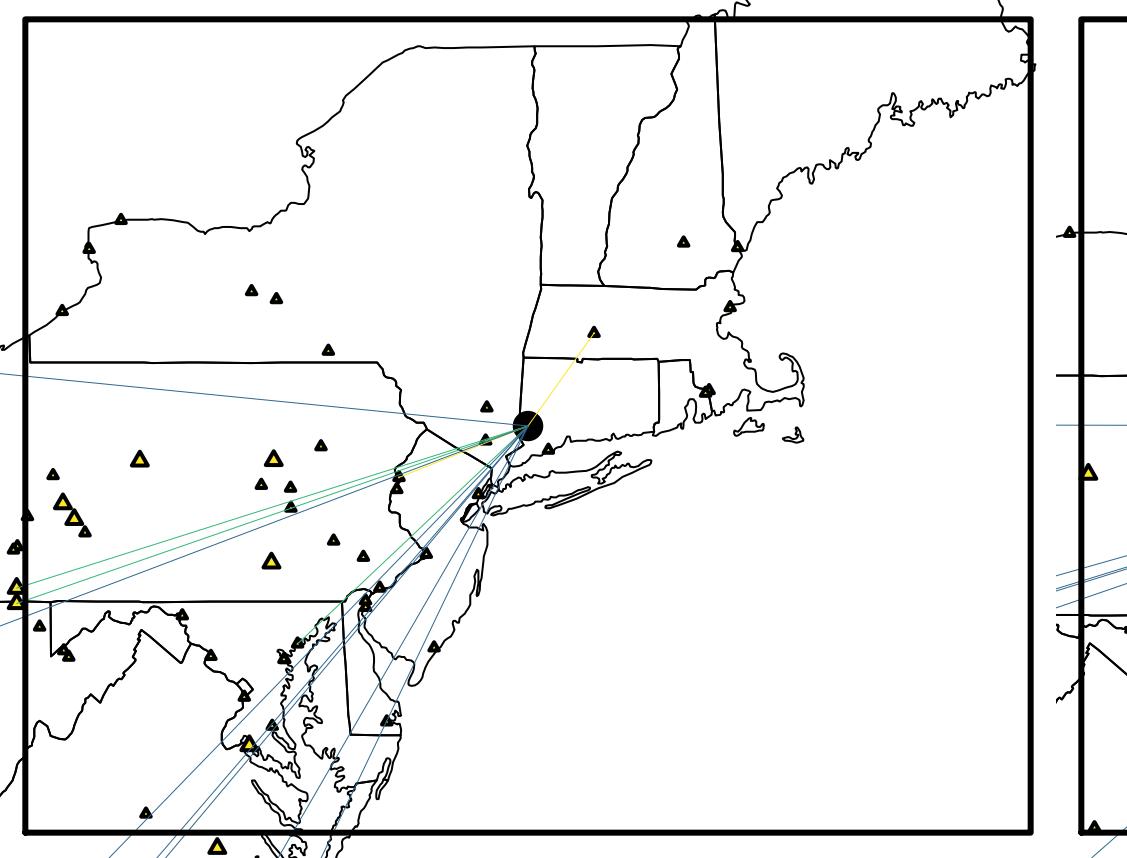
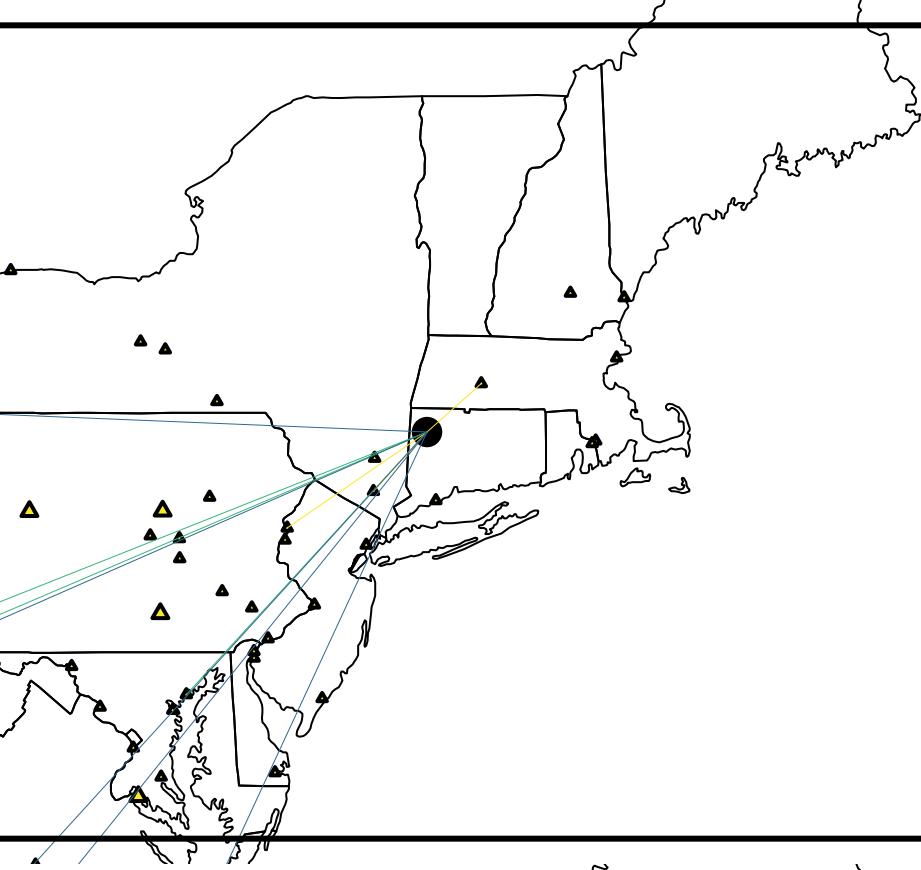
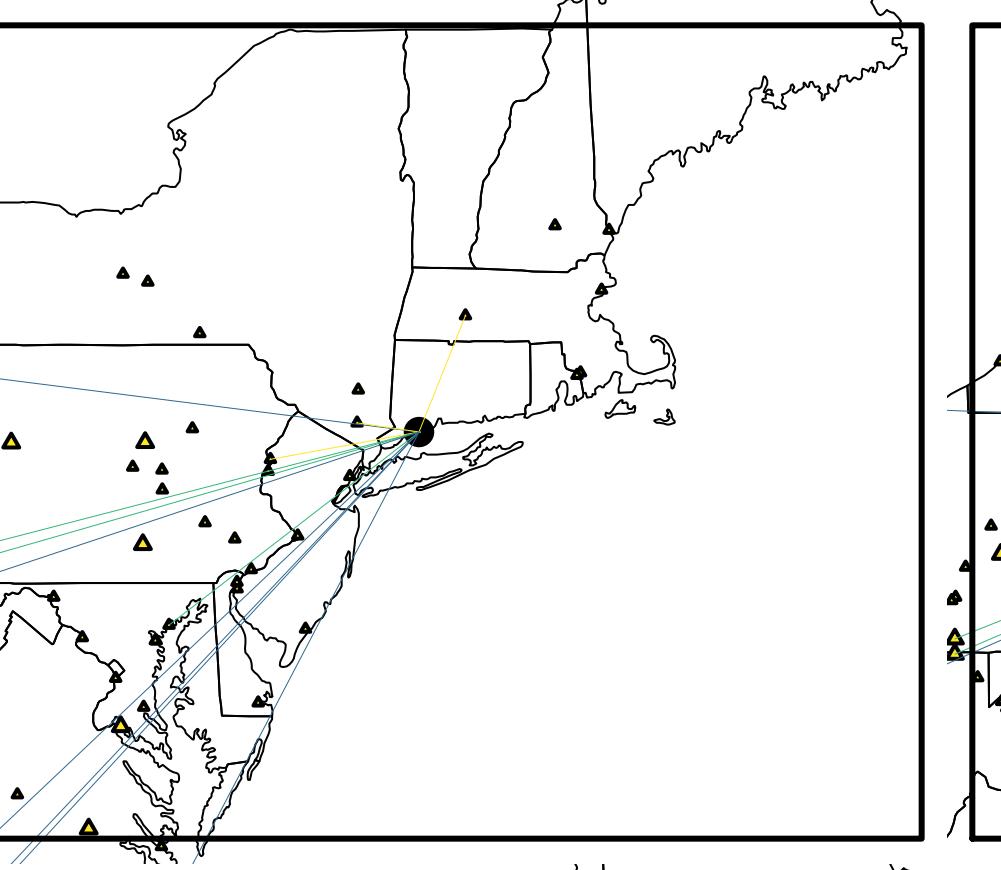
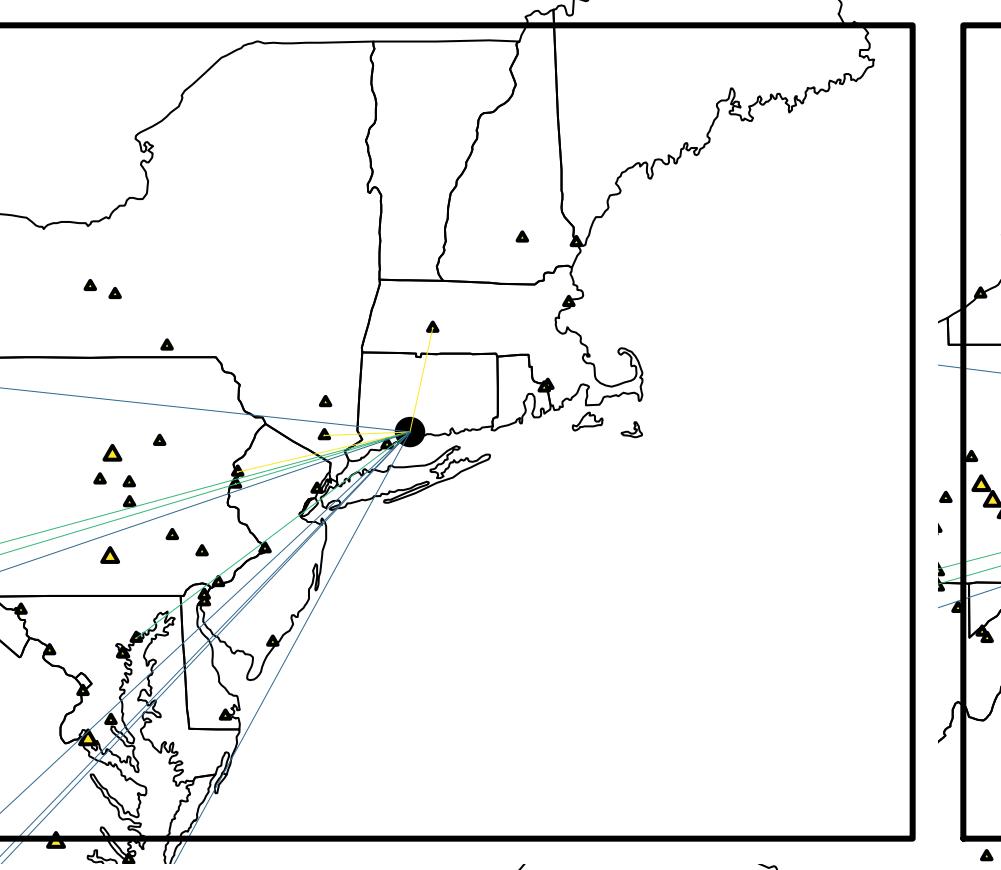
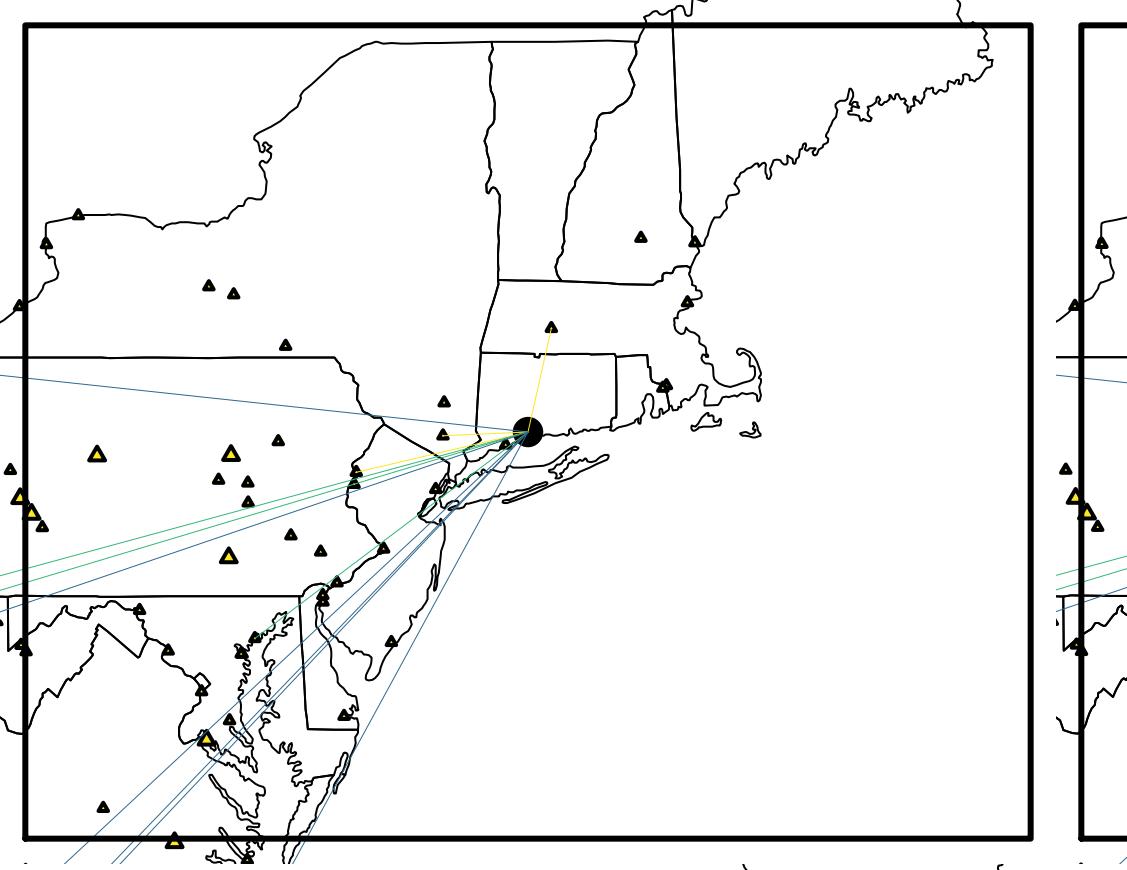
Lag 3 edges

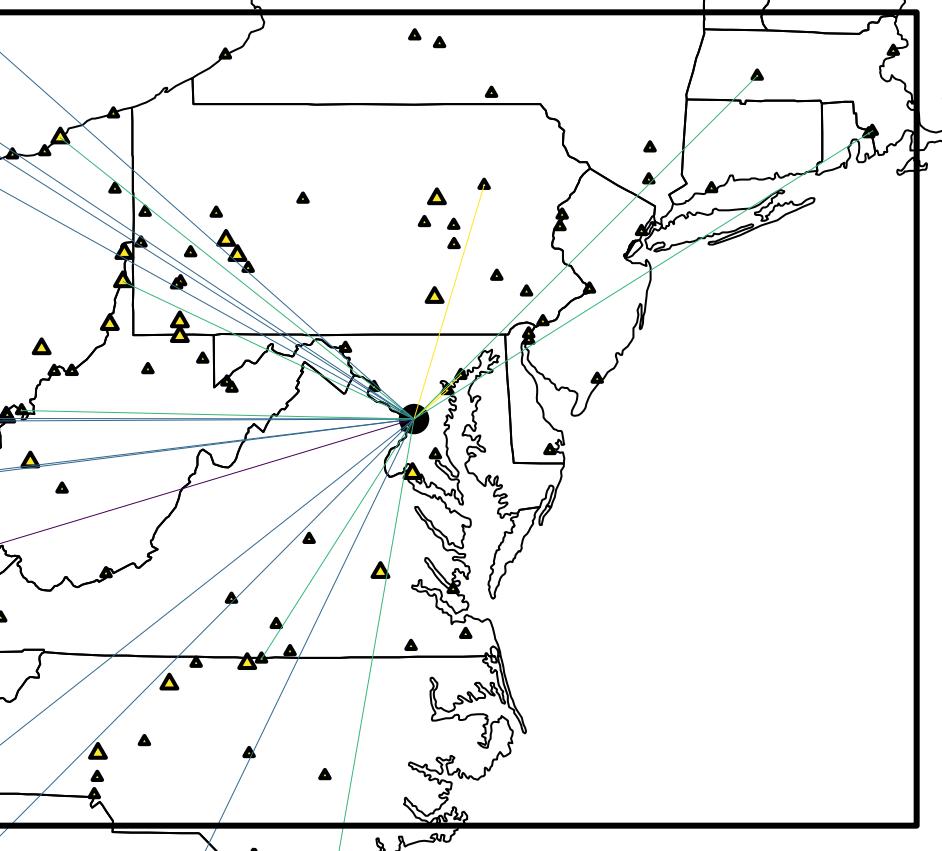
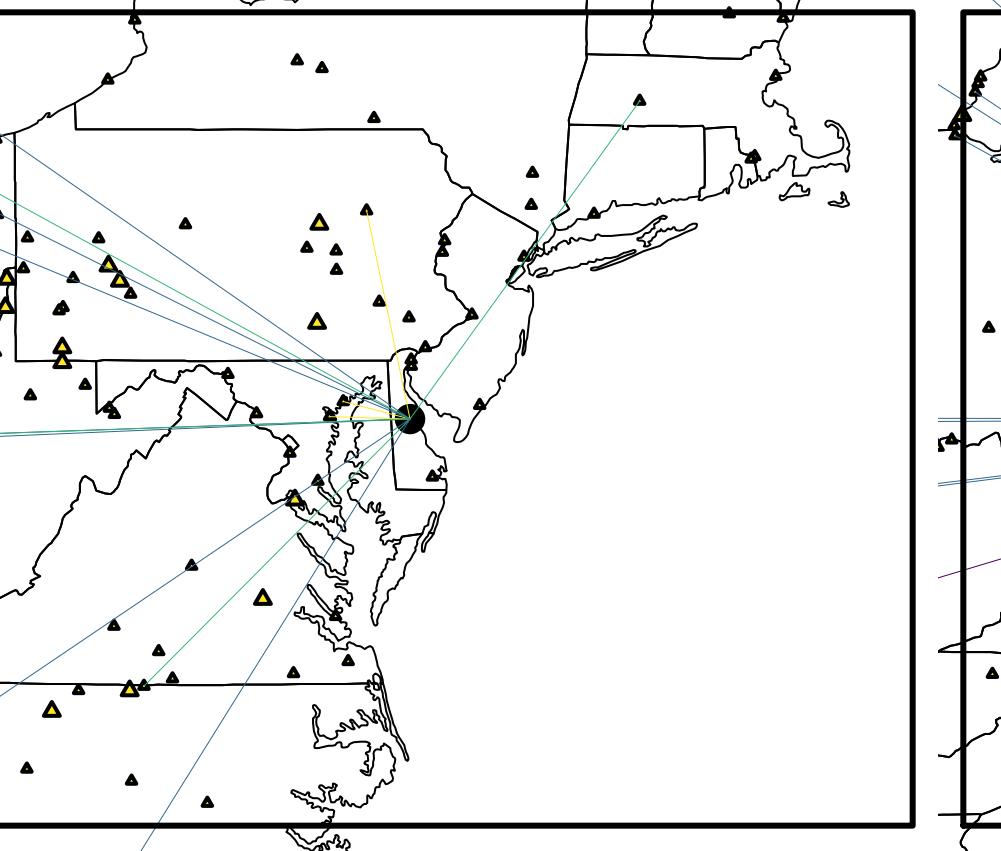
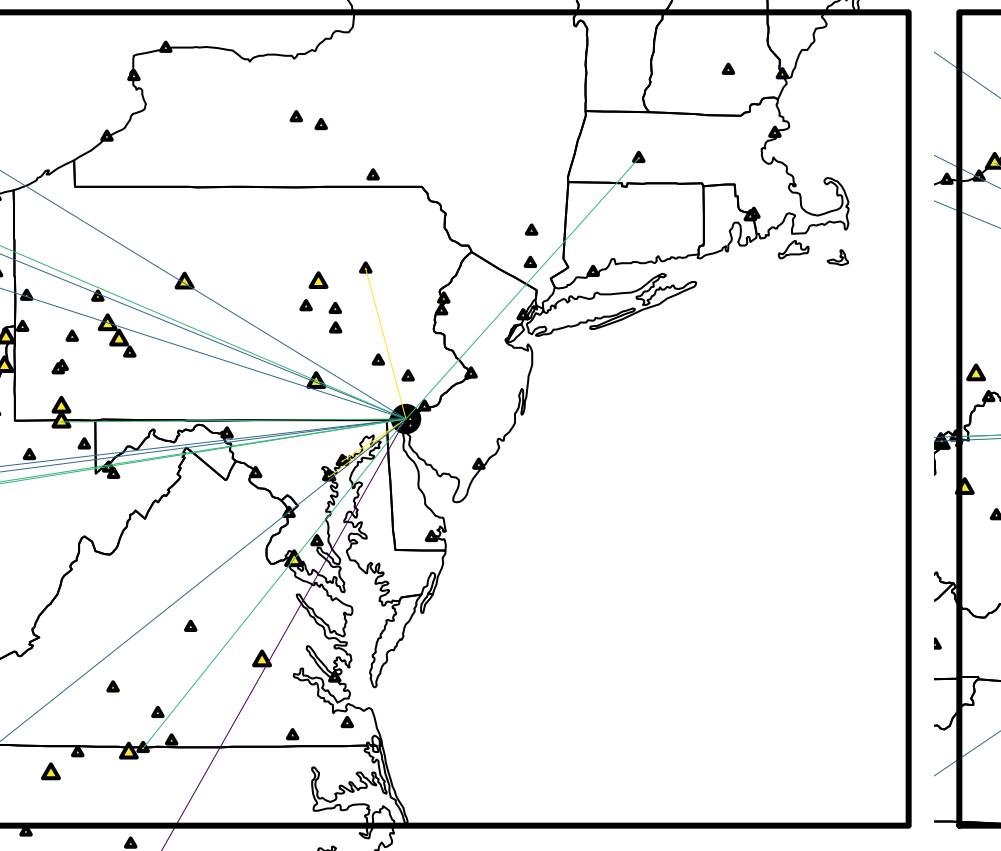
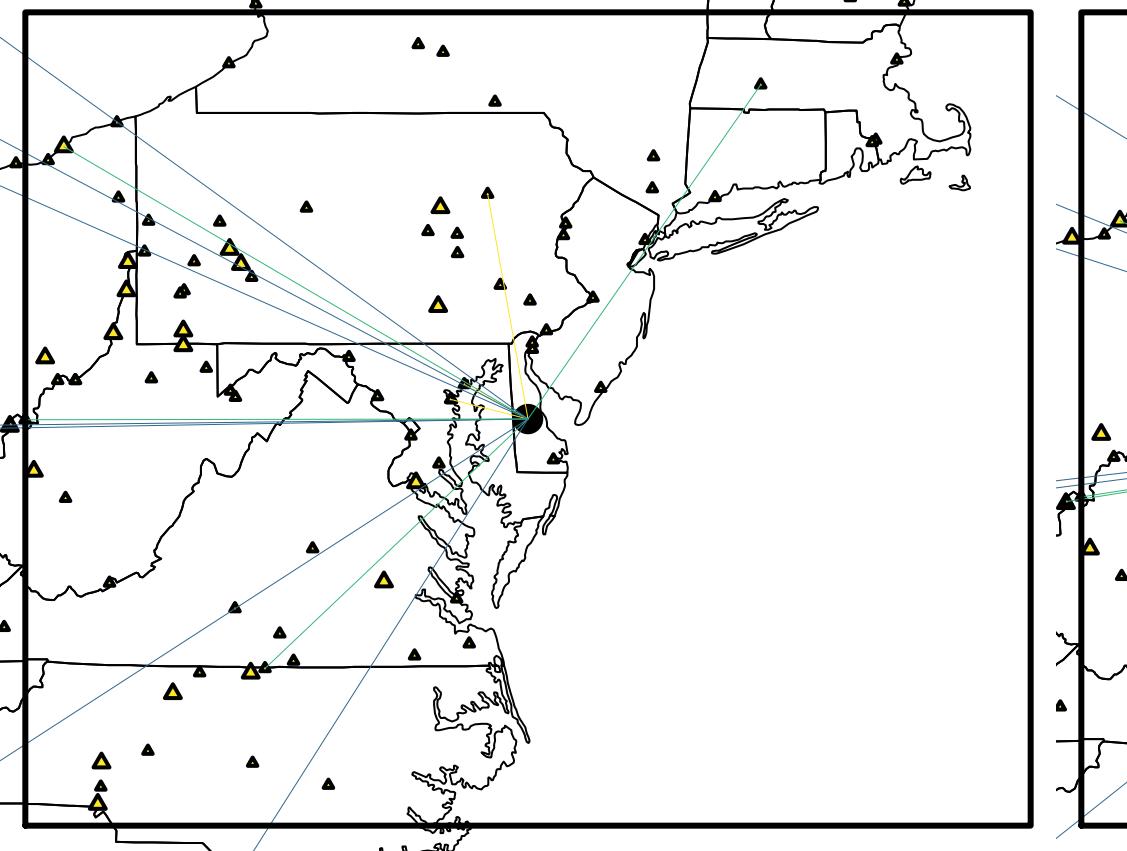
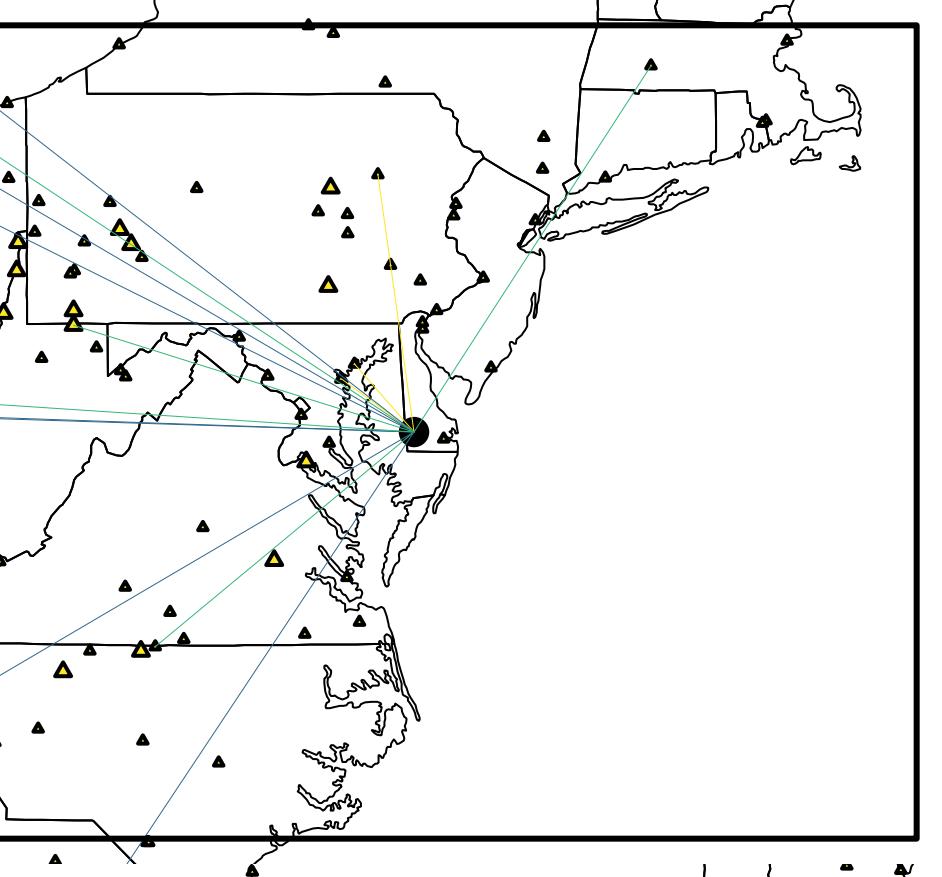
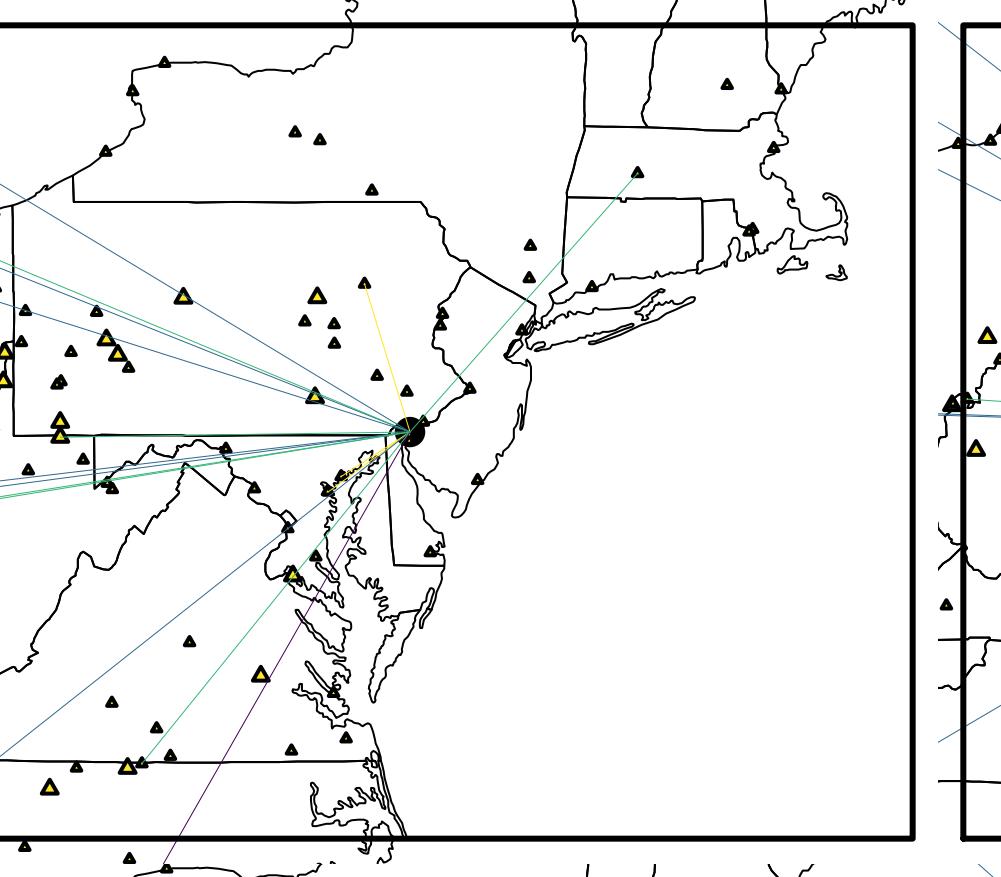
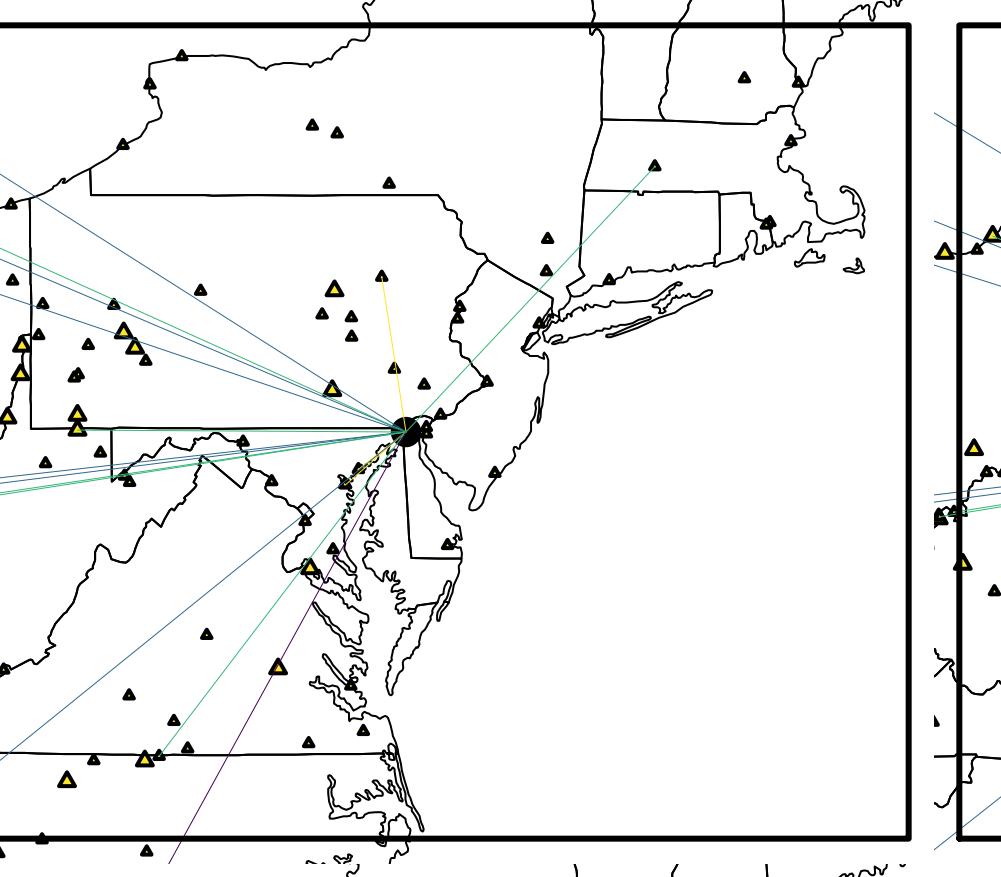
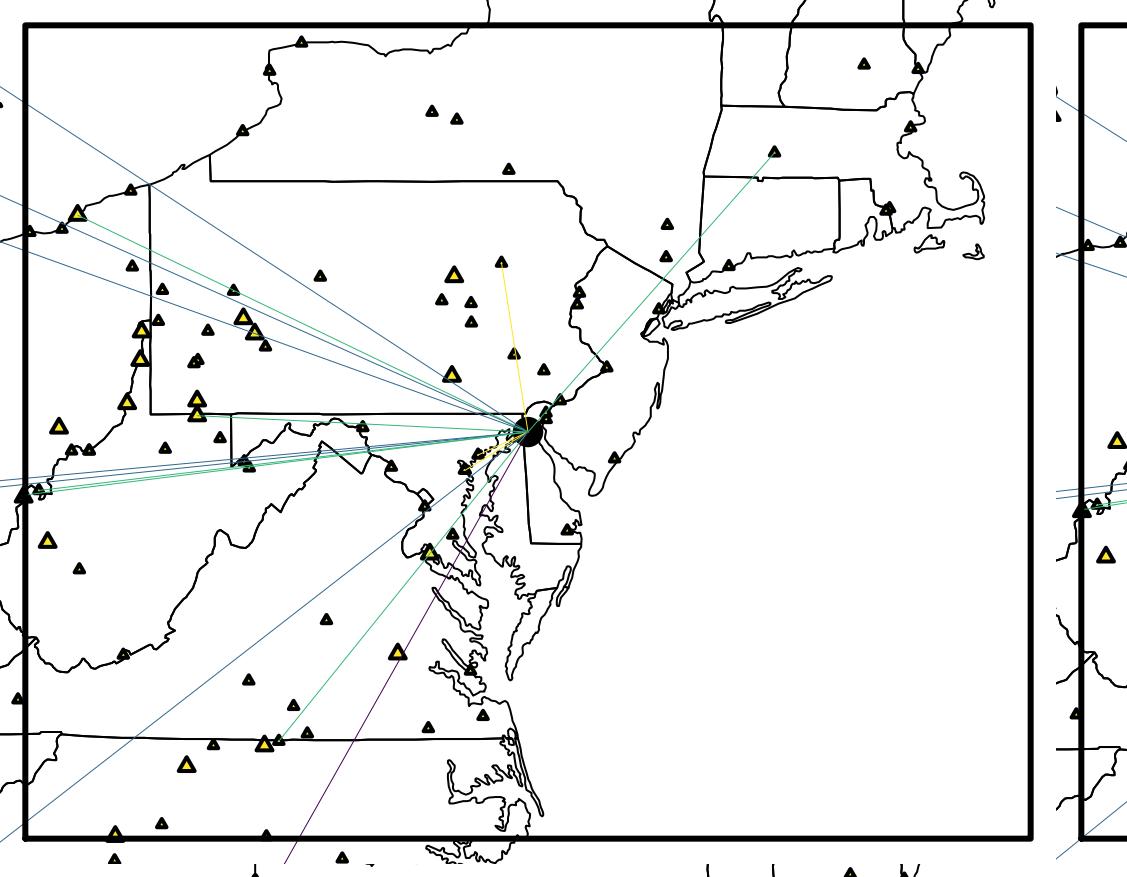


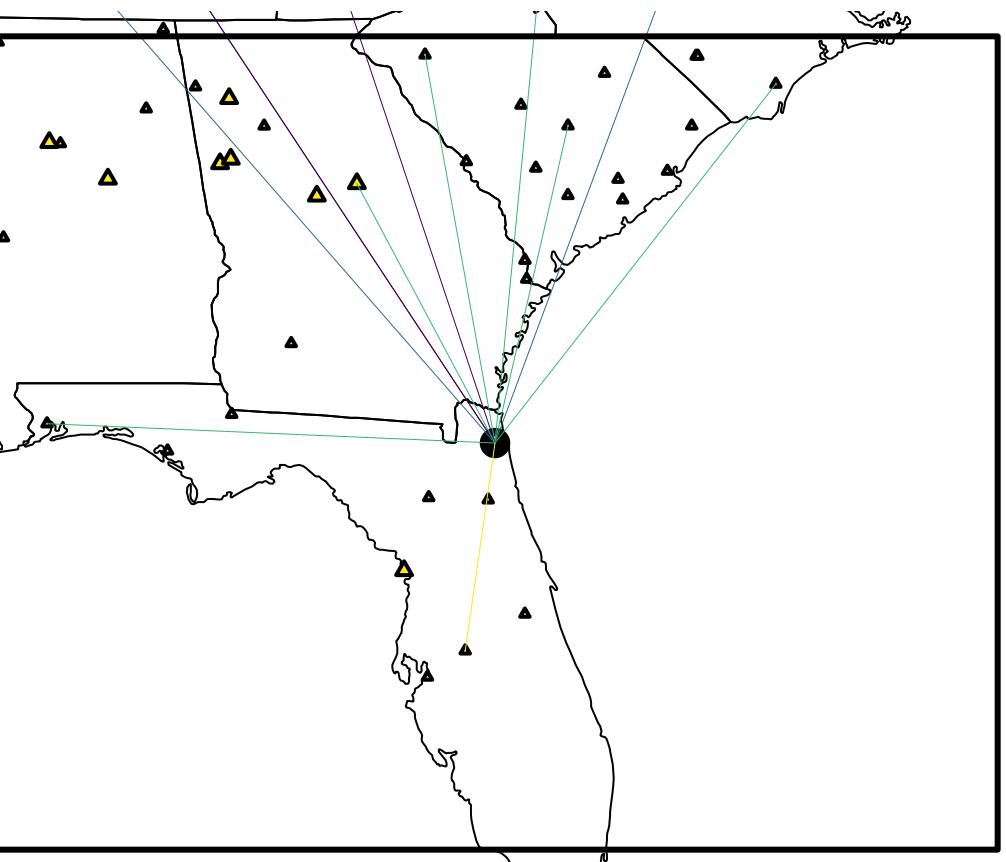
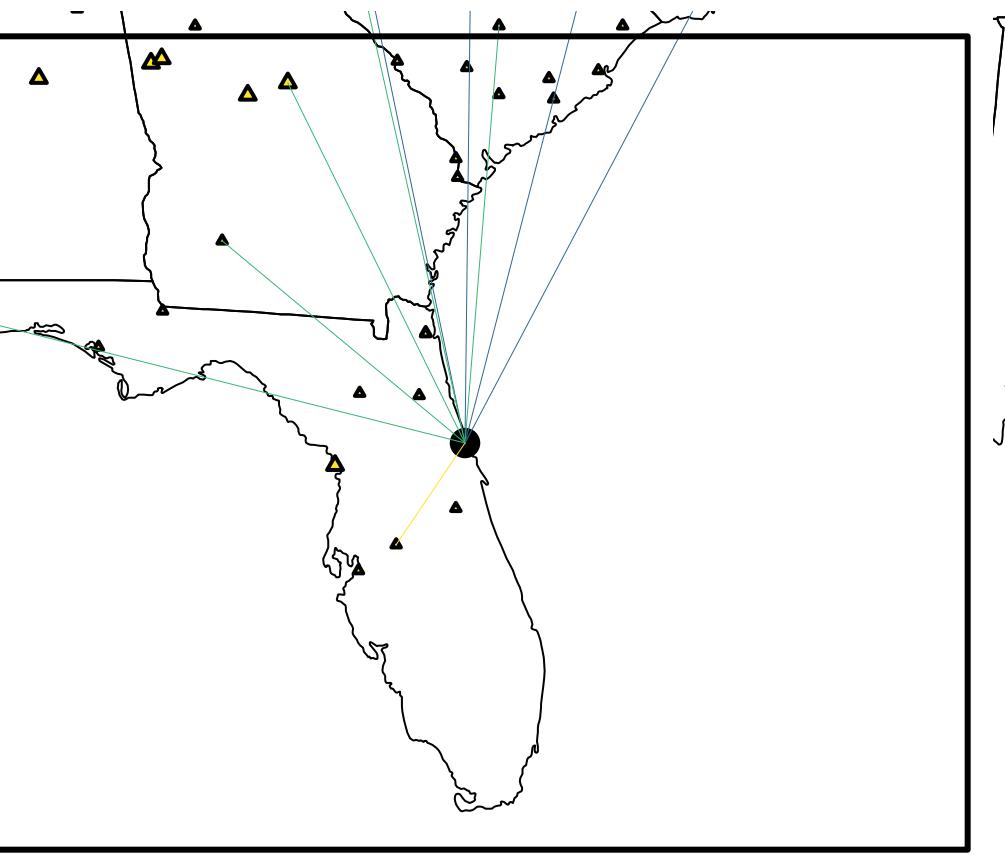
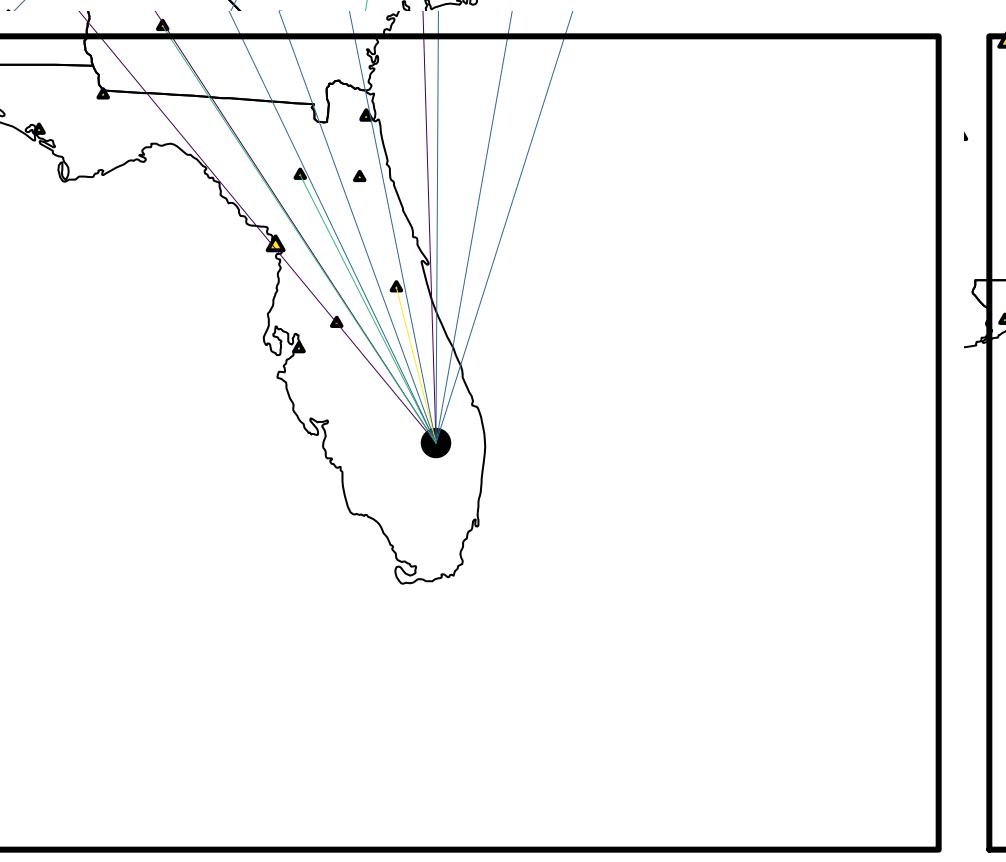
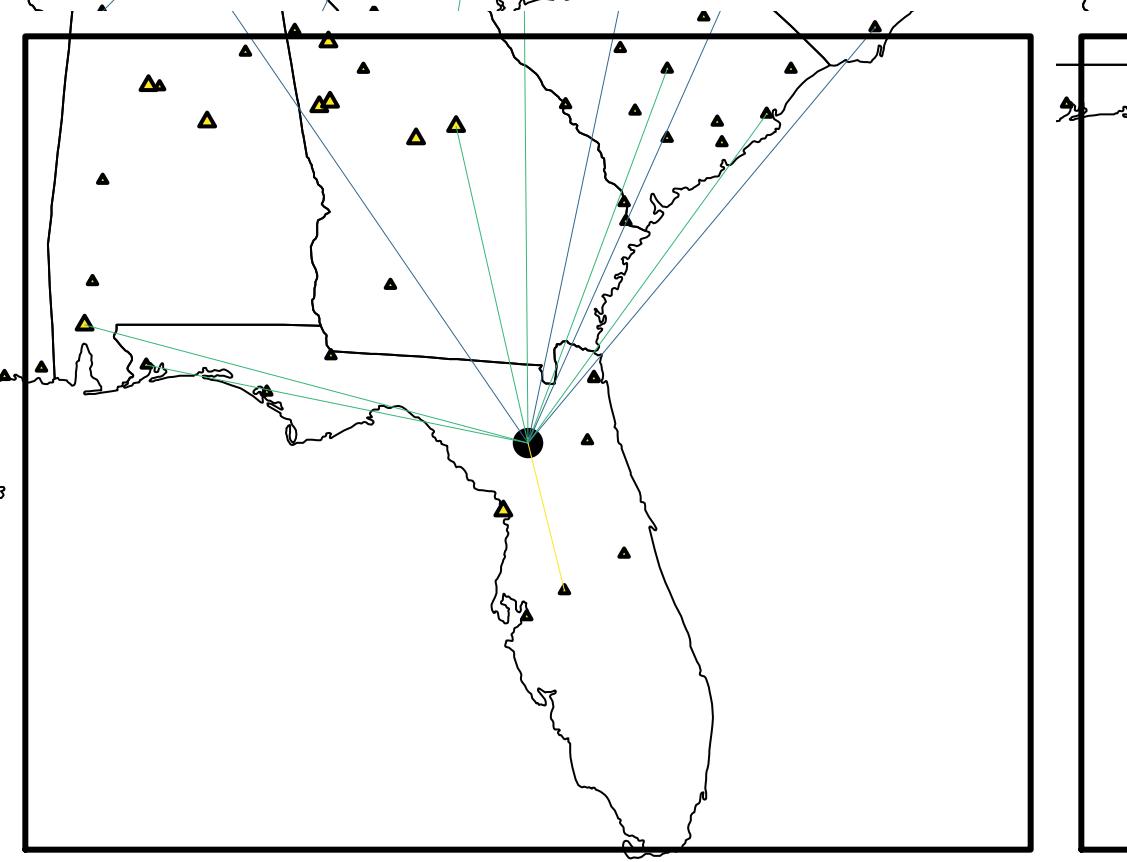
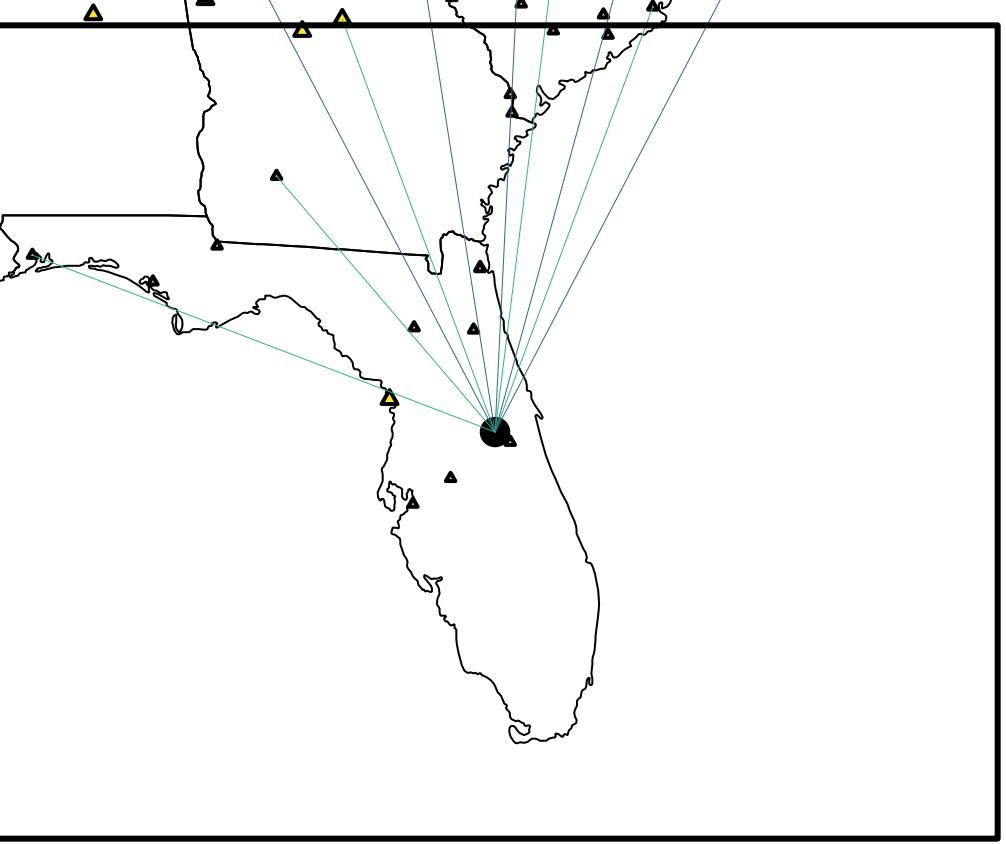
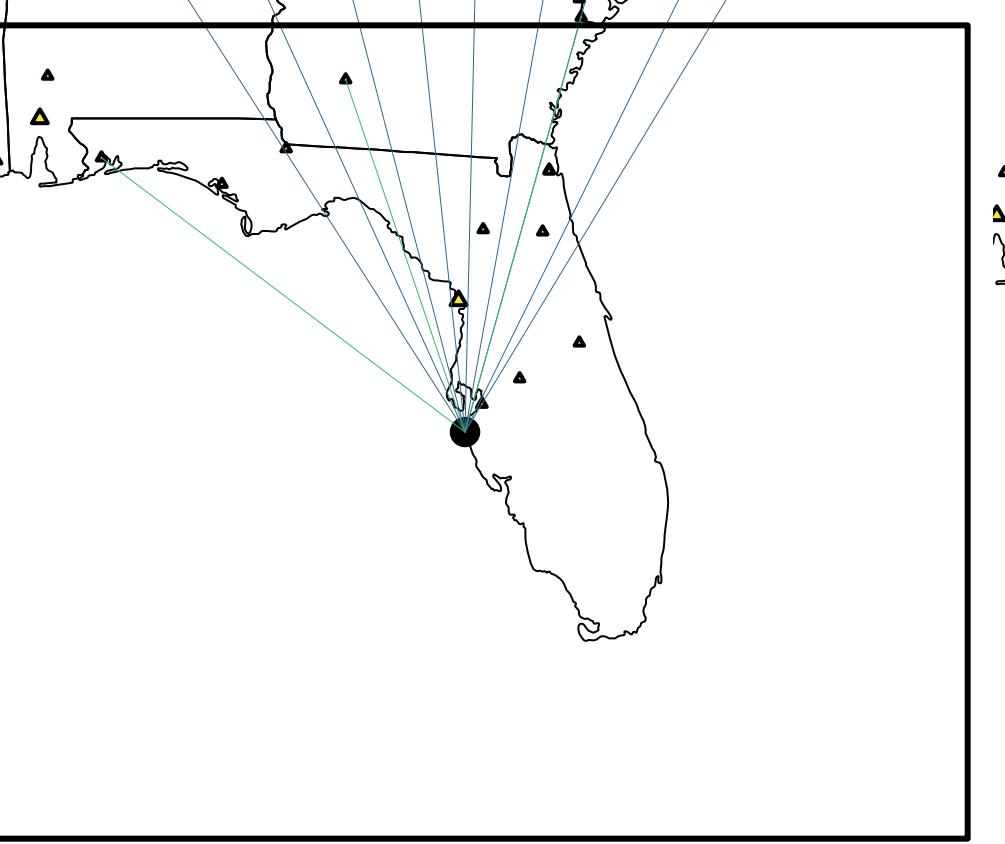
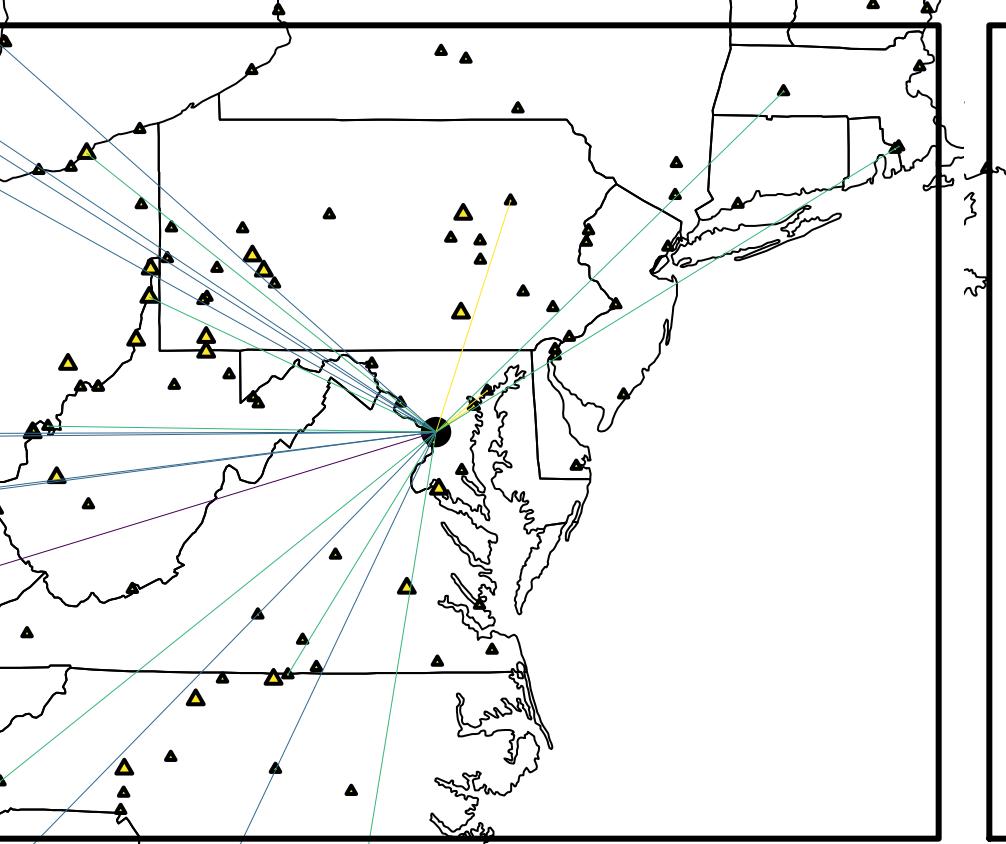
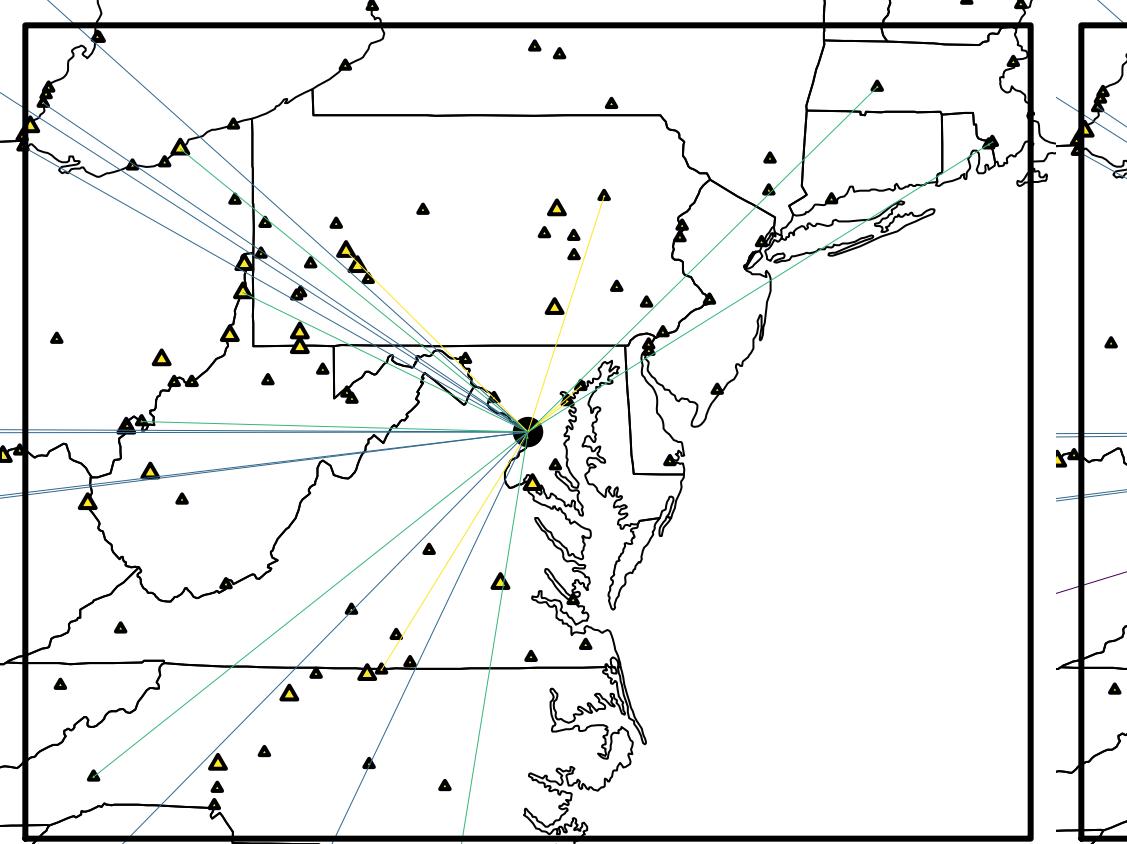


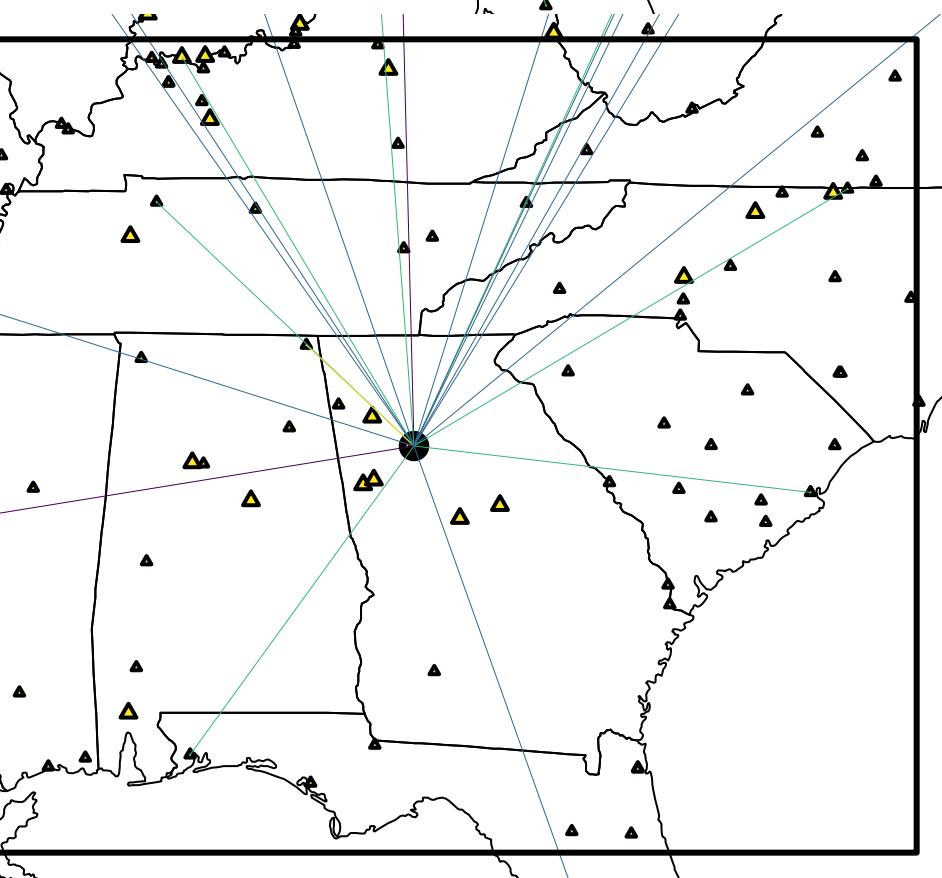
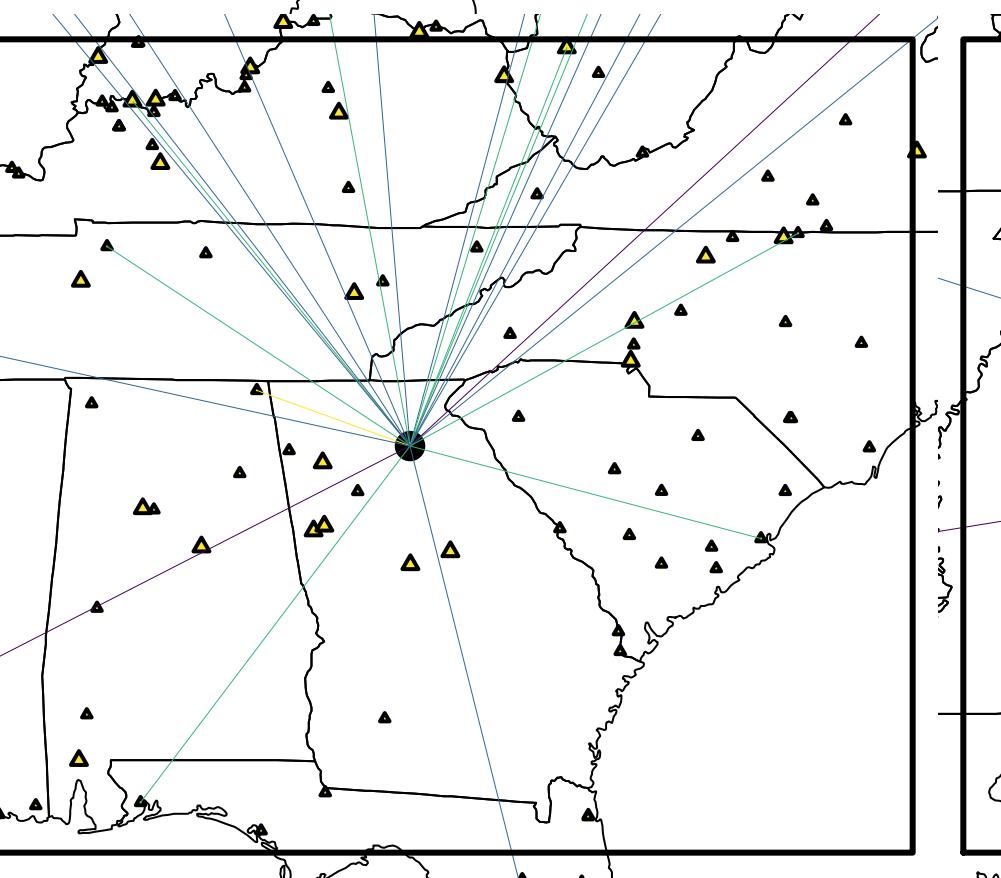
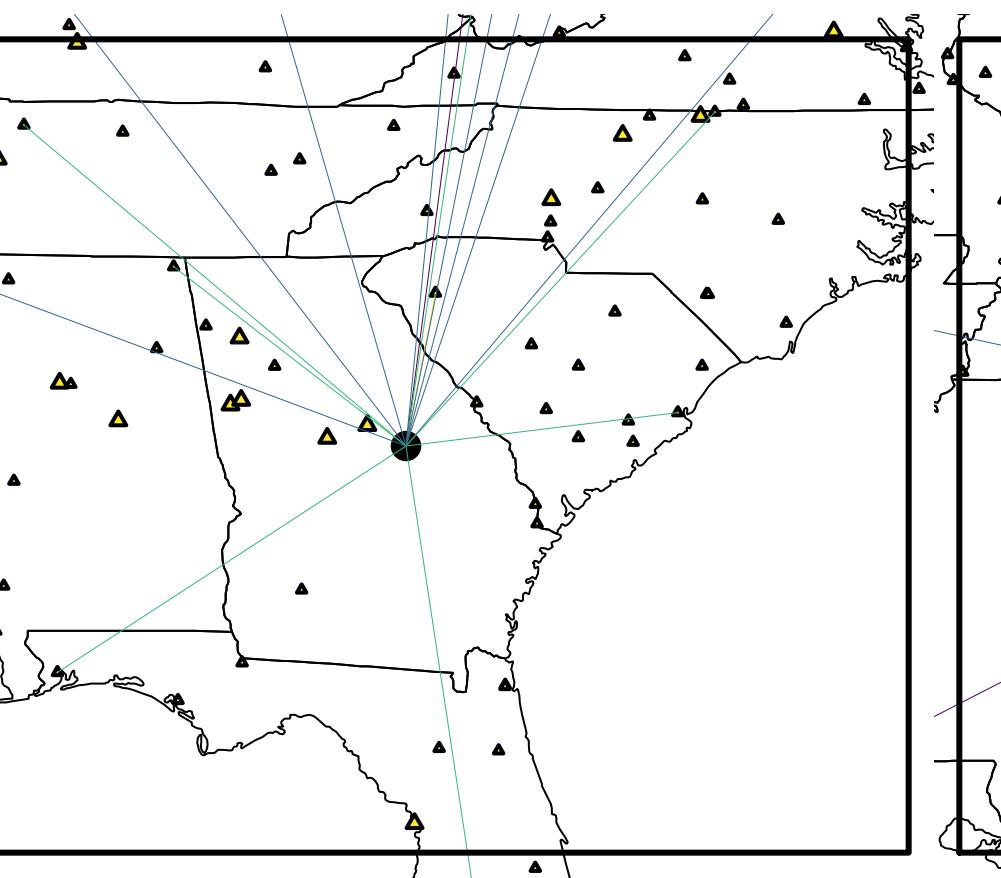
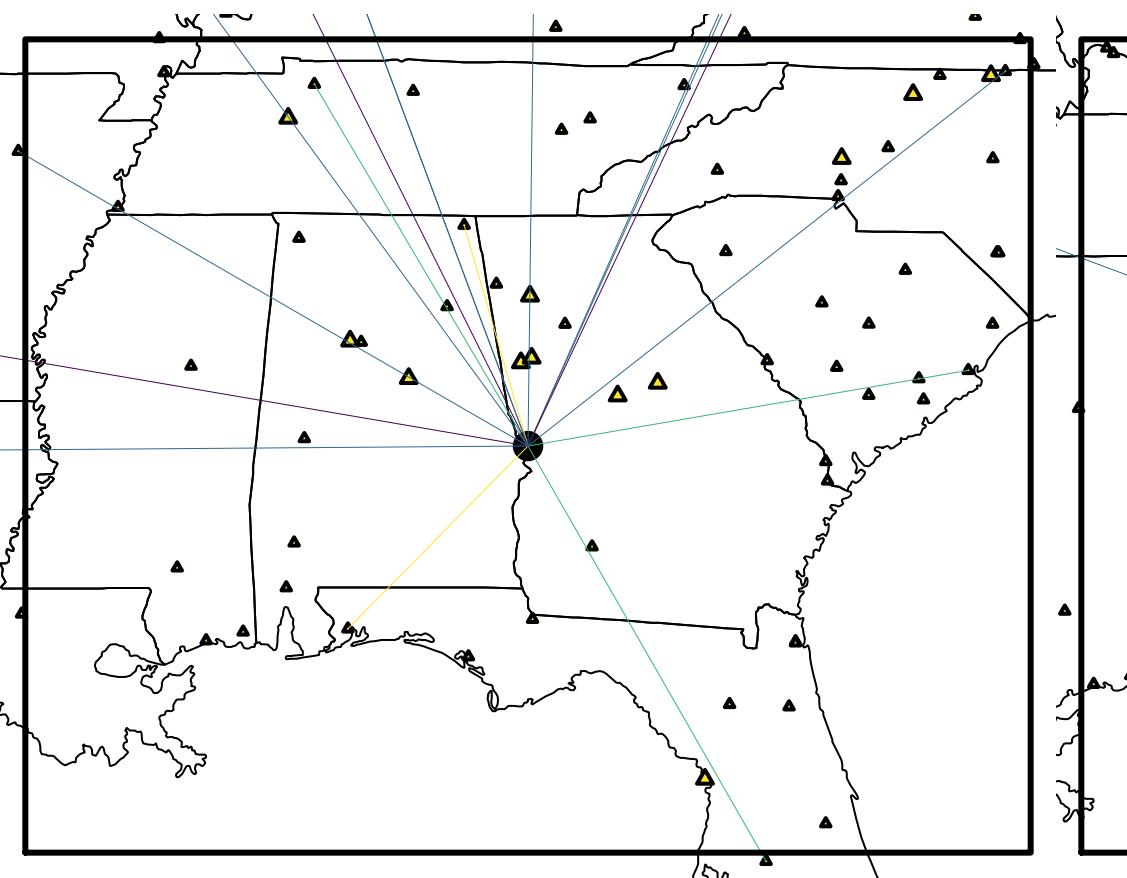
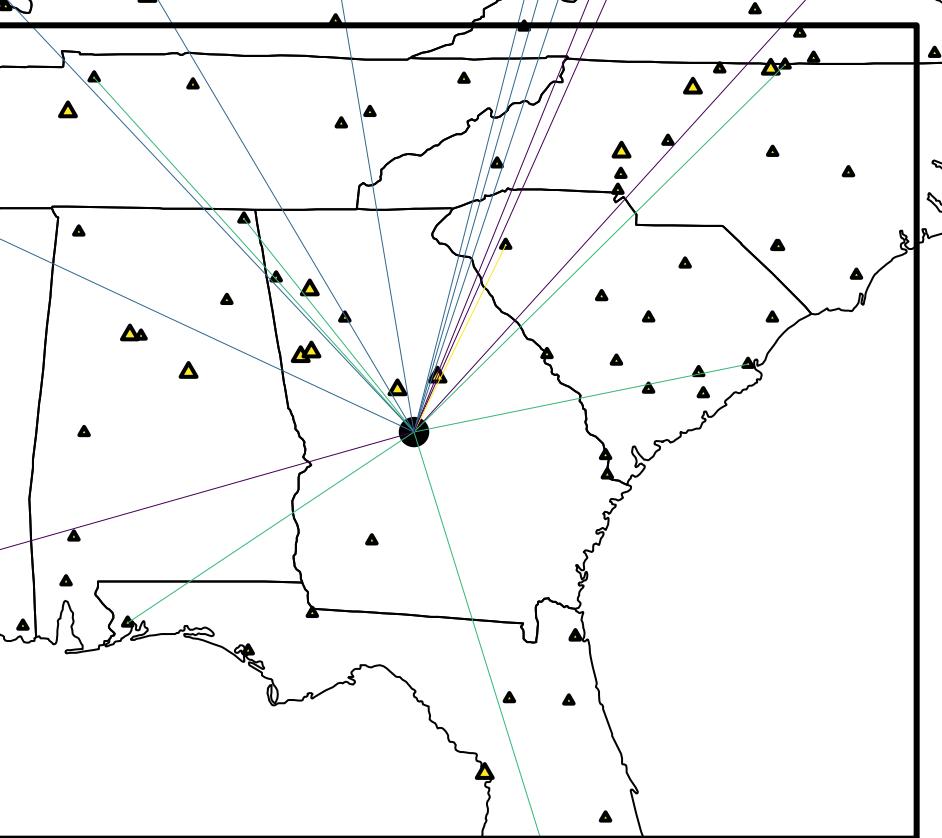
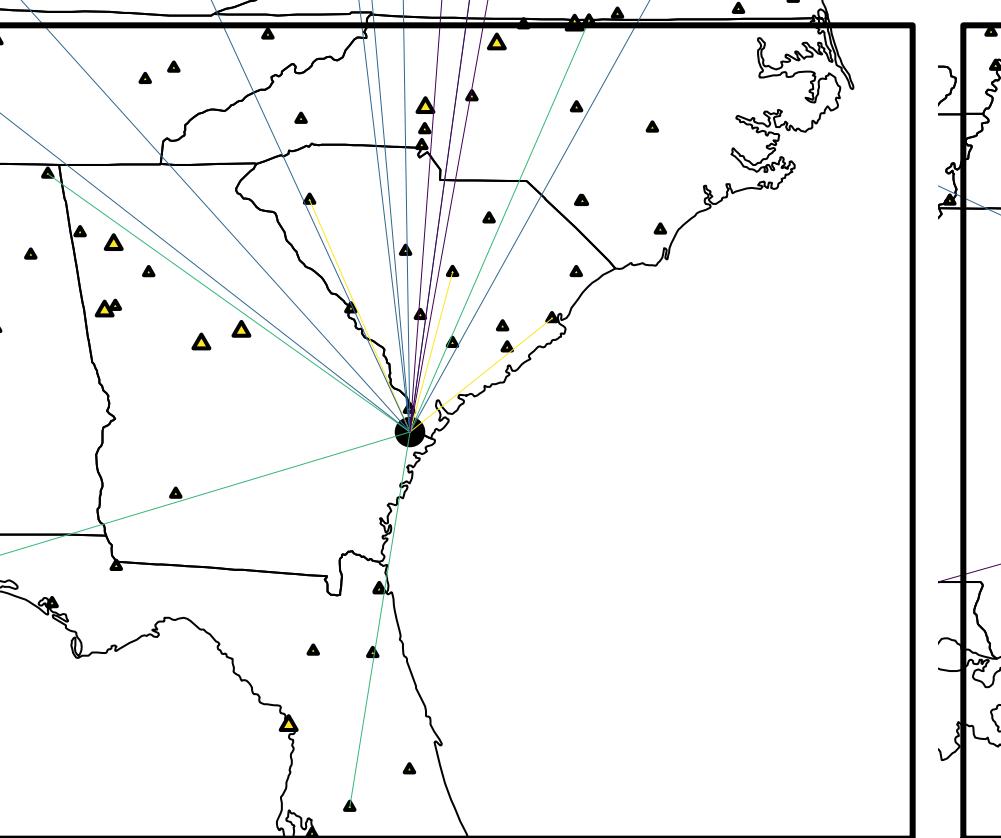
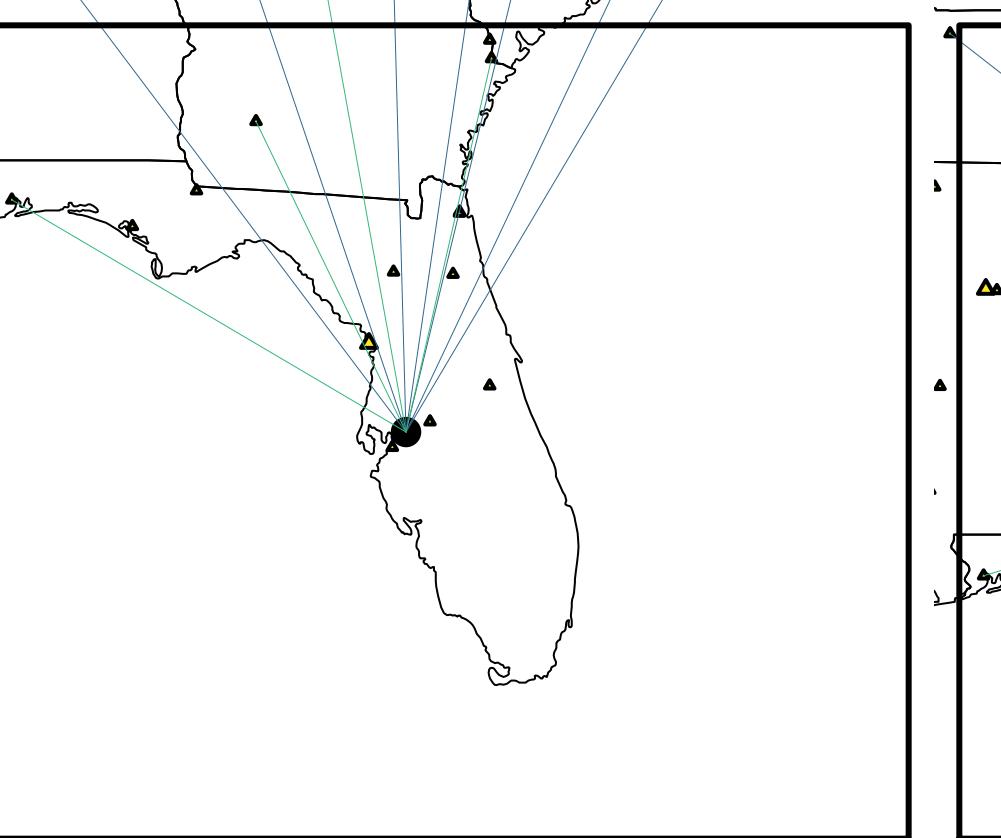
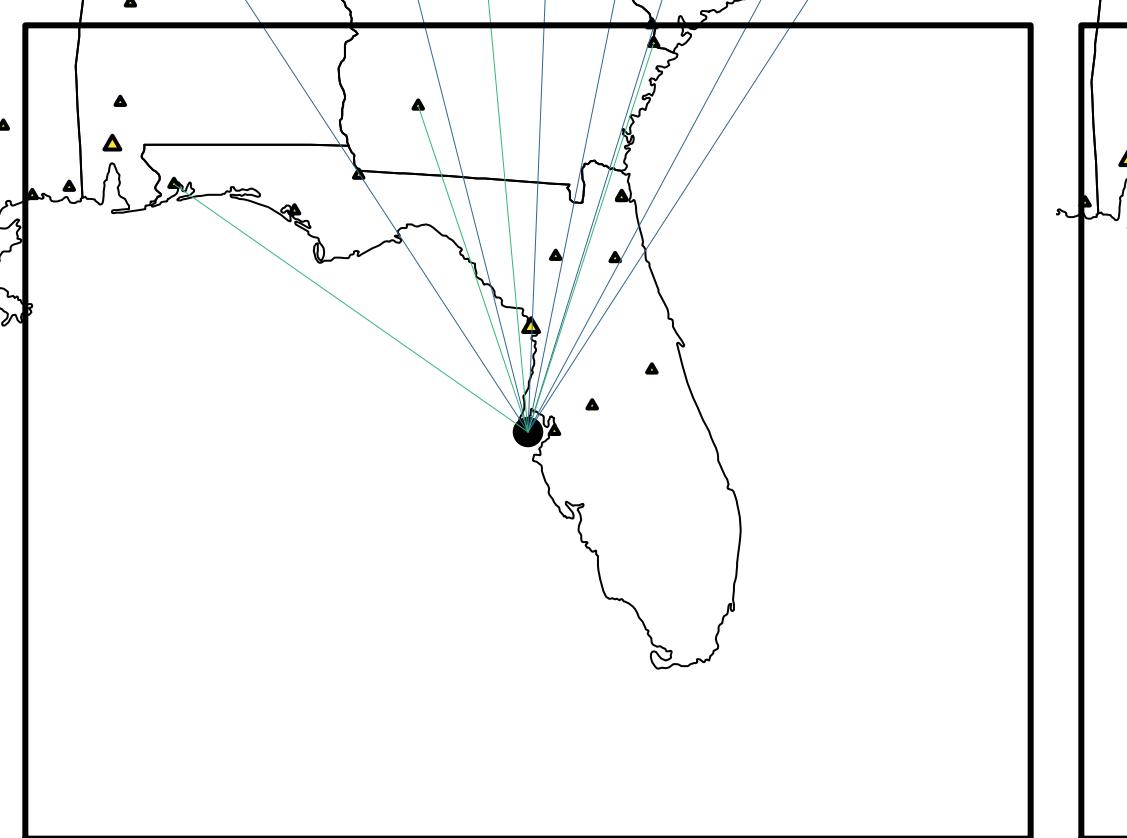


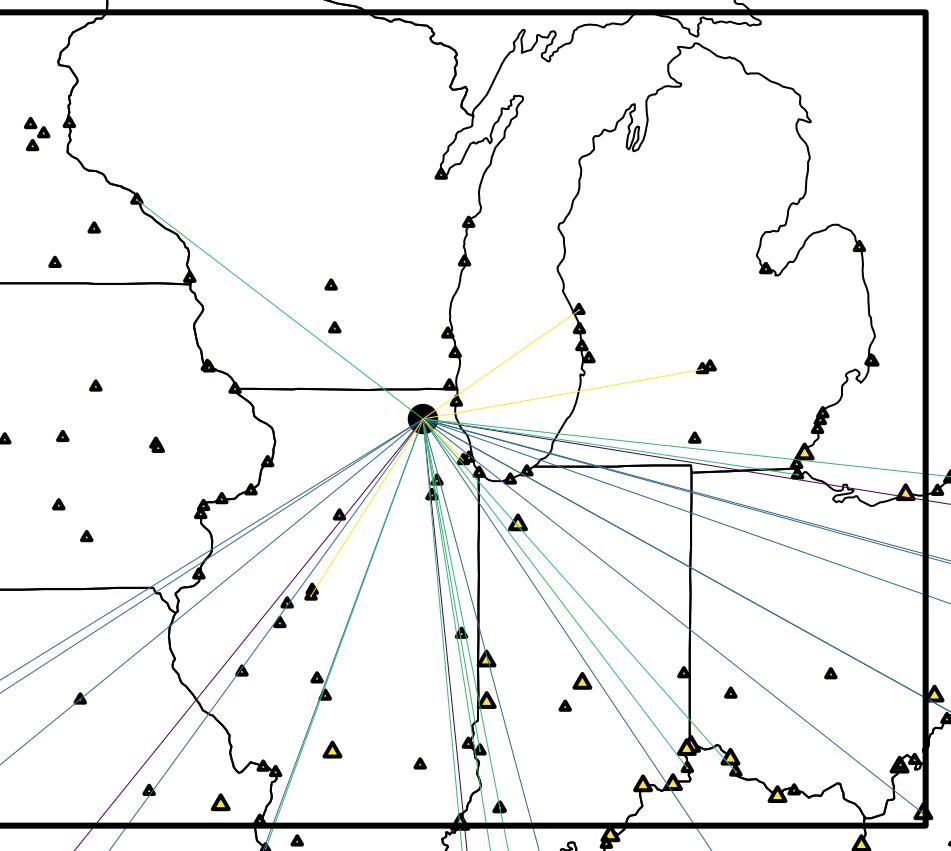
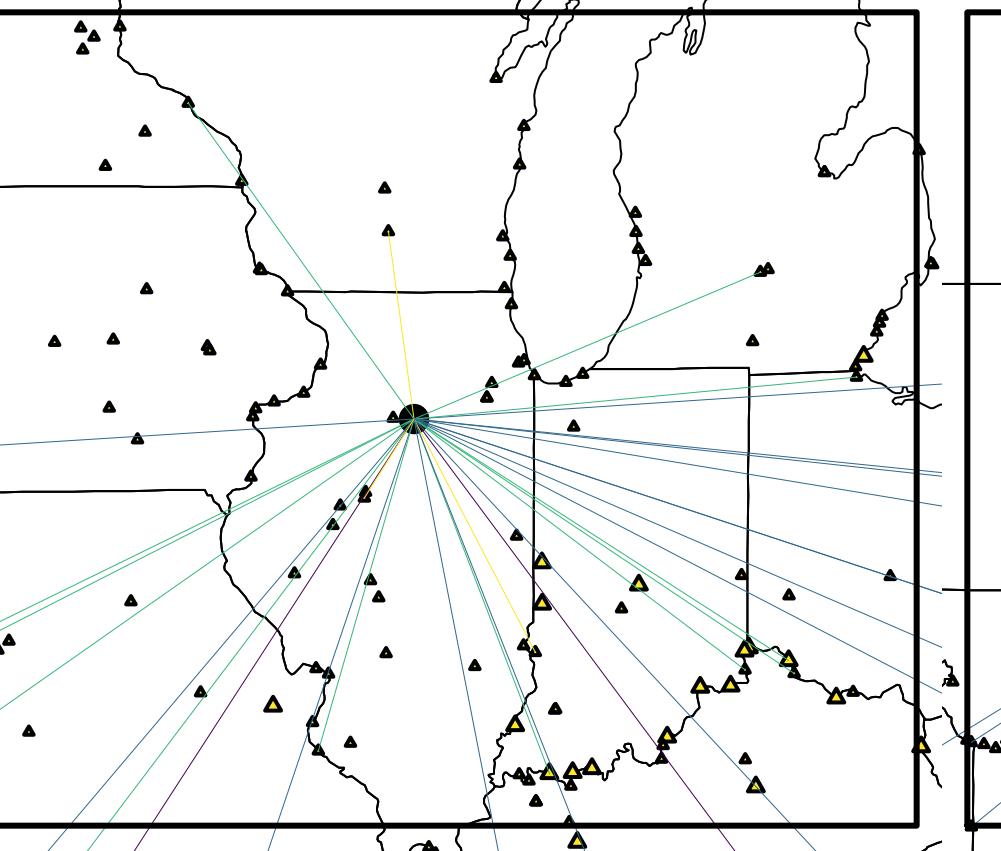
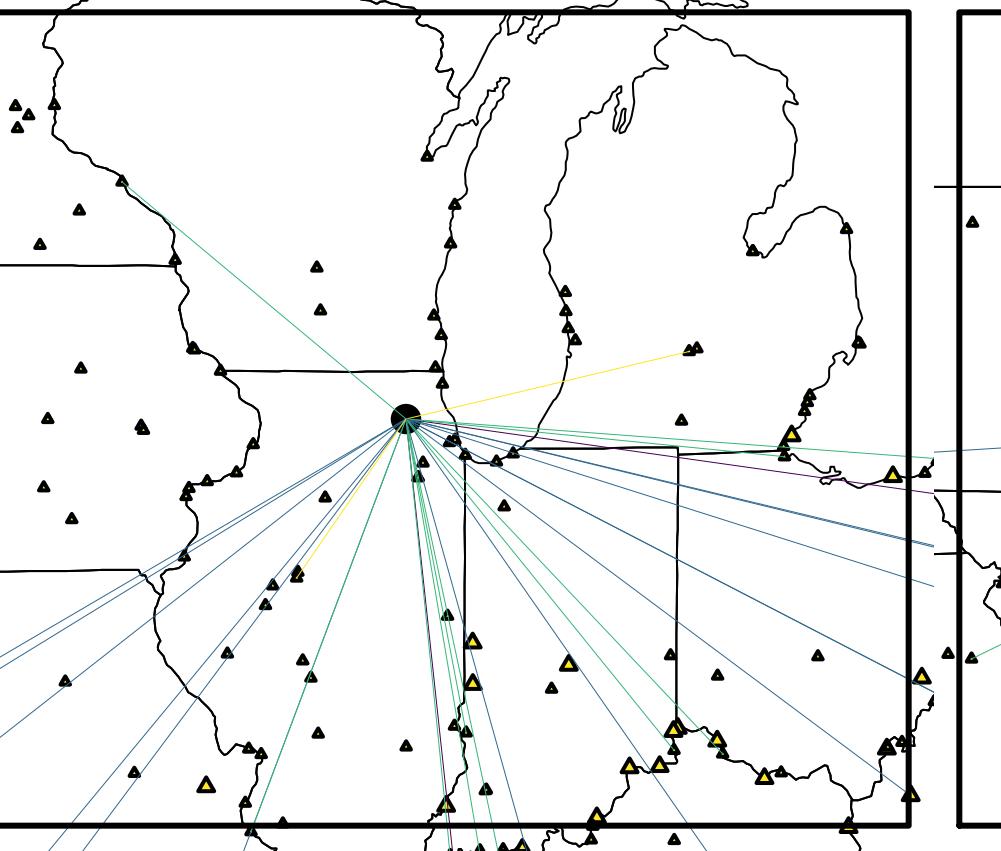
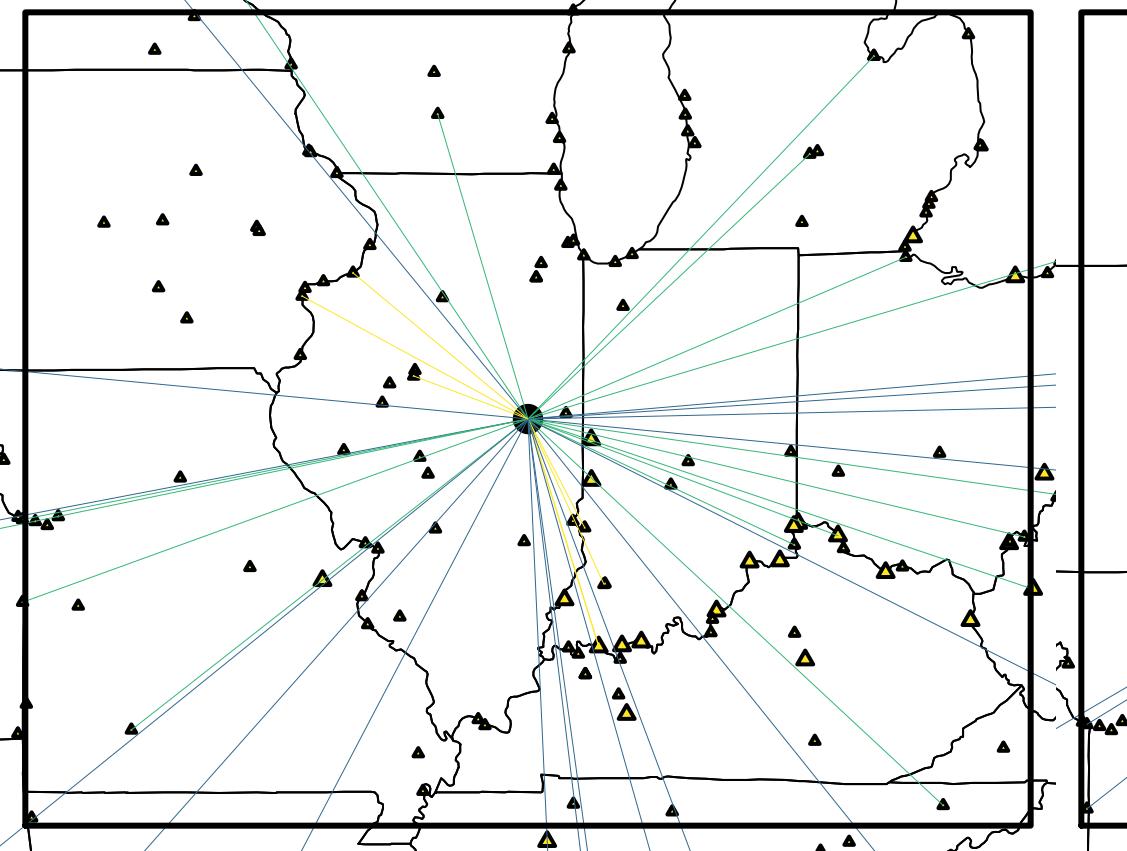
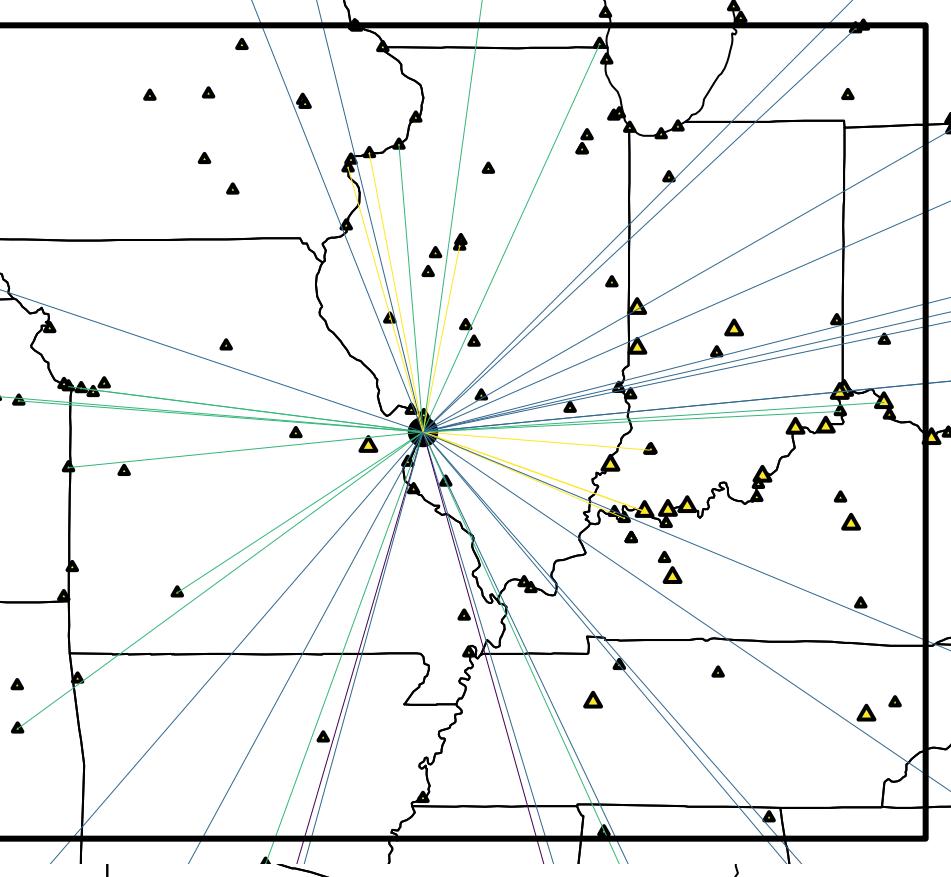
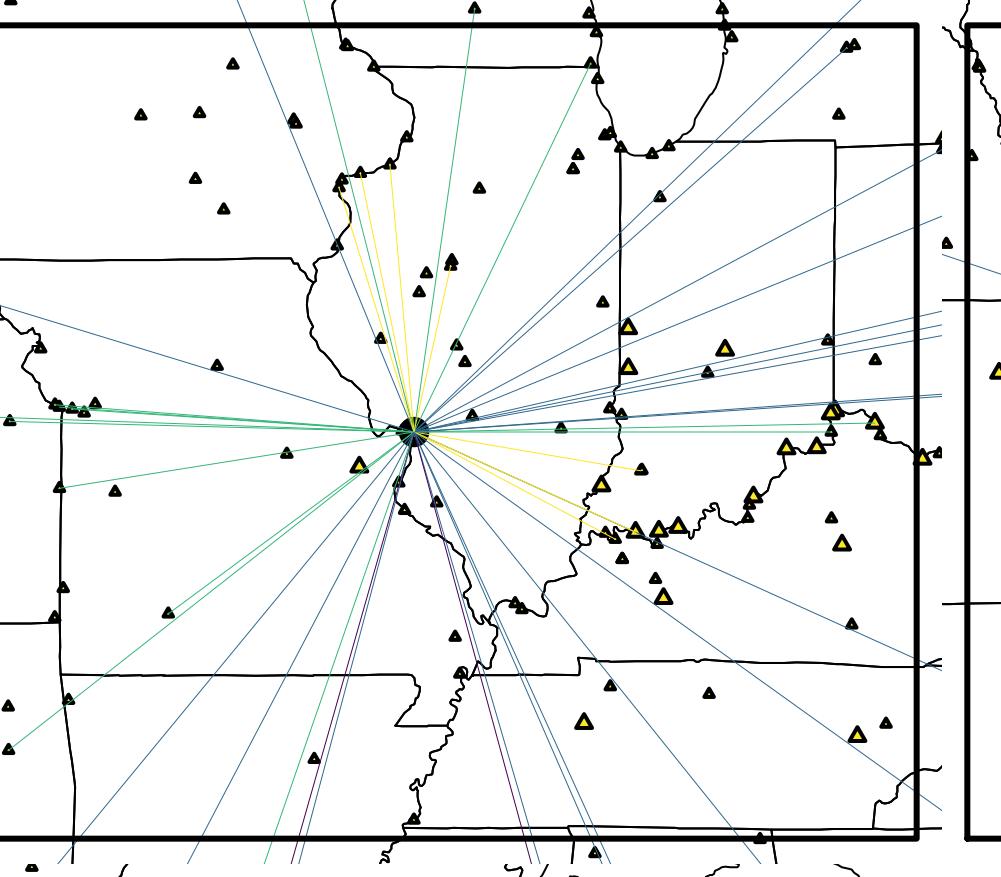
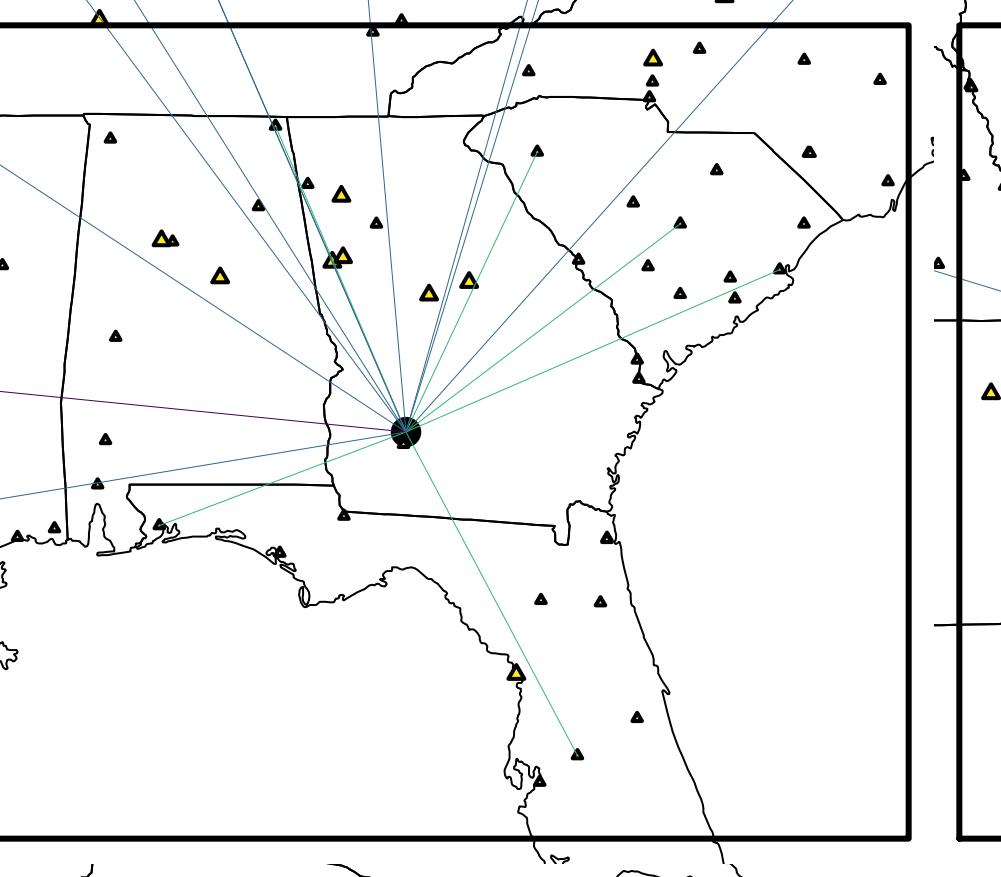
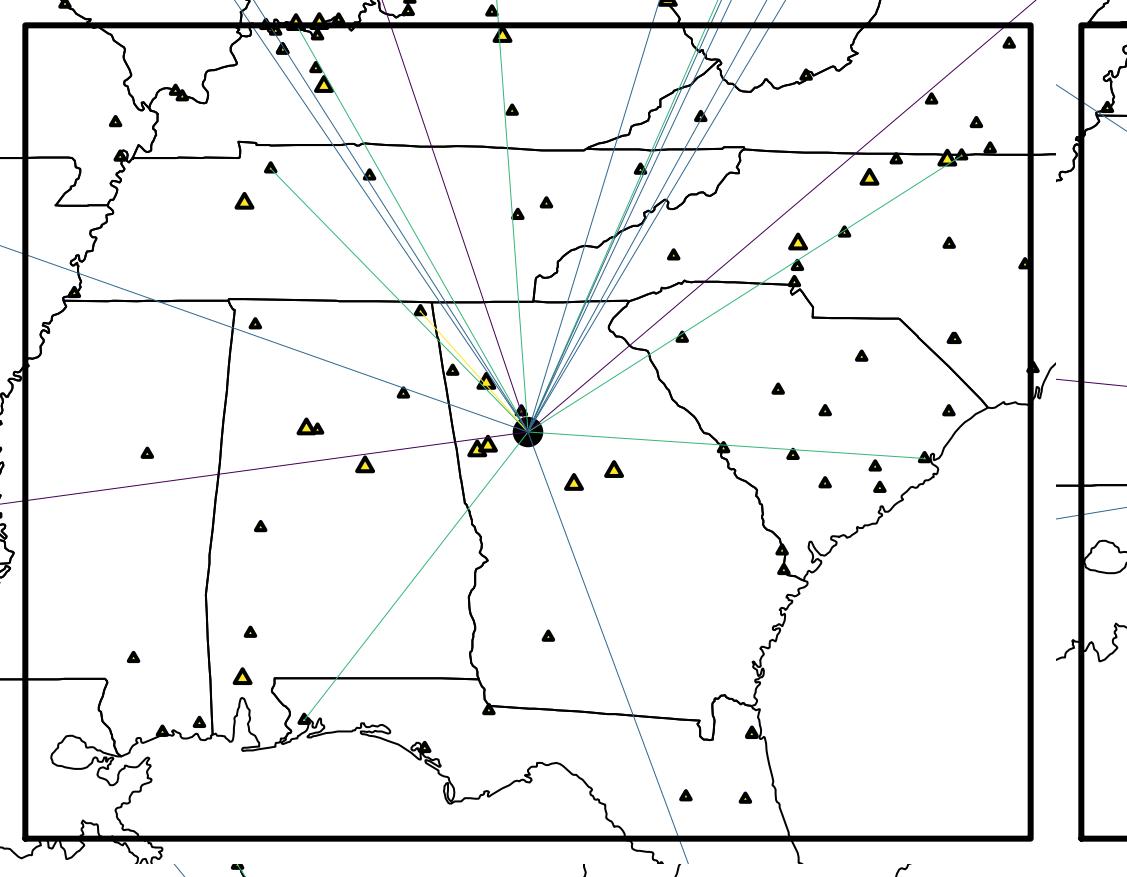


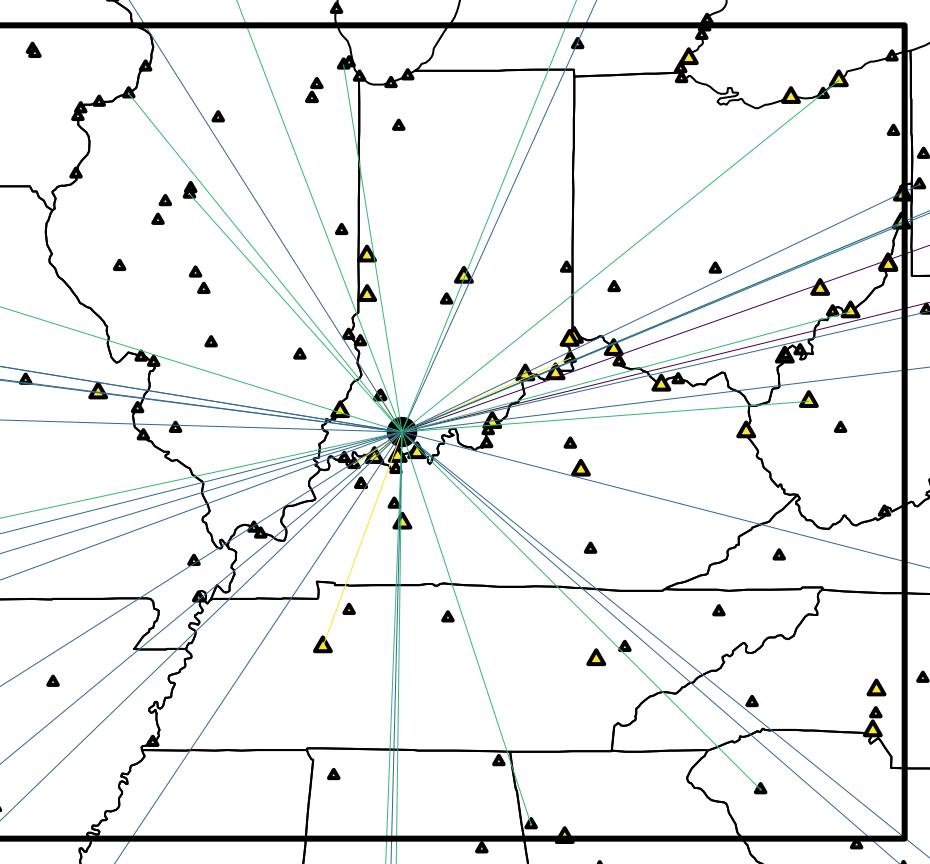
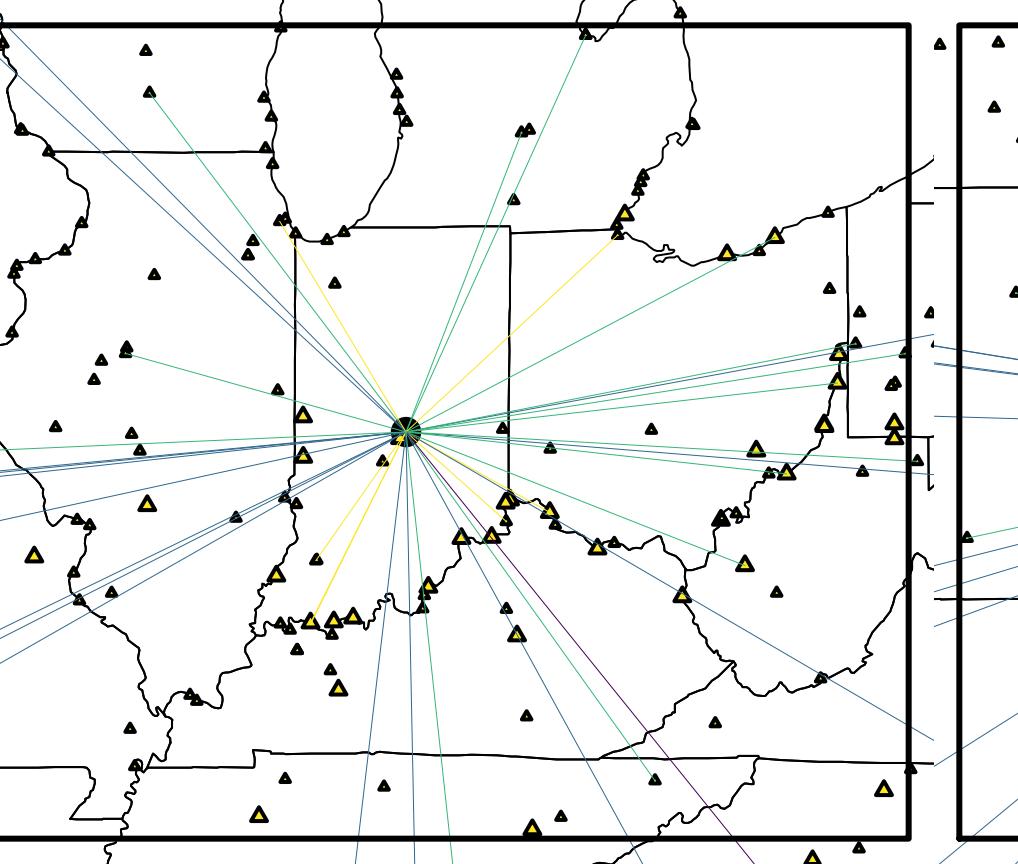
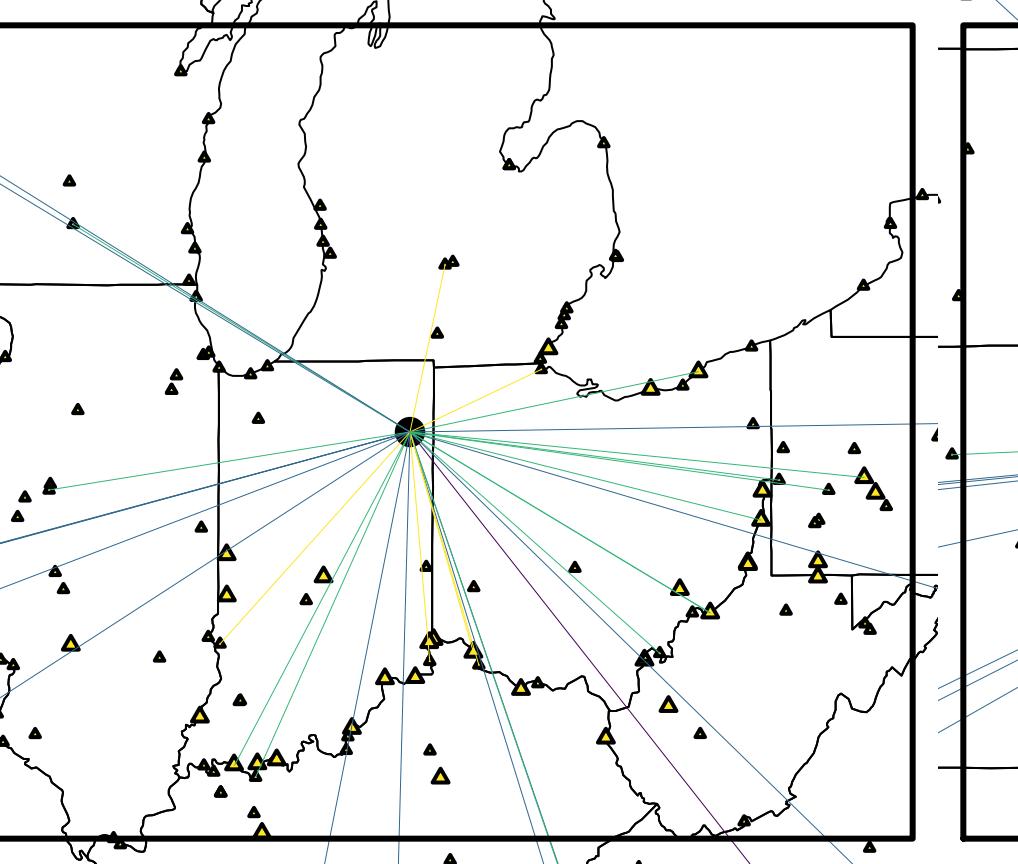
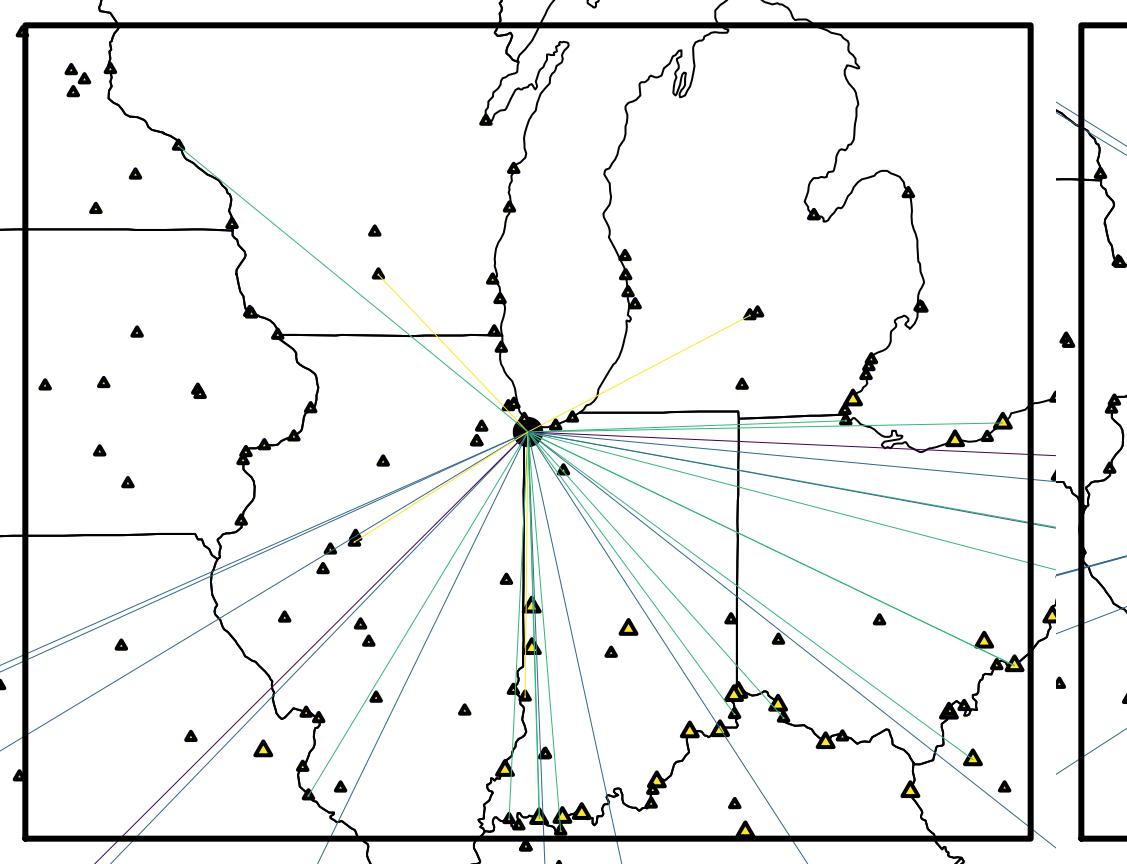
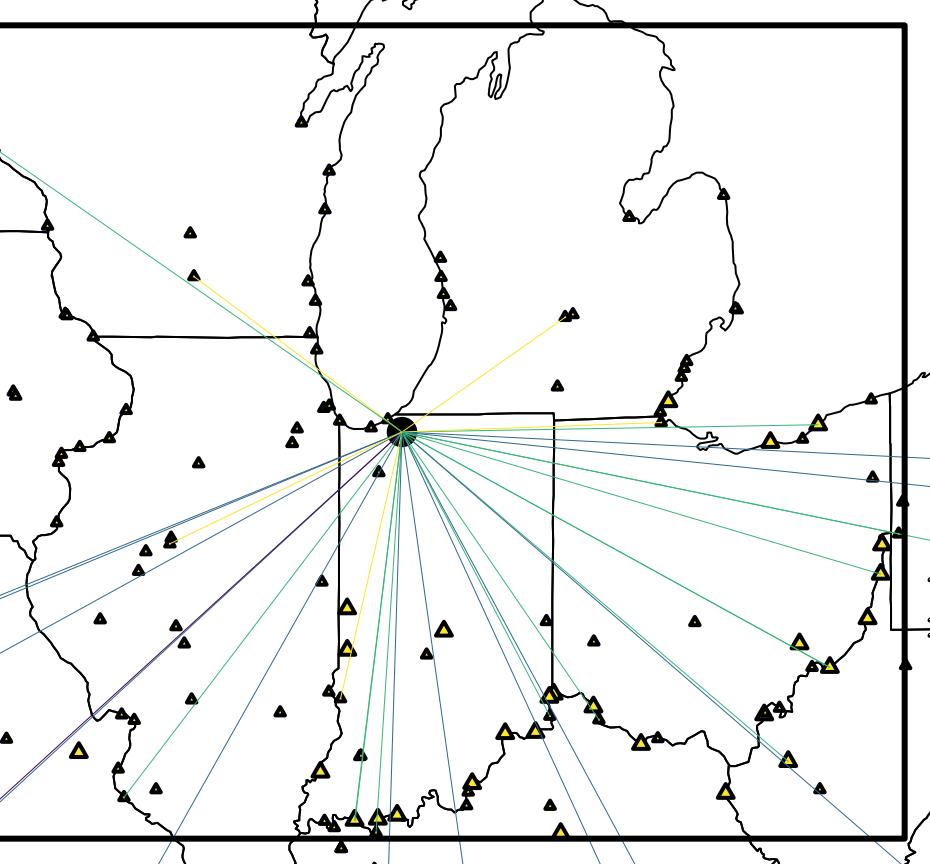
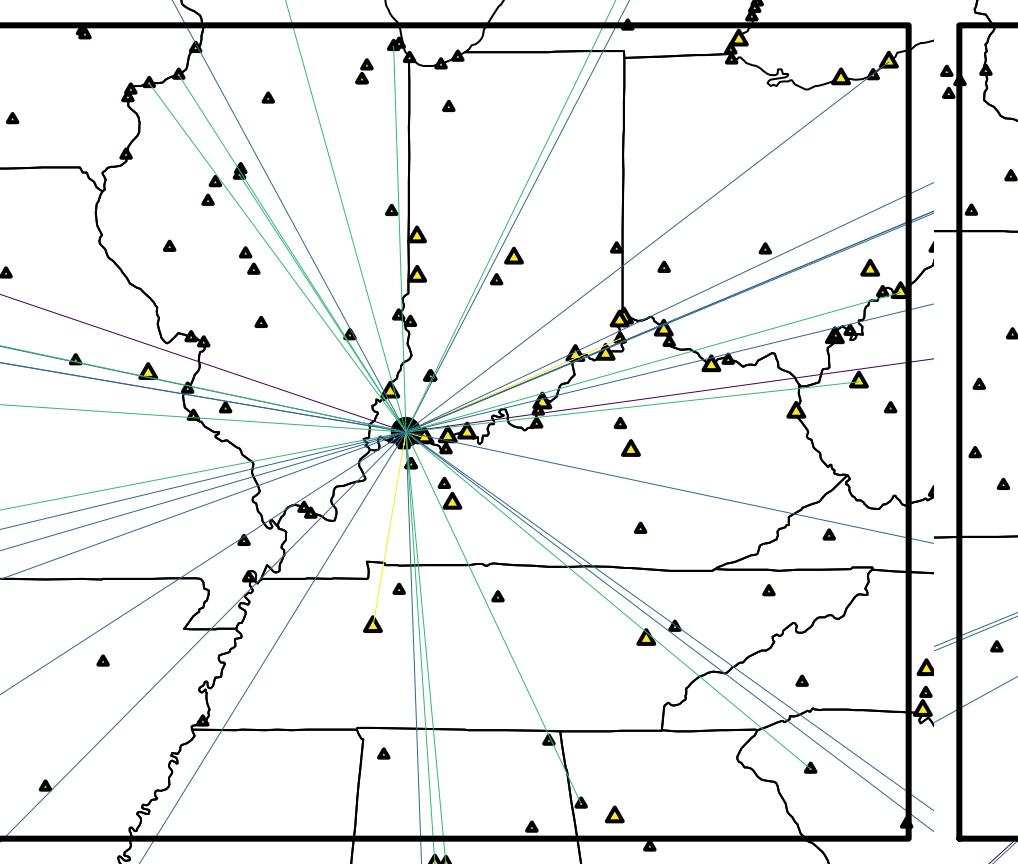
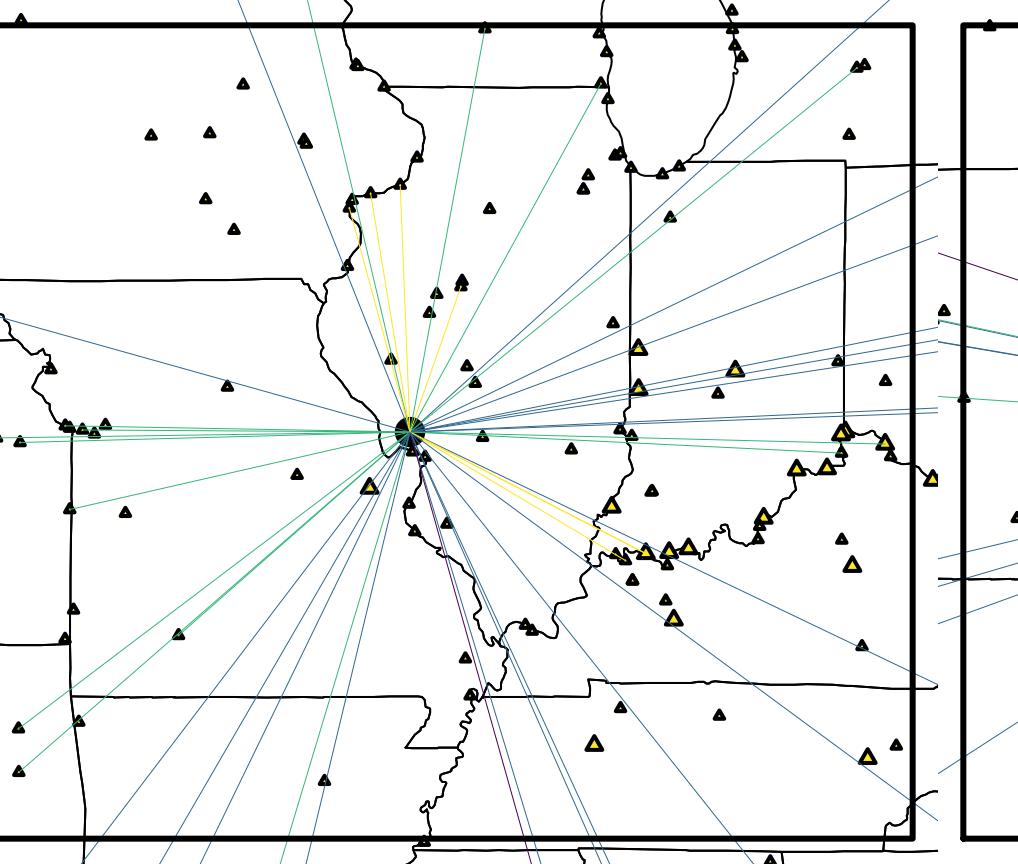
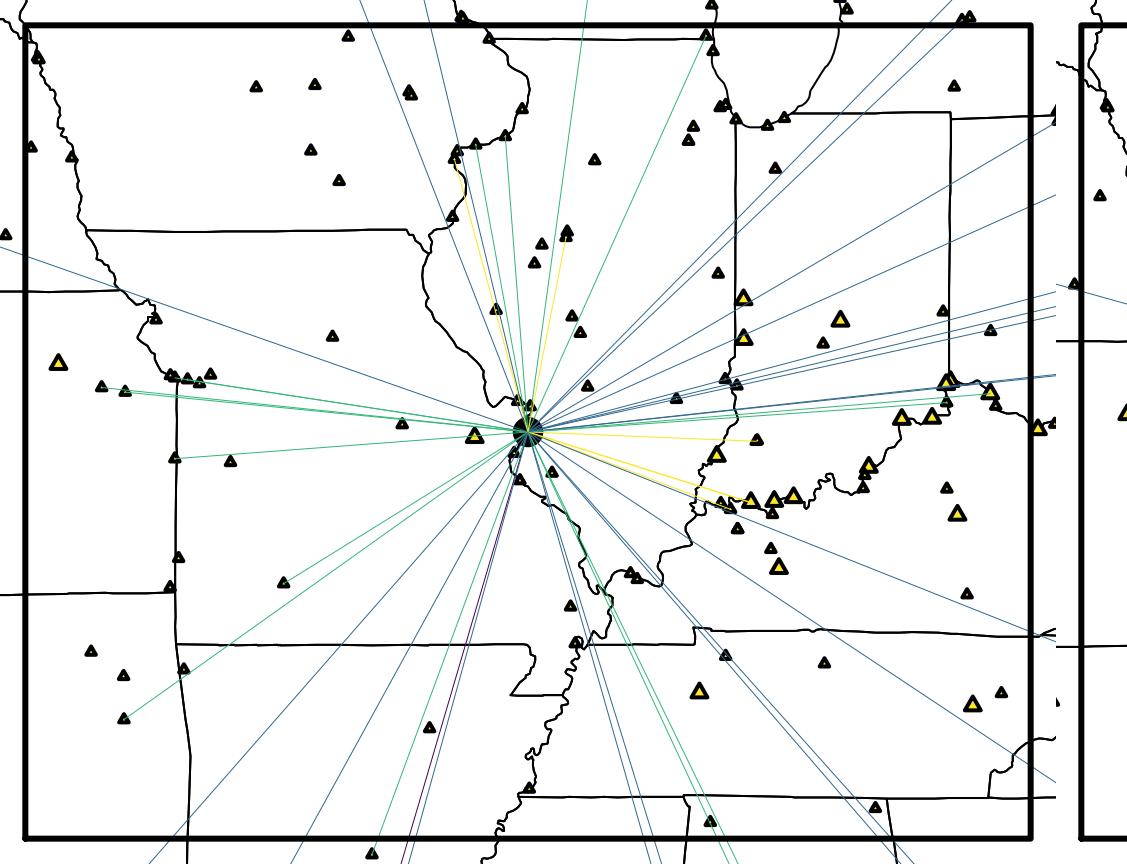


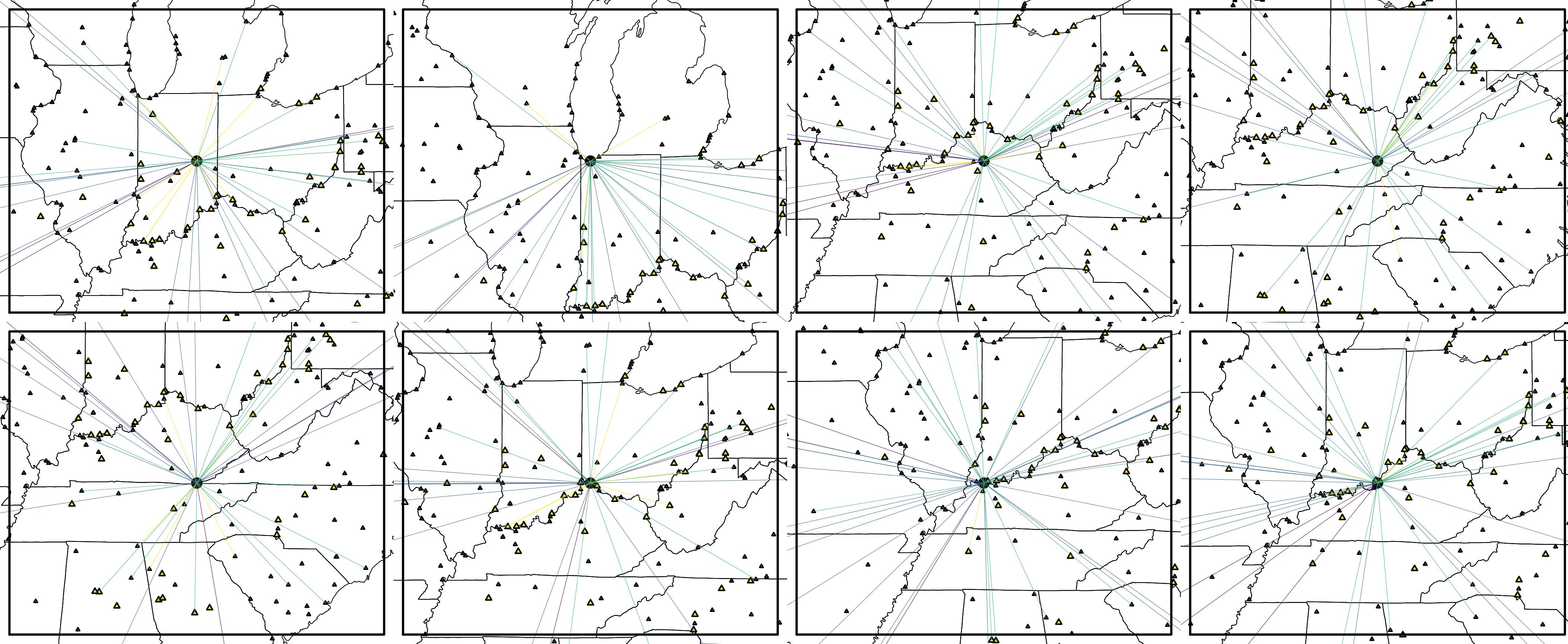


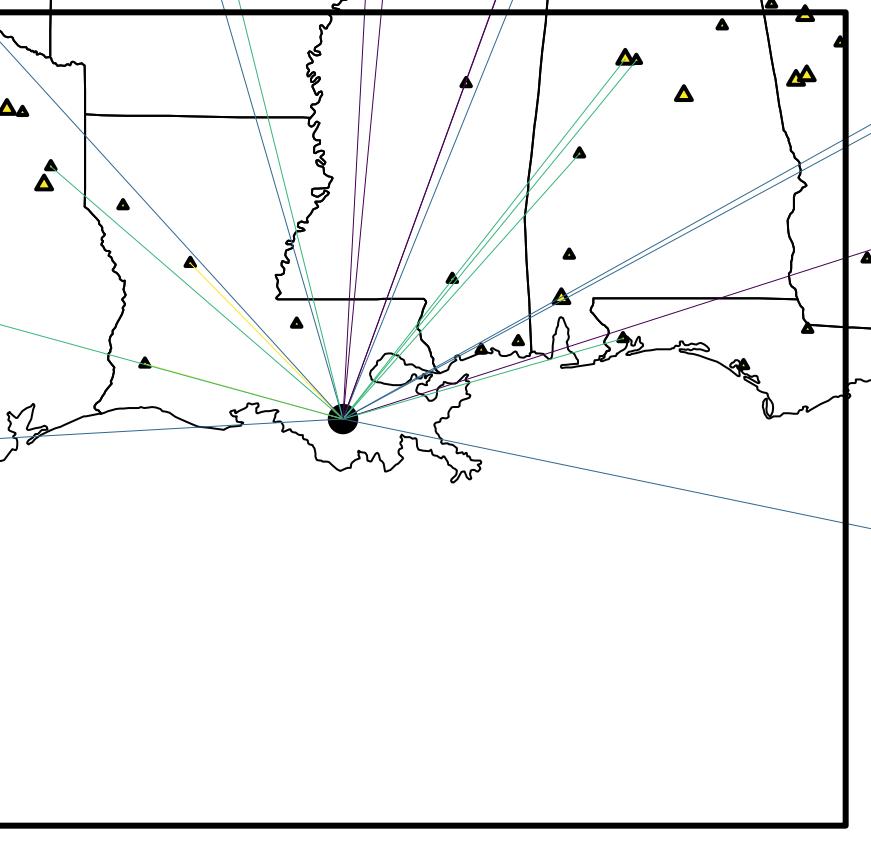
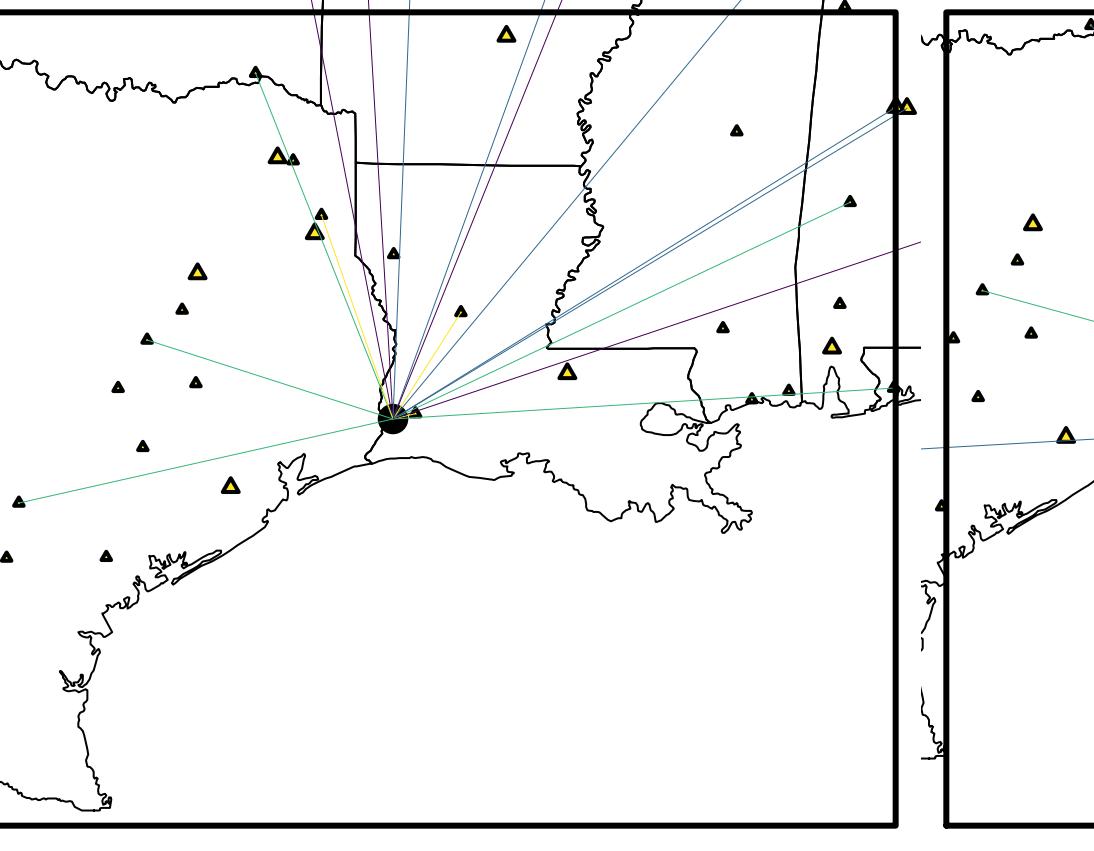
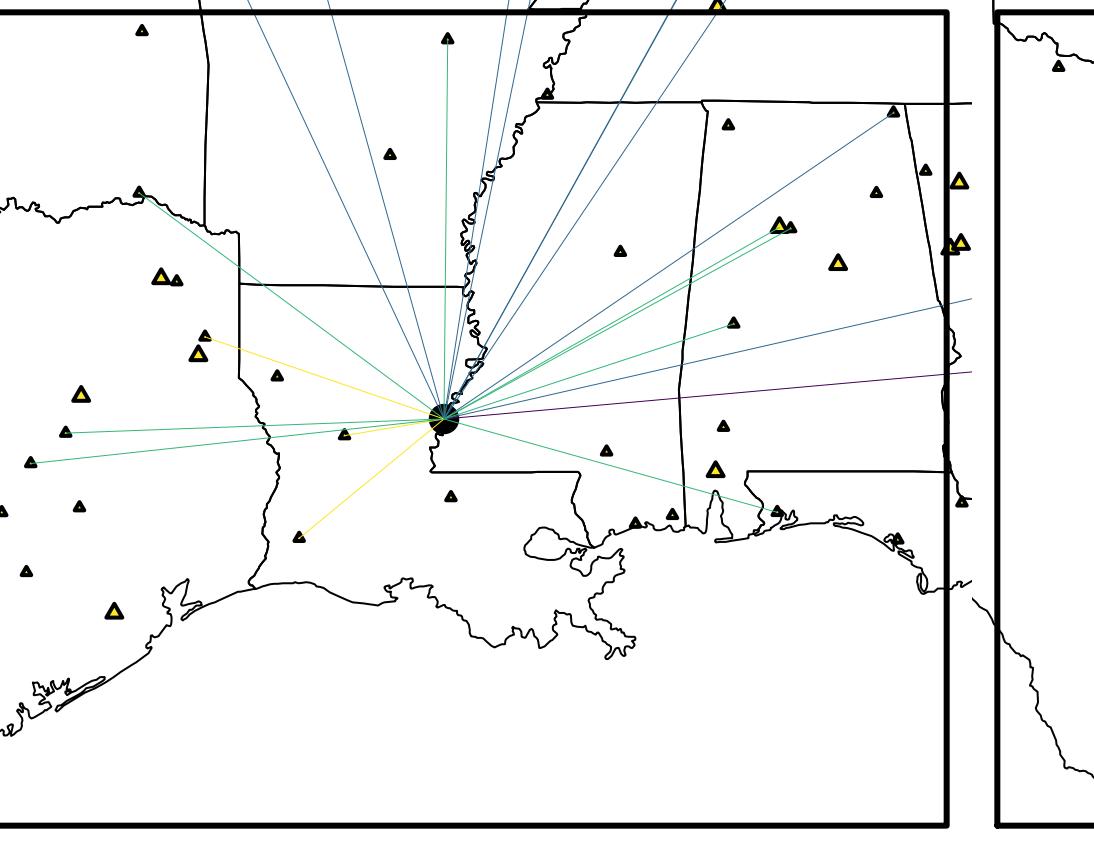
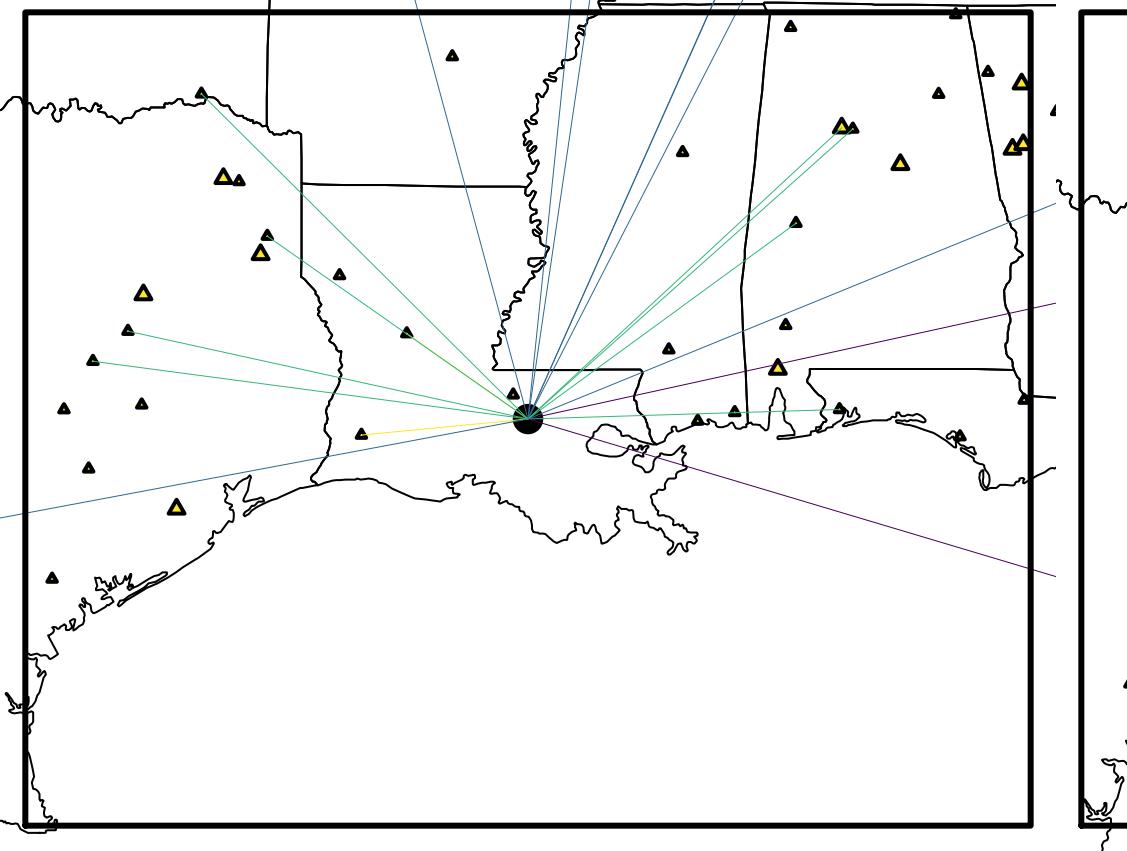
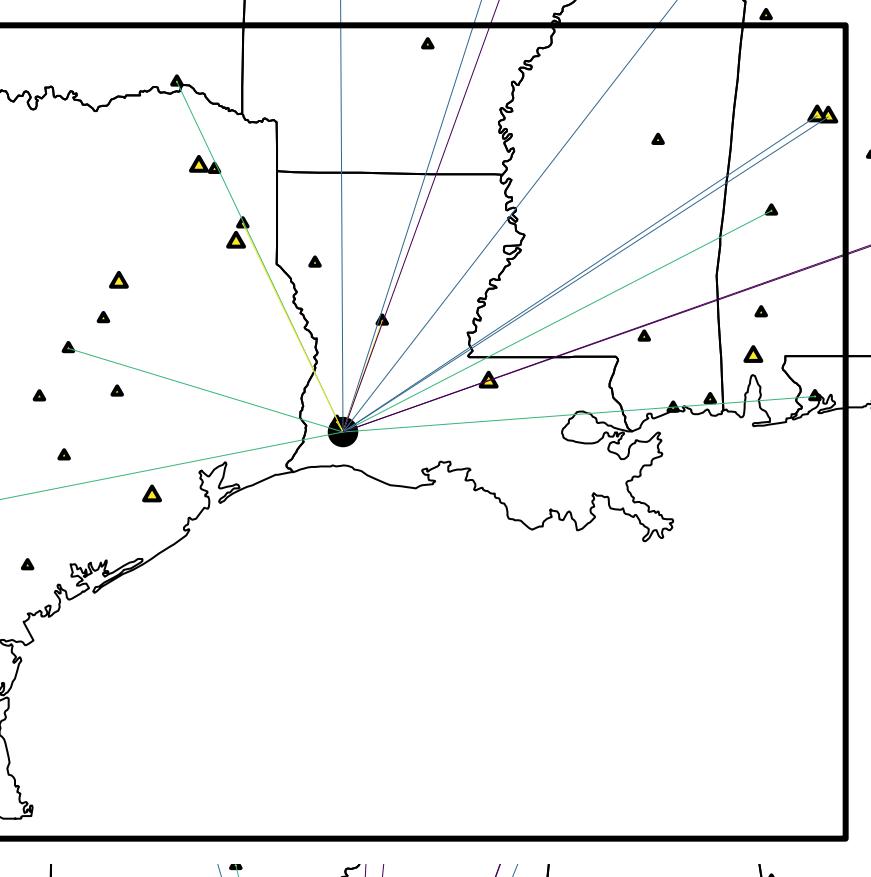
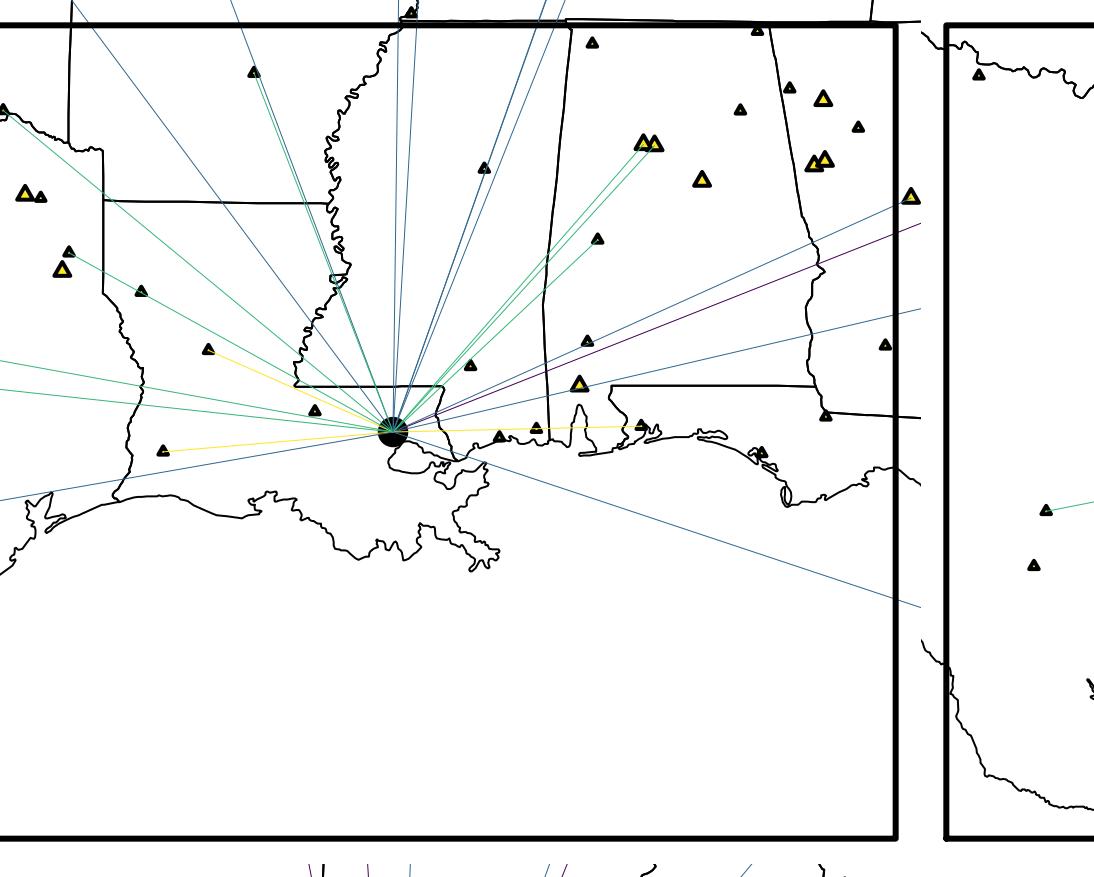
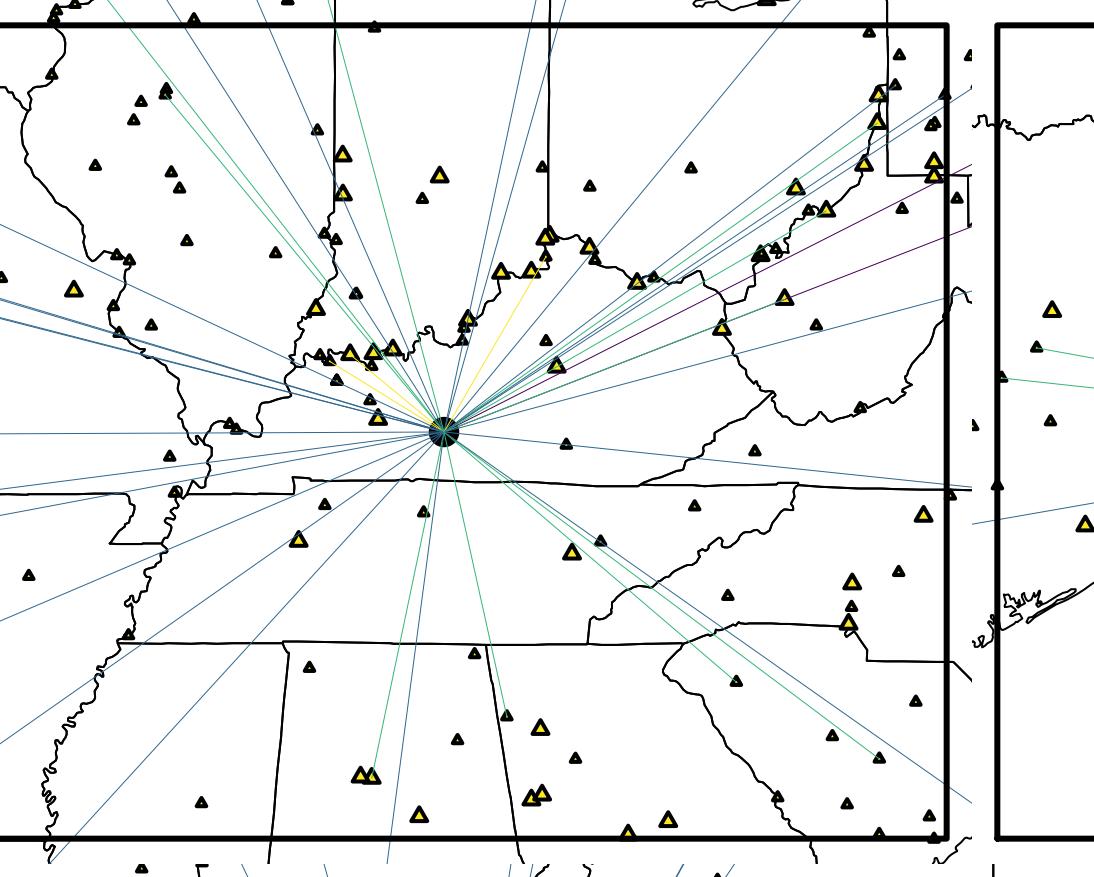
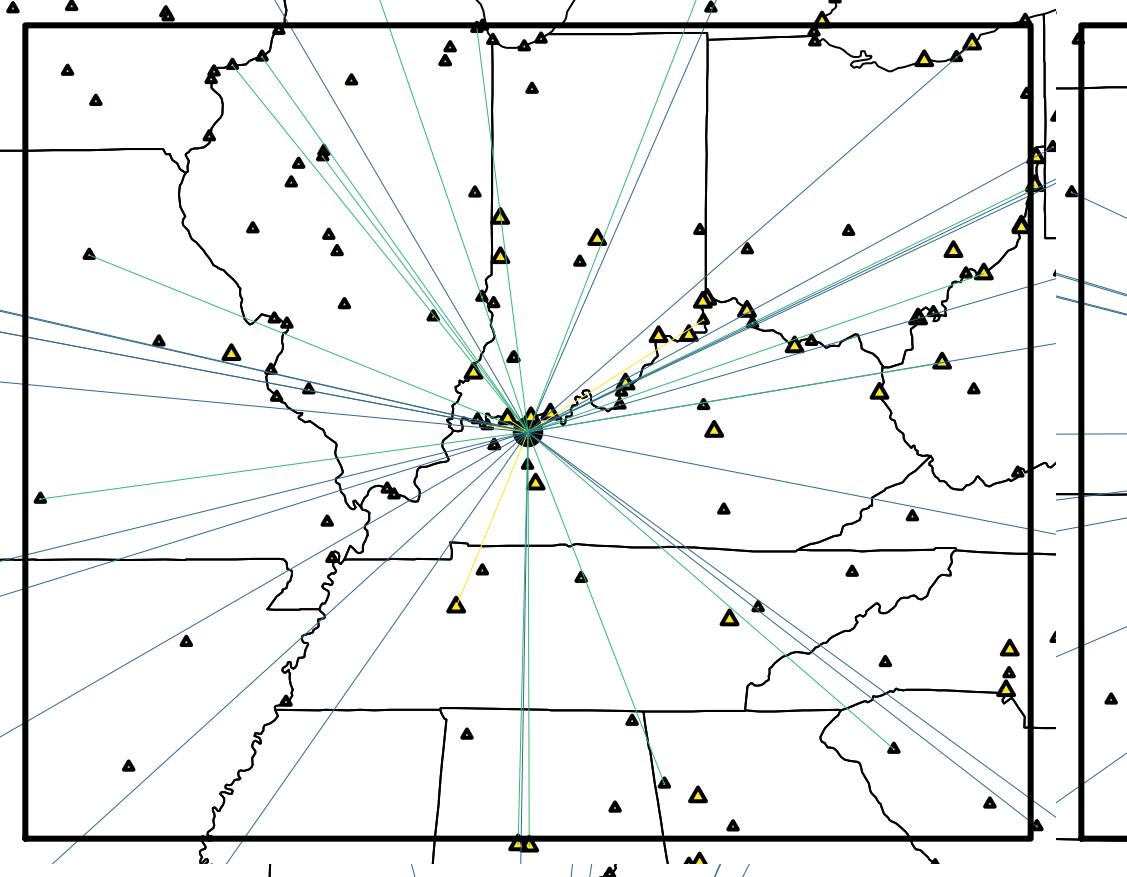


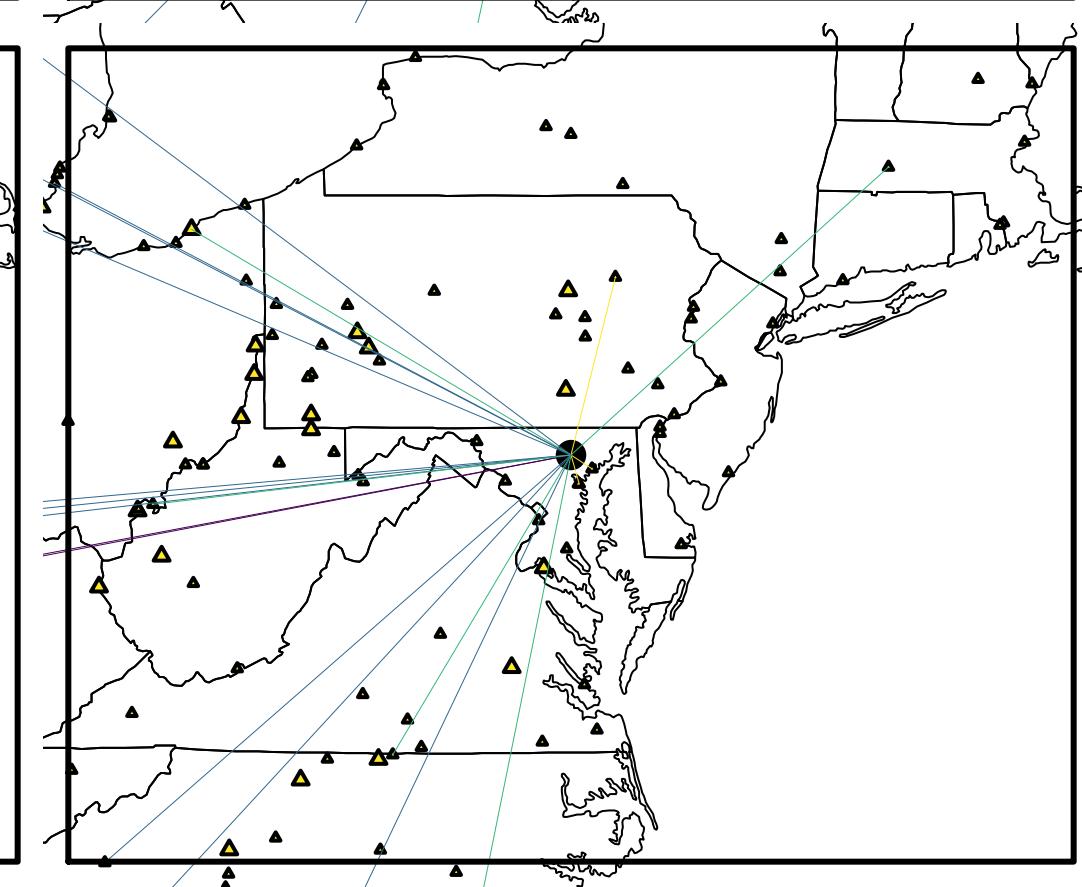
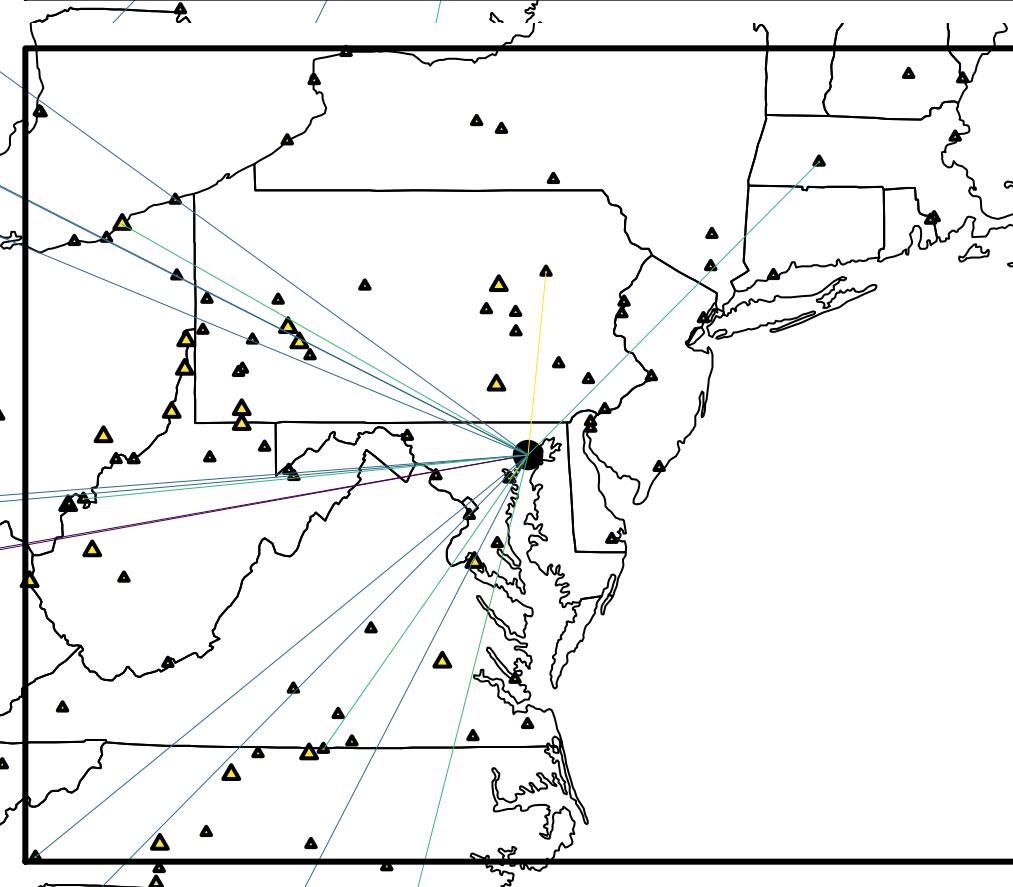
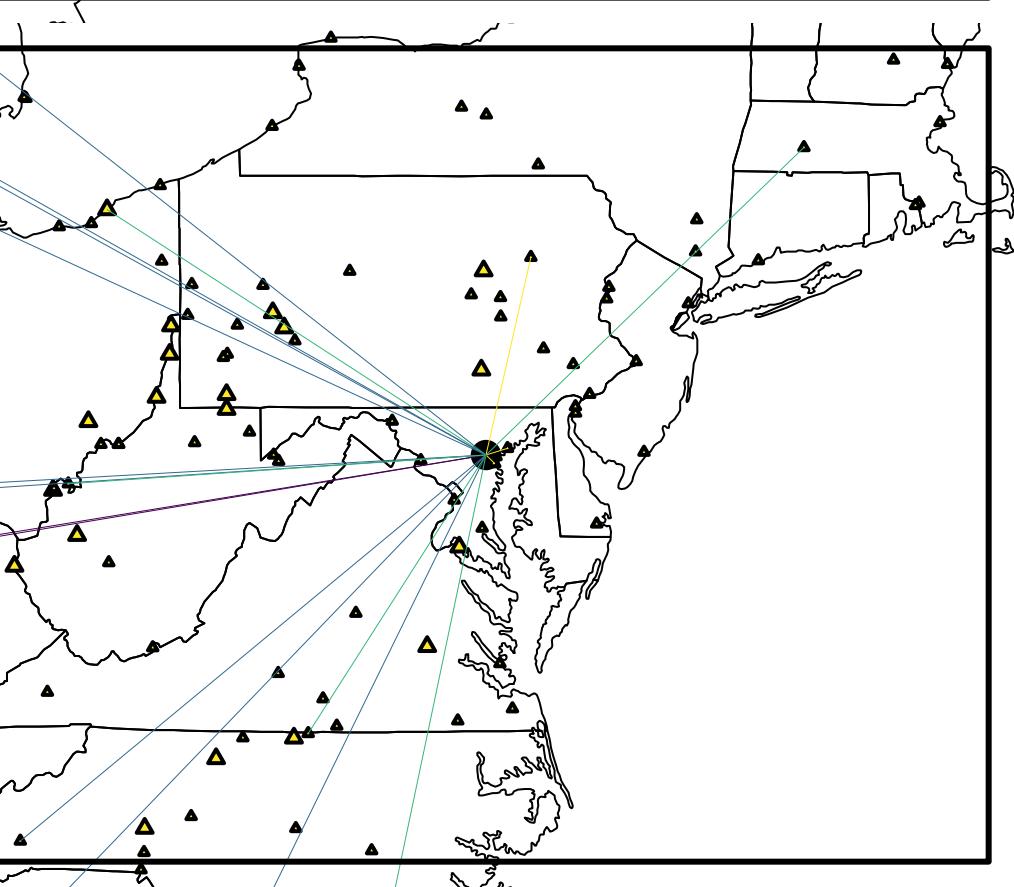
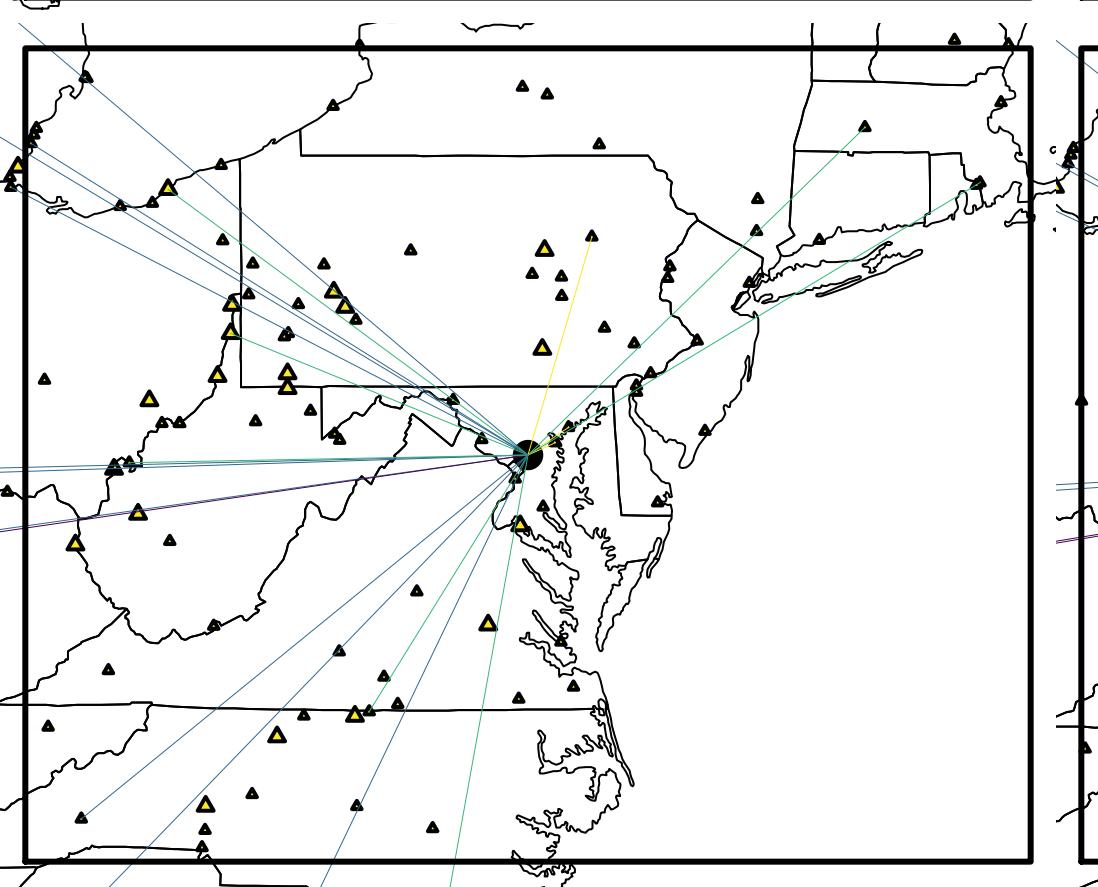
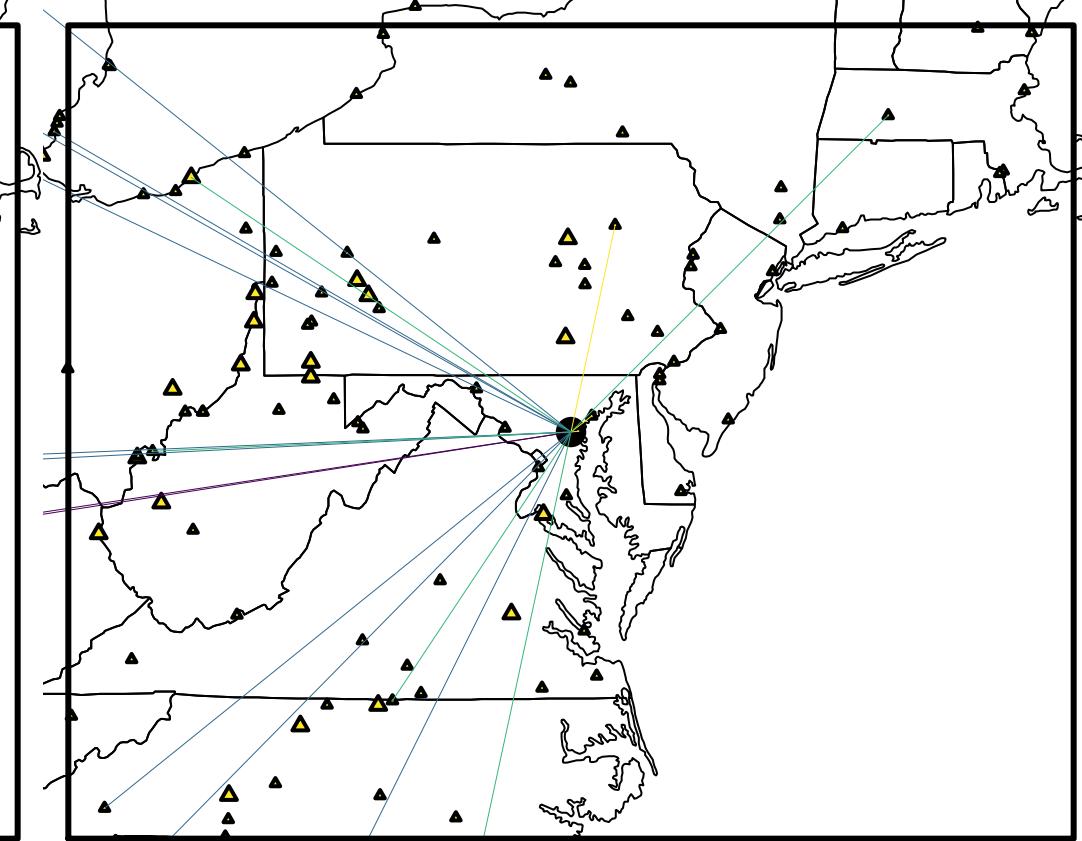
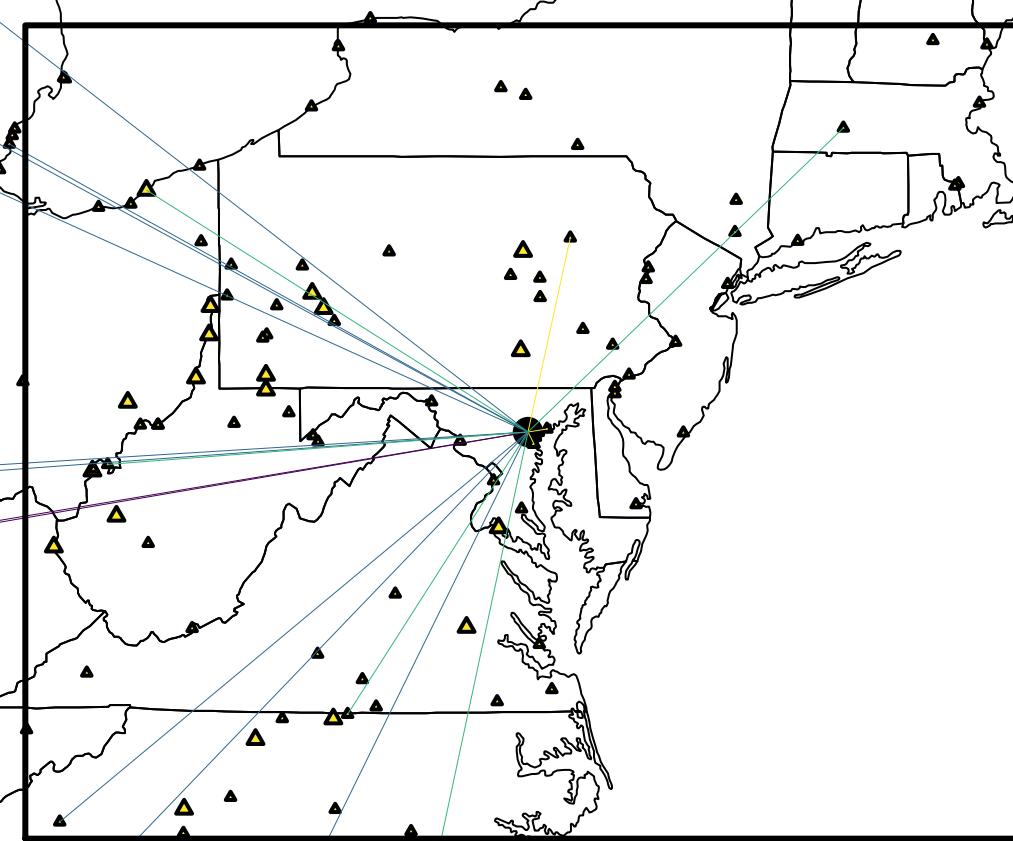
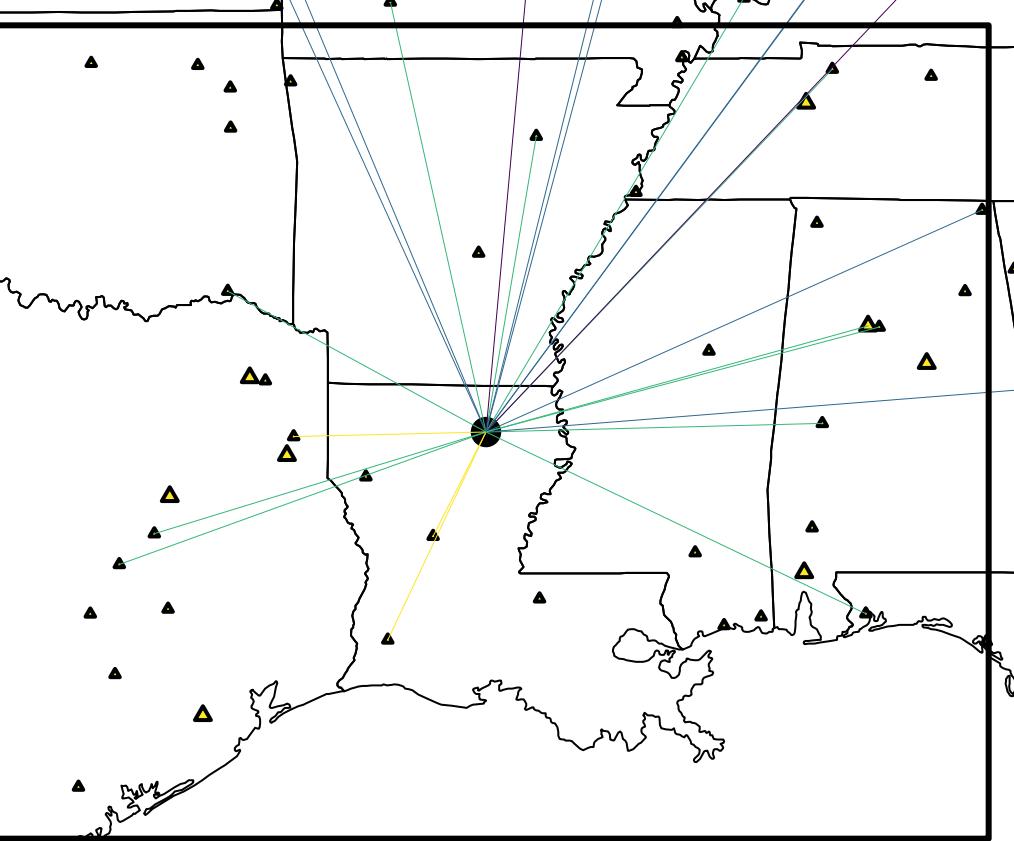
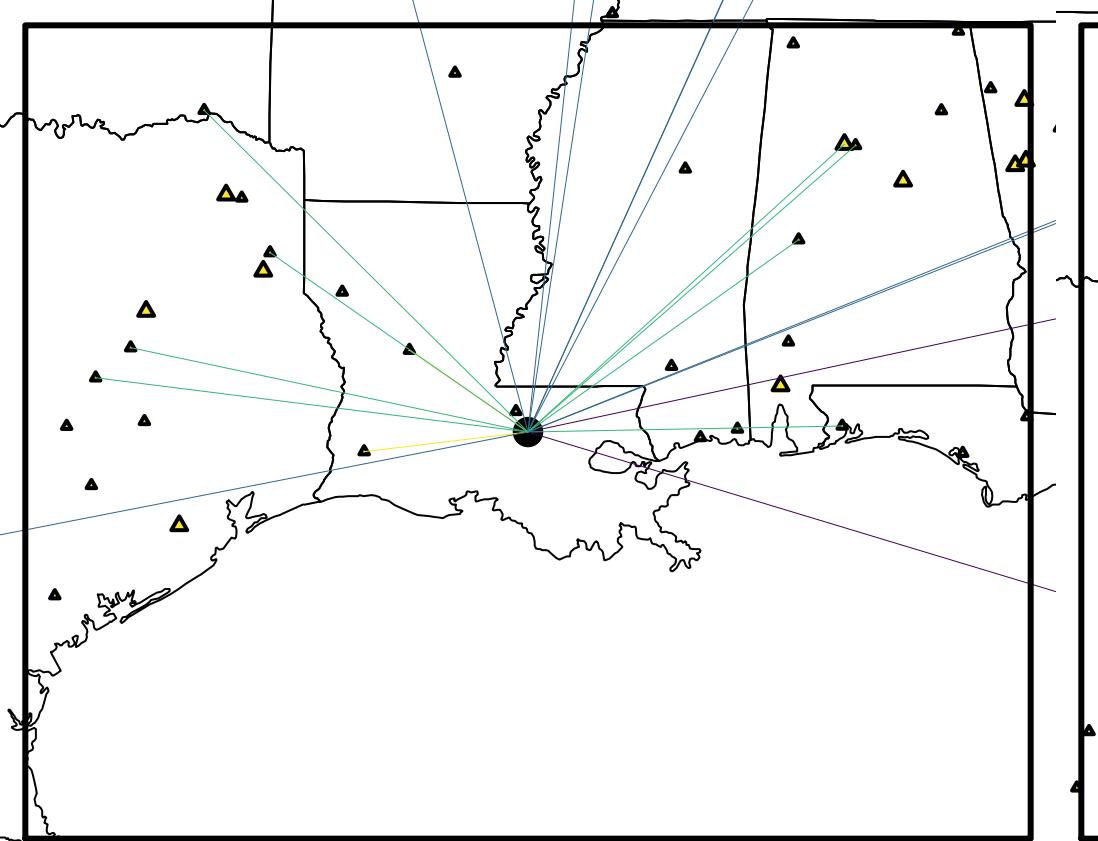


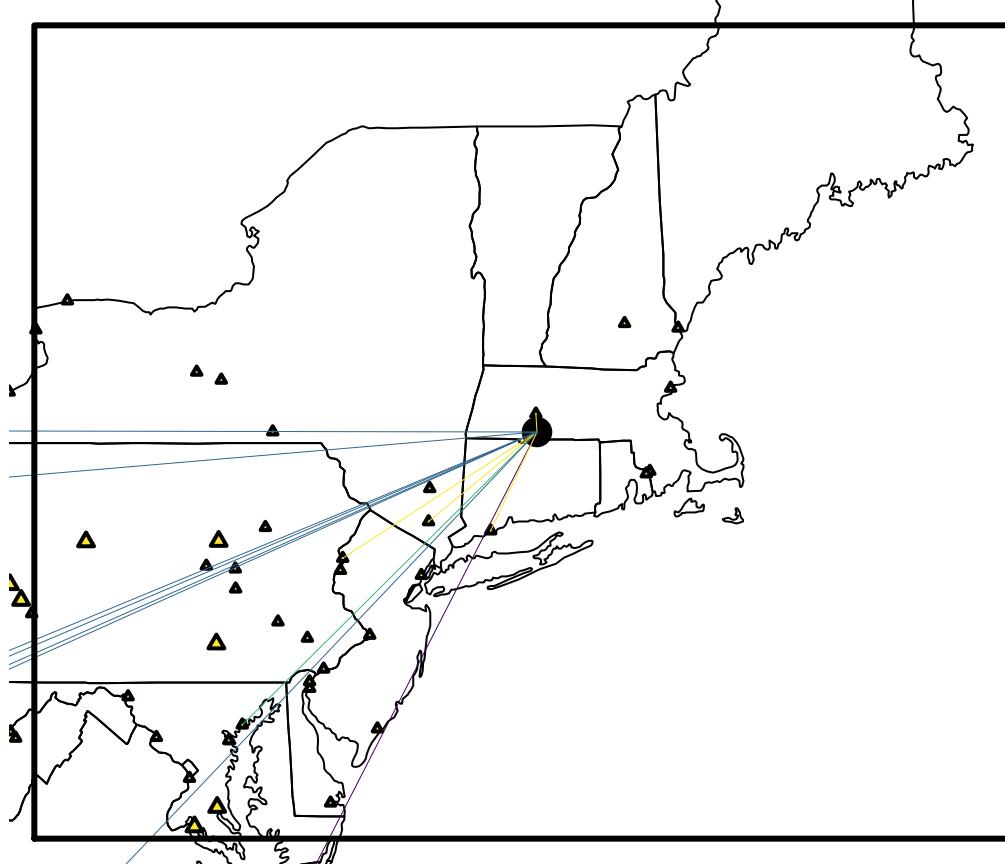
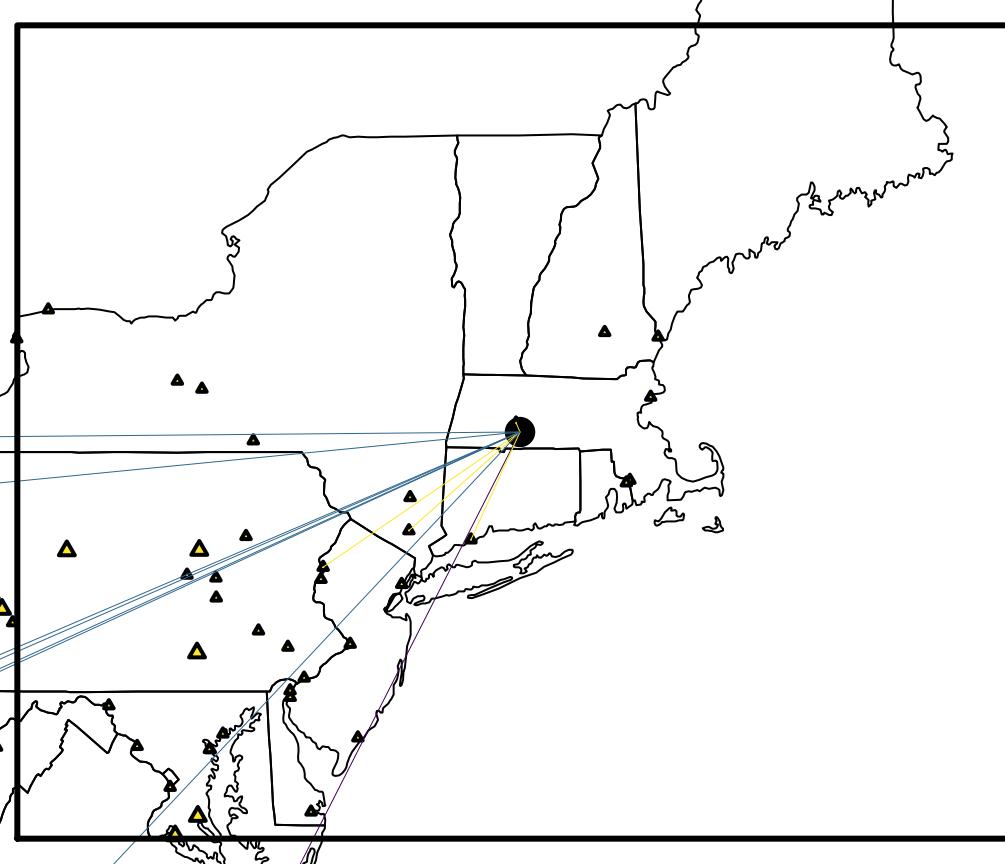
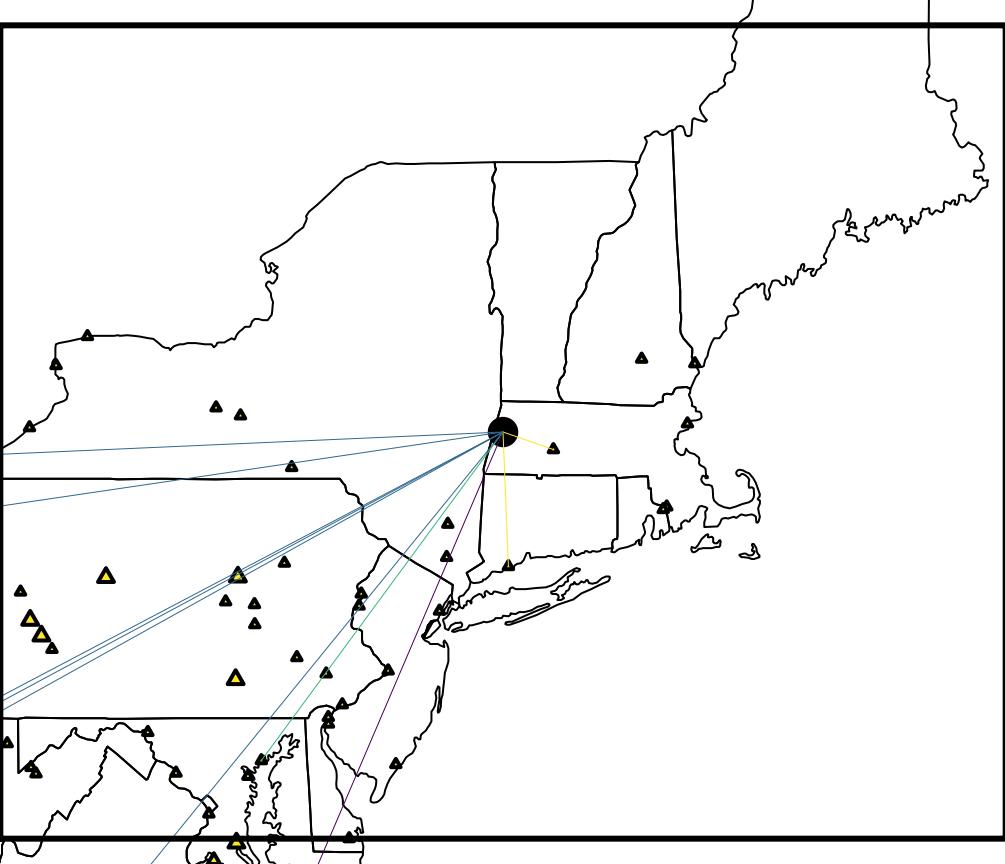
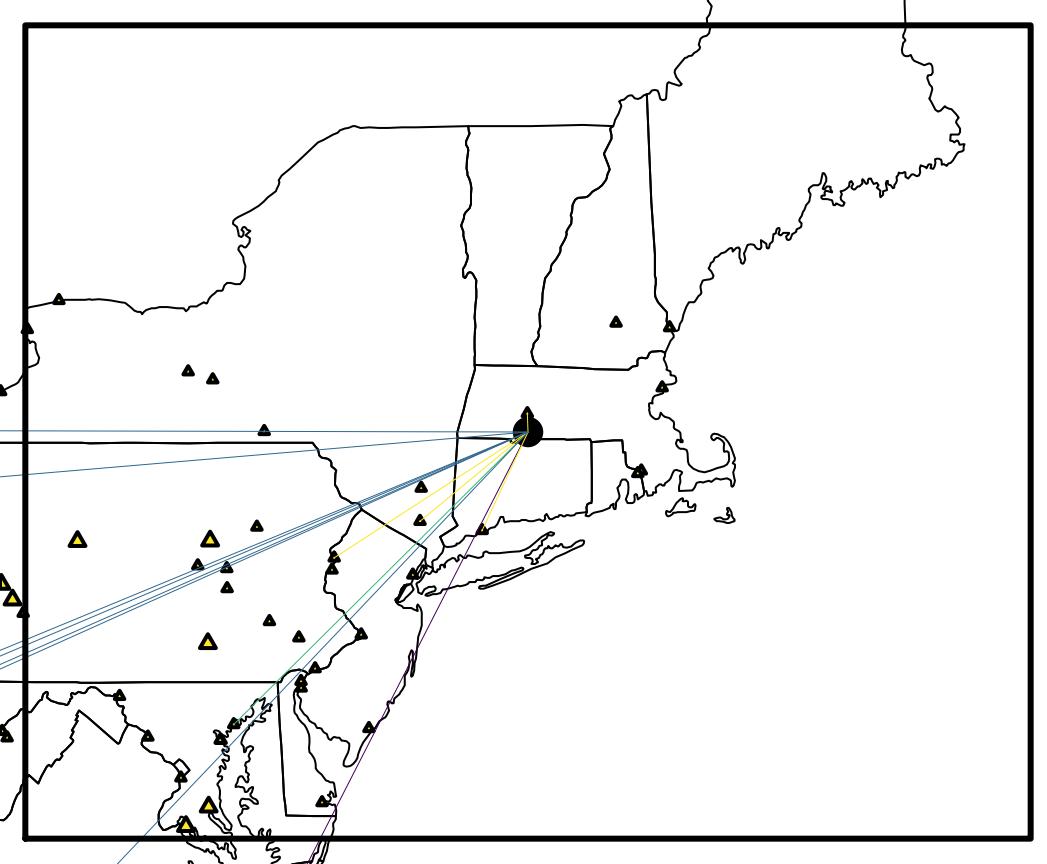
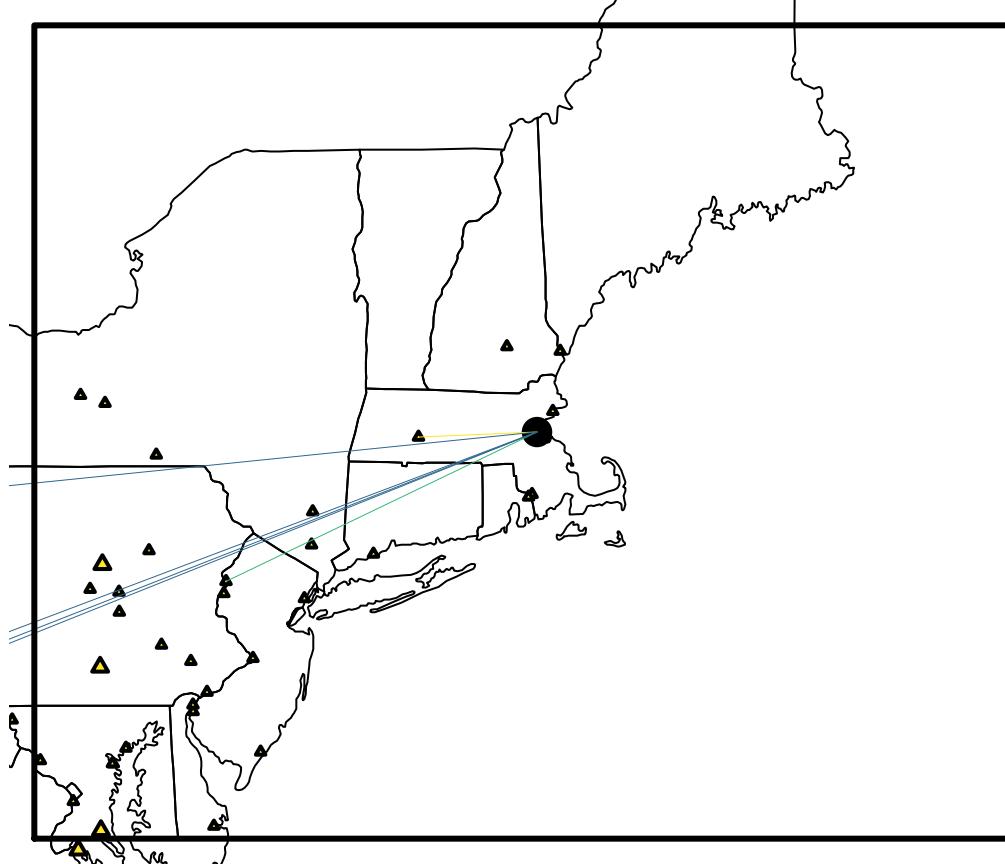
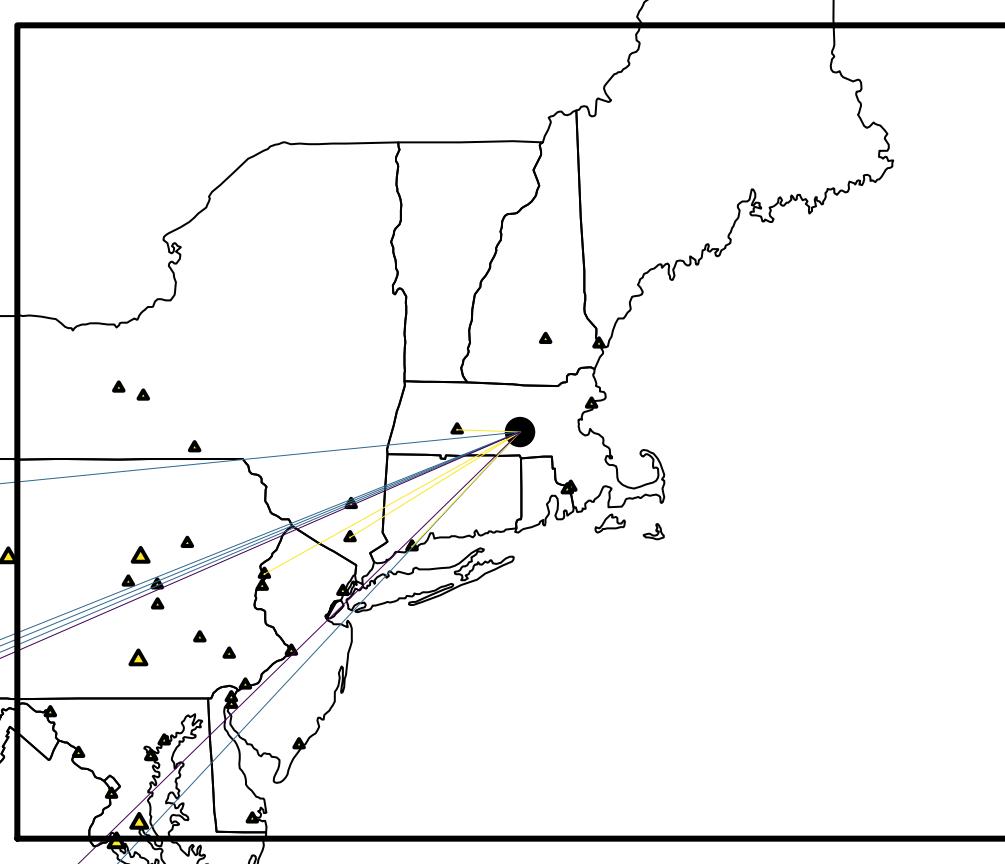
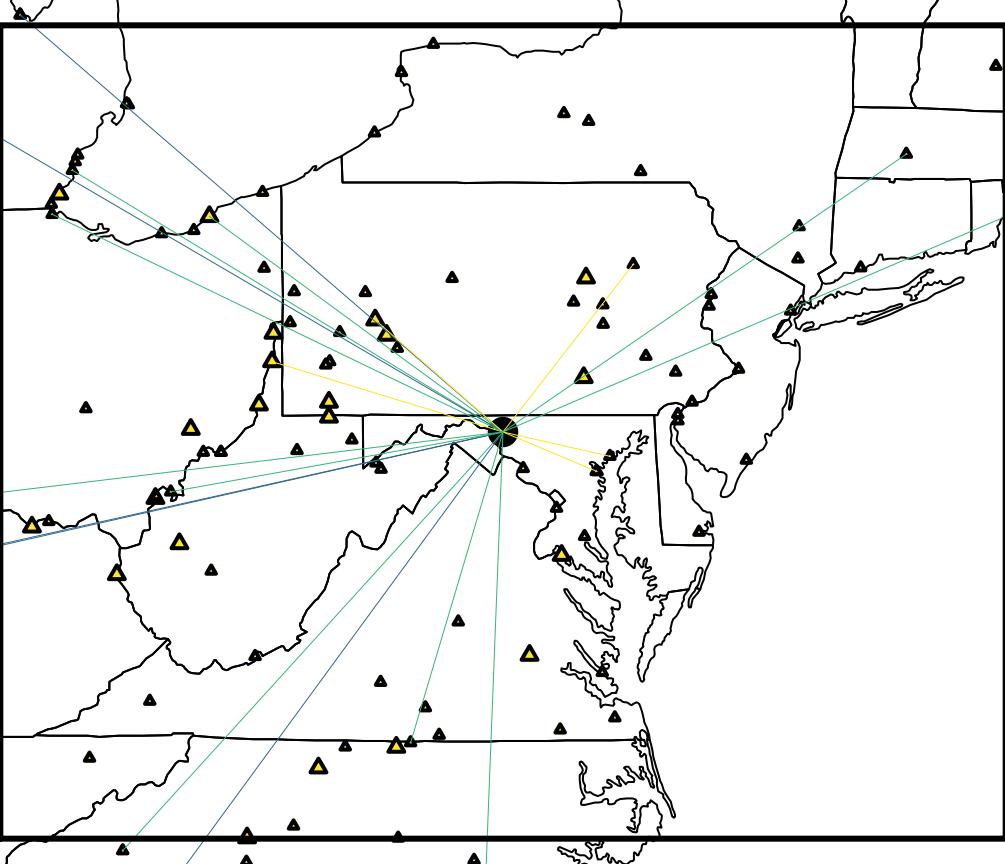
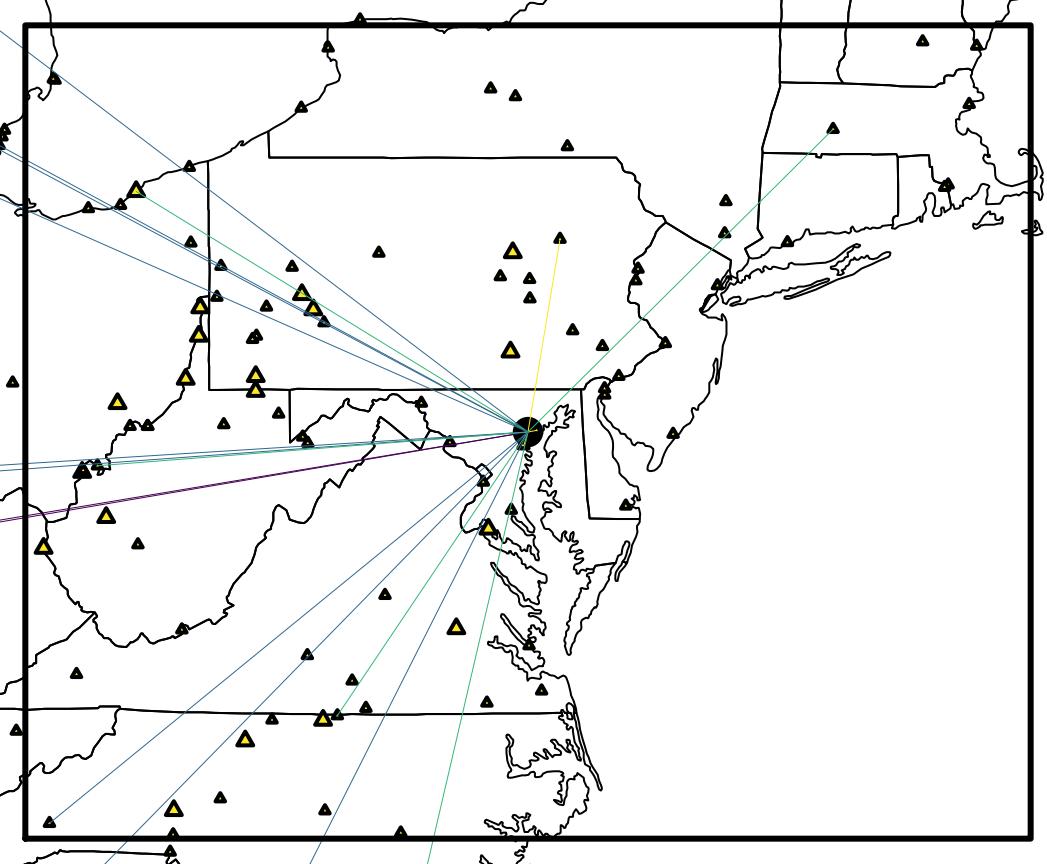


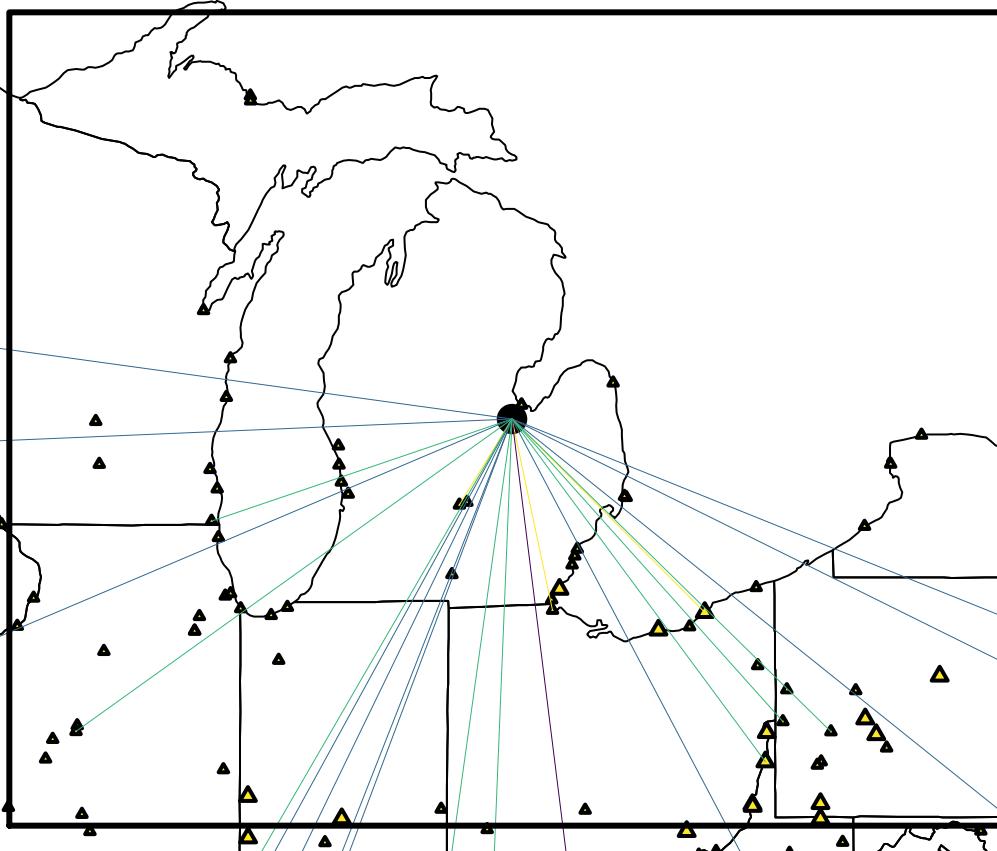
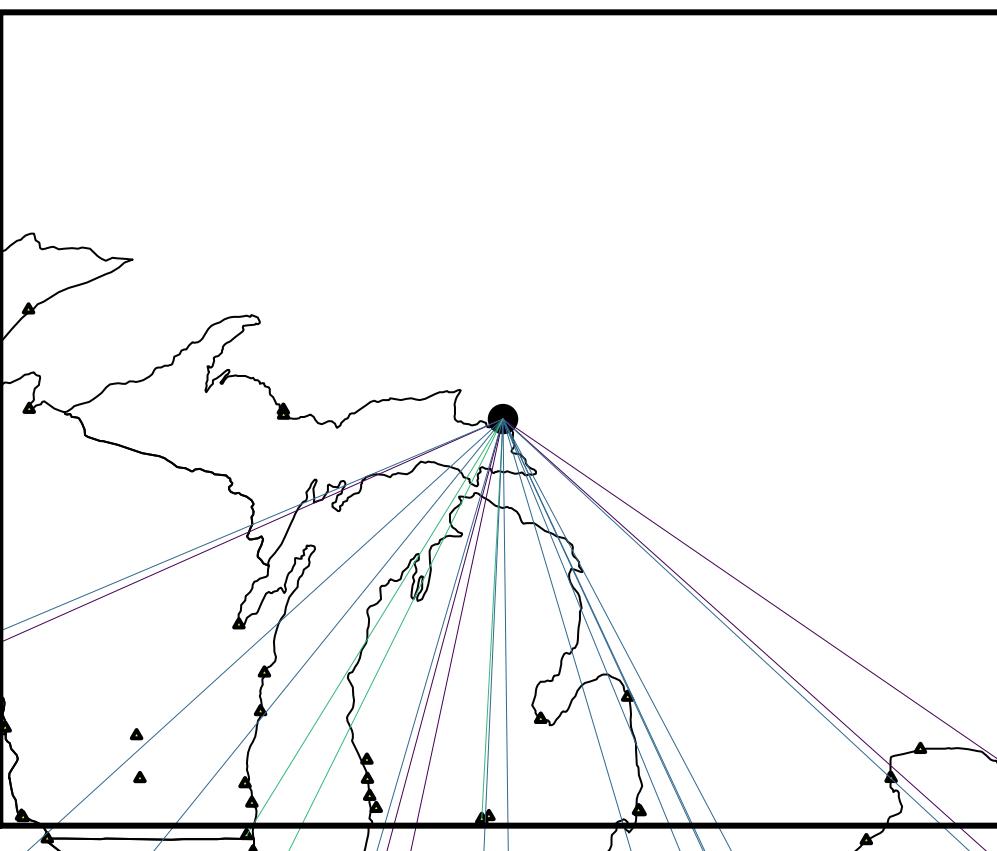
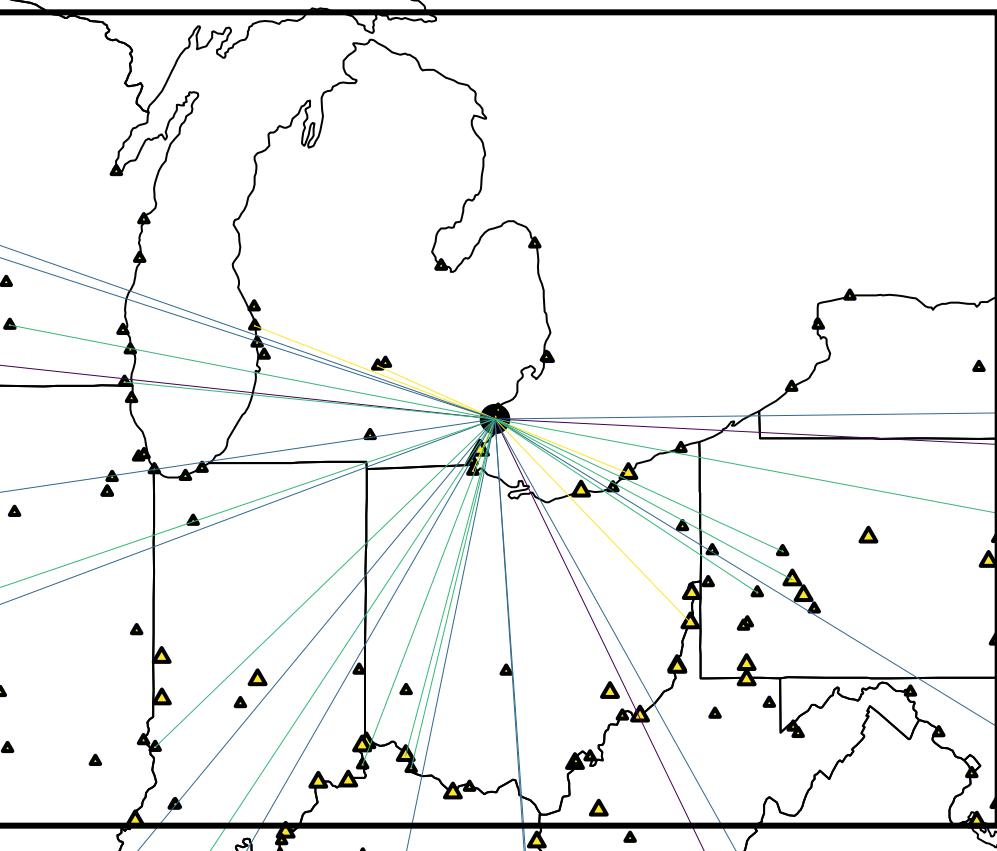
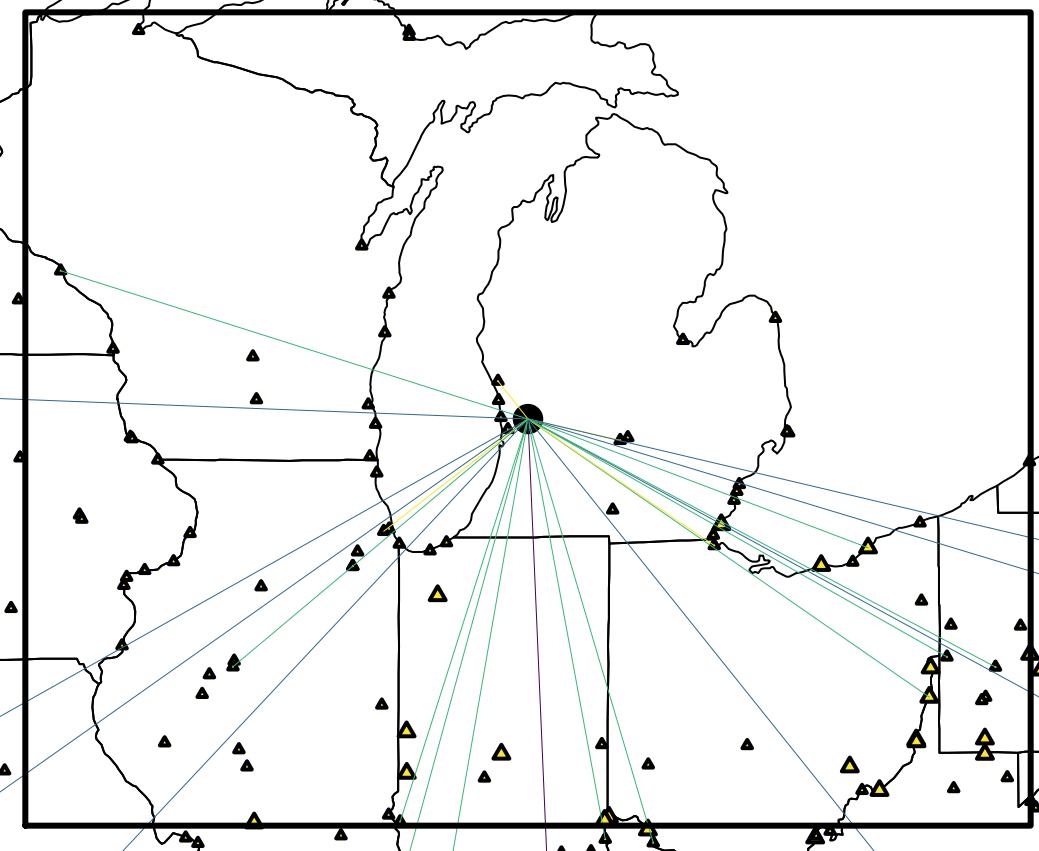
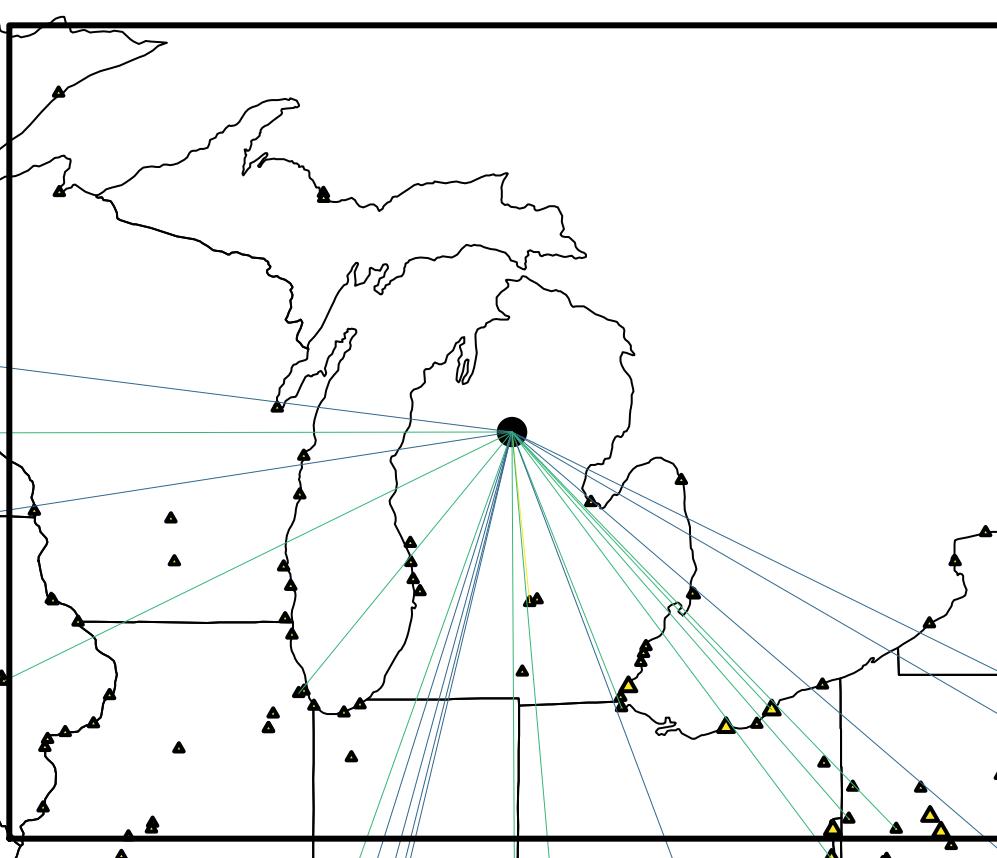
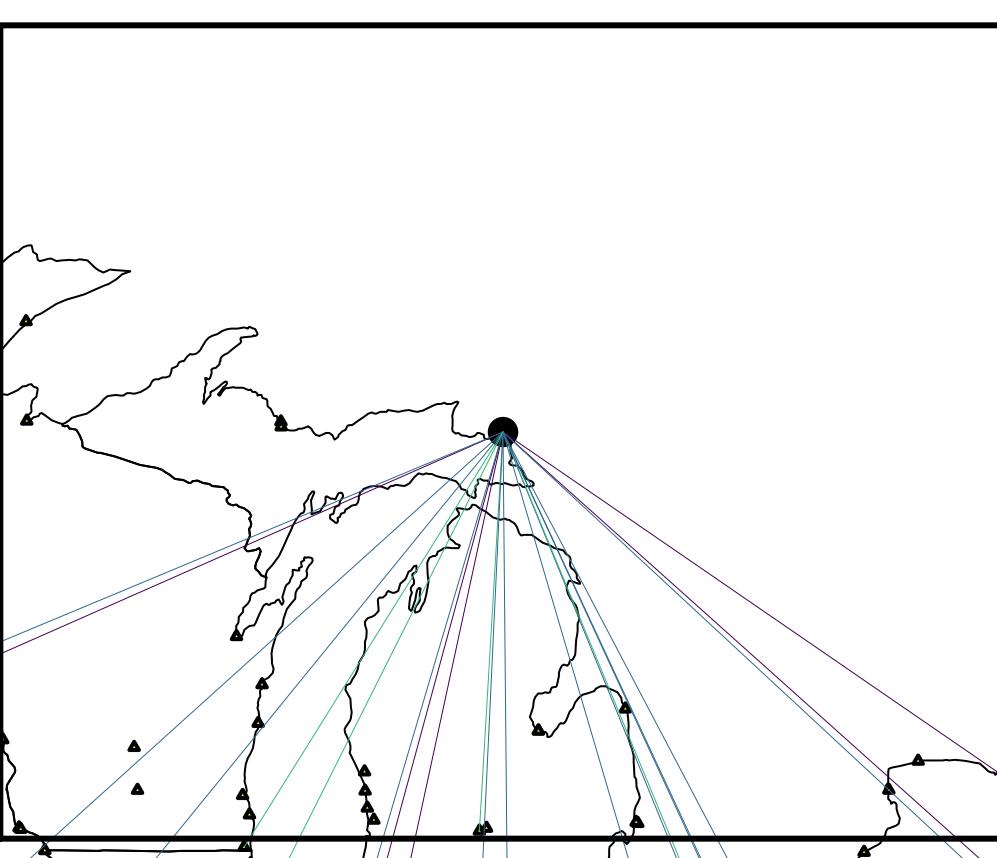
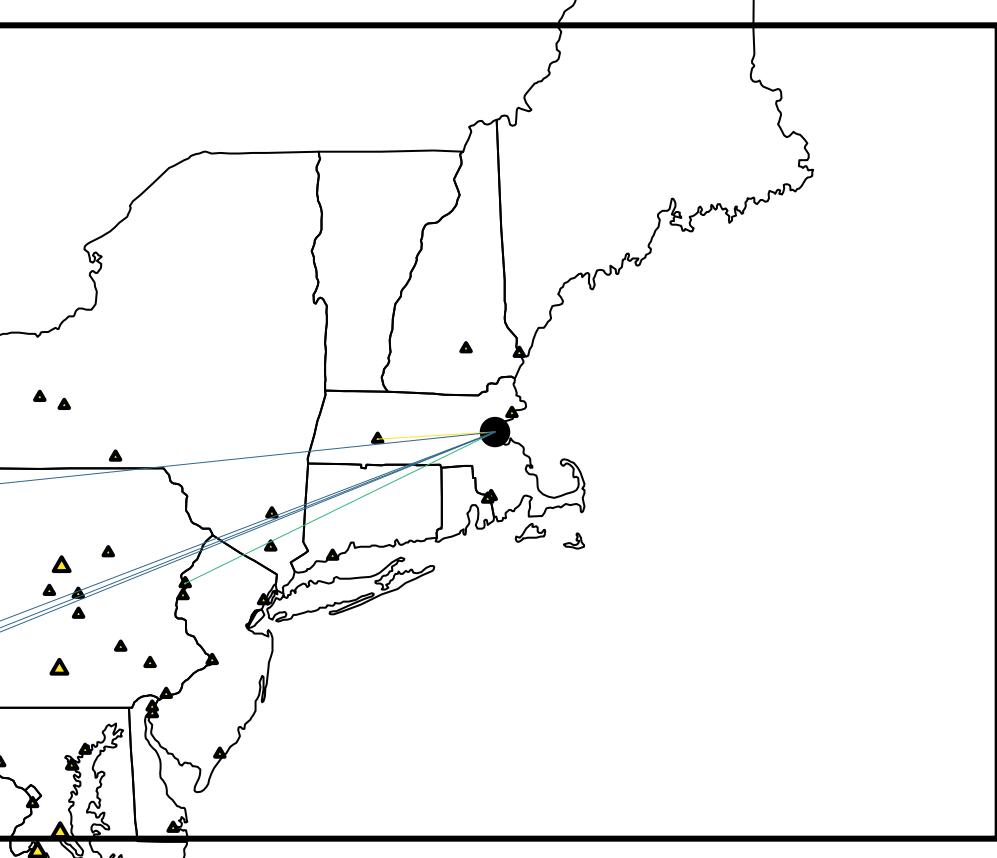
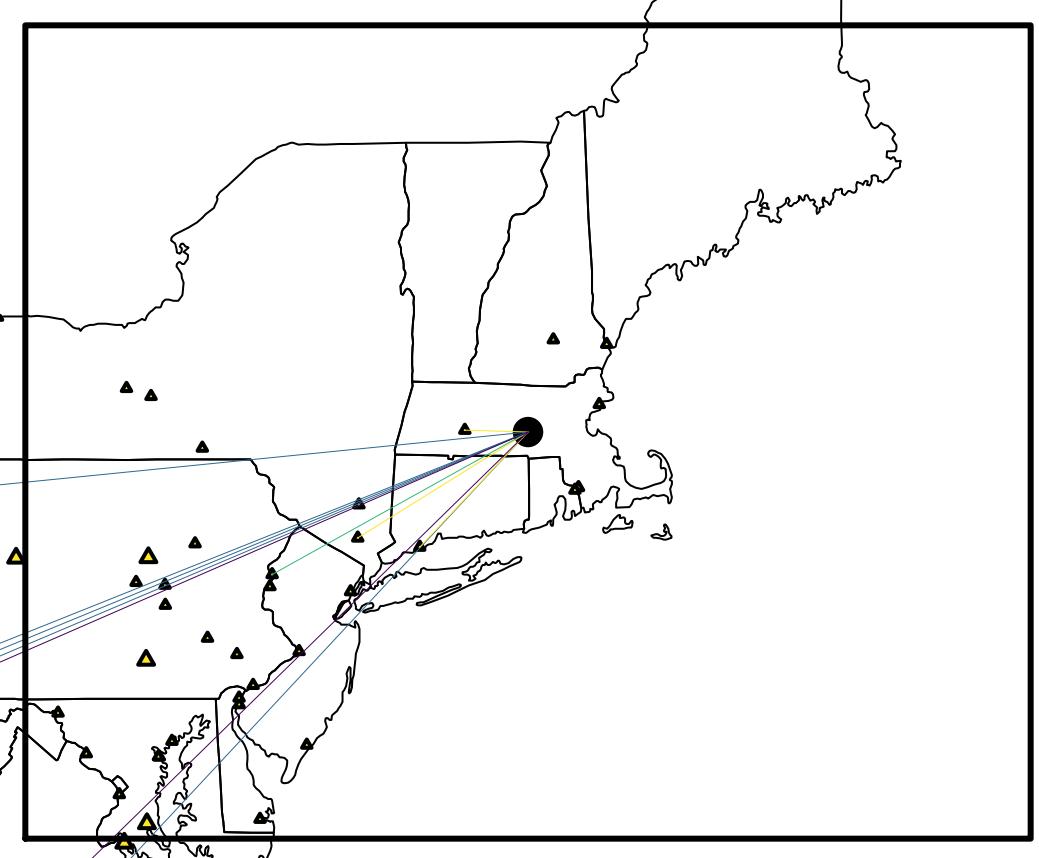


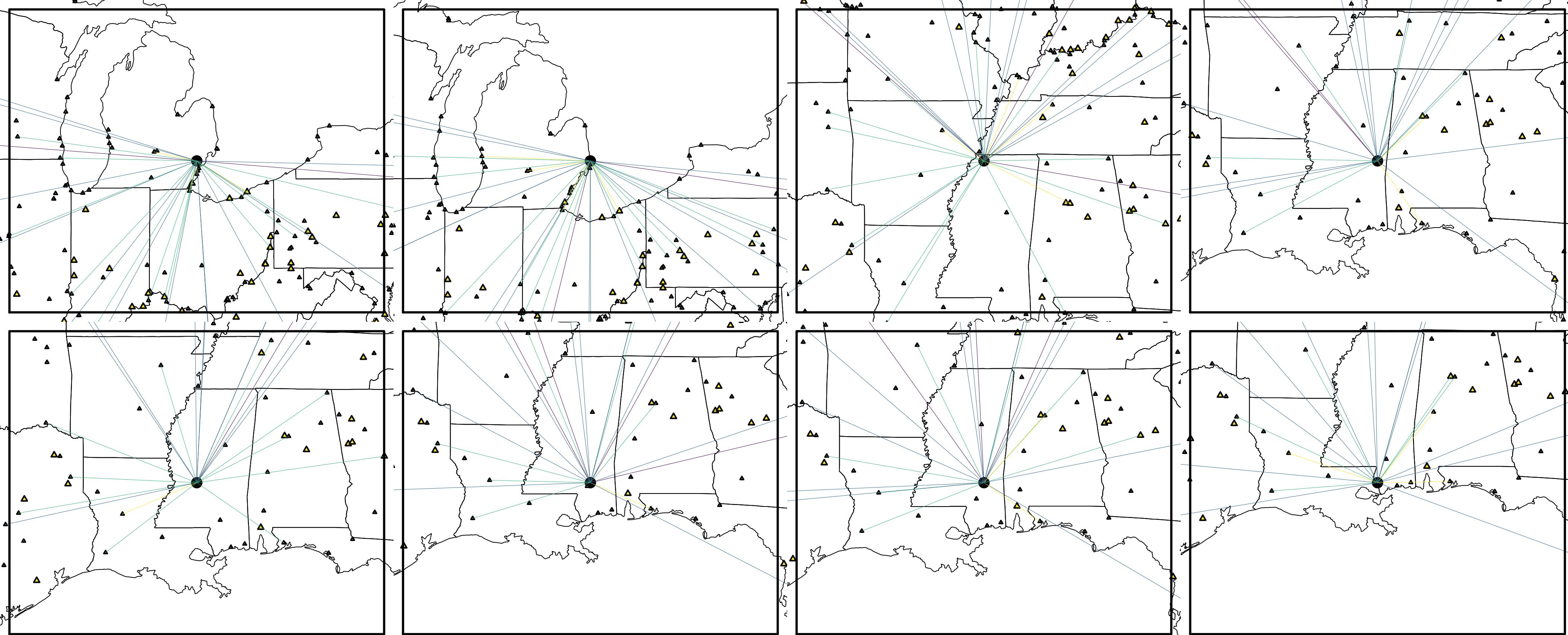


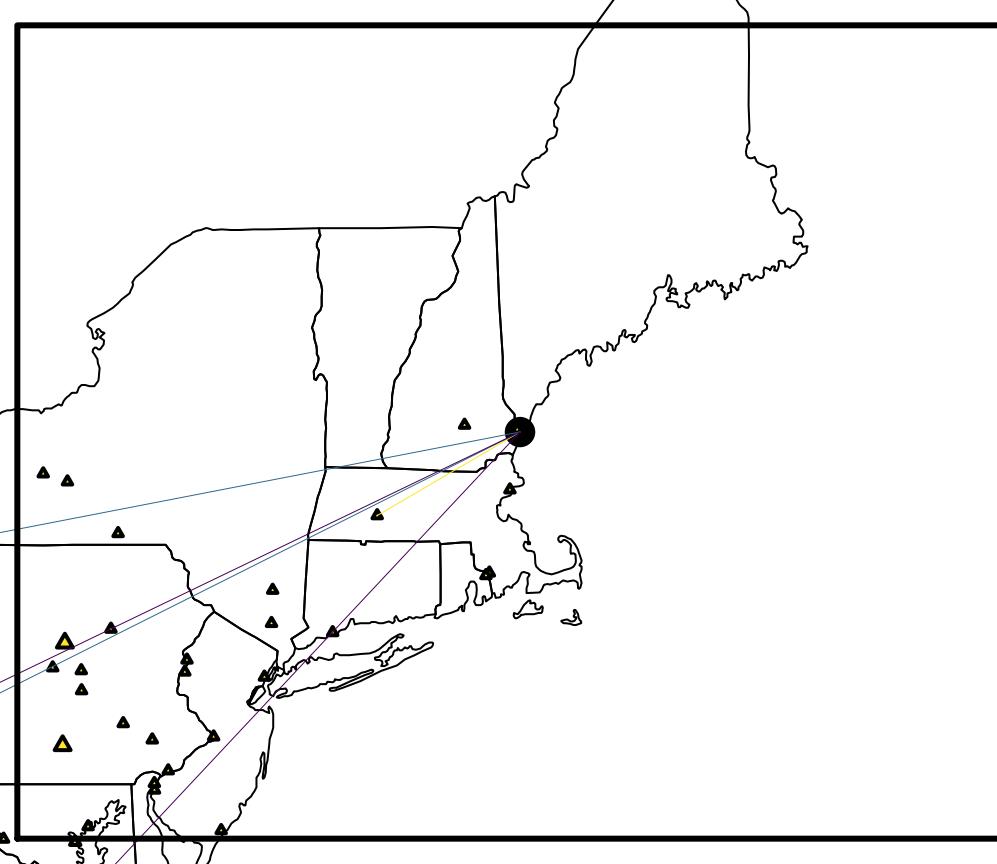
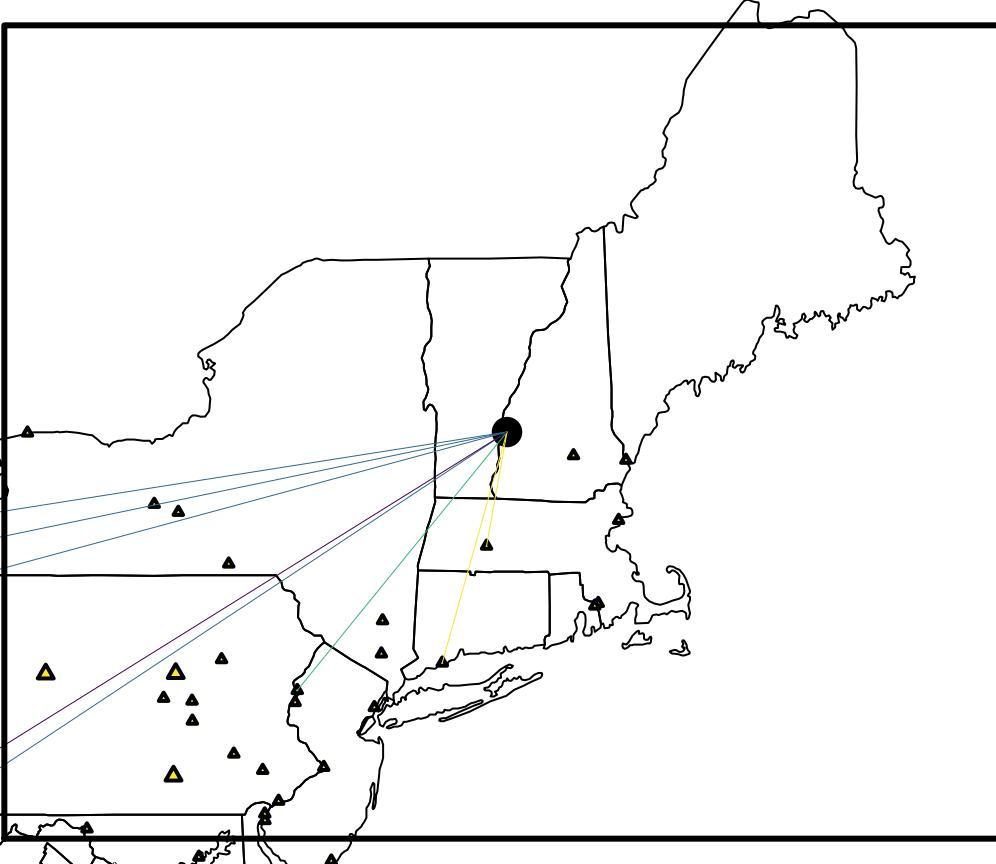
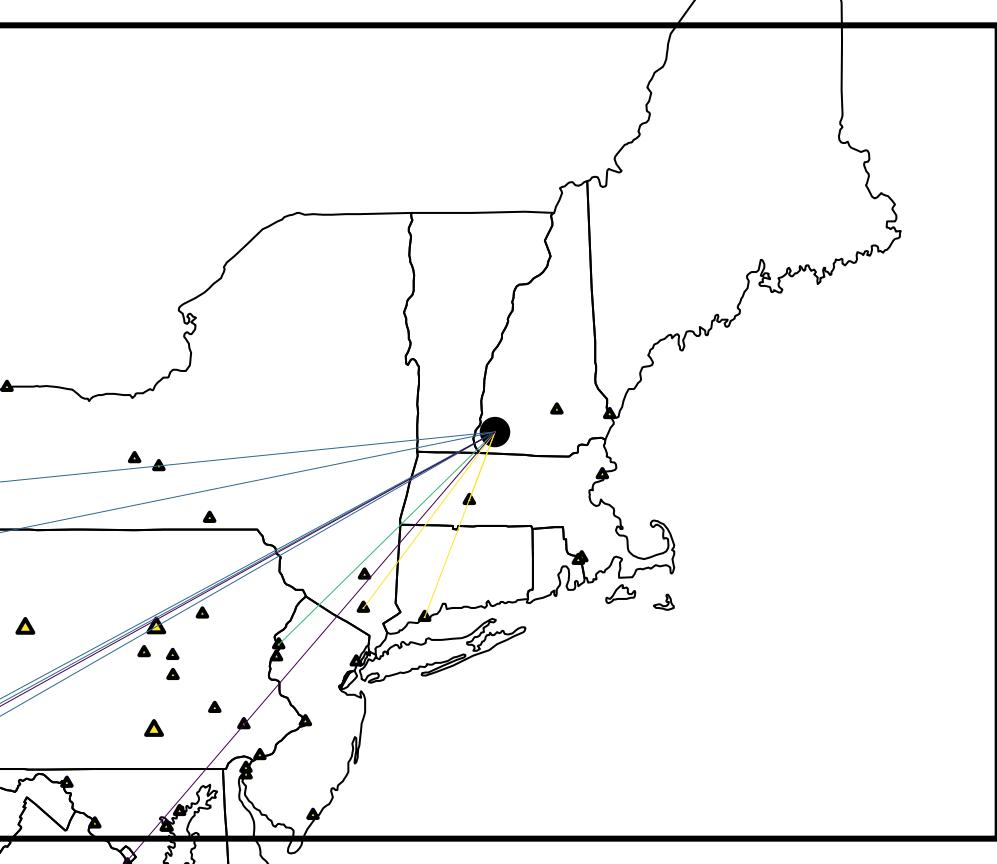
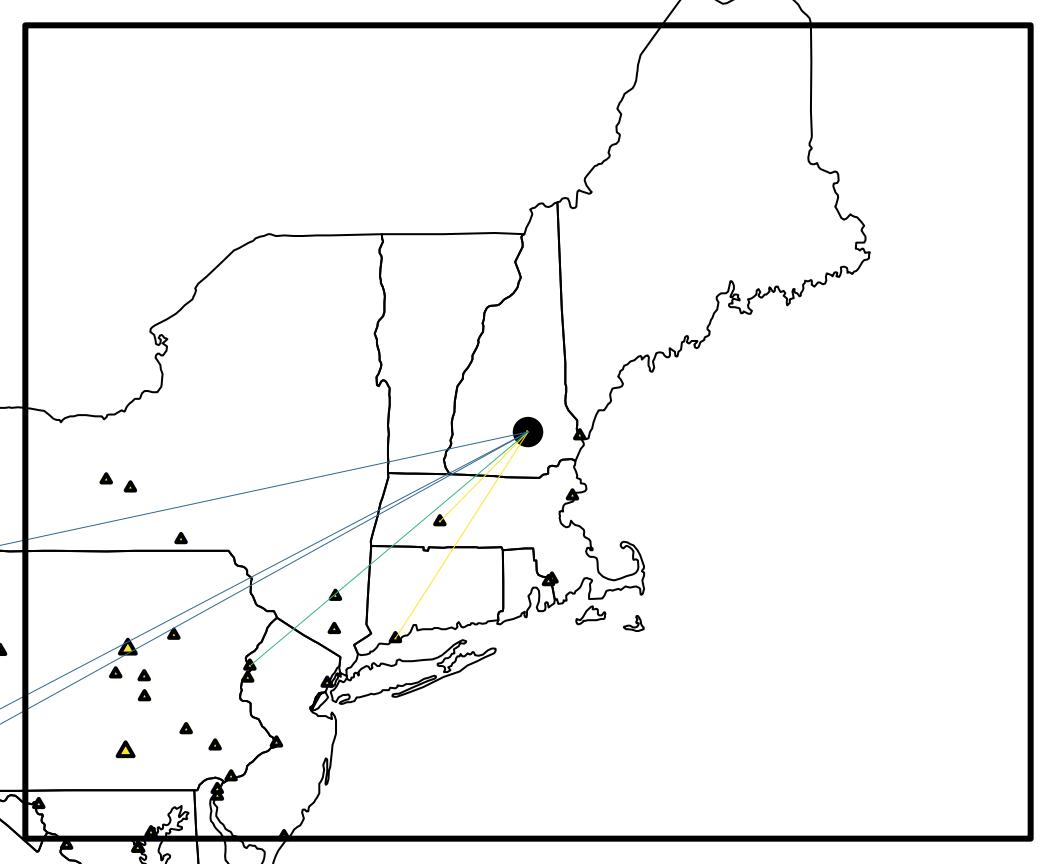
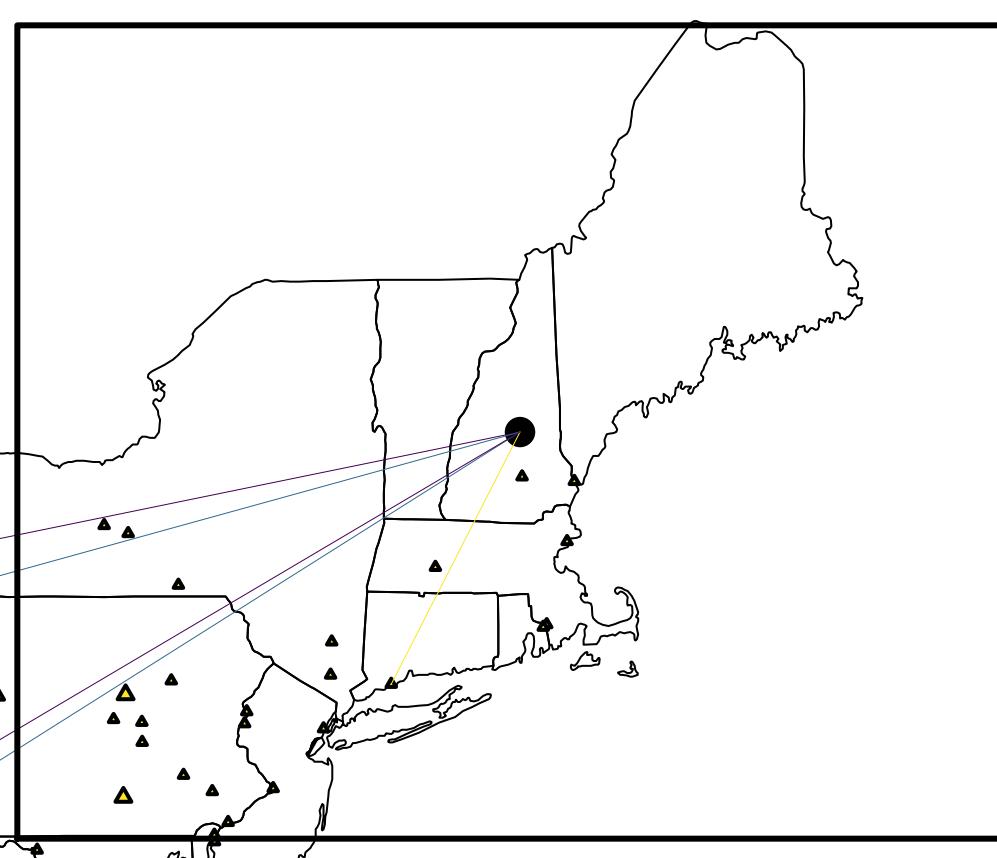
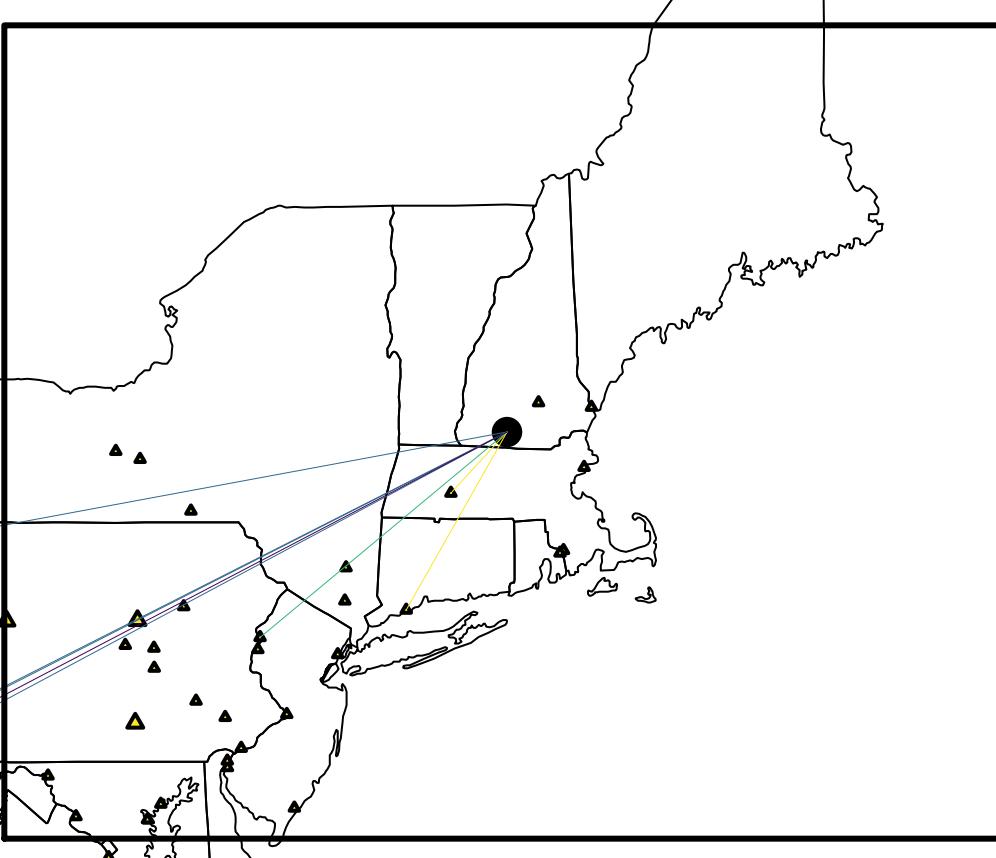
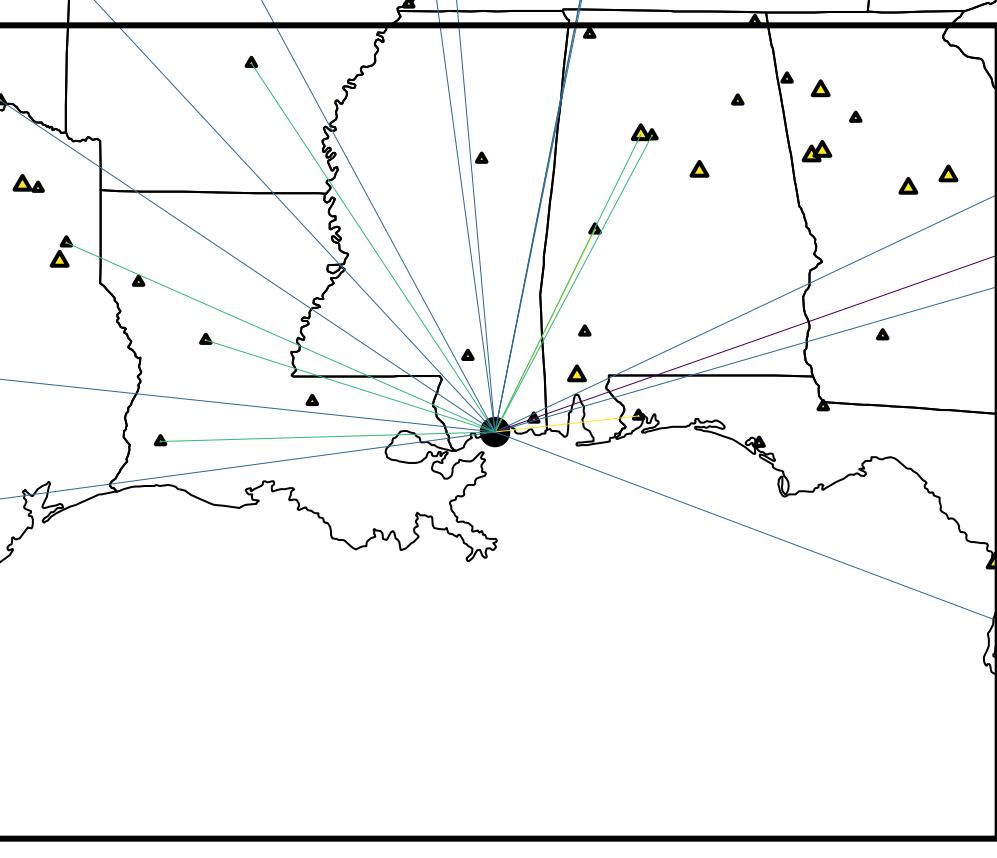
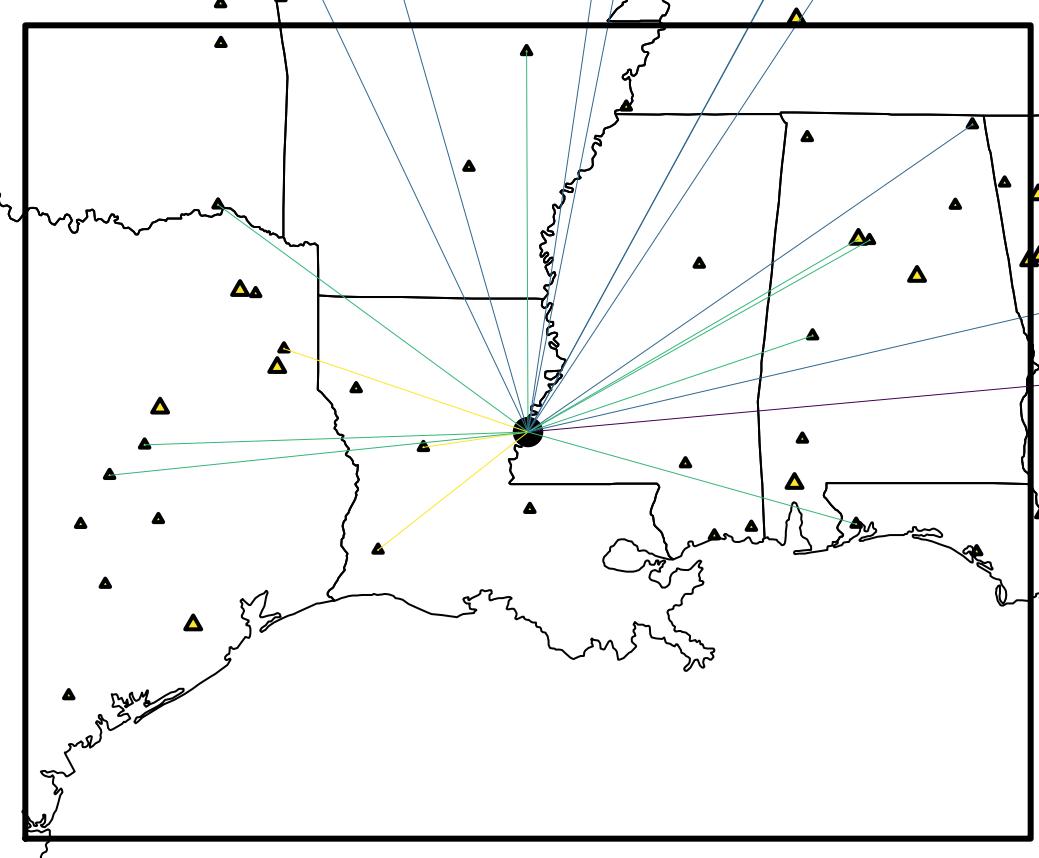


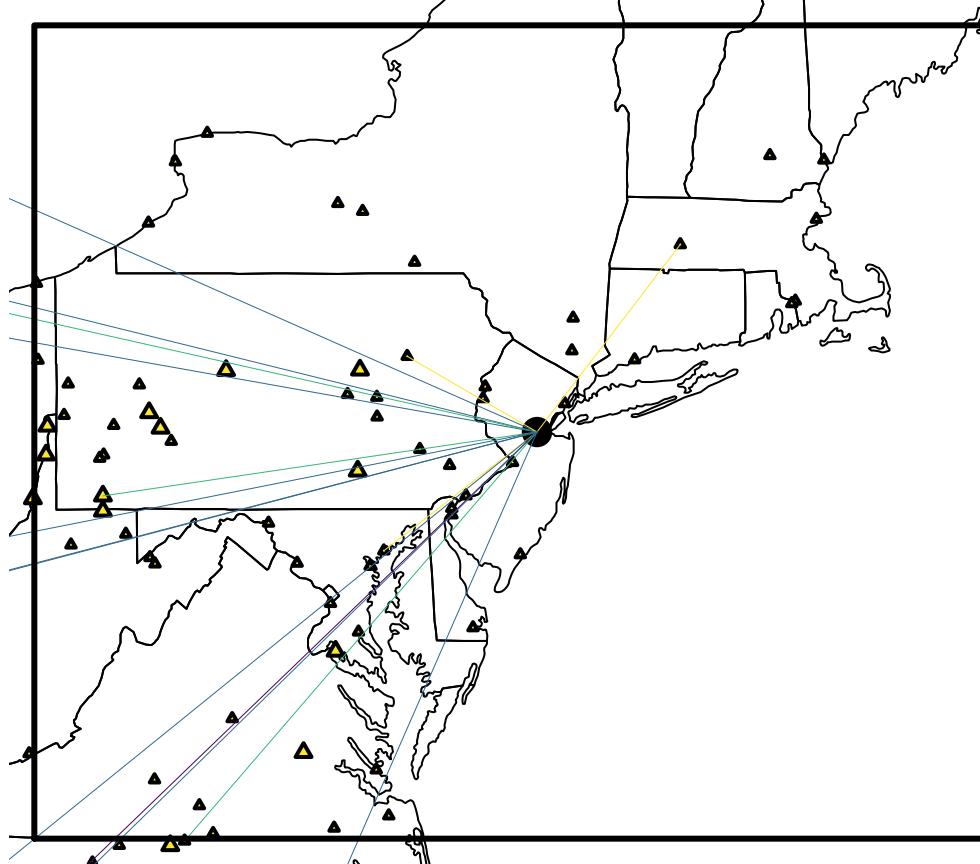
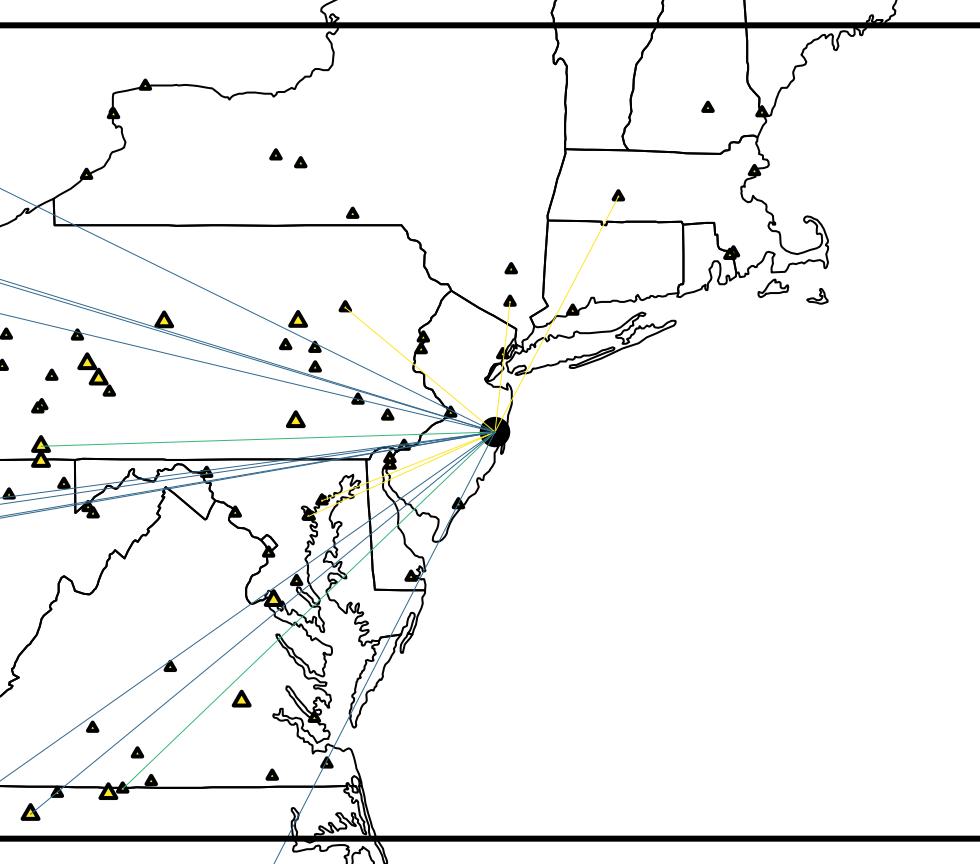
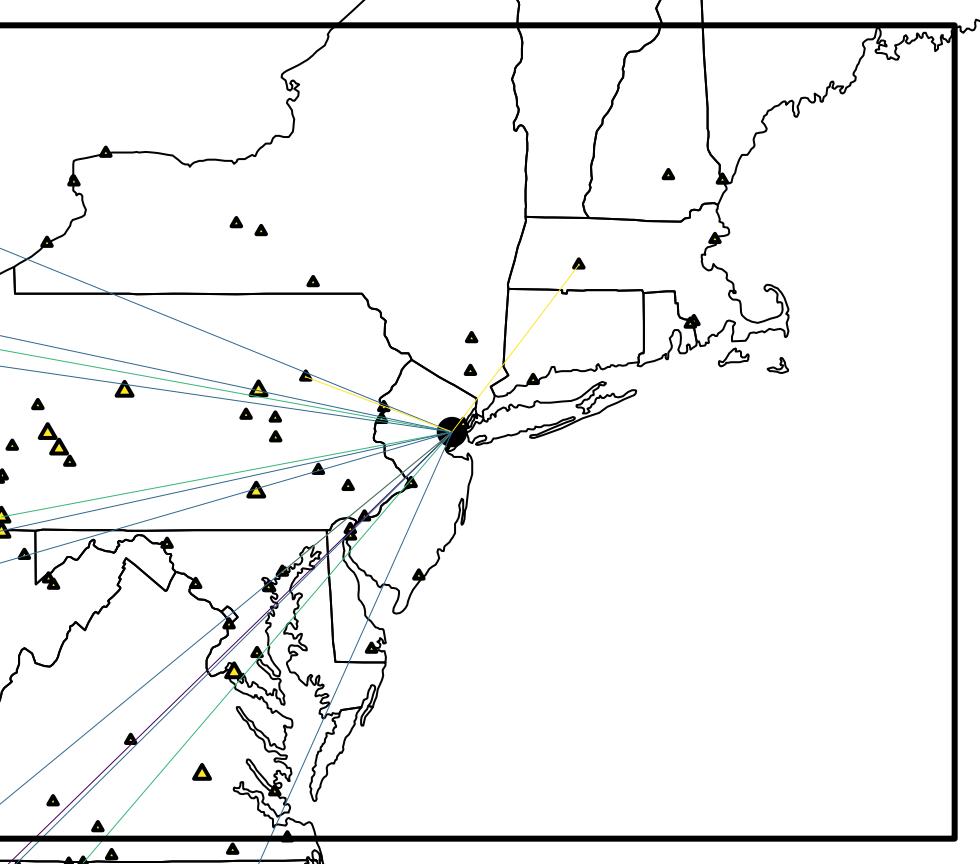
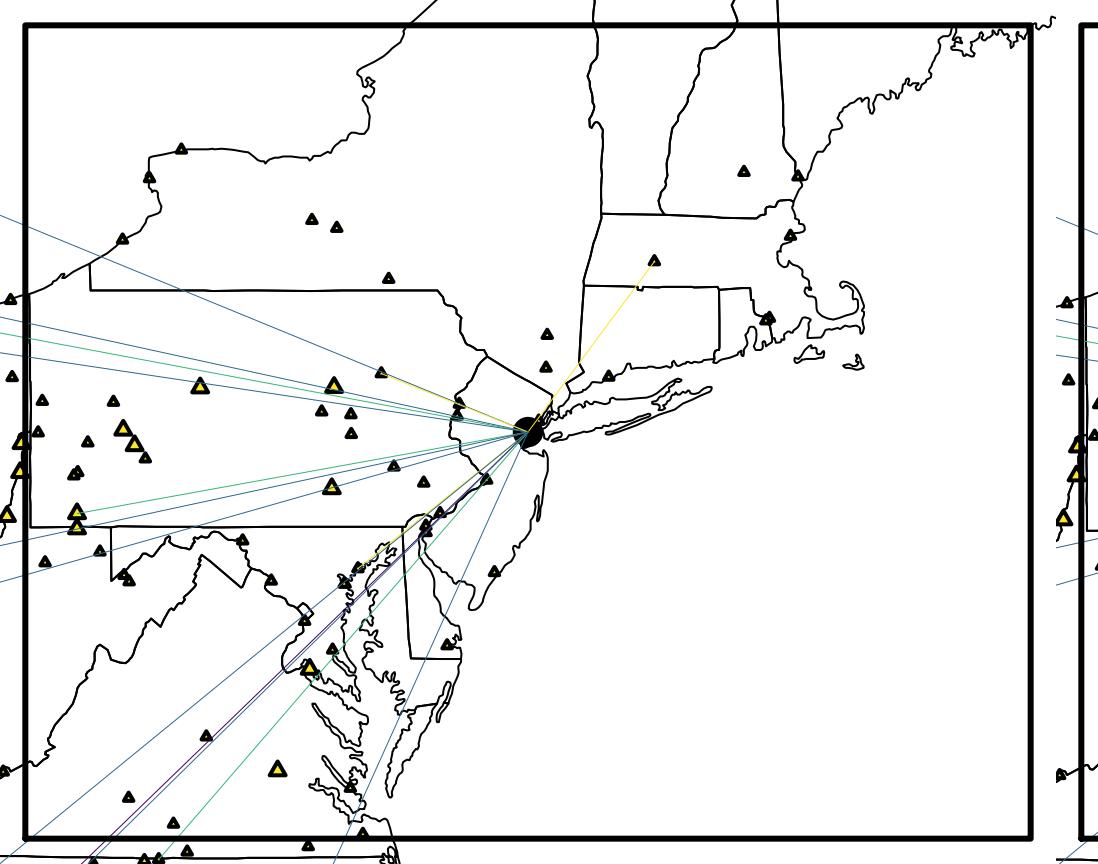
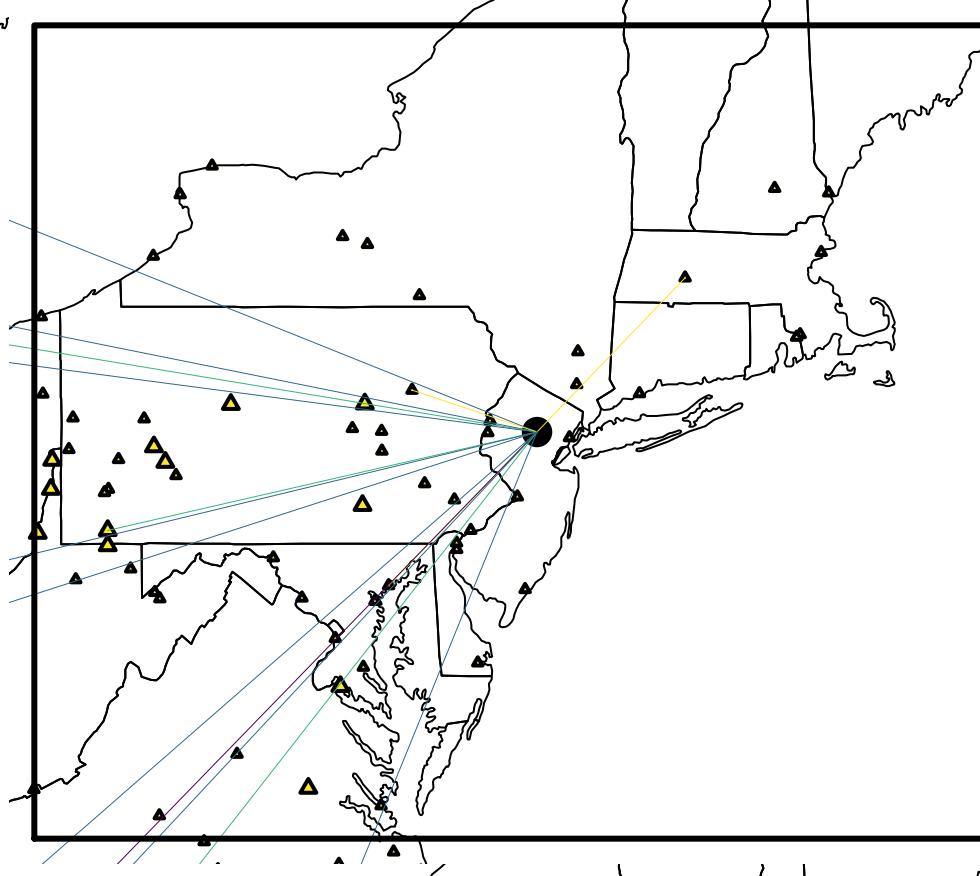
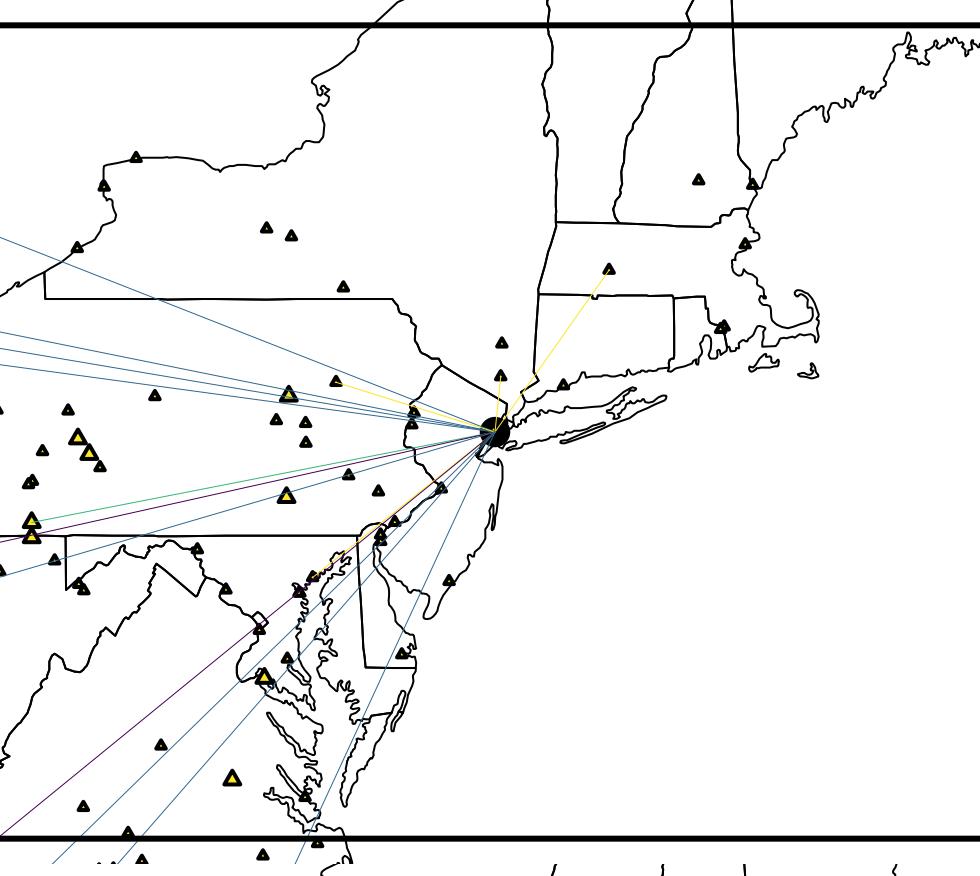
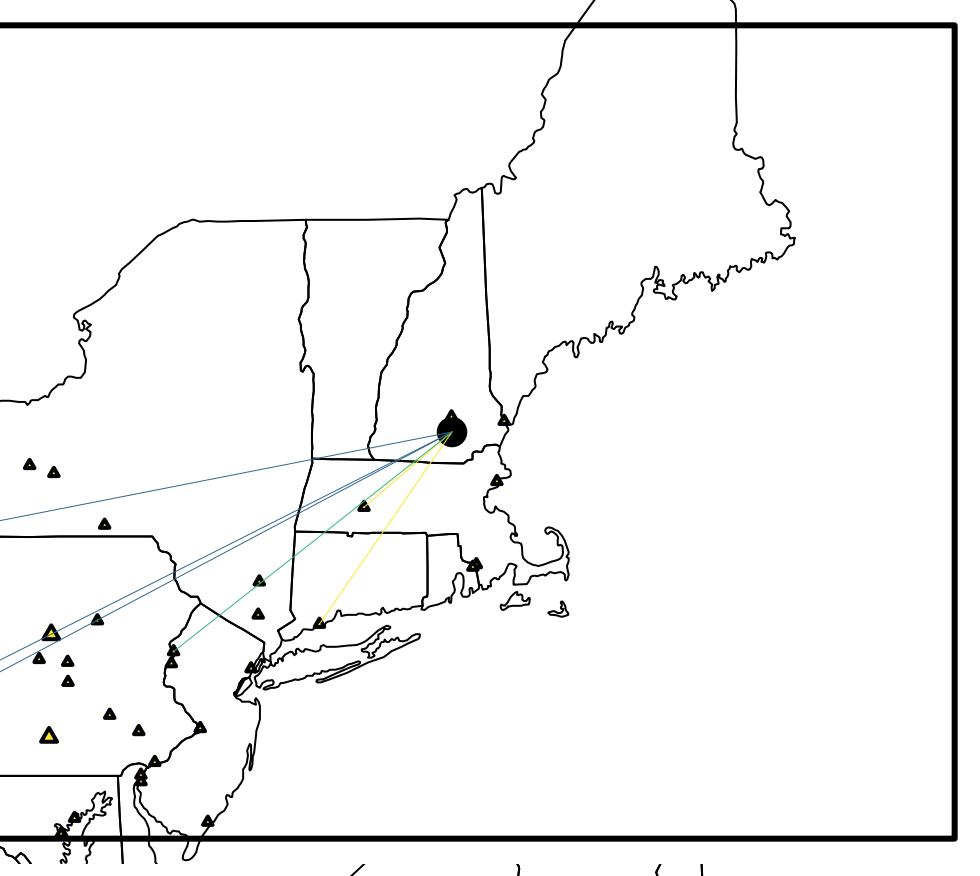
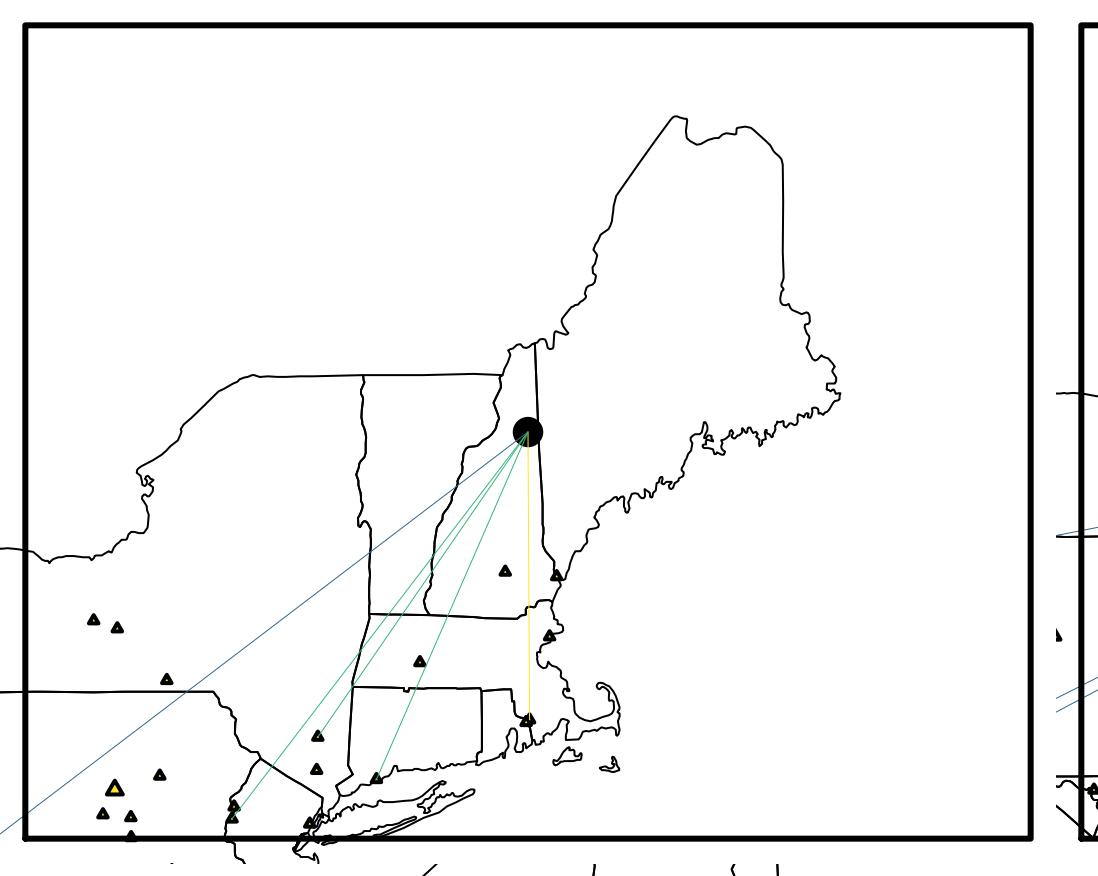


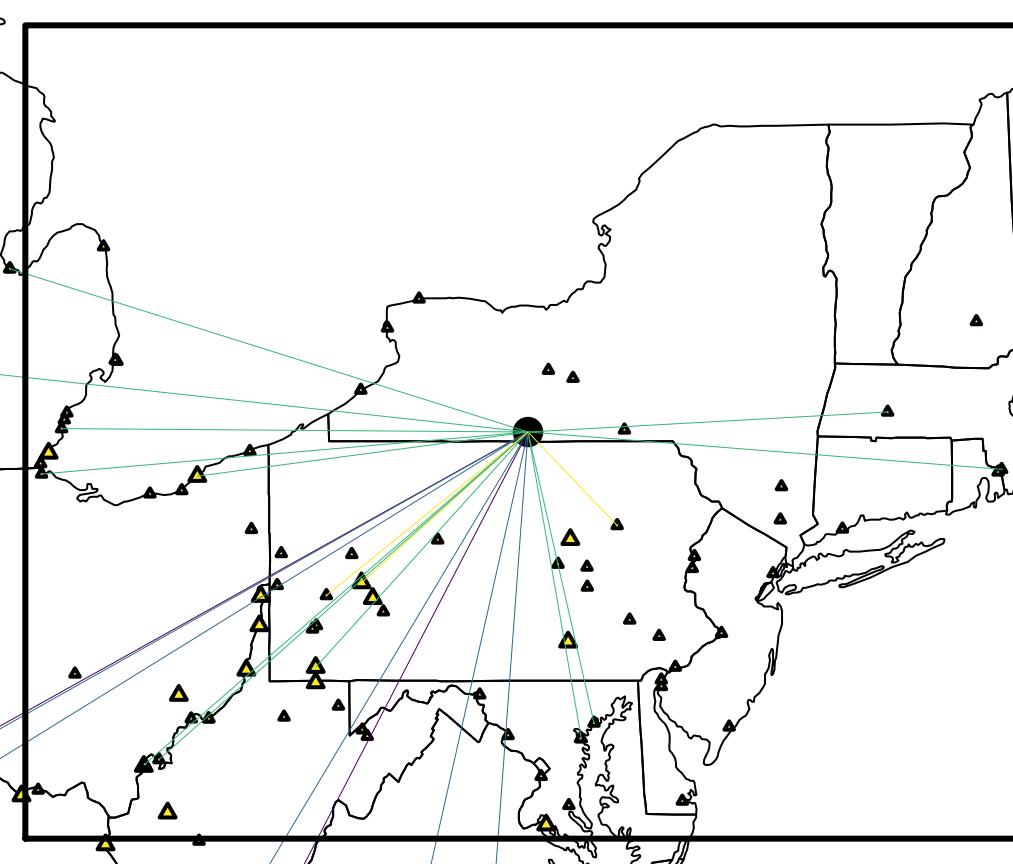
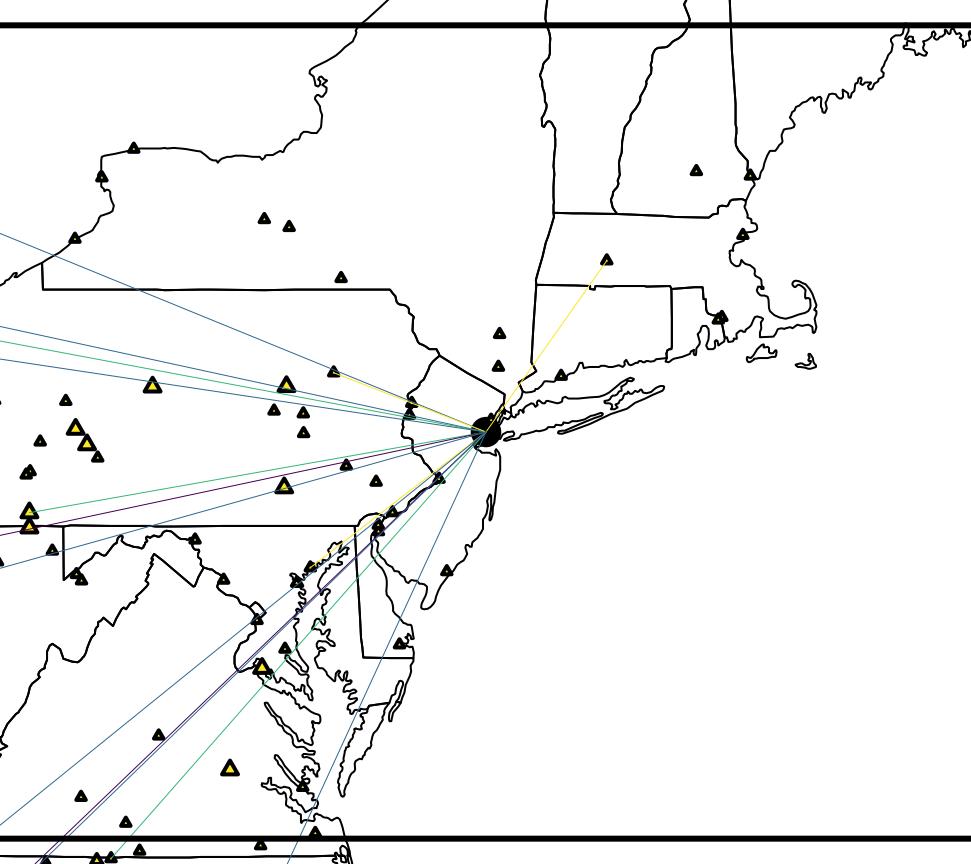
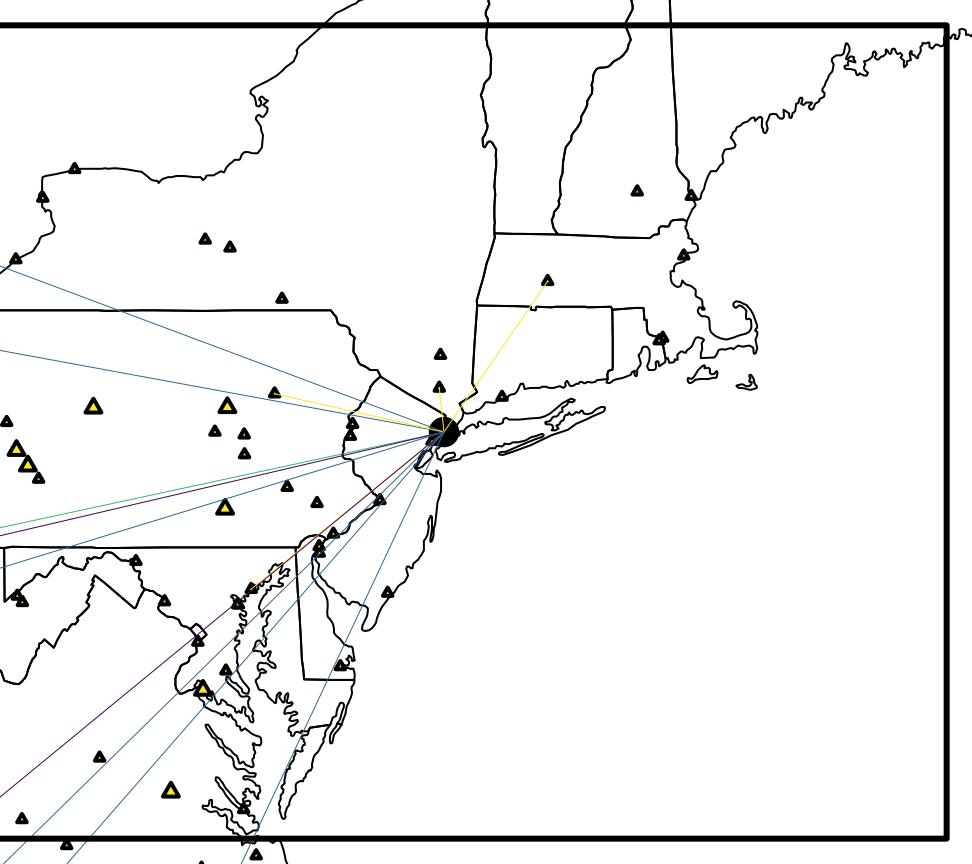
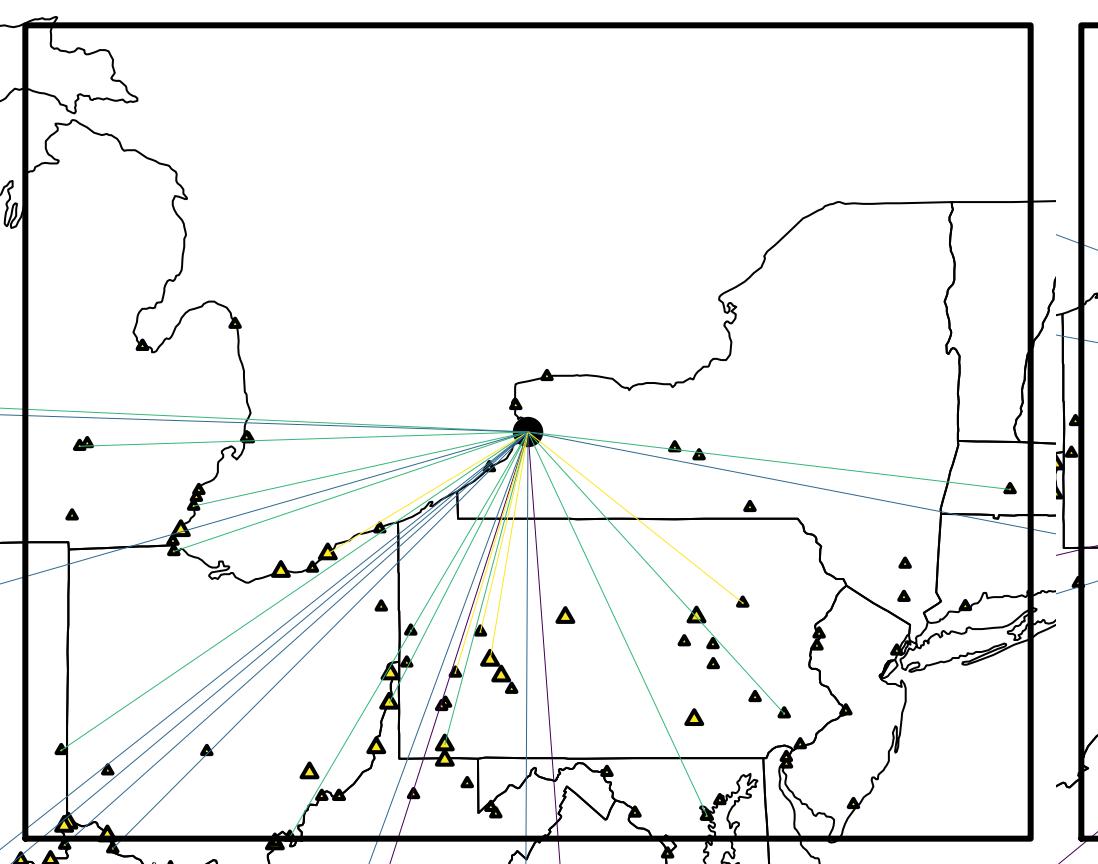
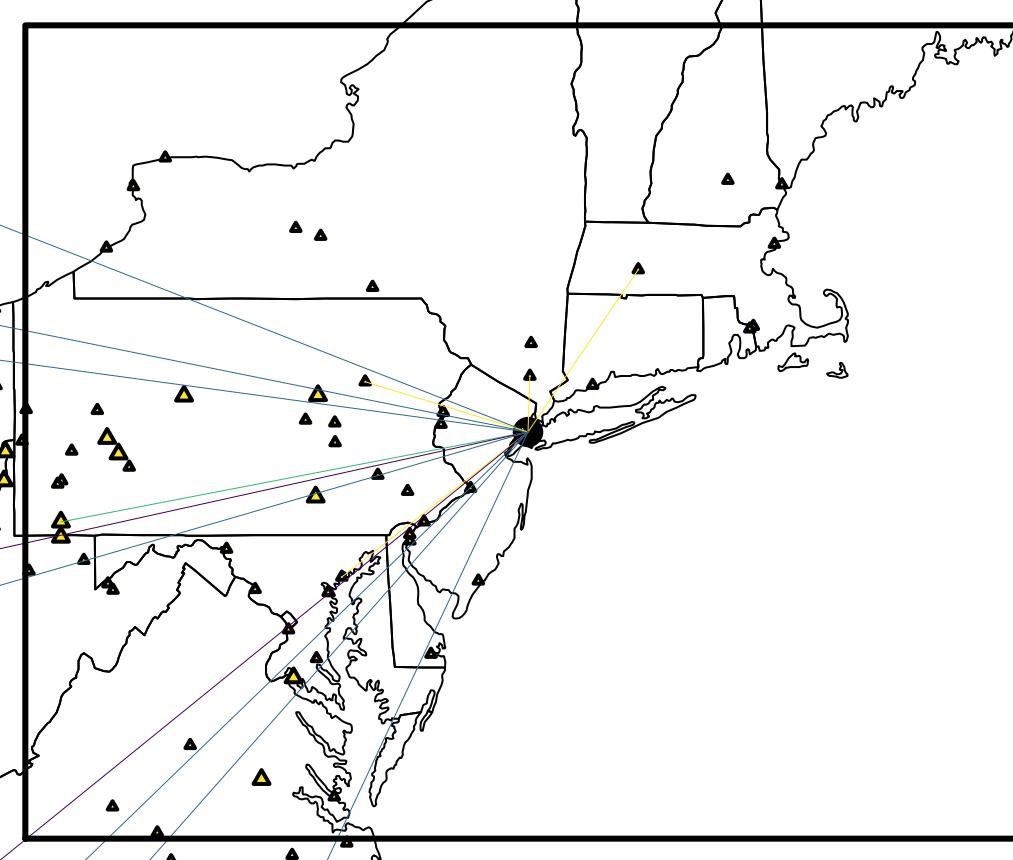
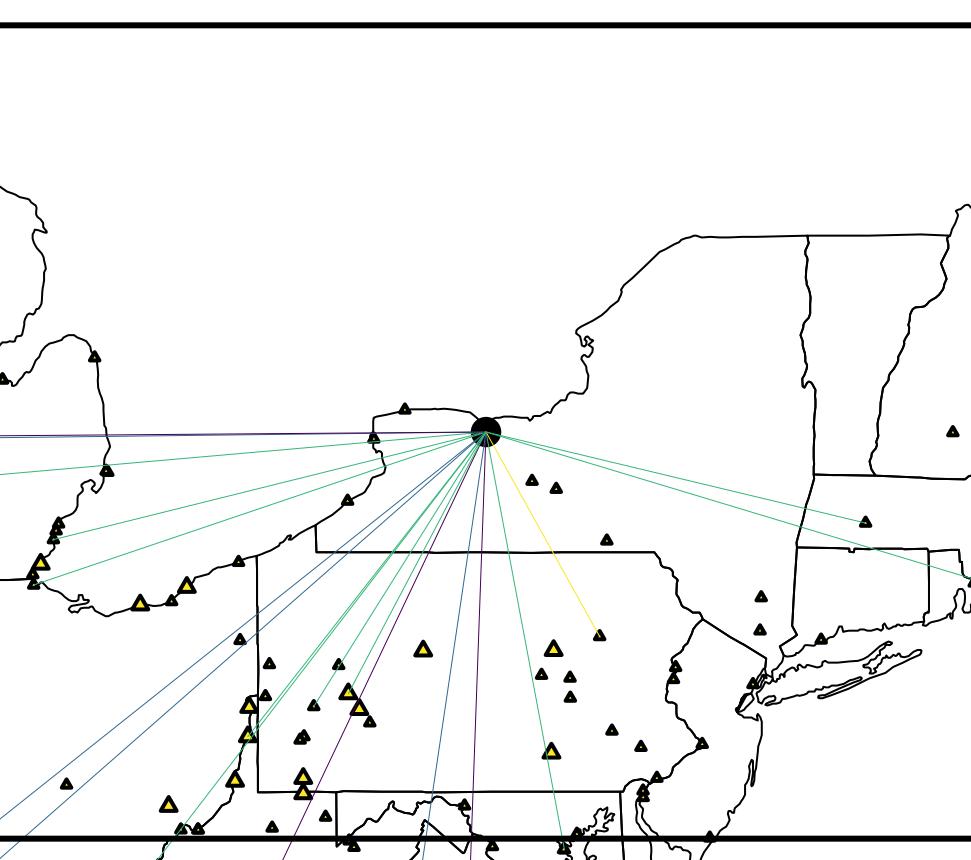
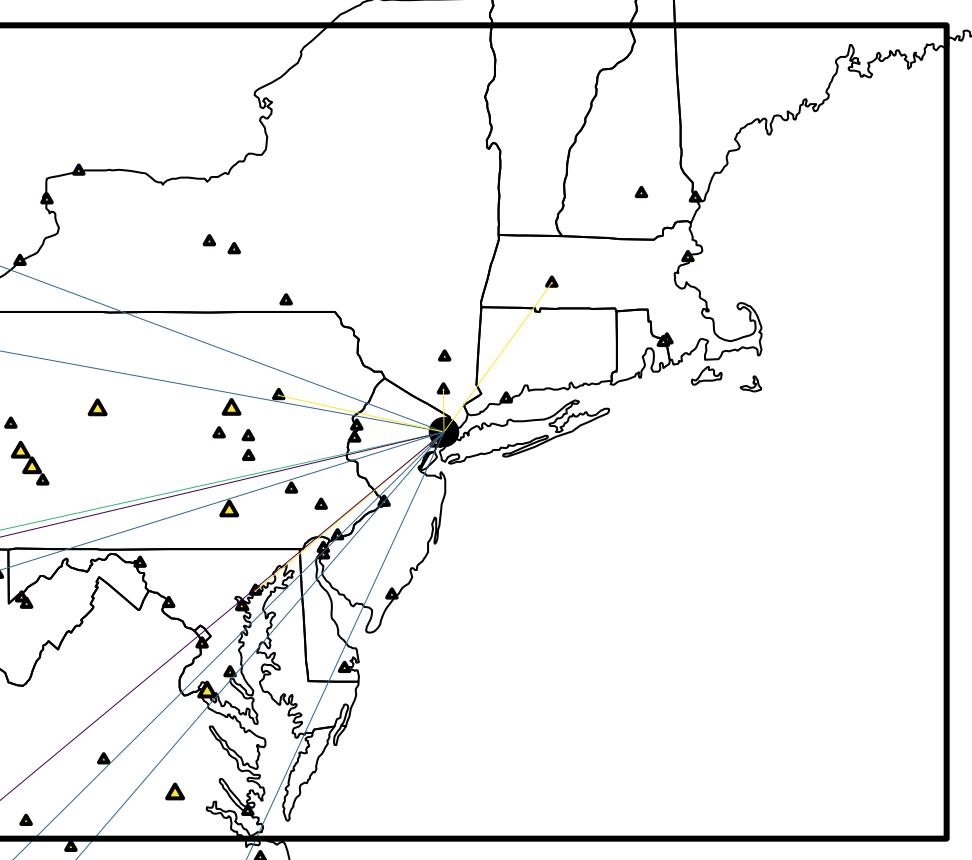
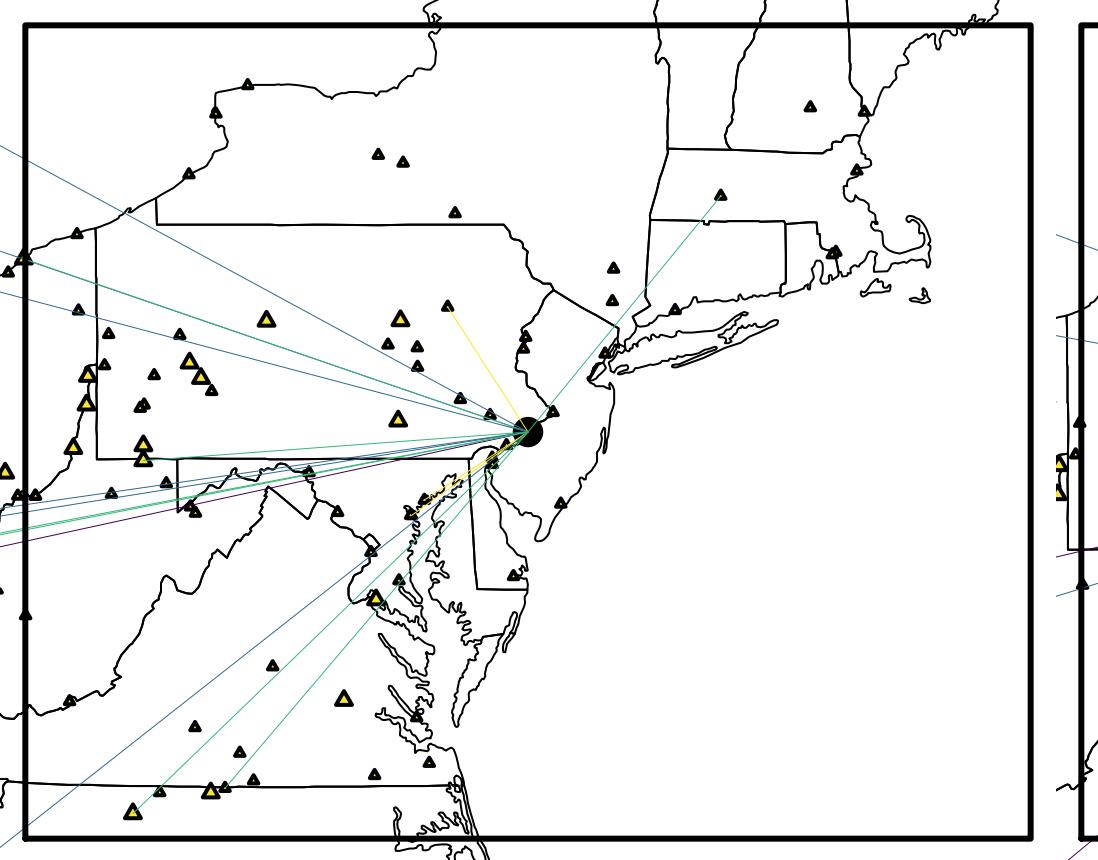


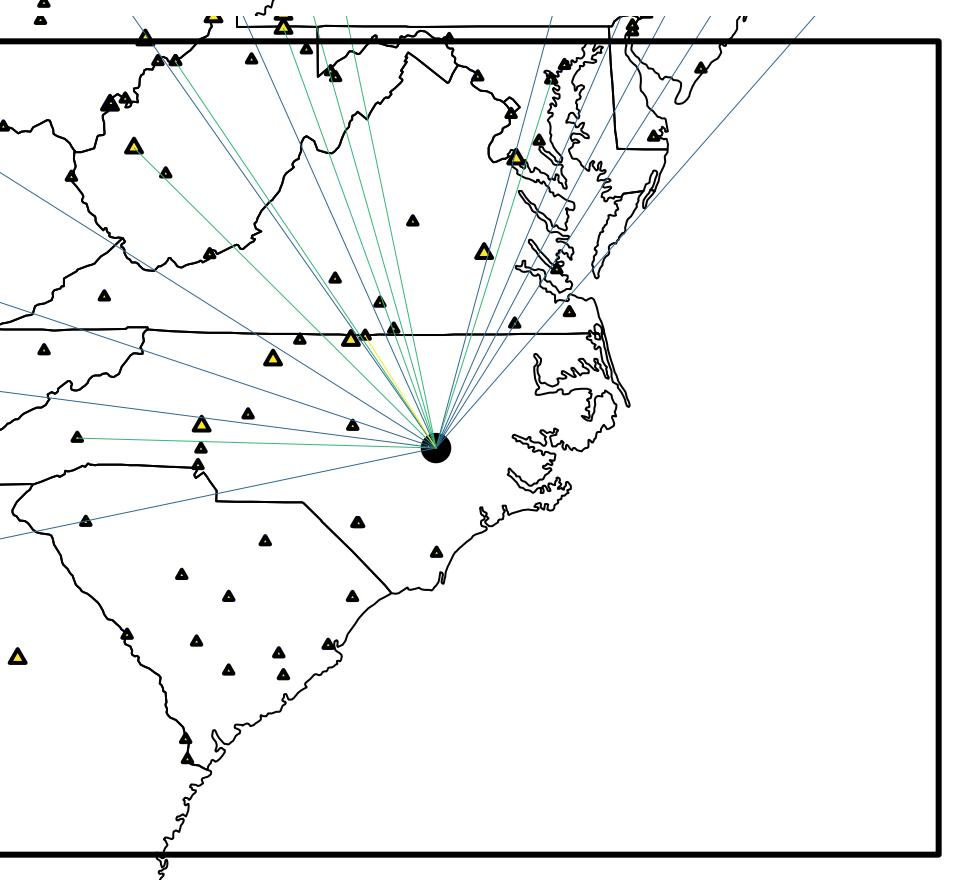
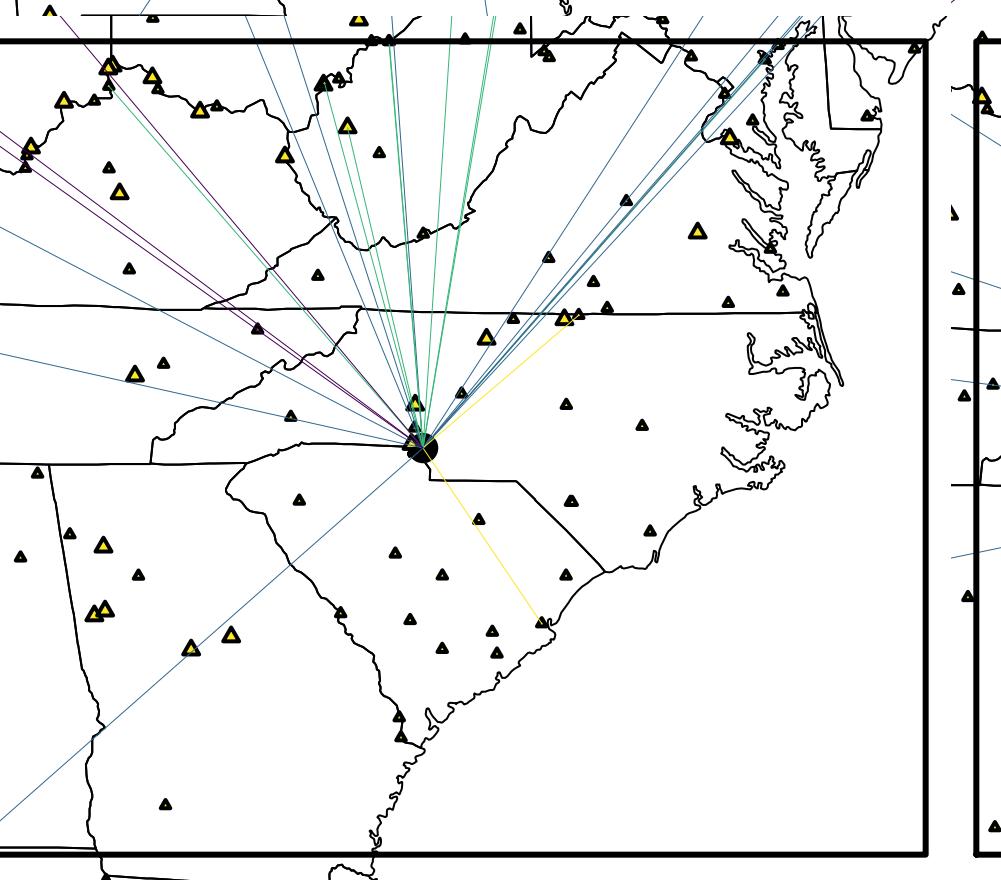
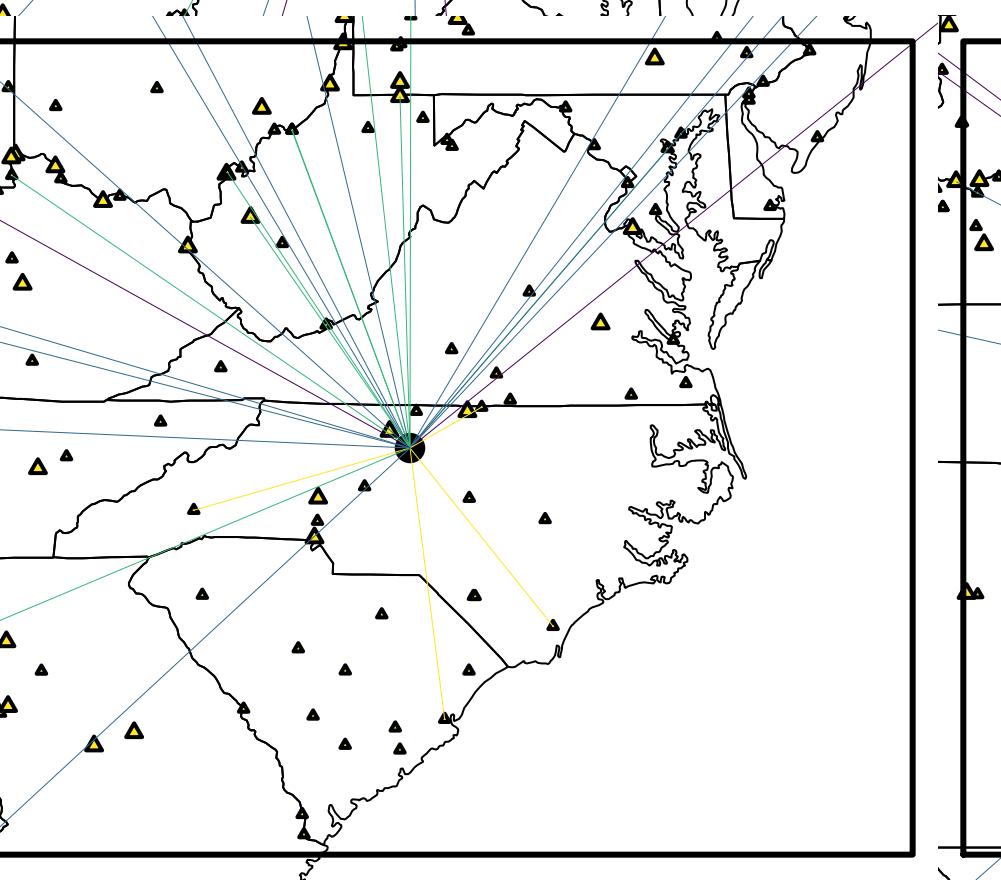
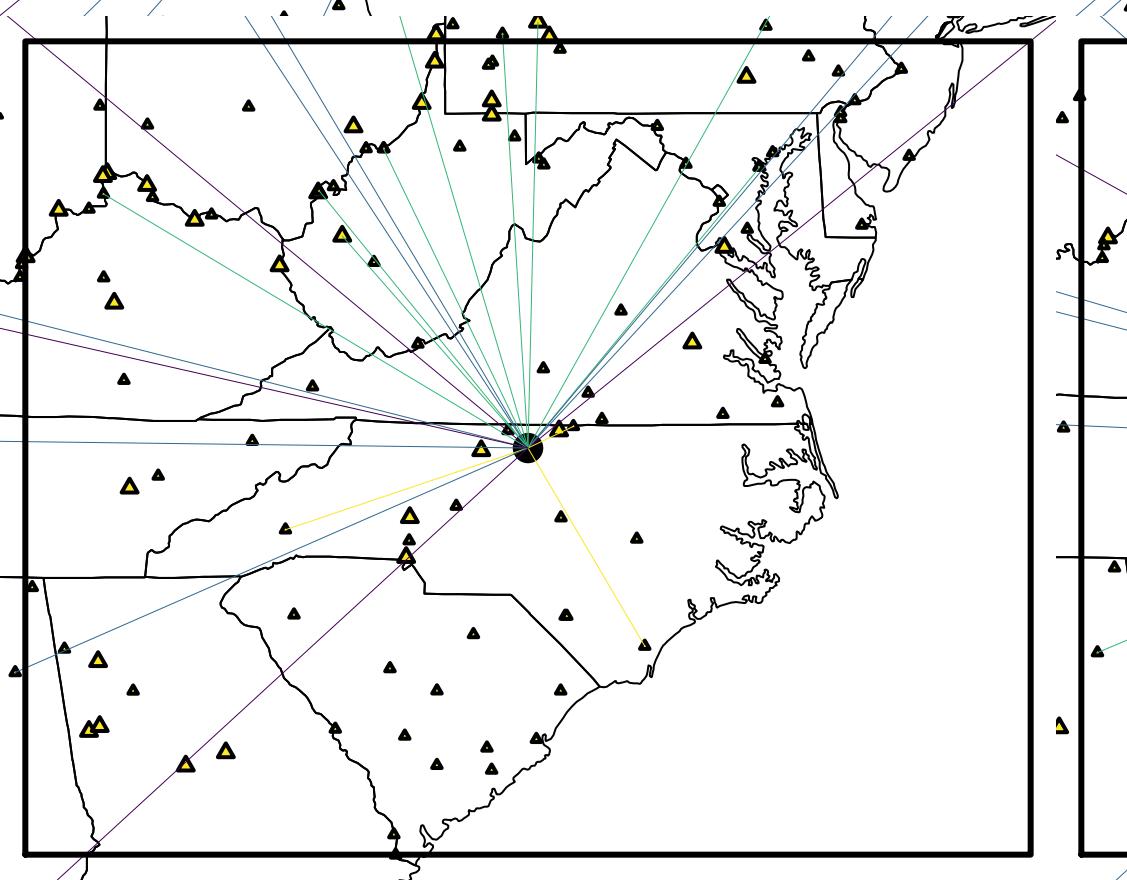
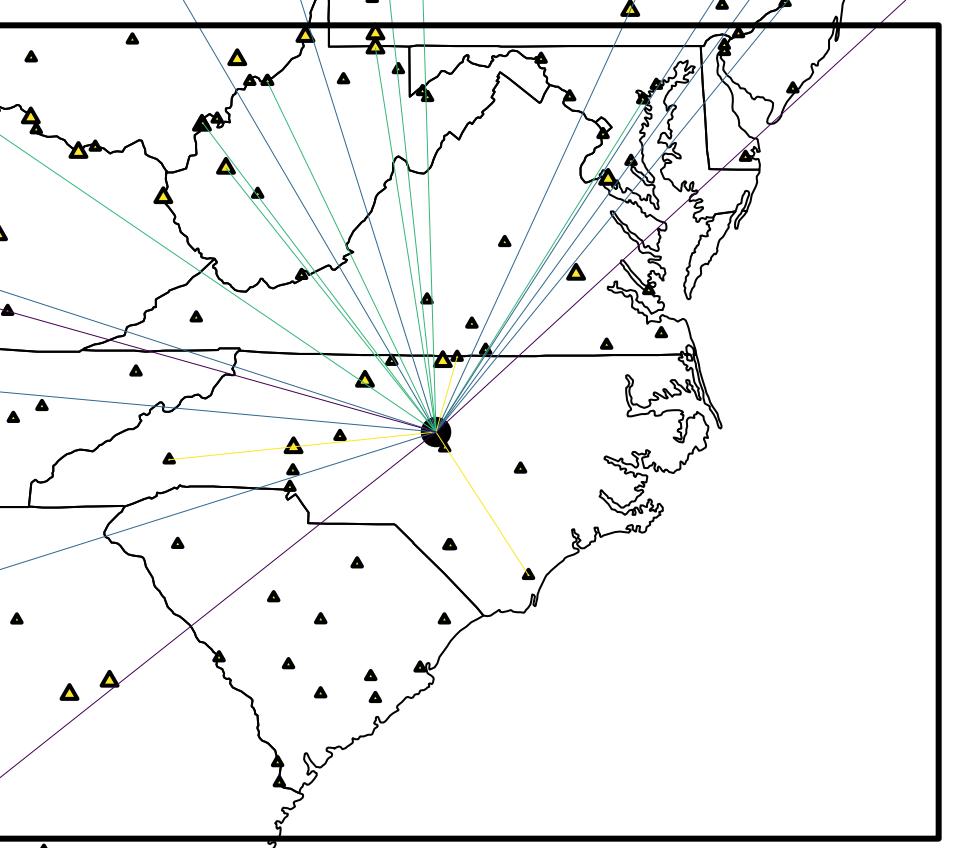
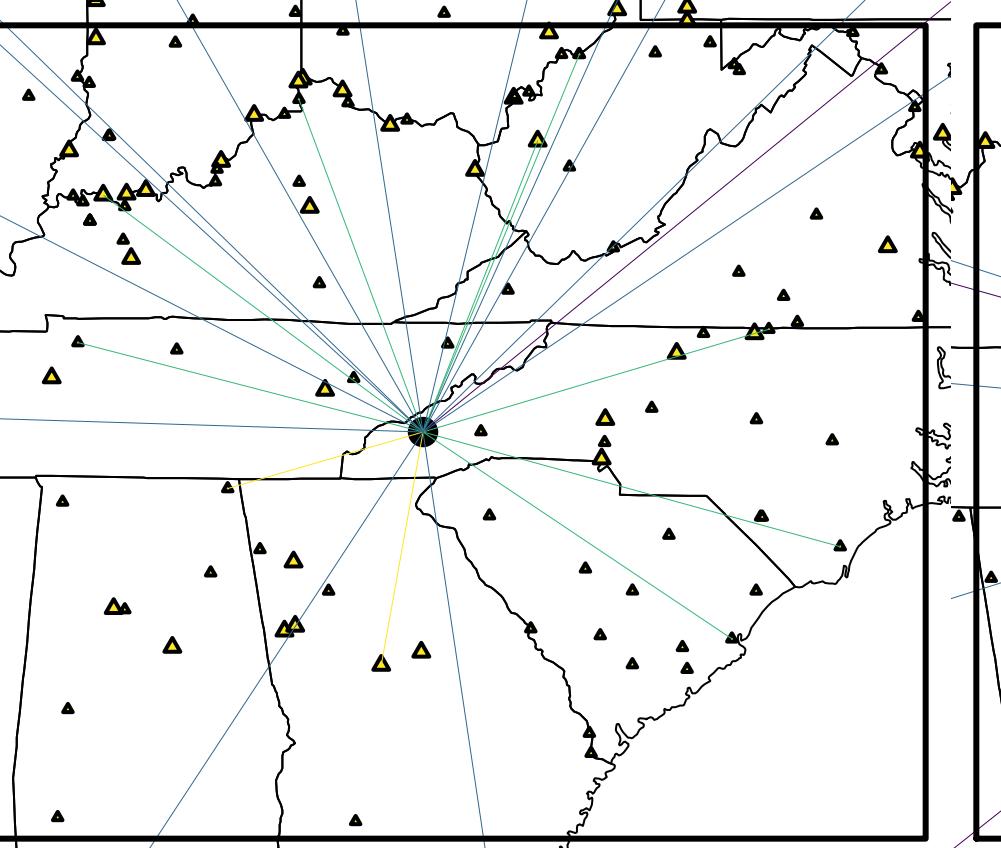
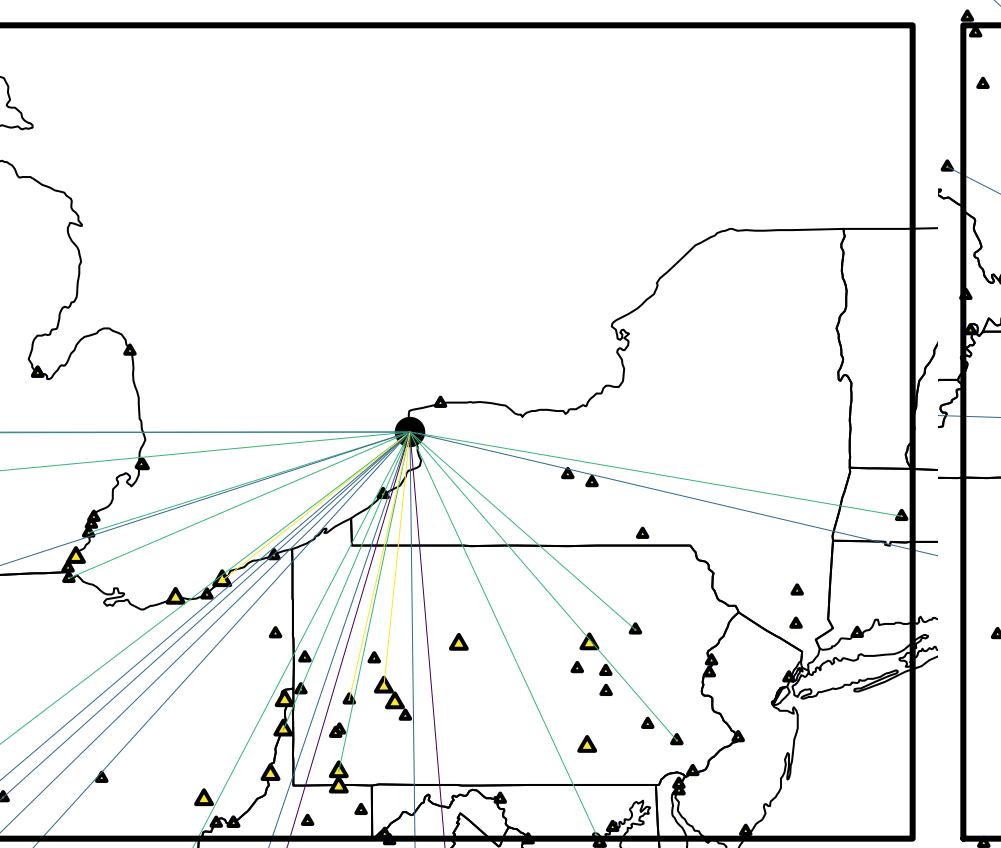
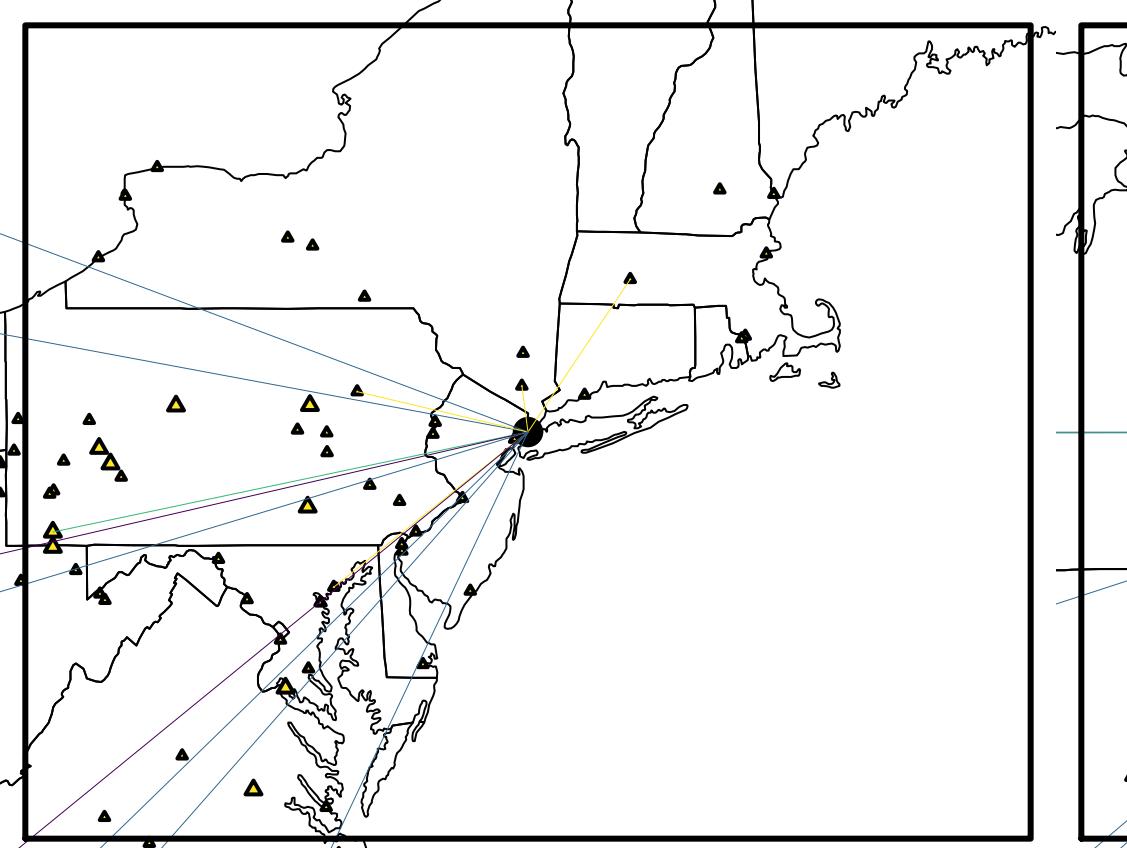


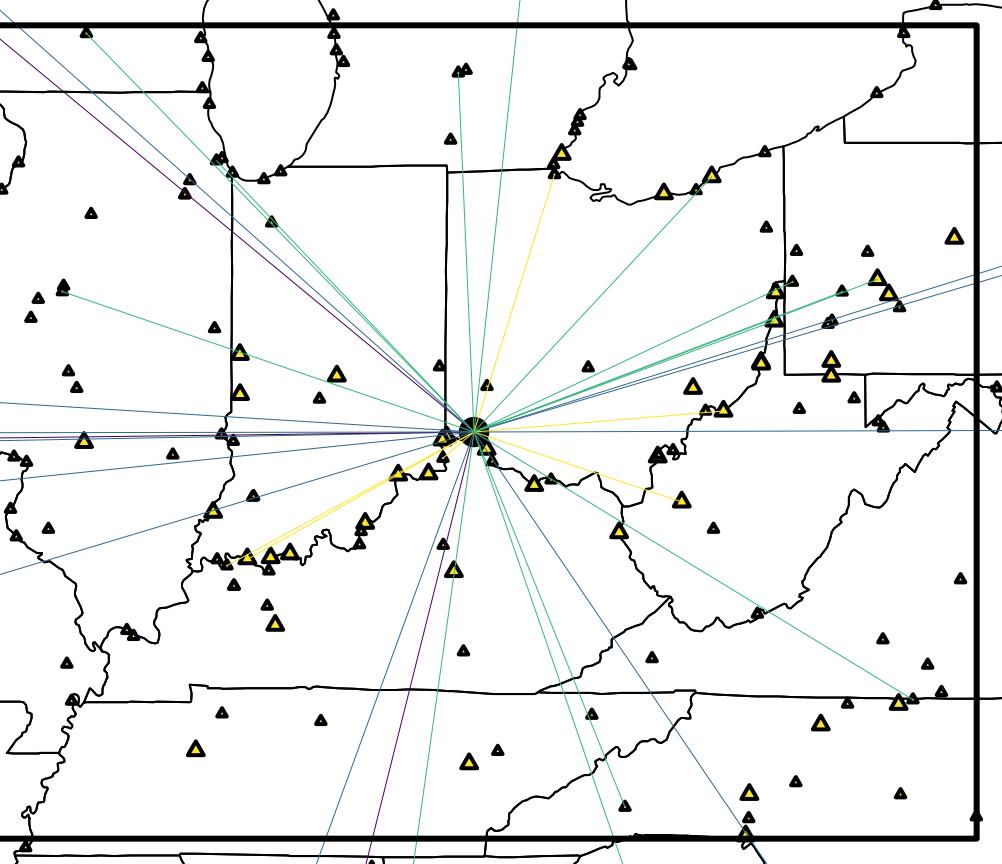
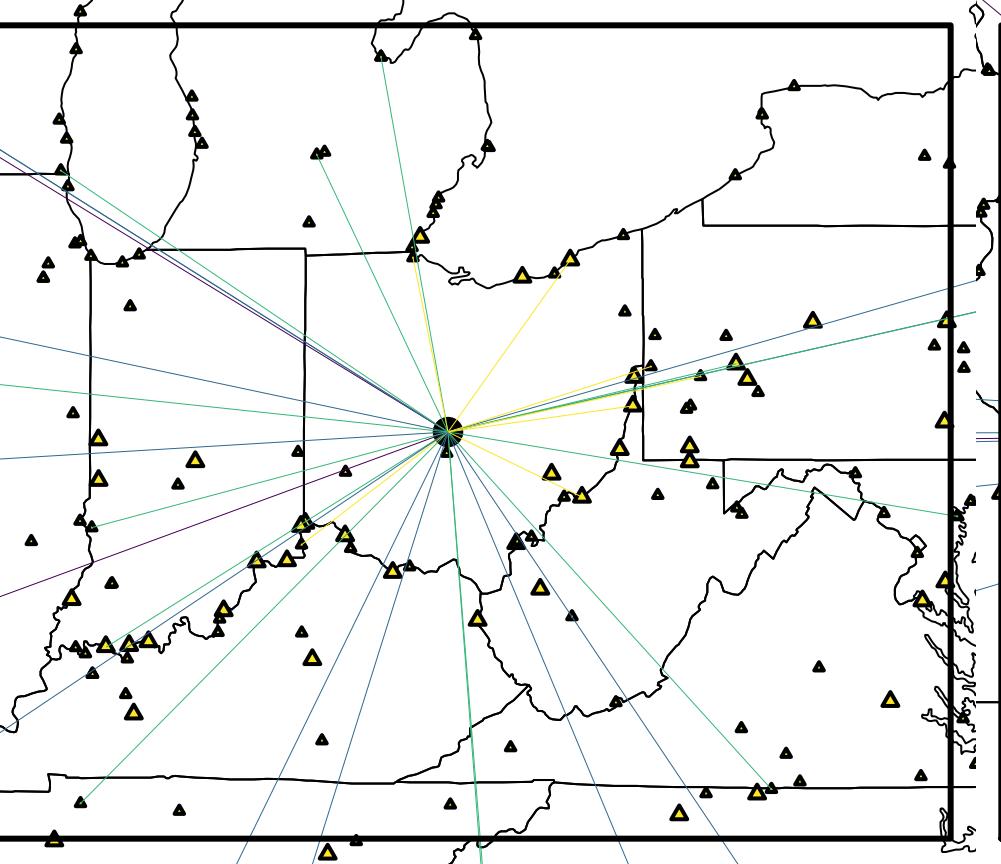
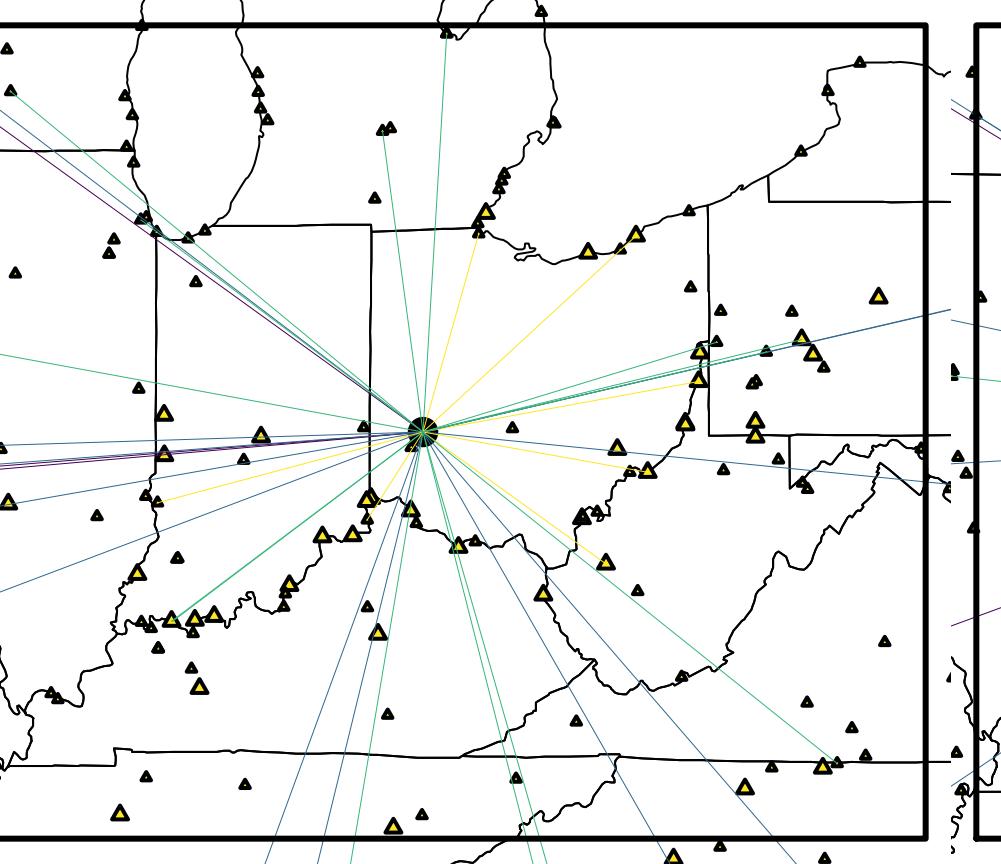
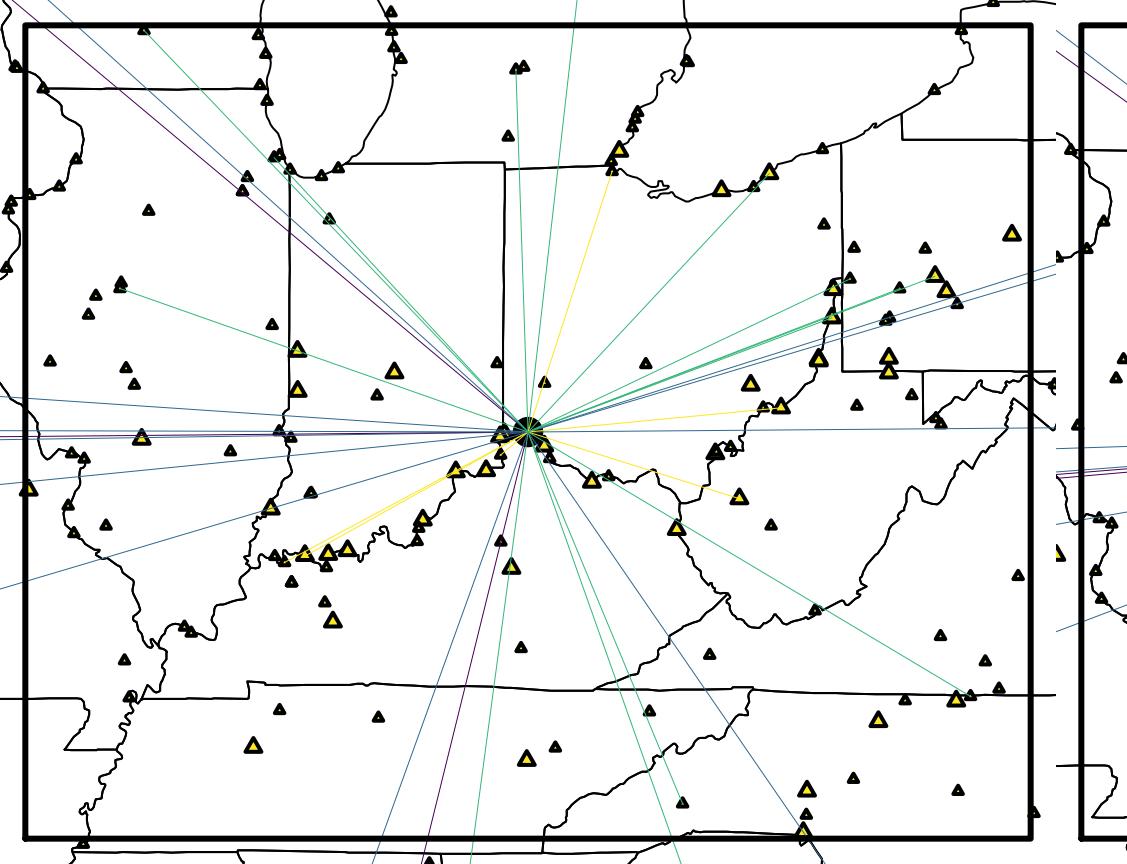
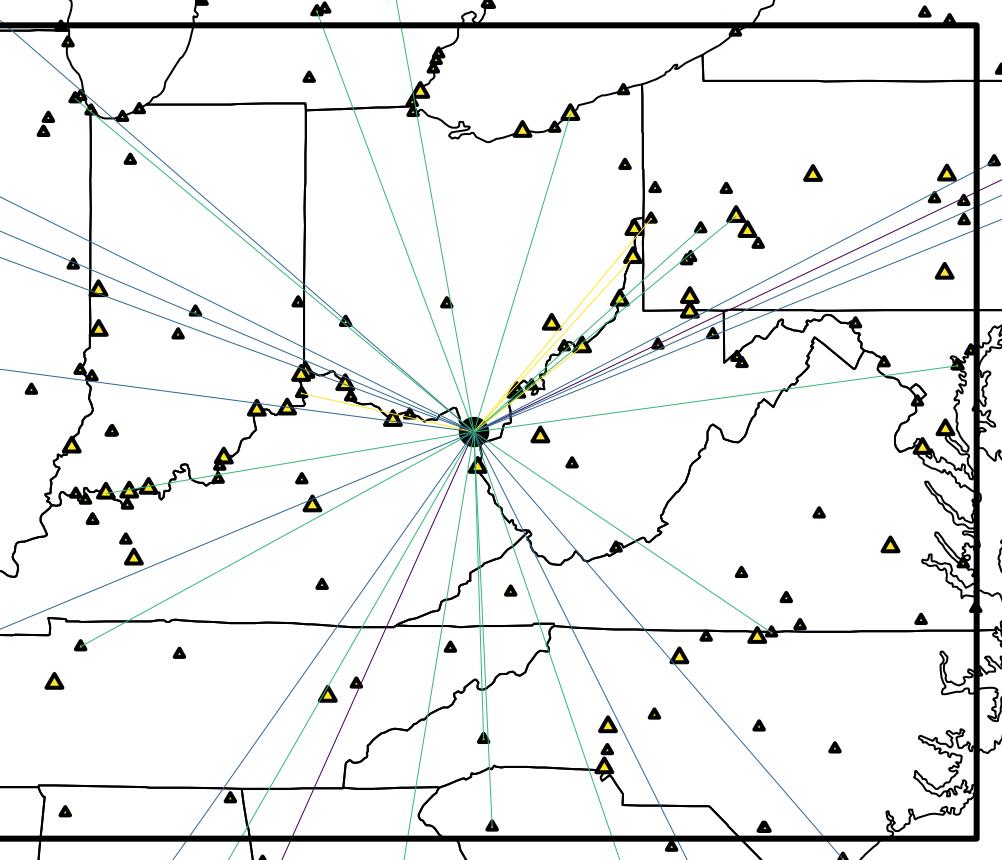
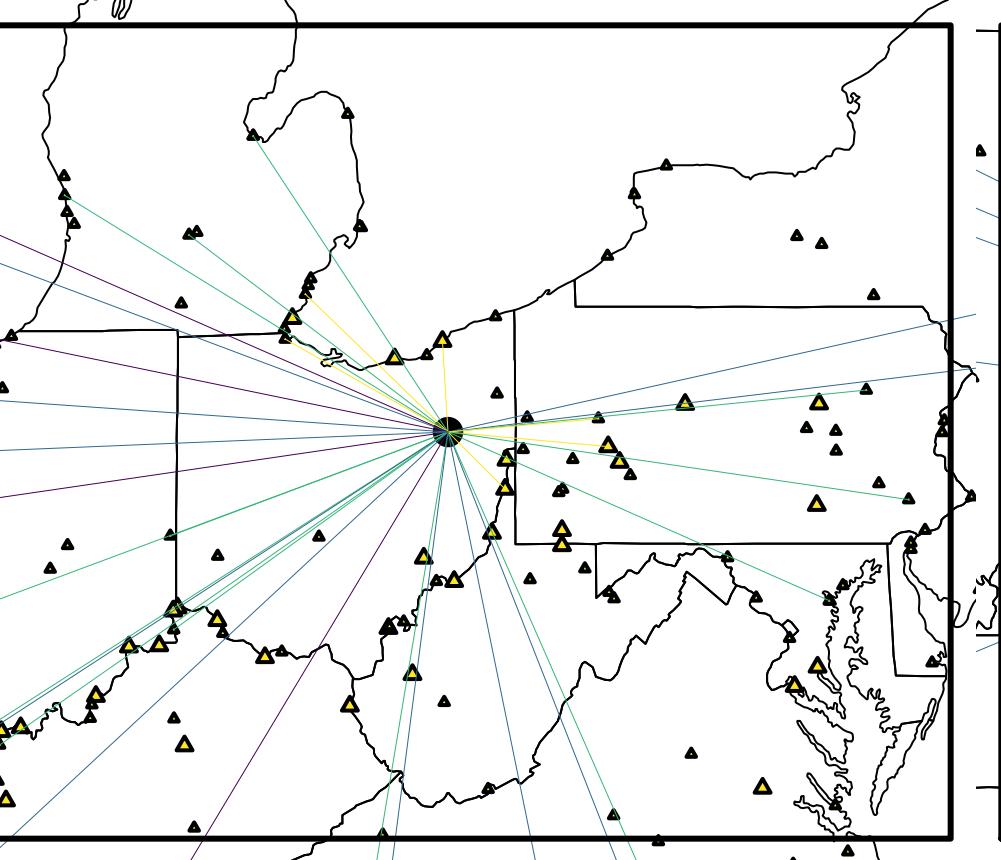
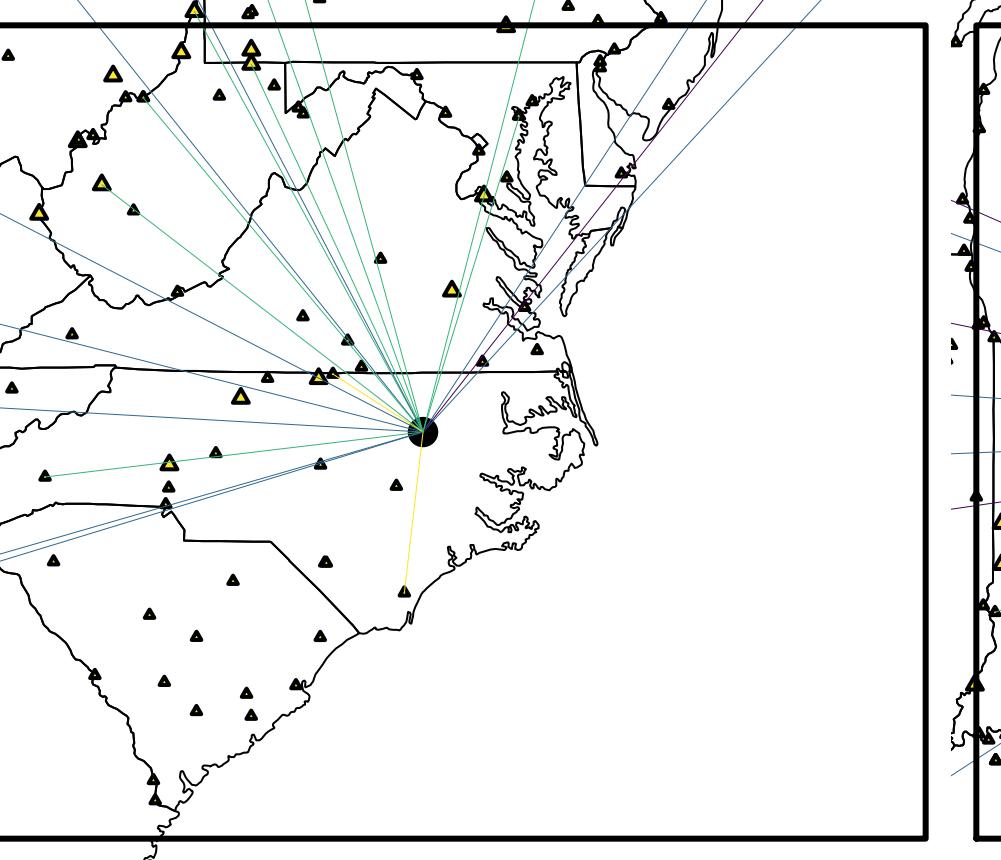
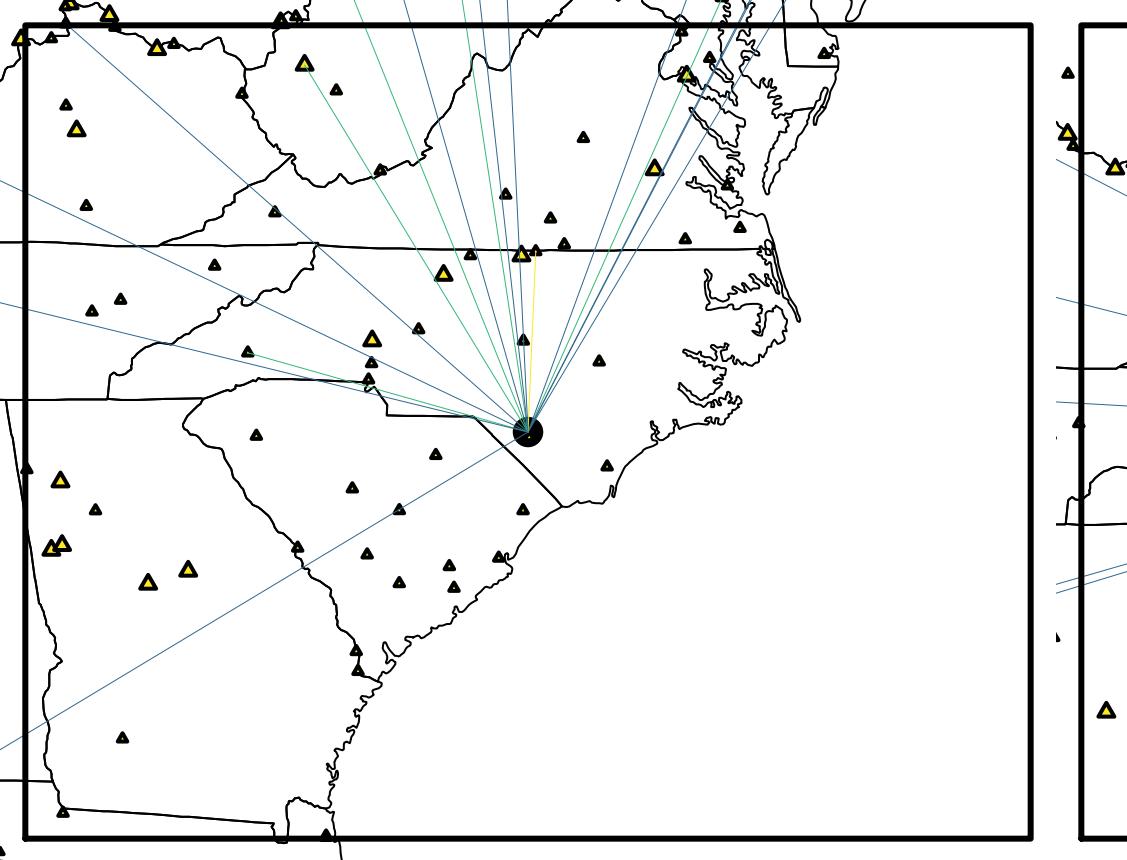


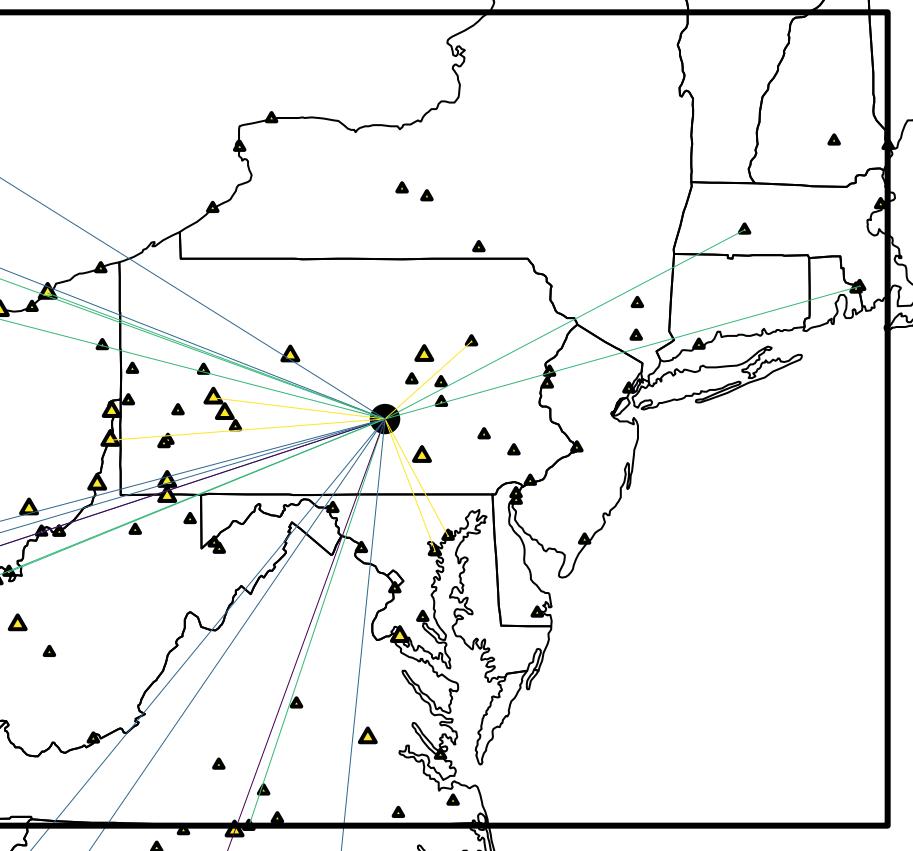
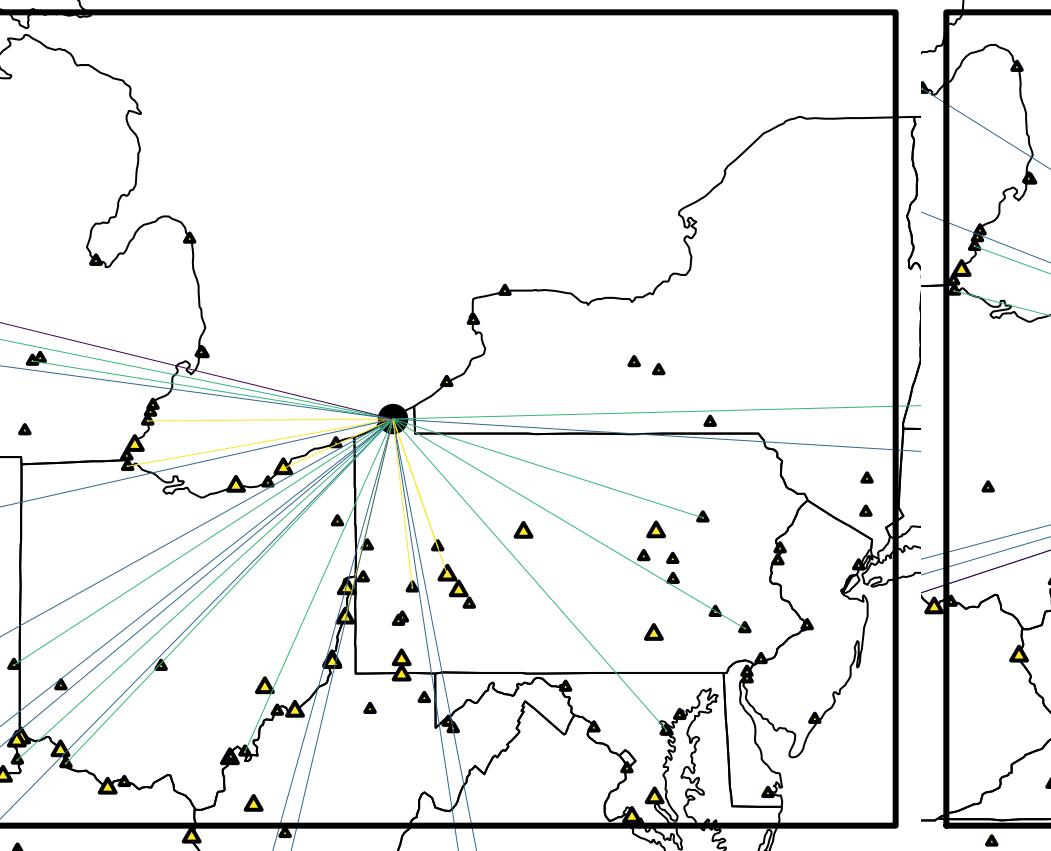
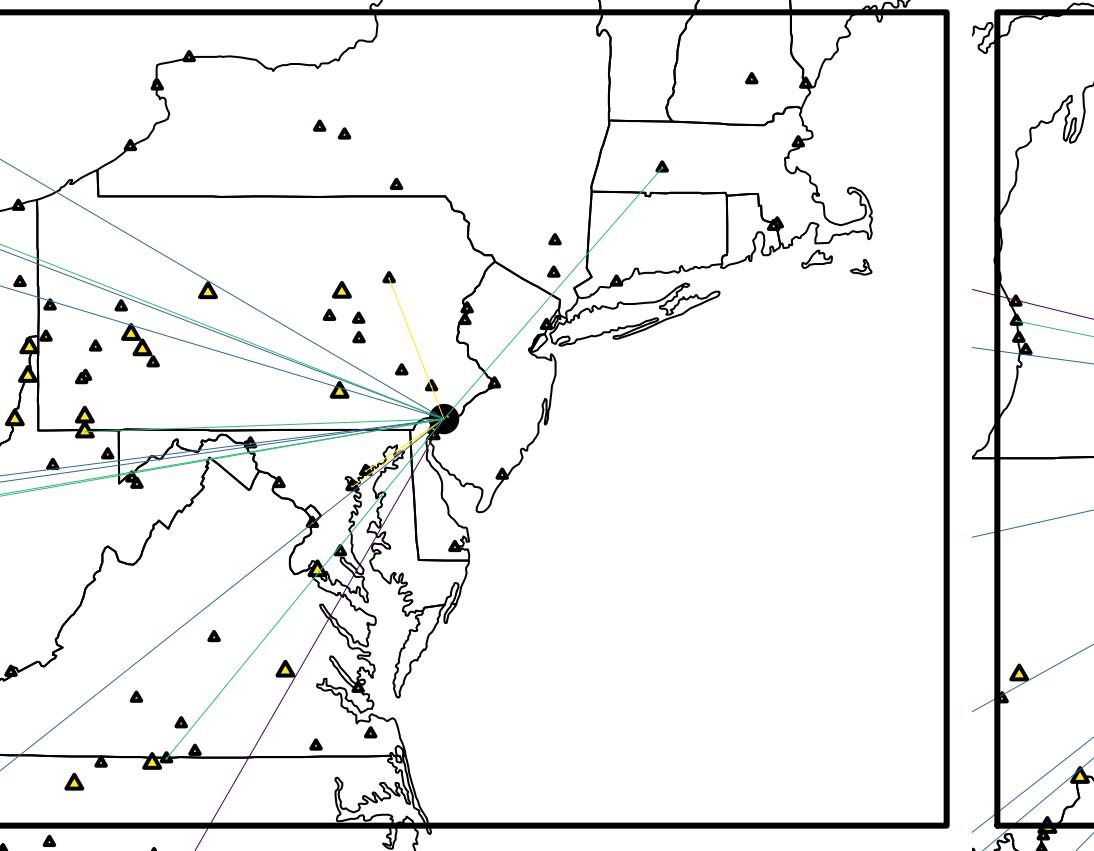
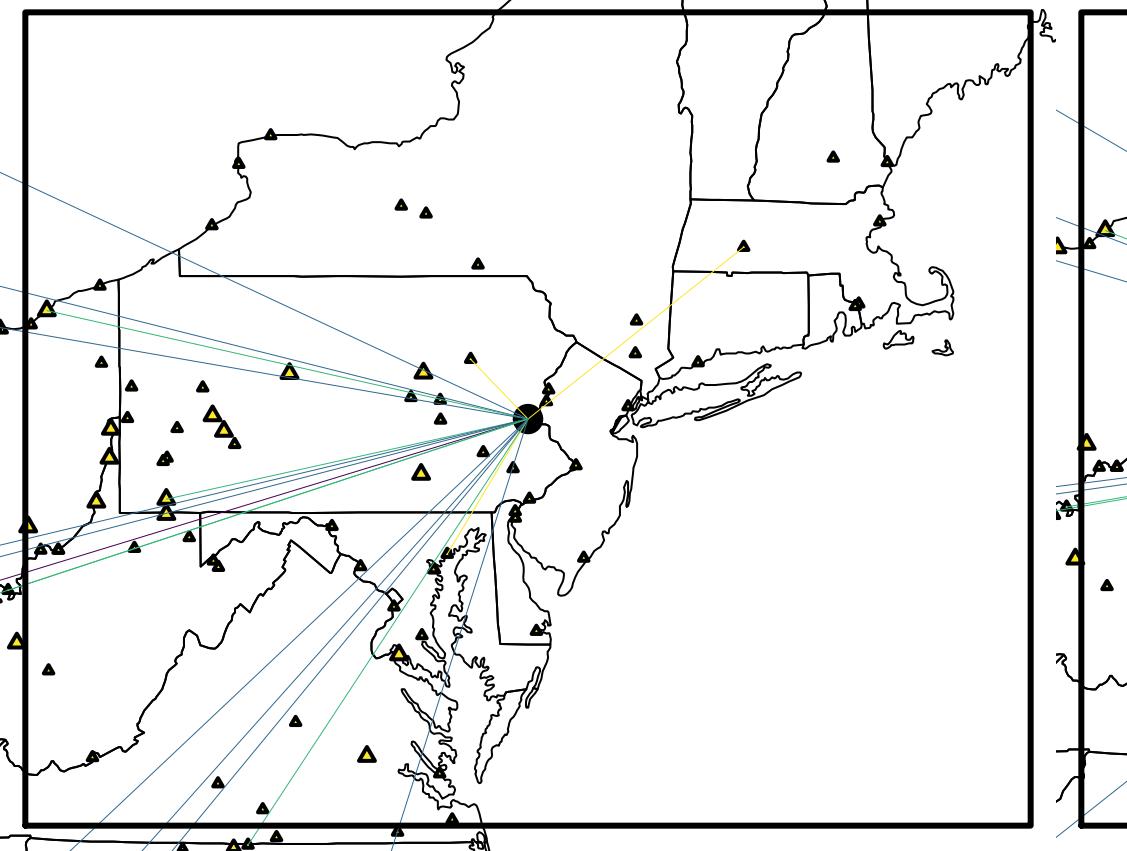
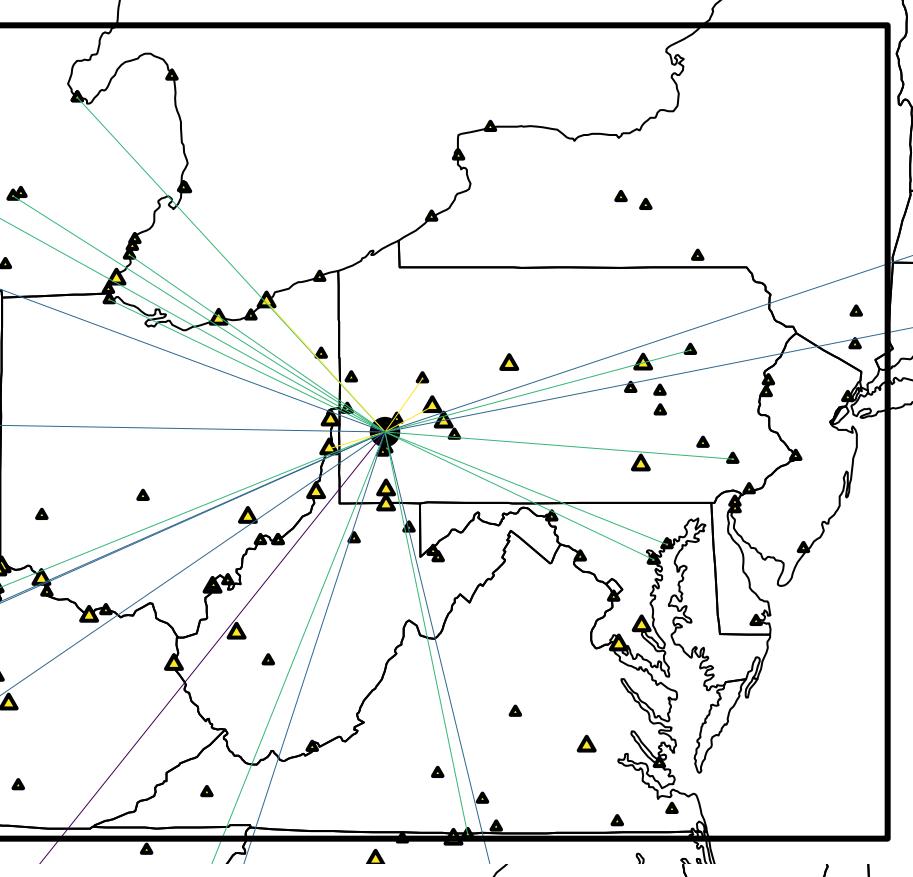
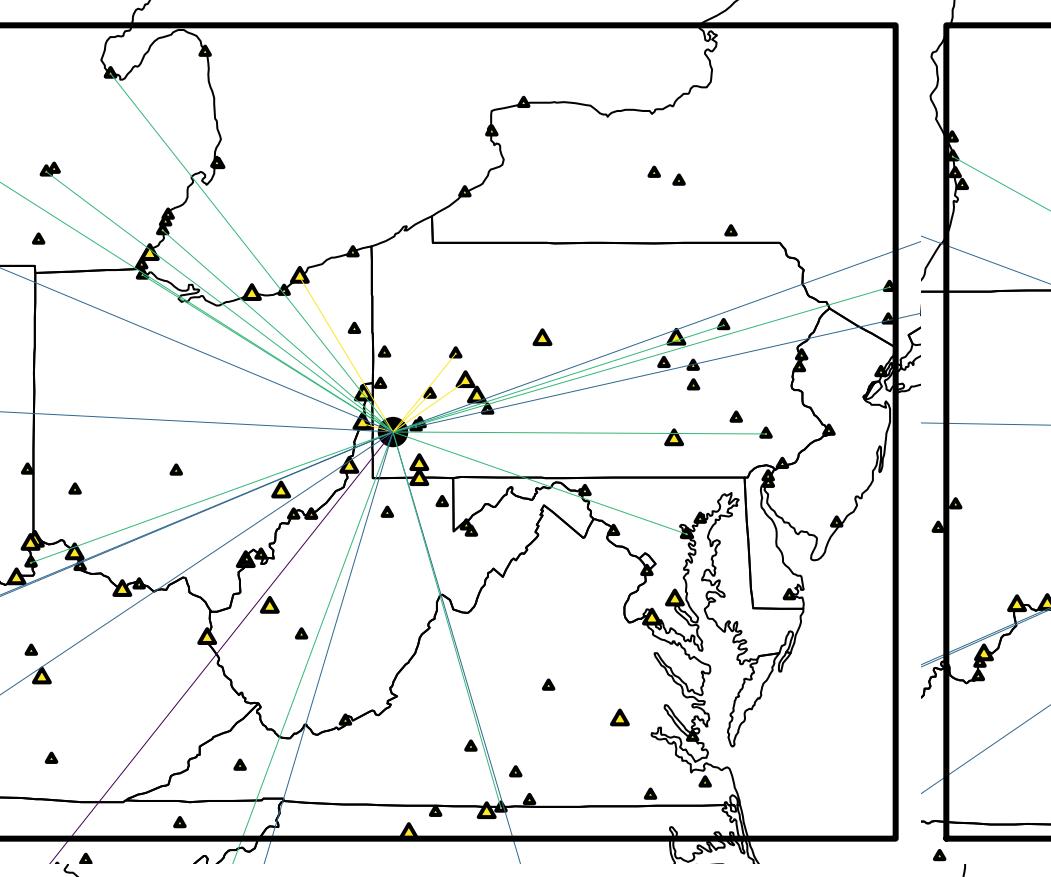
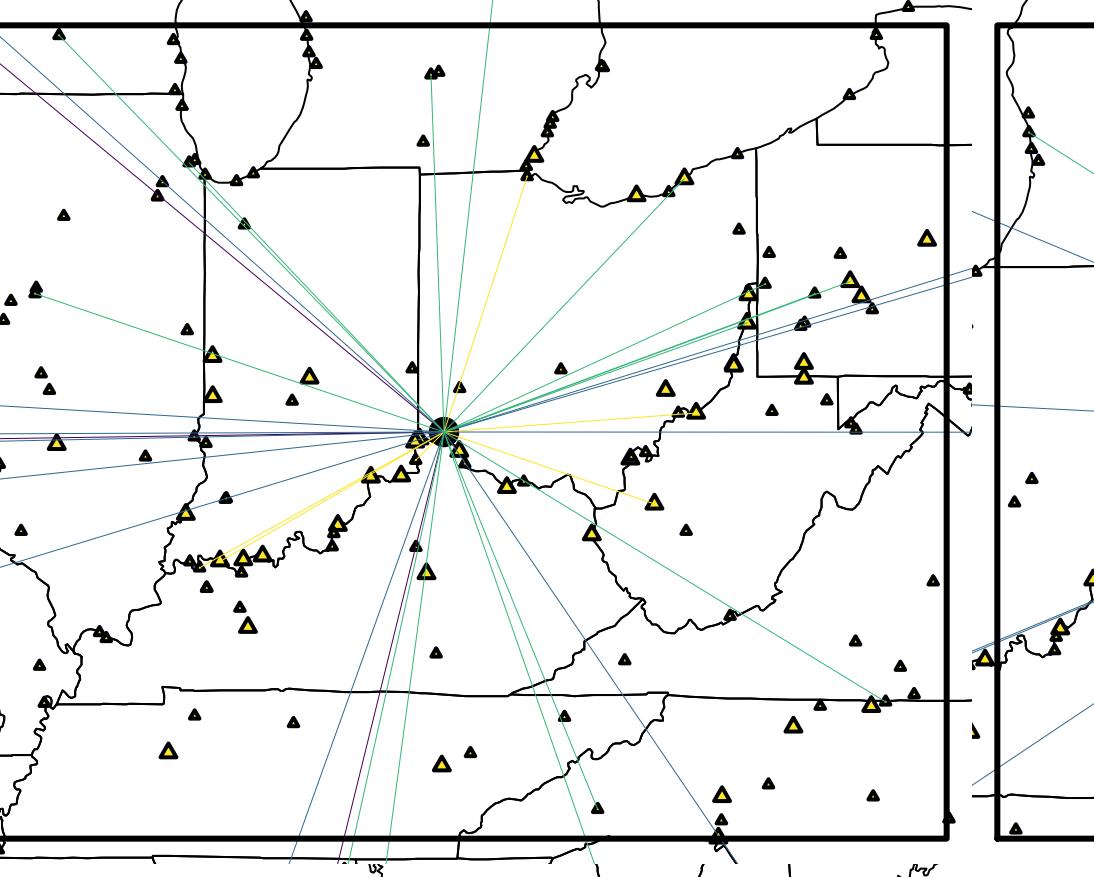
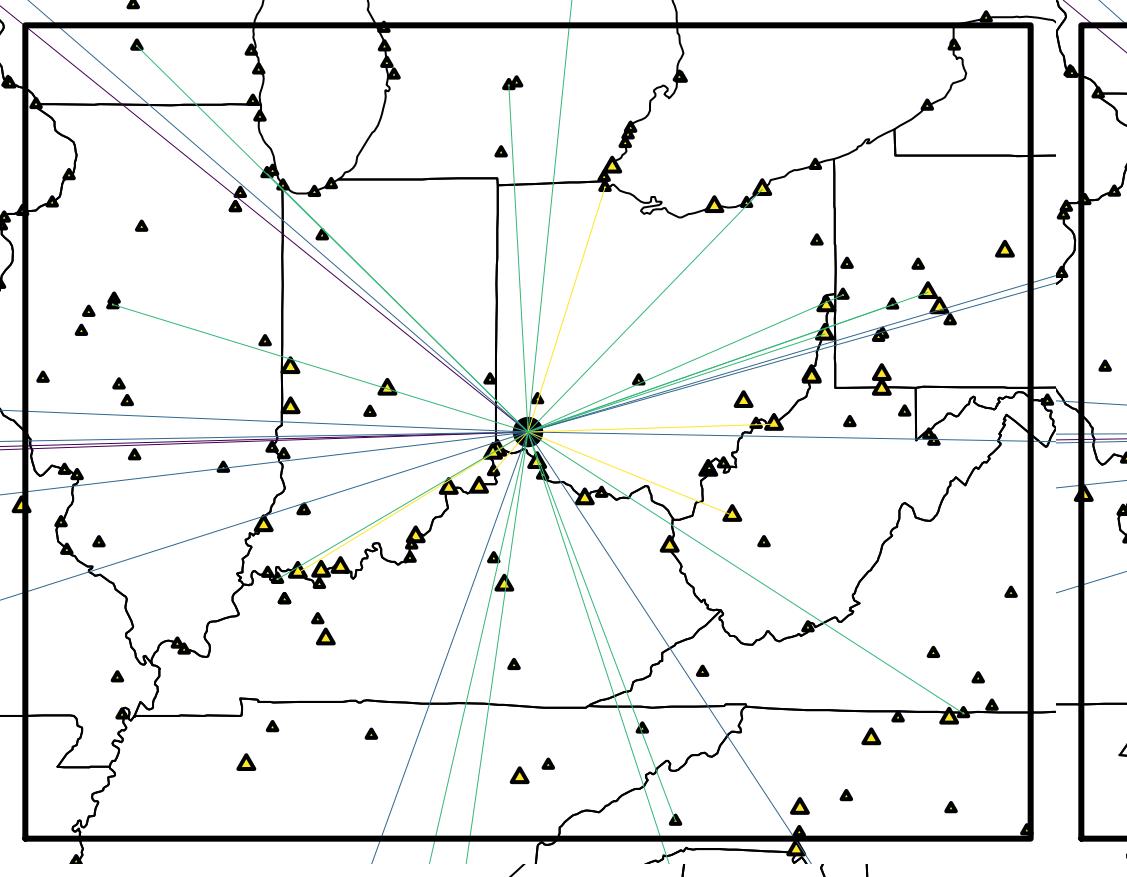


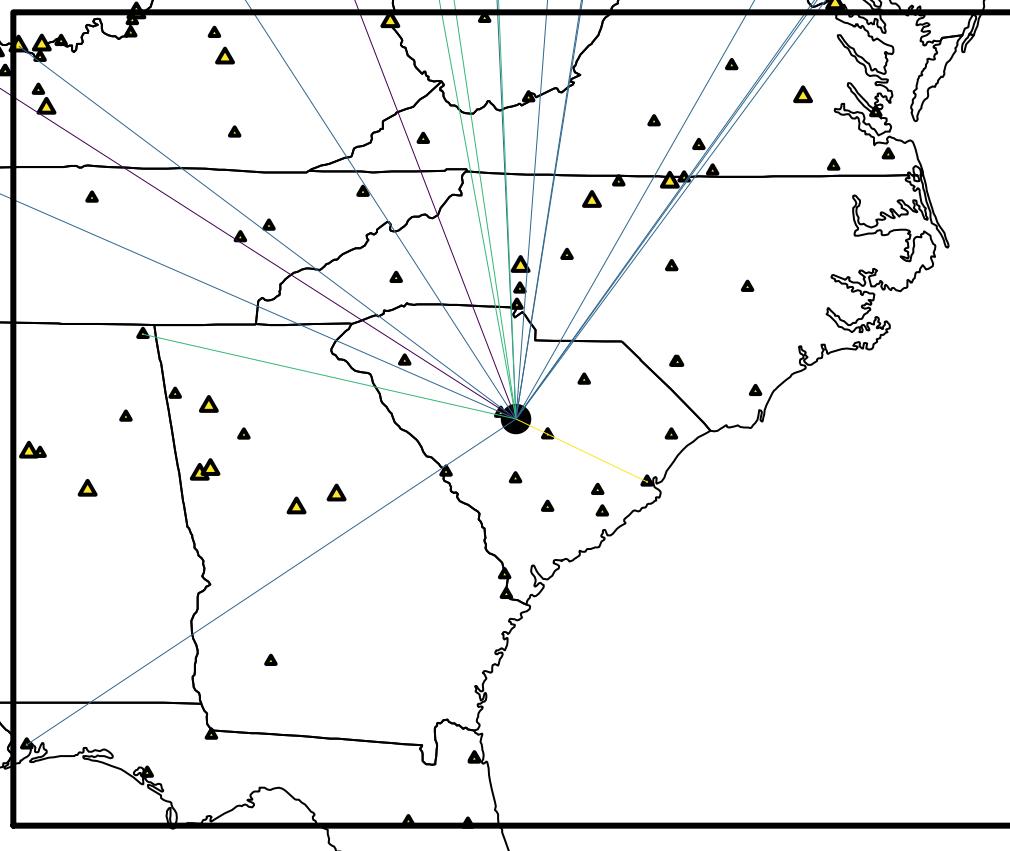
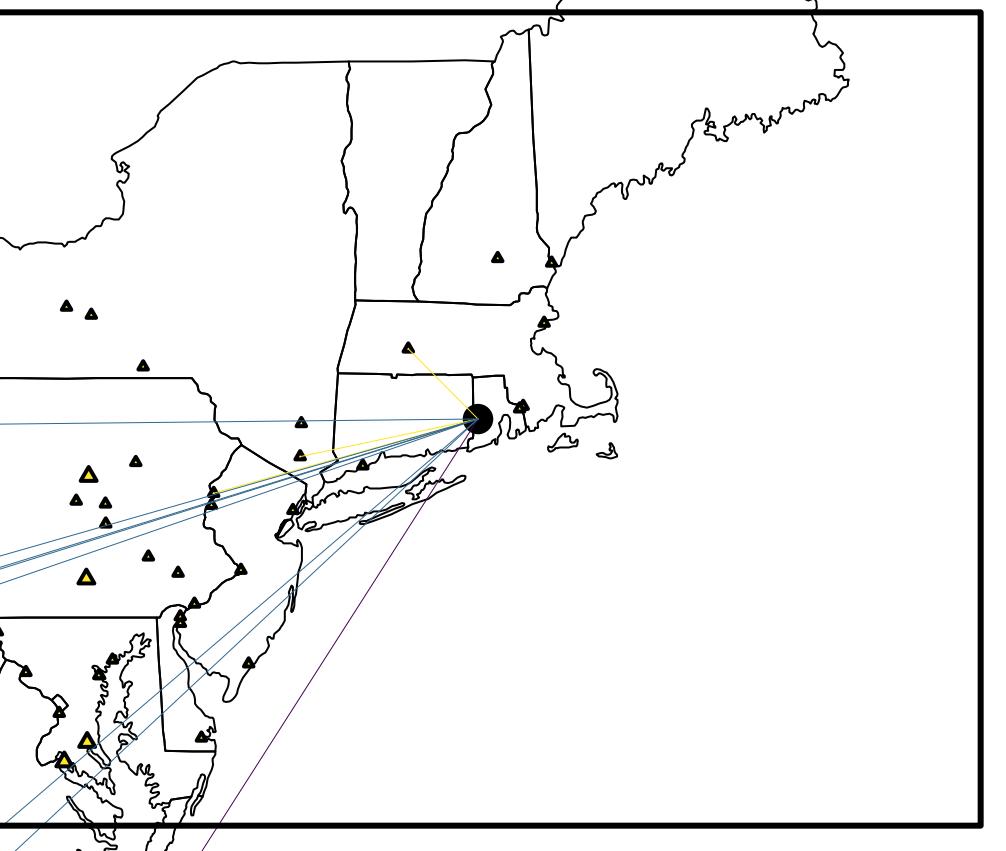
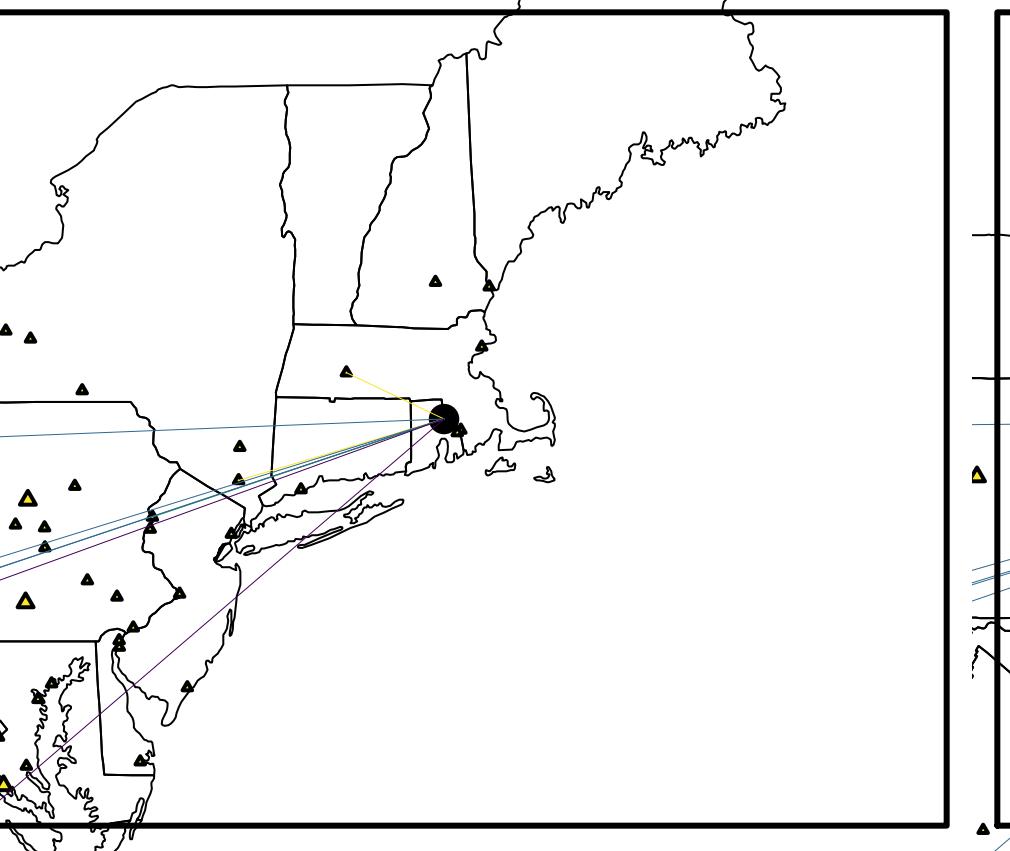
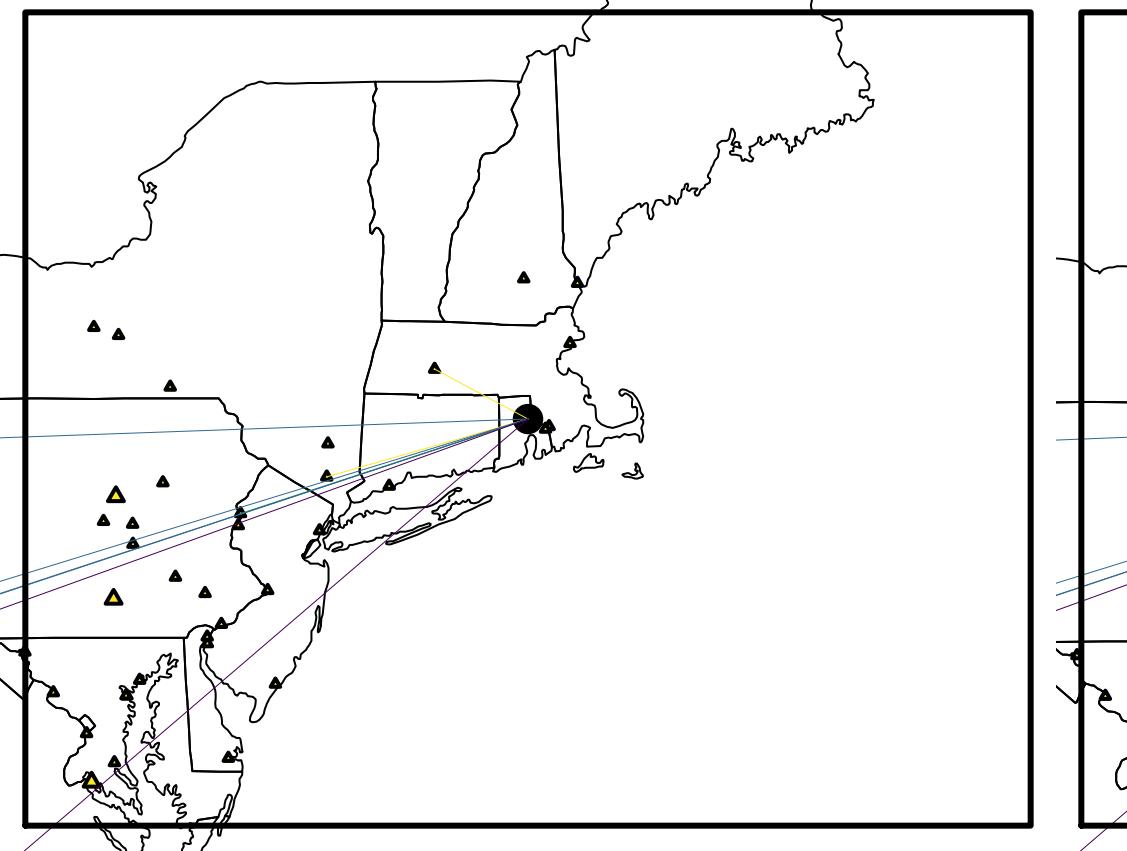
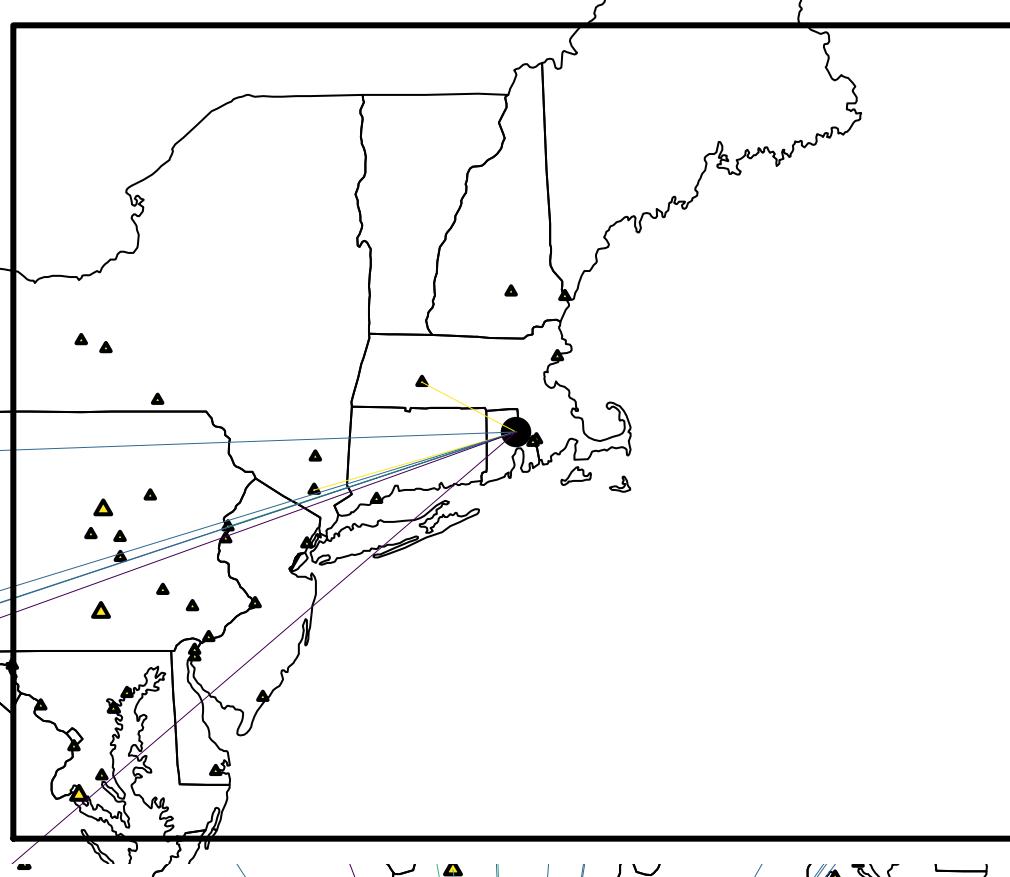
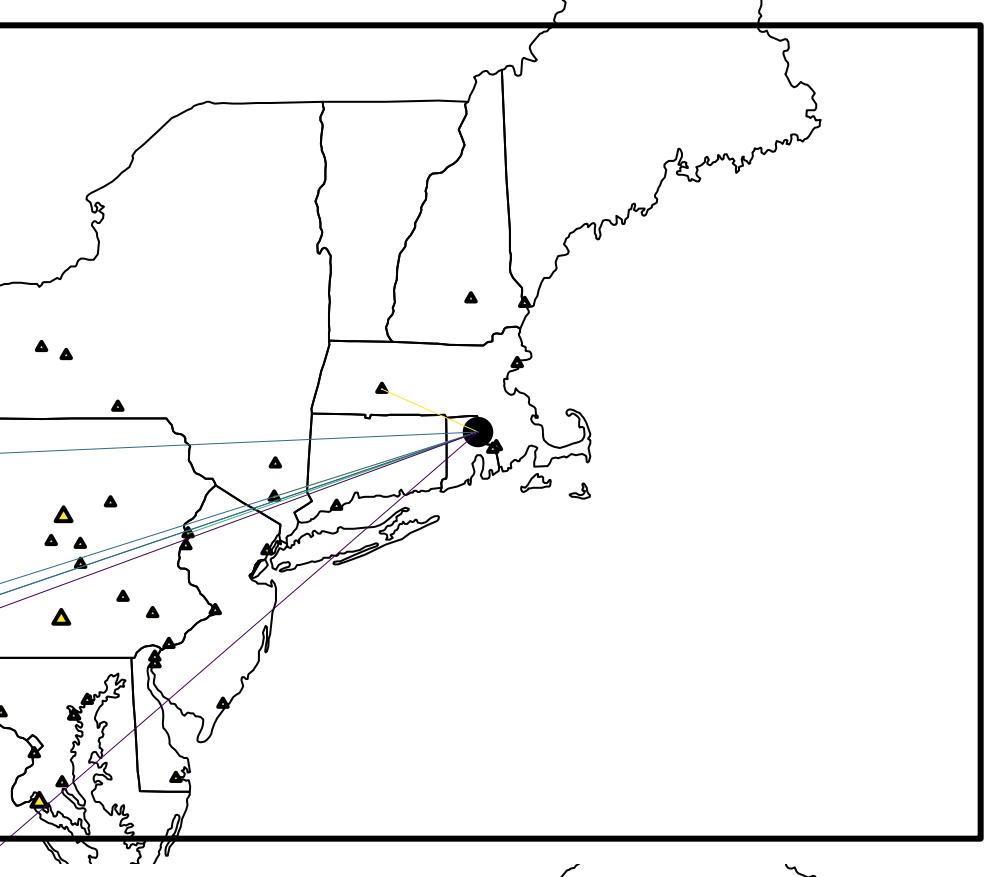
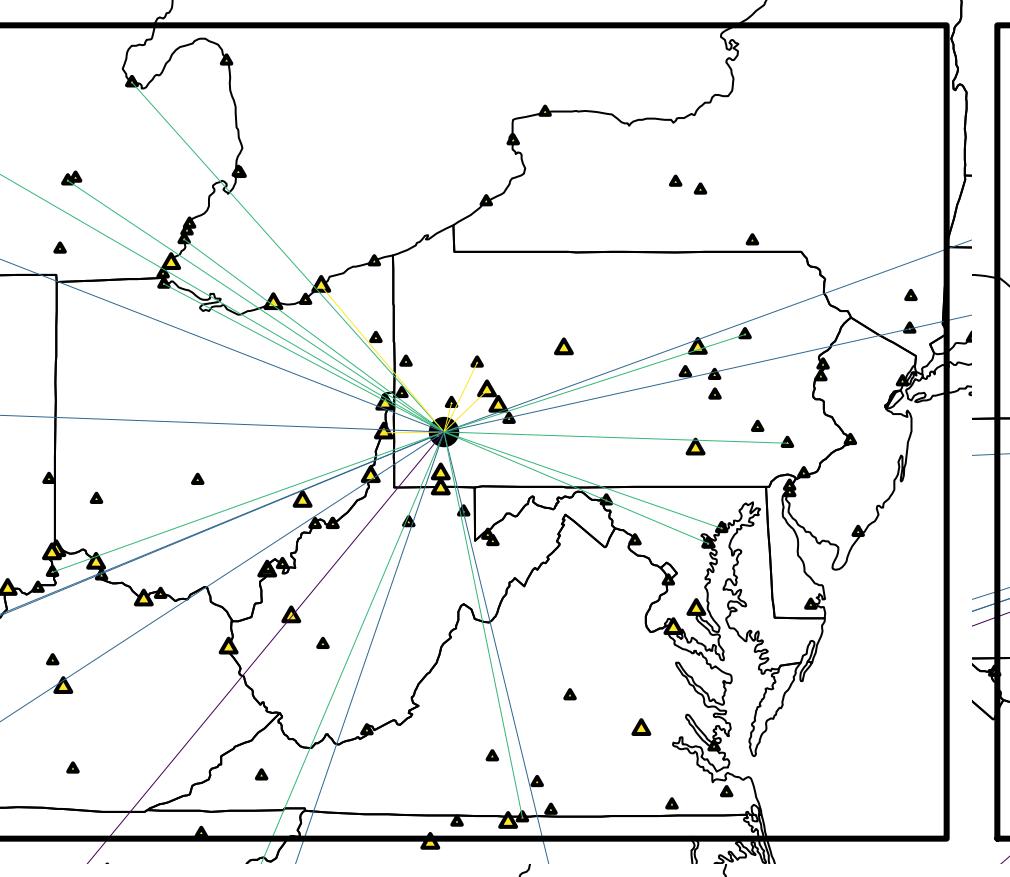
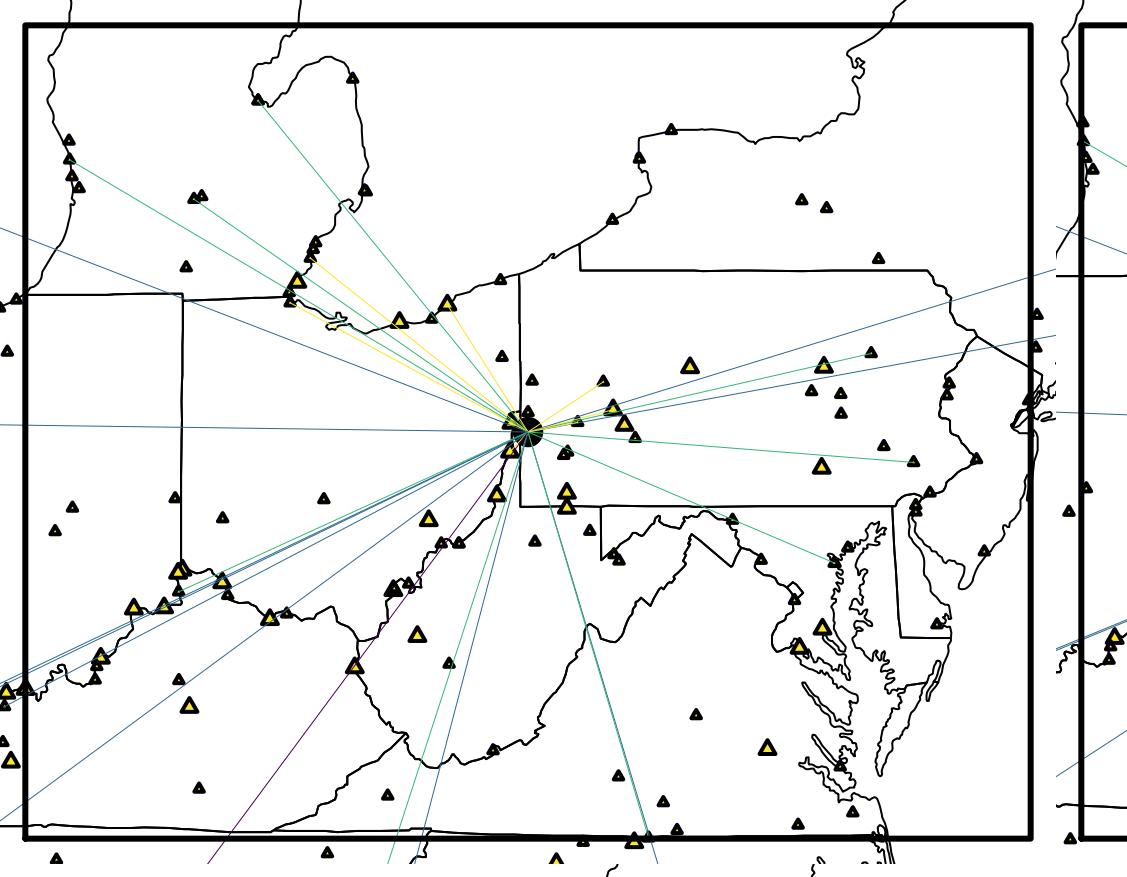


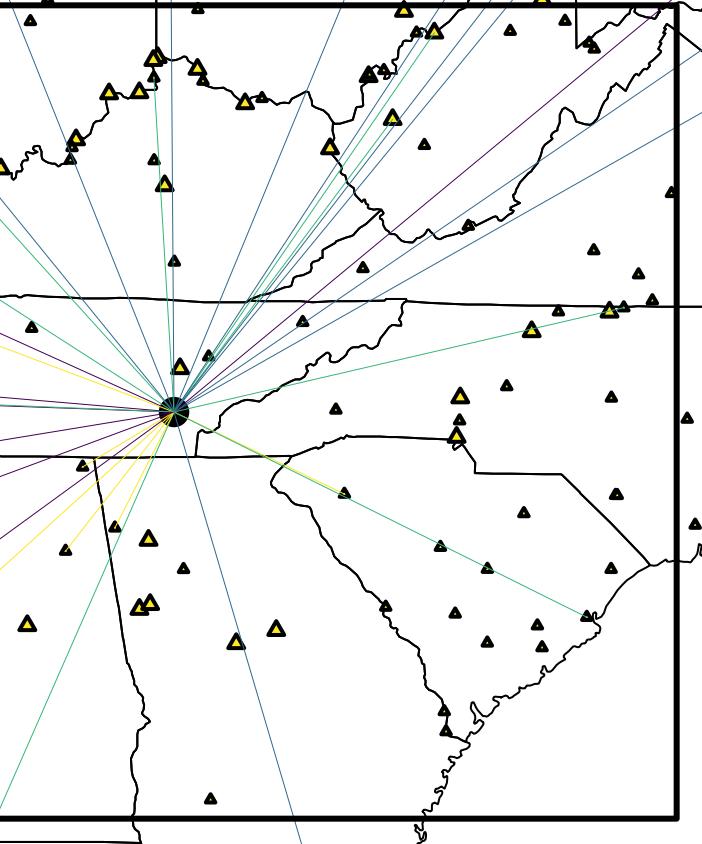
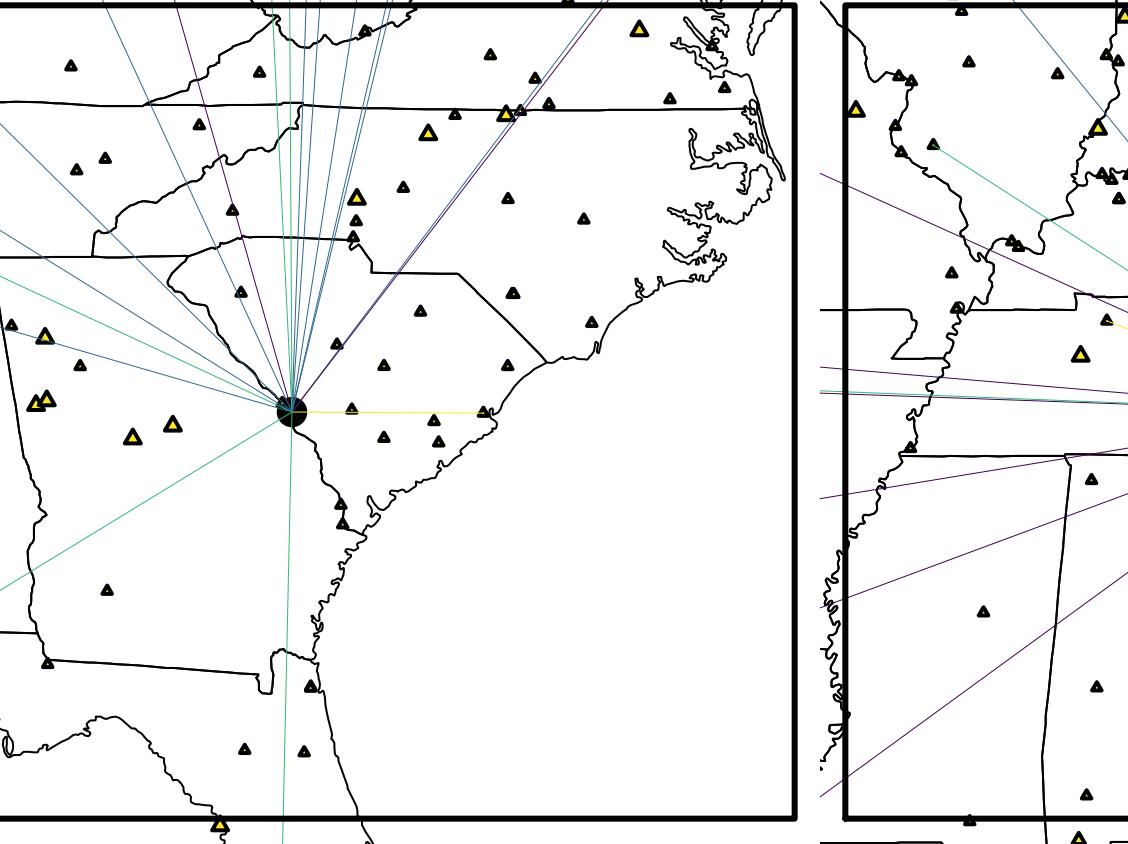
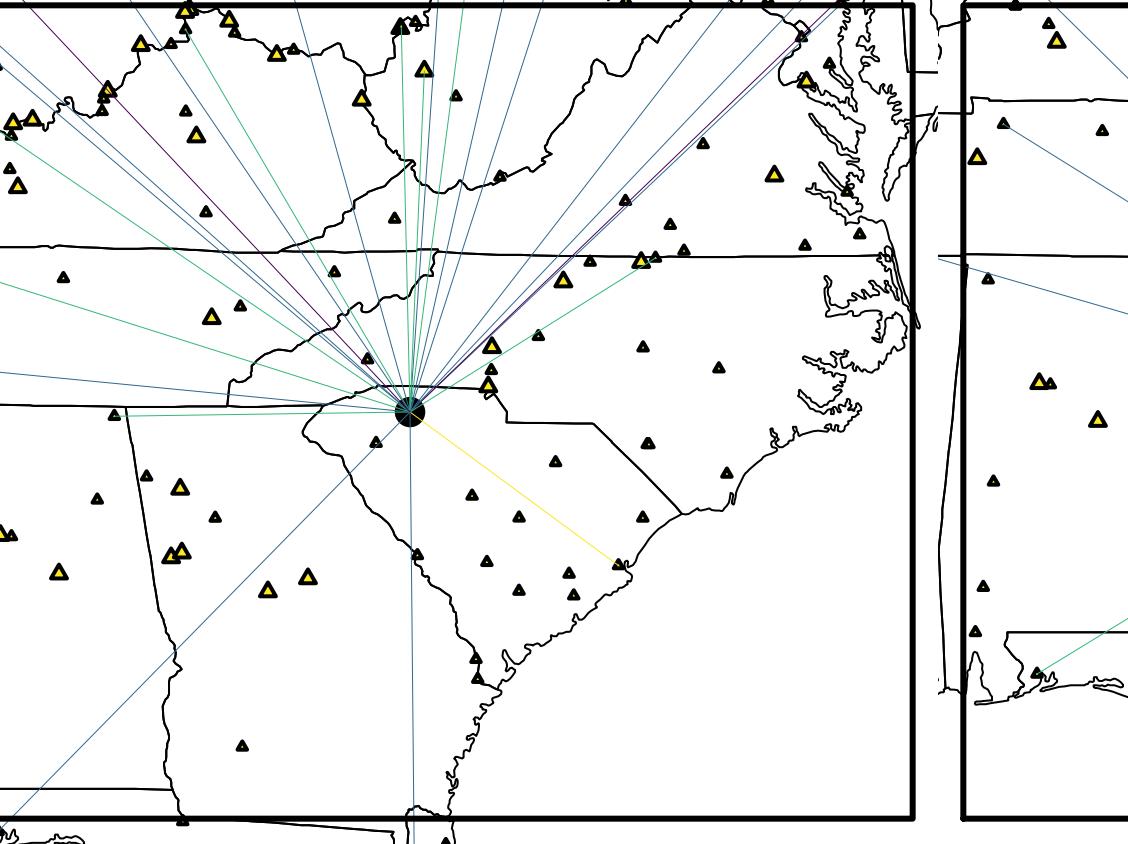
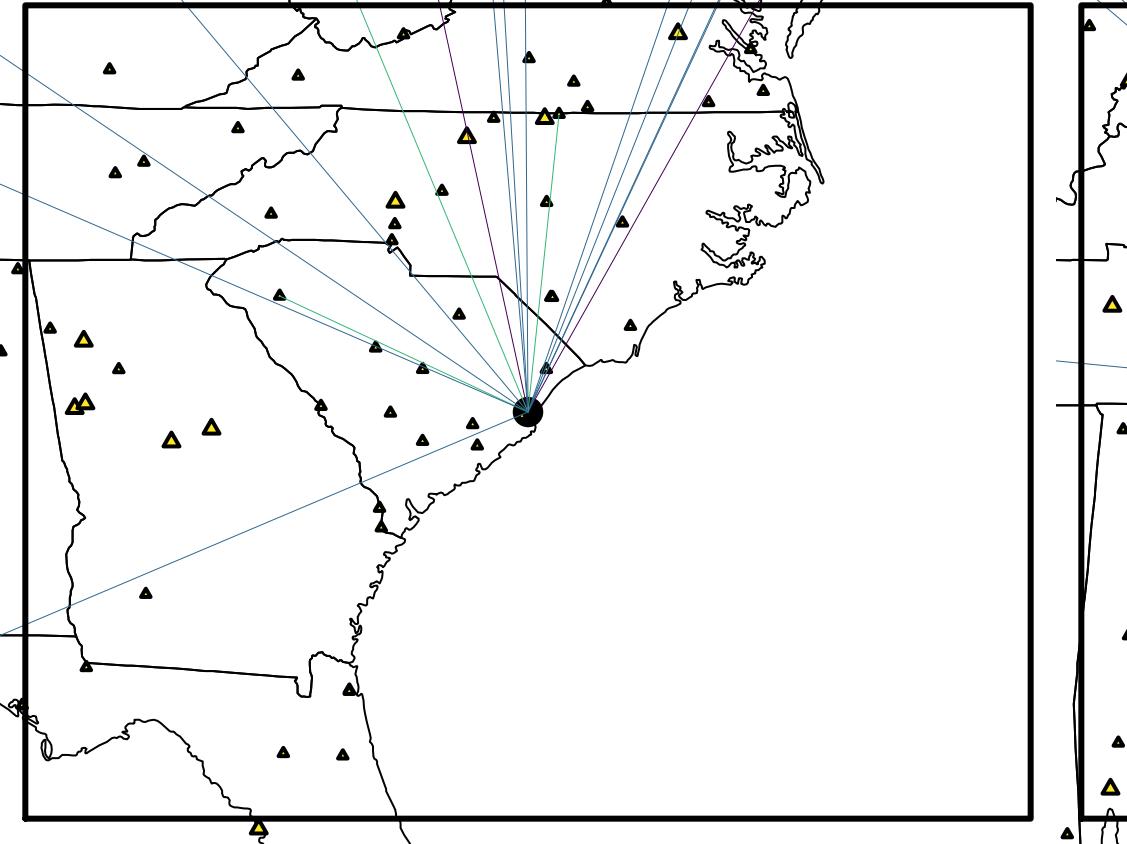
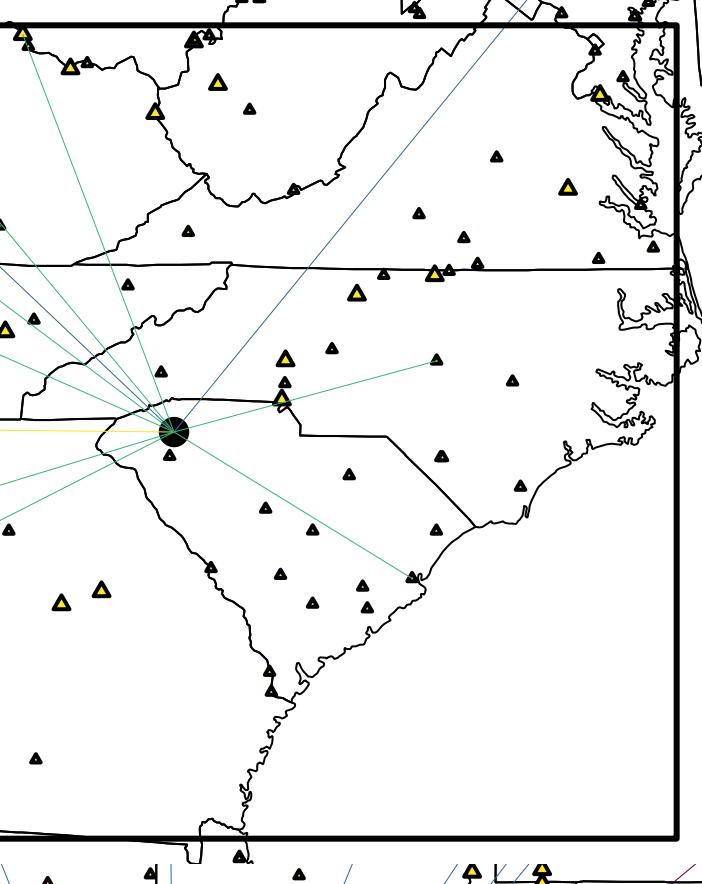
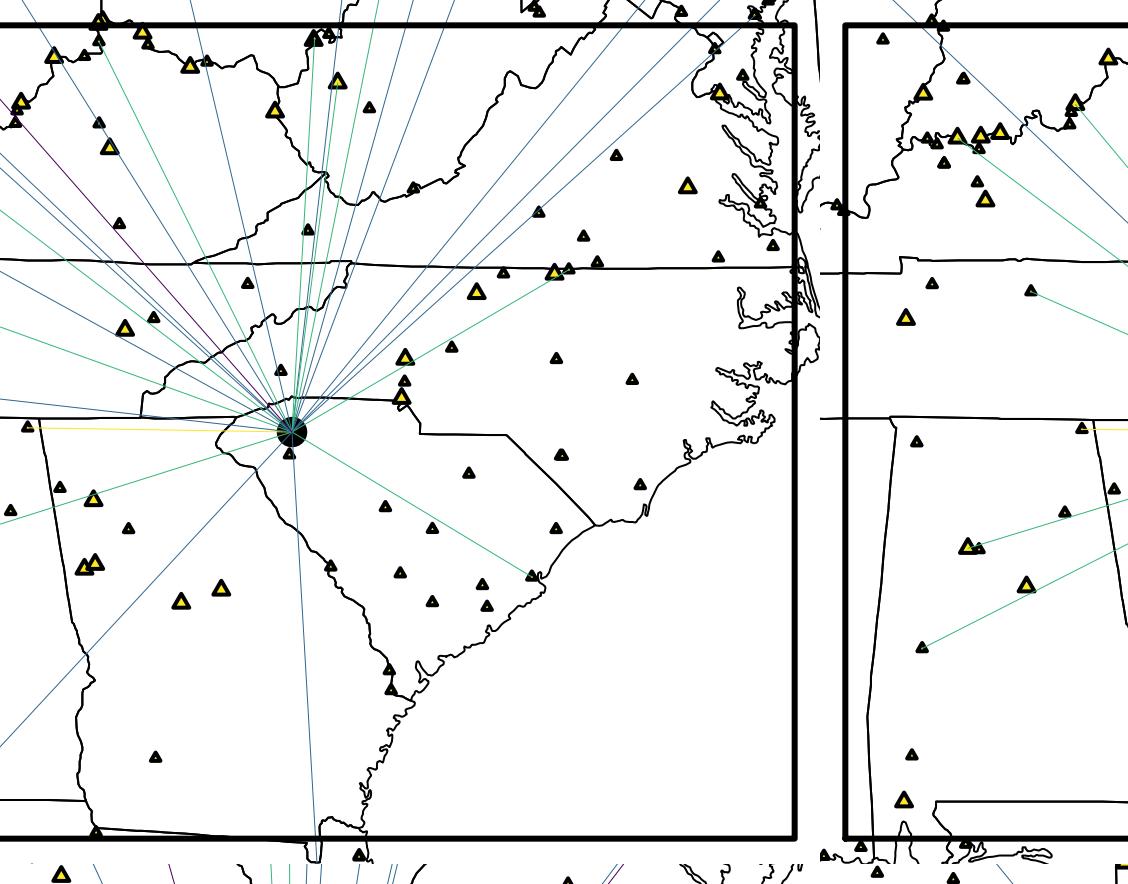
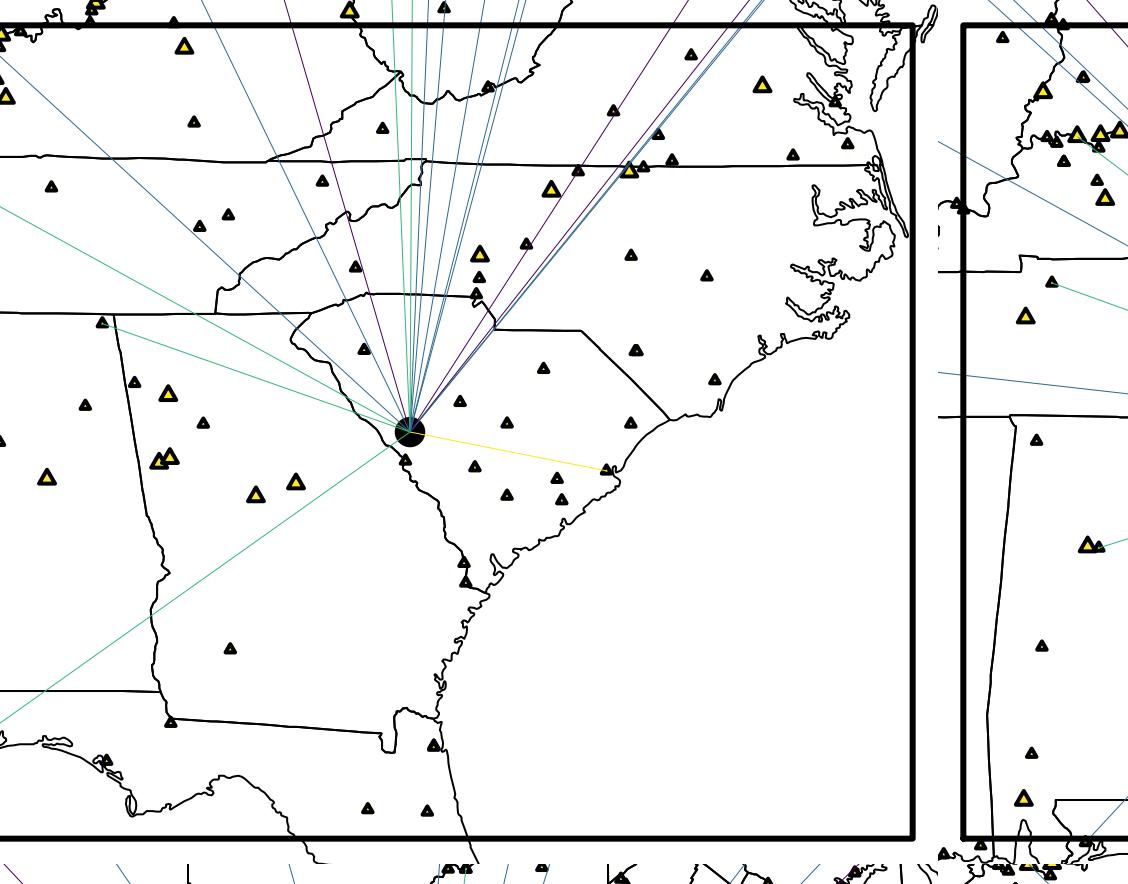
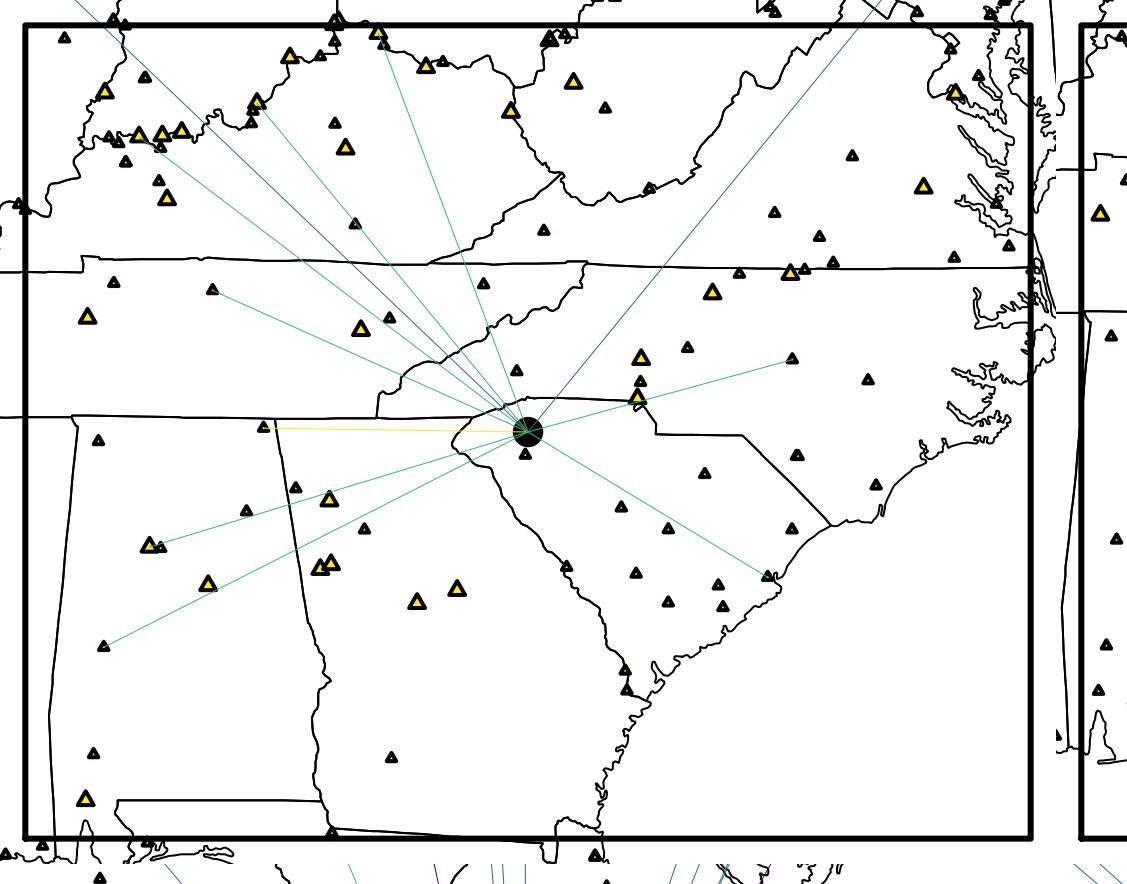


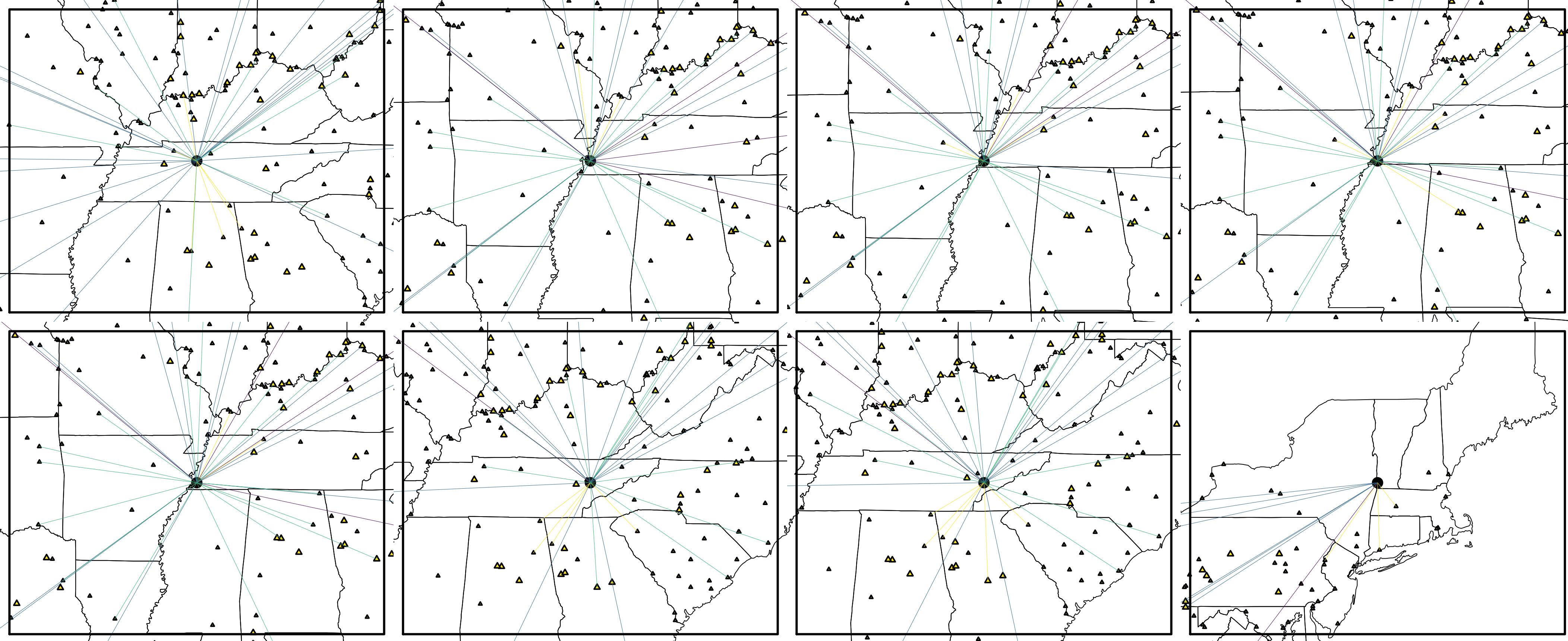


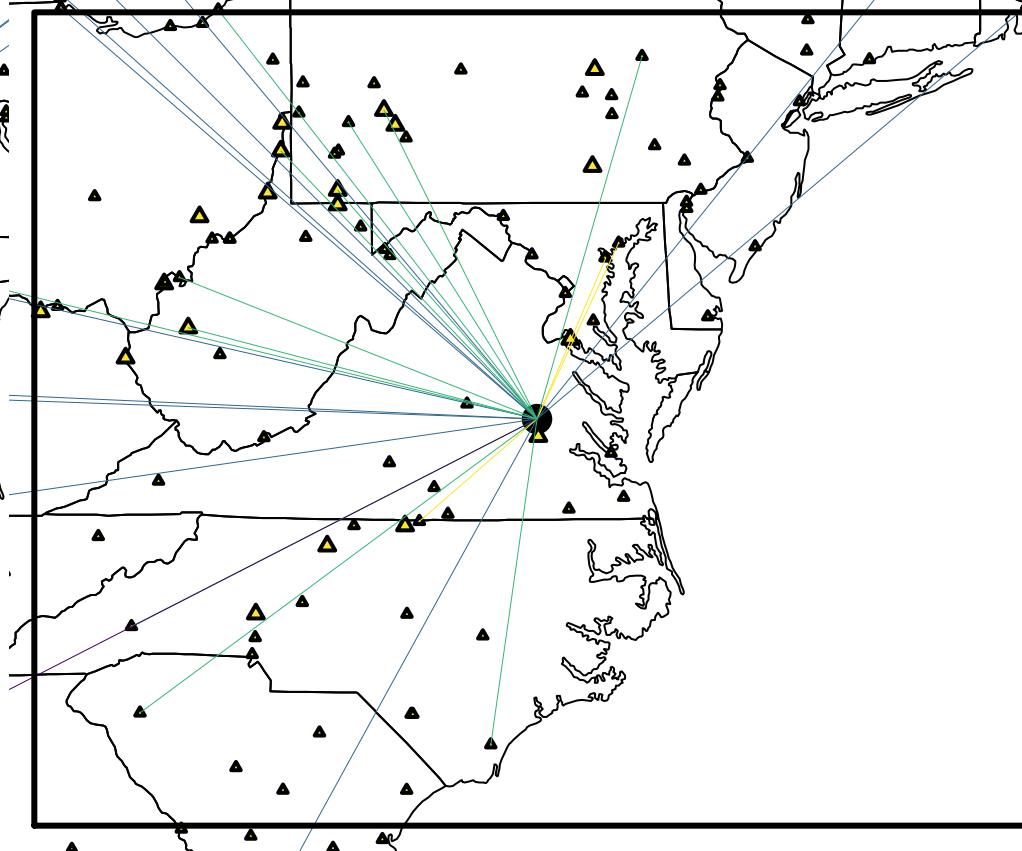
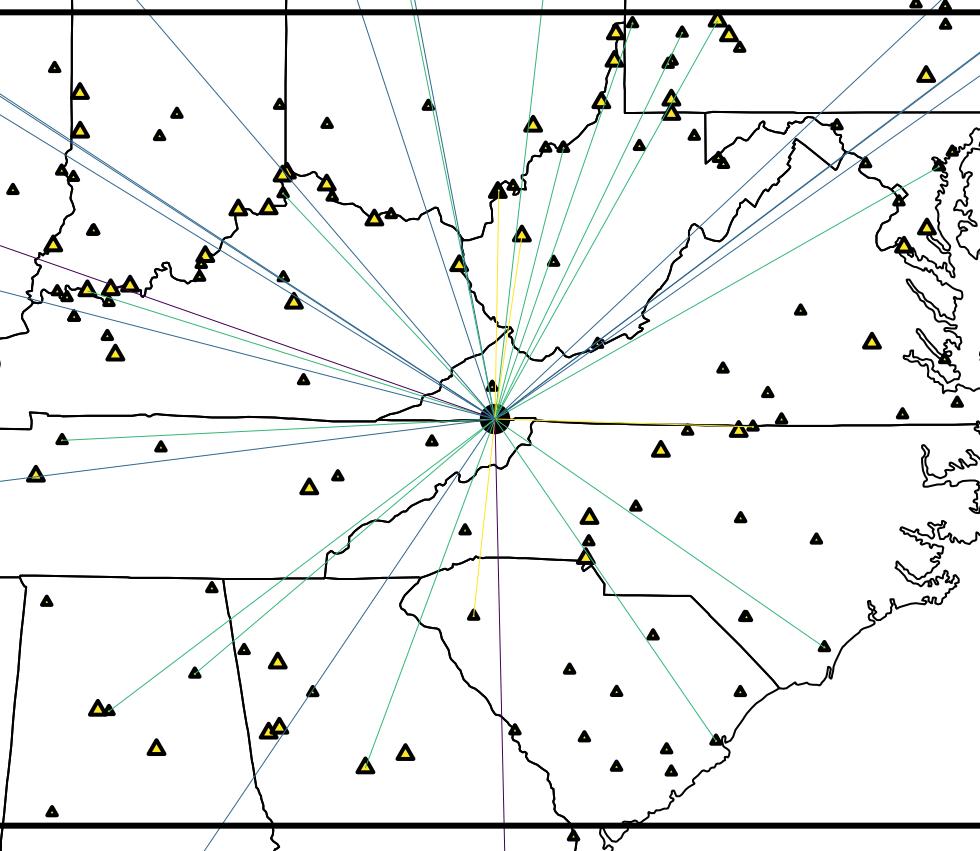
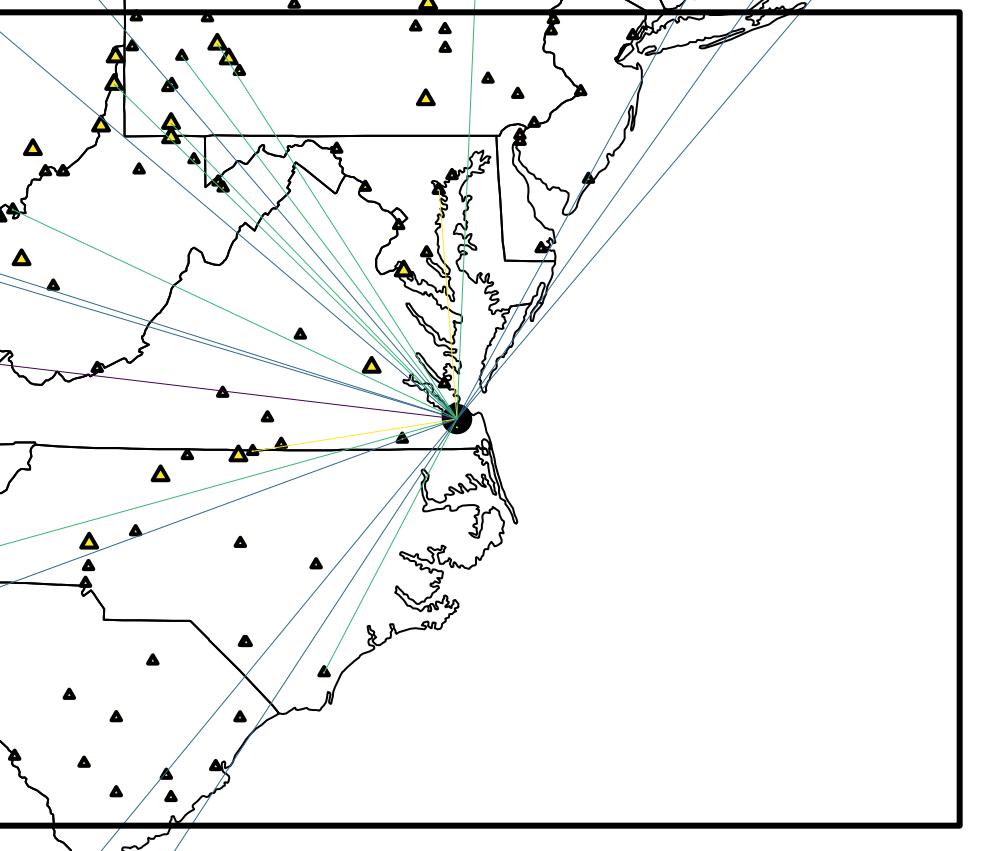
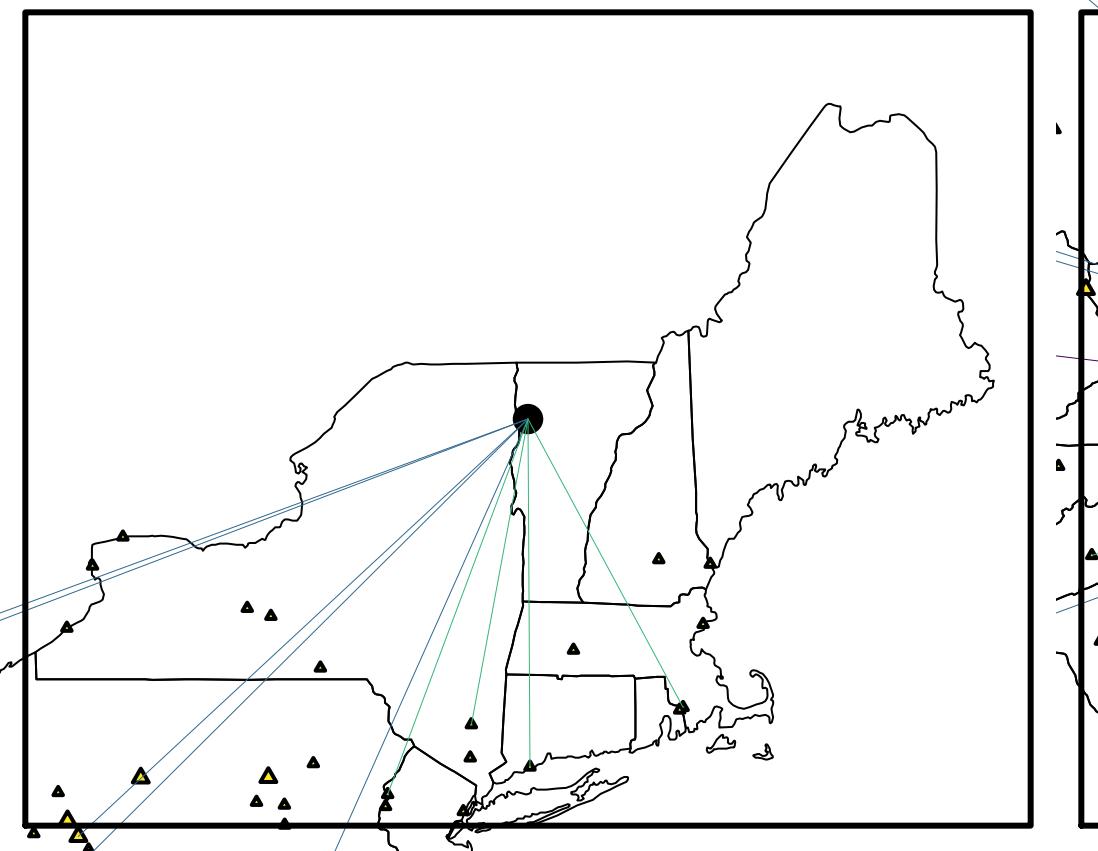
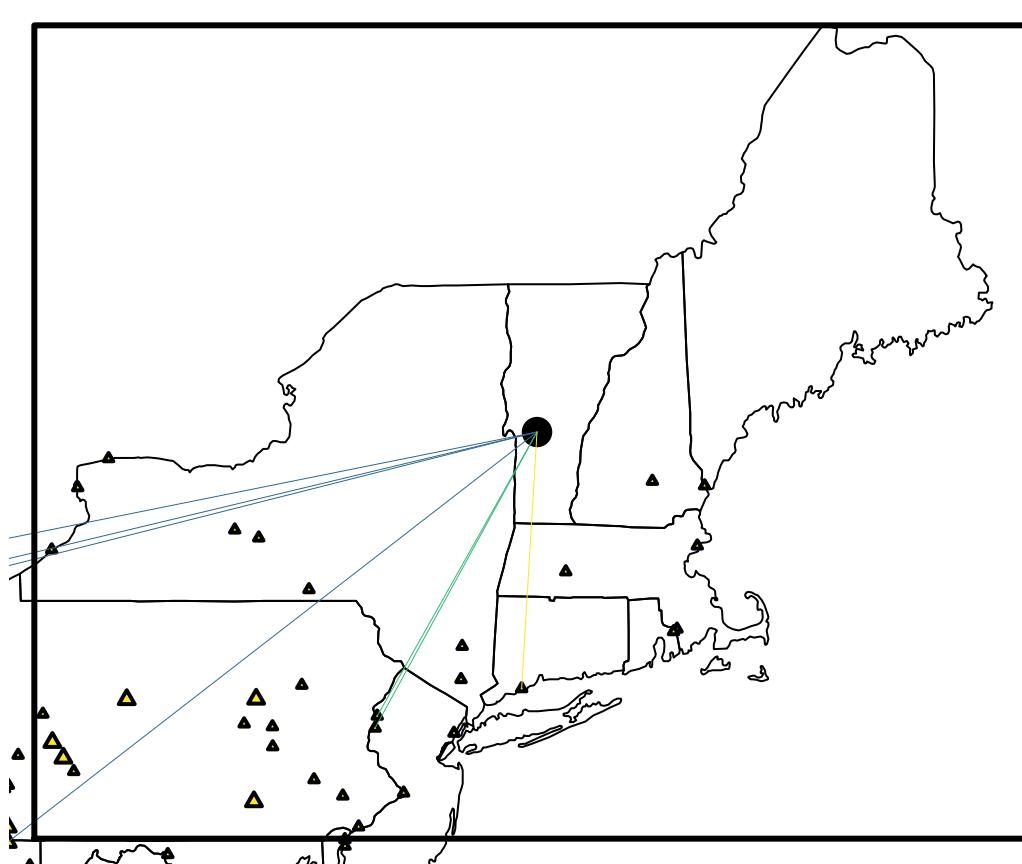
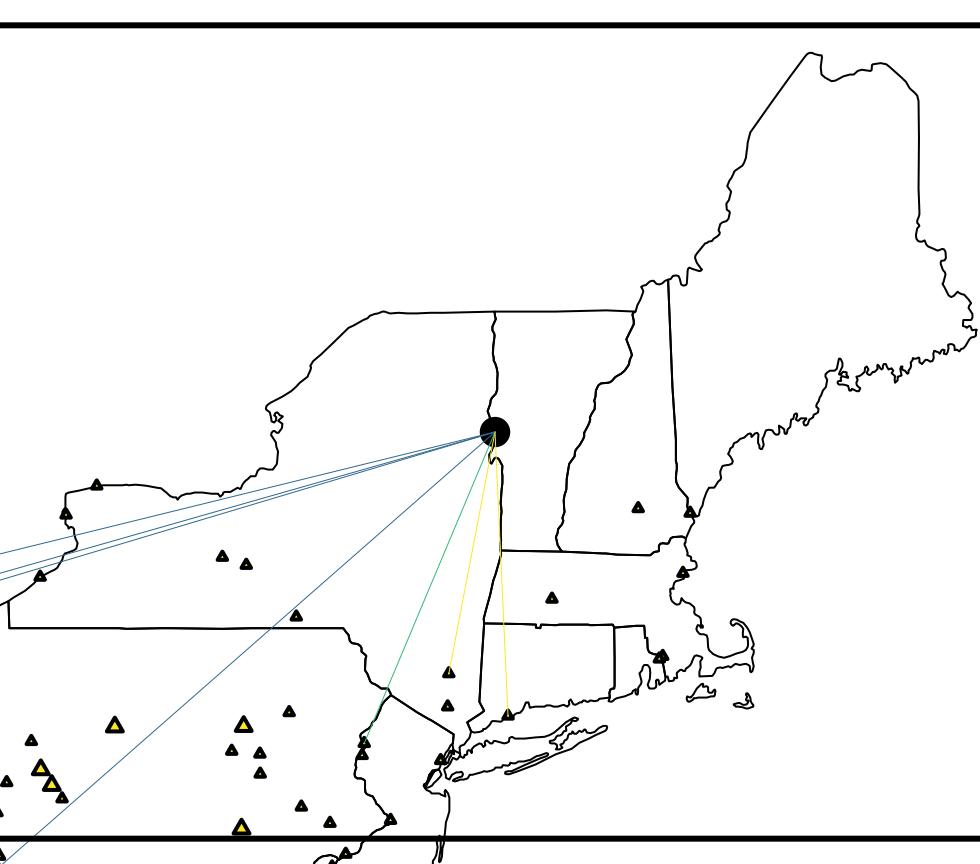
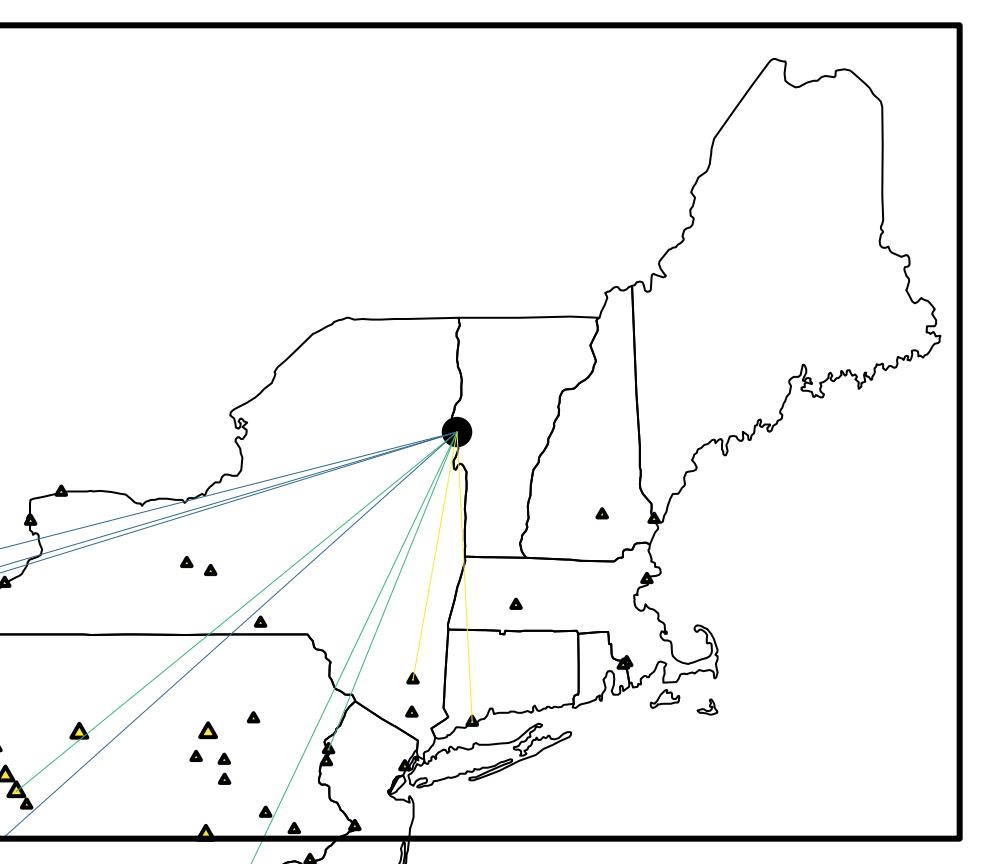
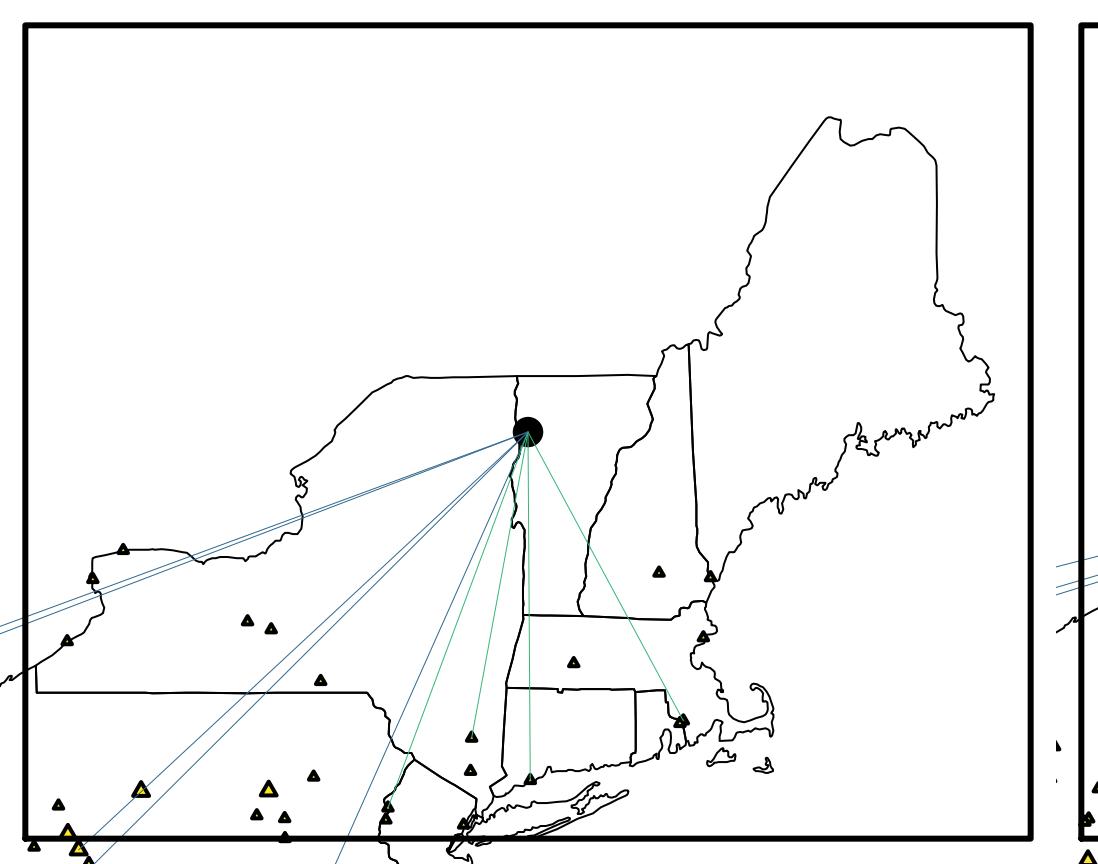


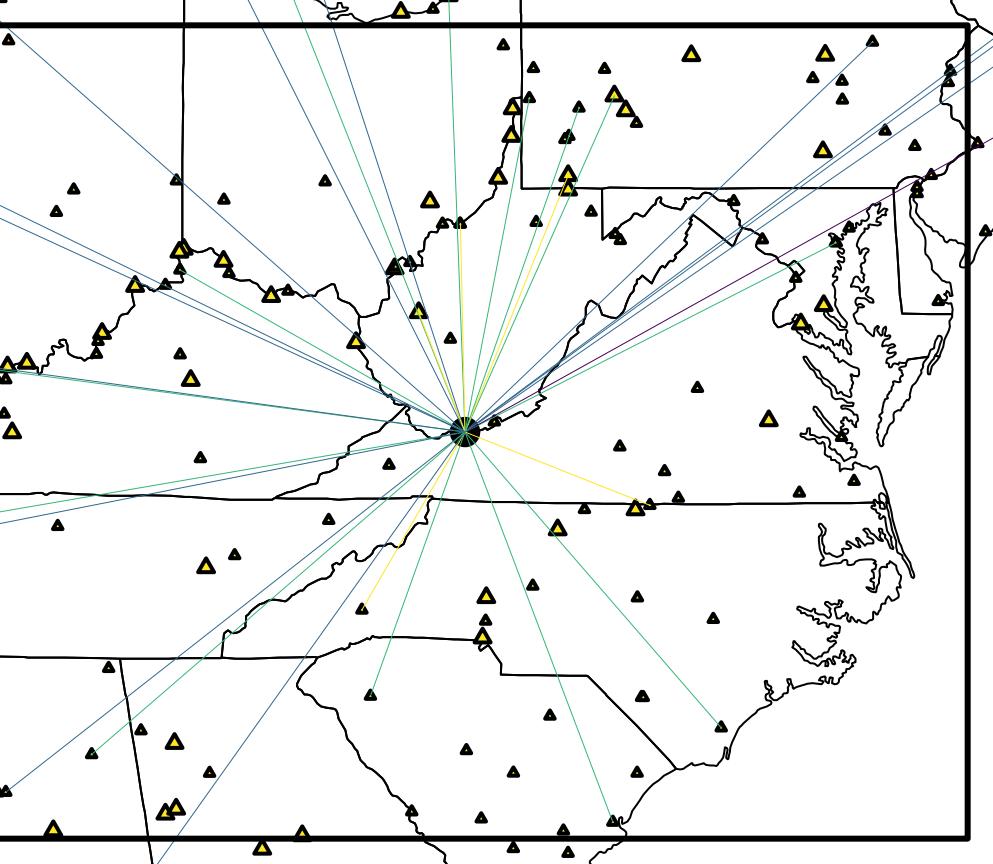
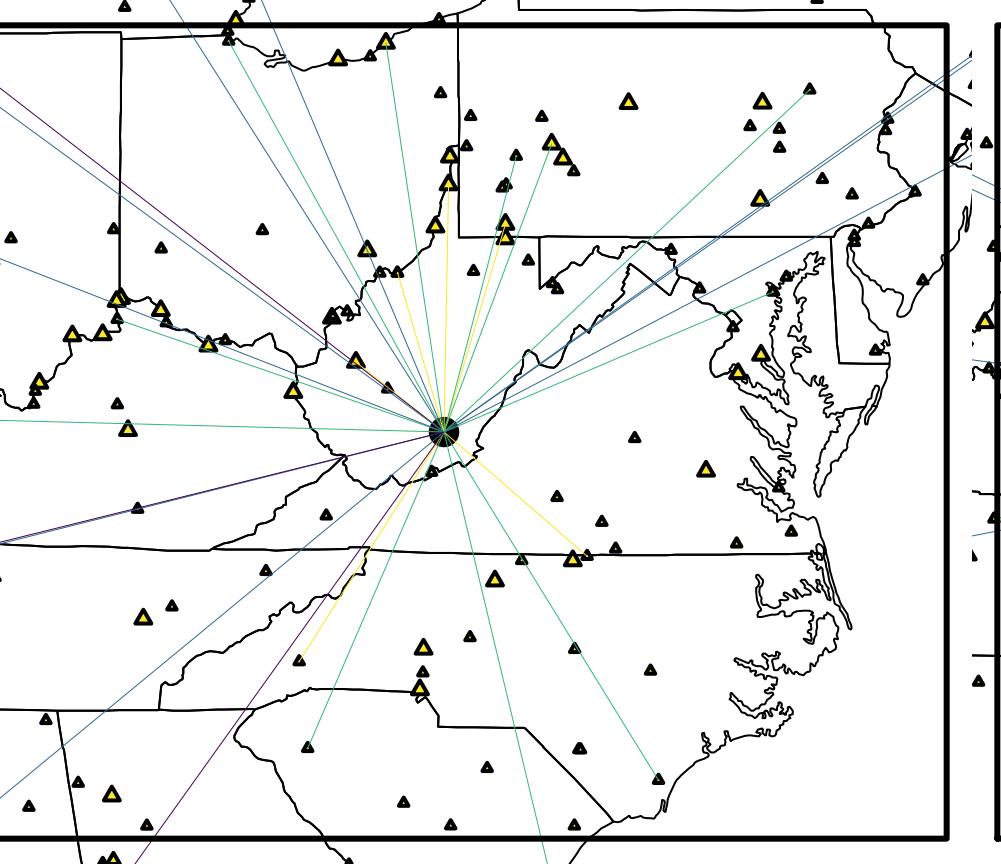
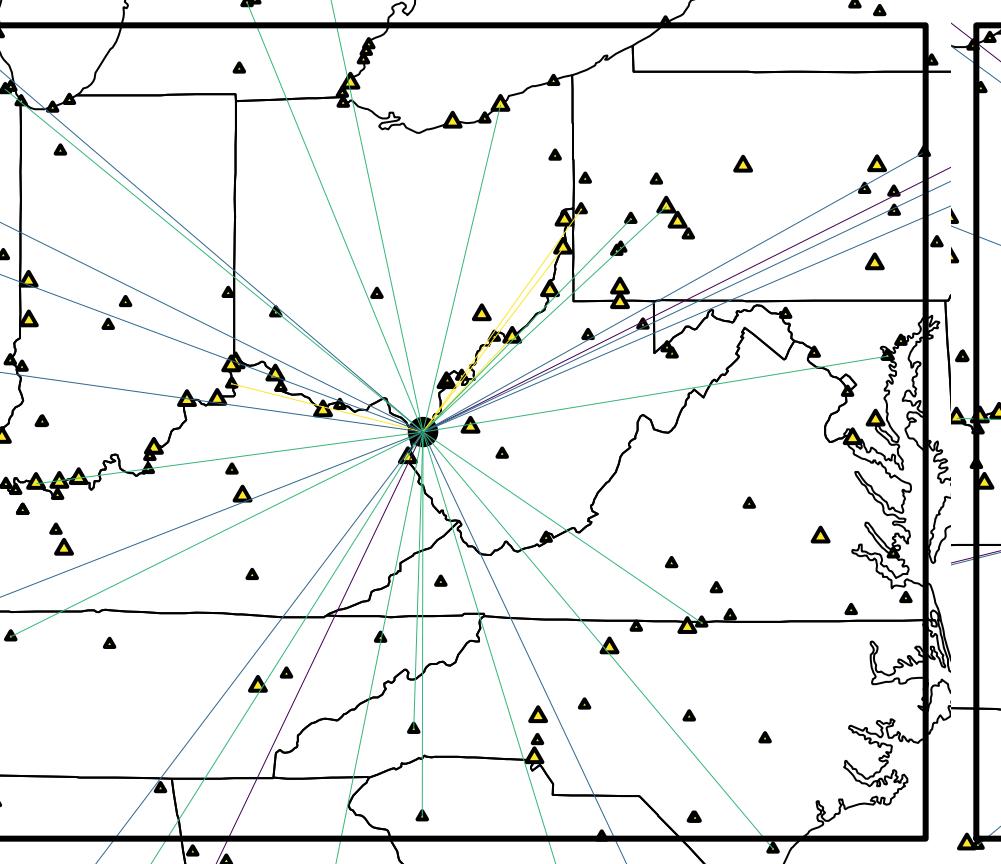
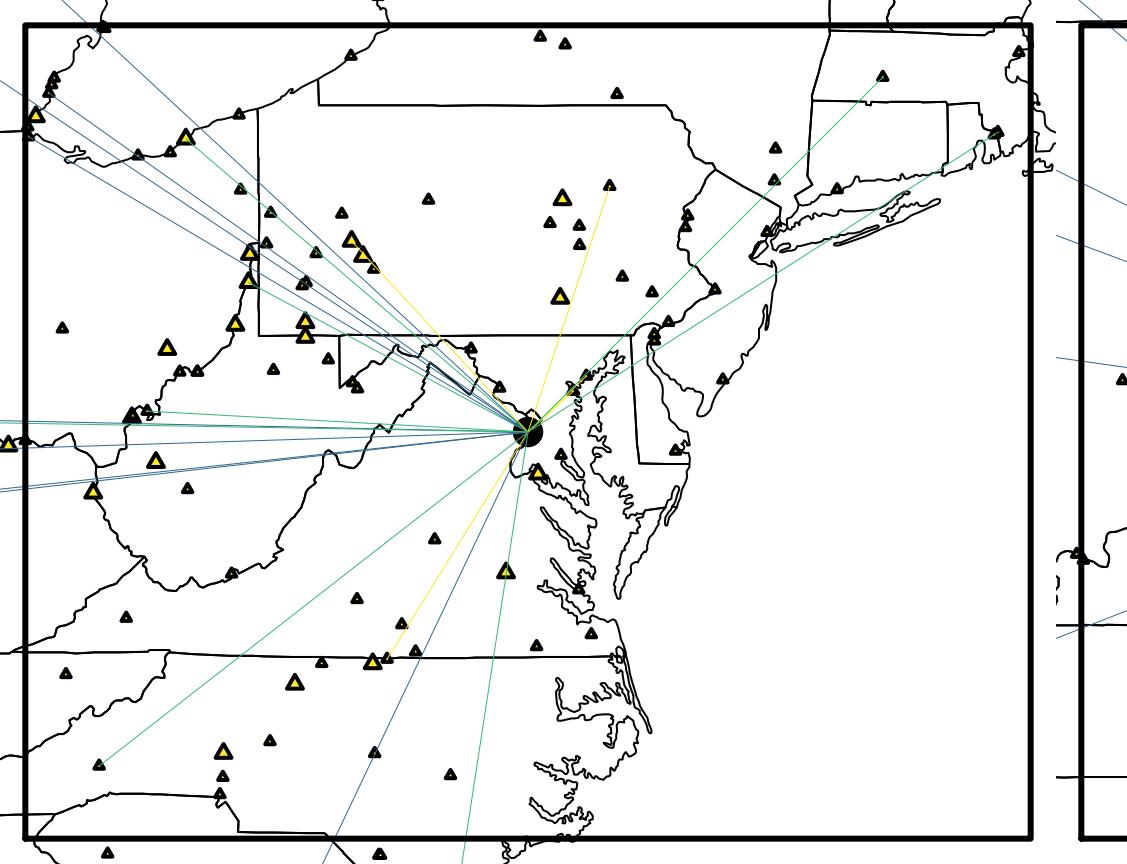
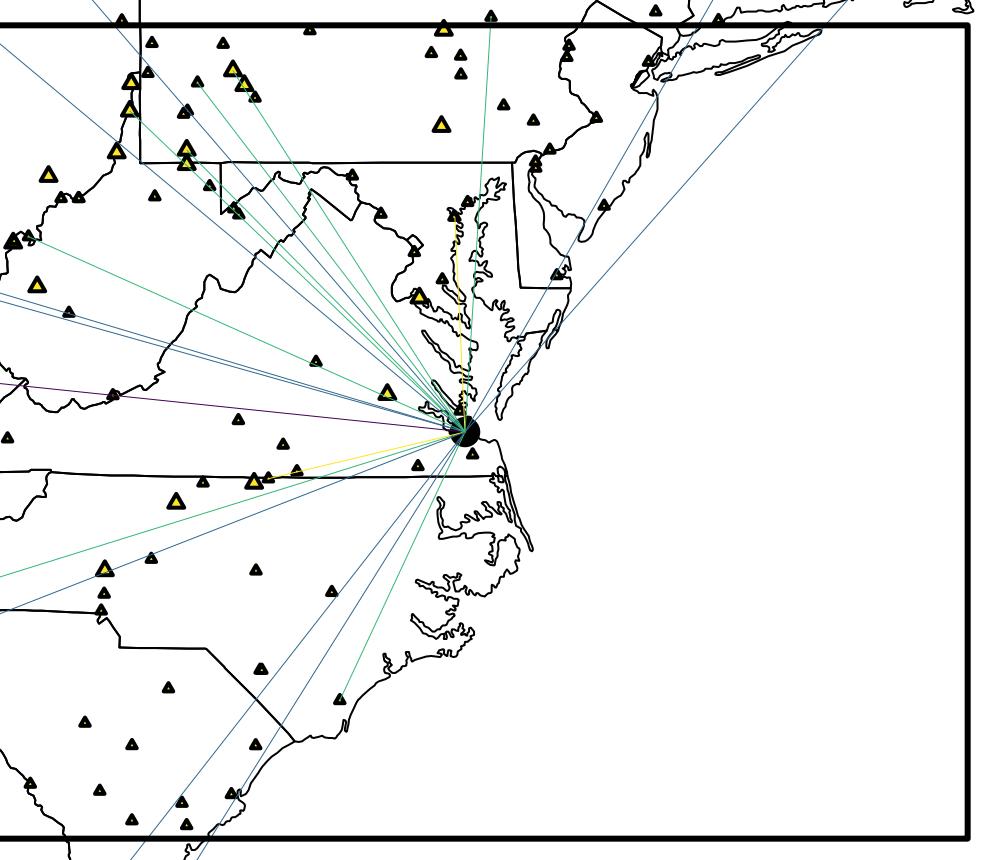
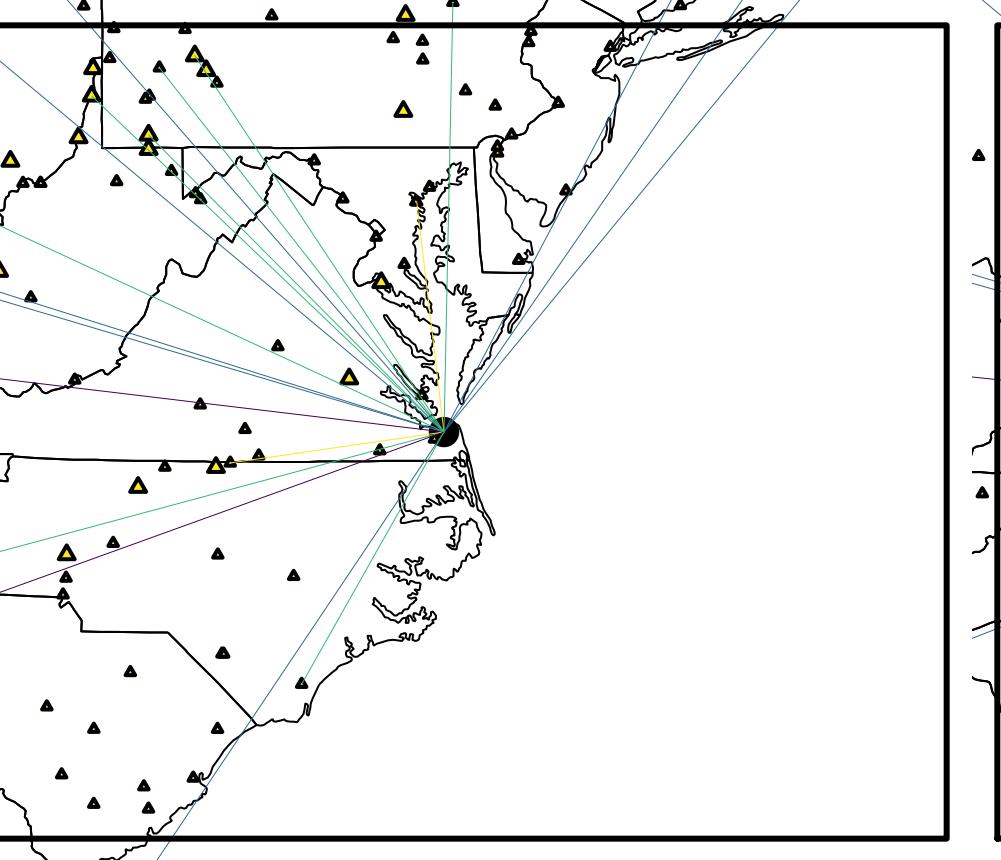
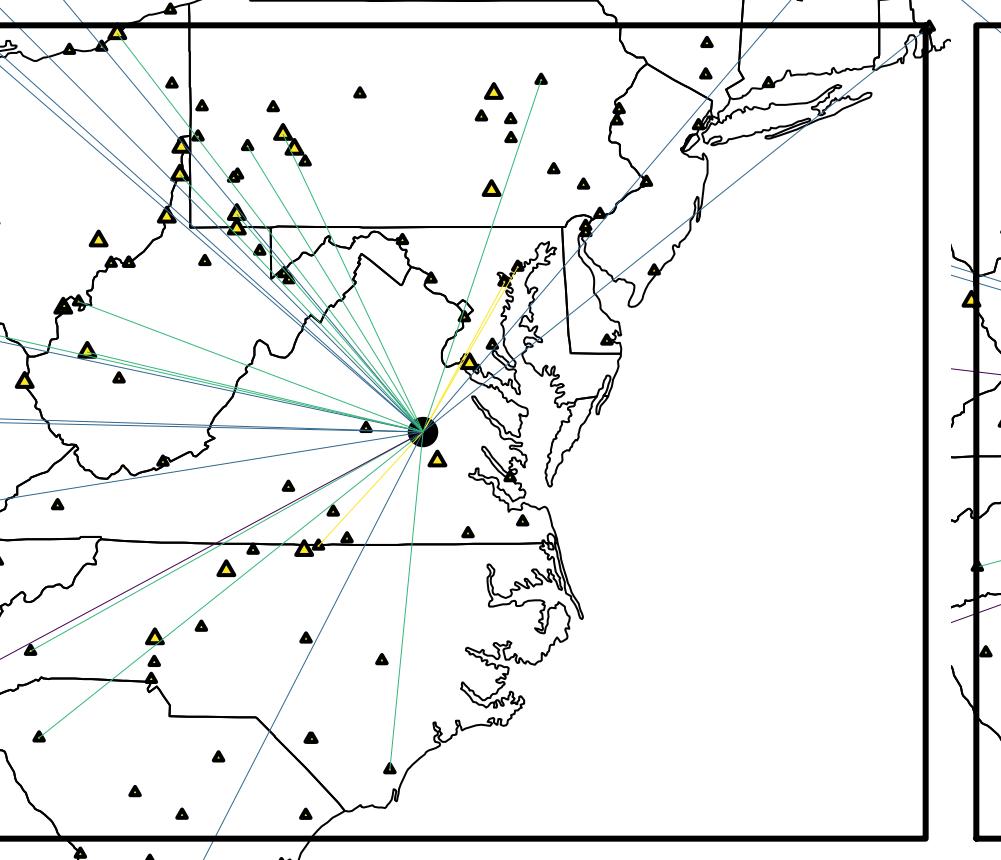
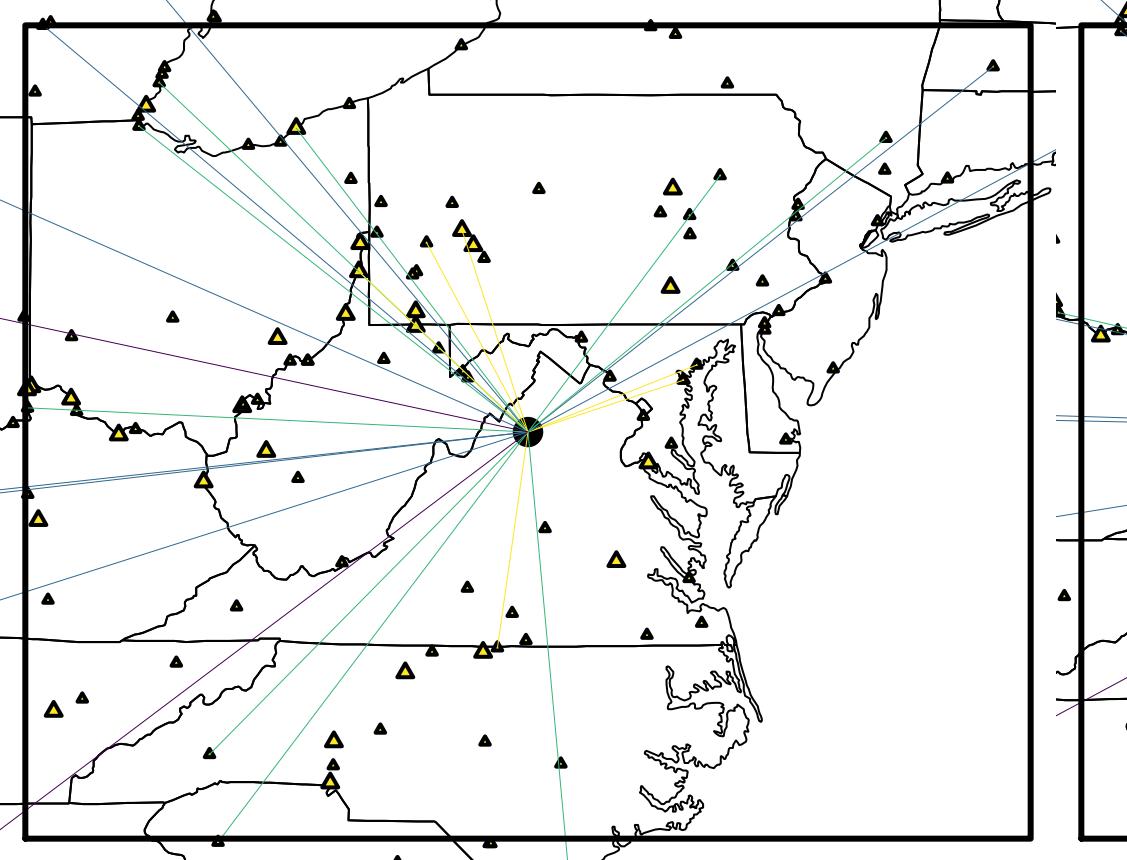


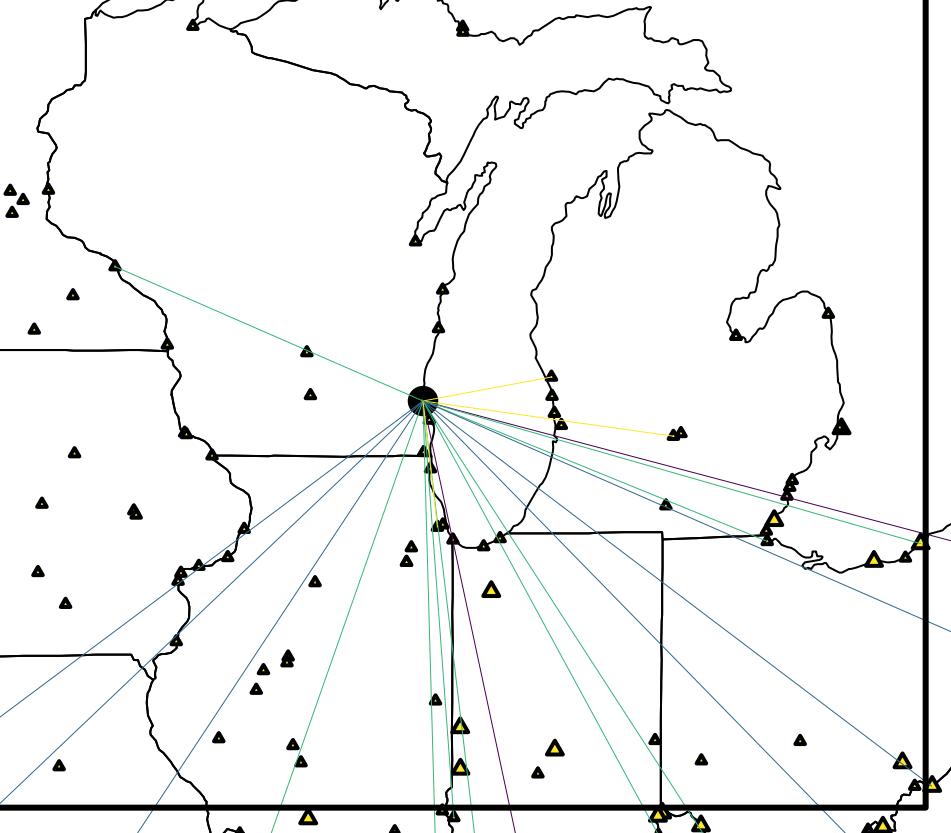
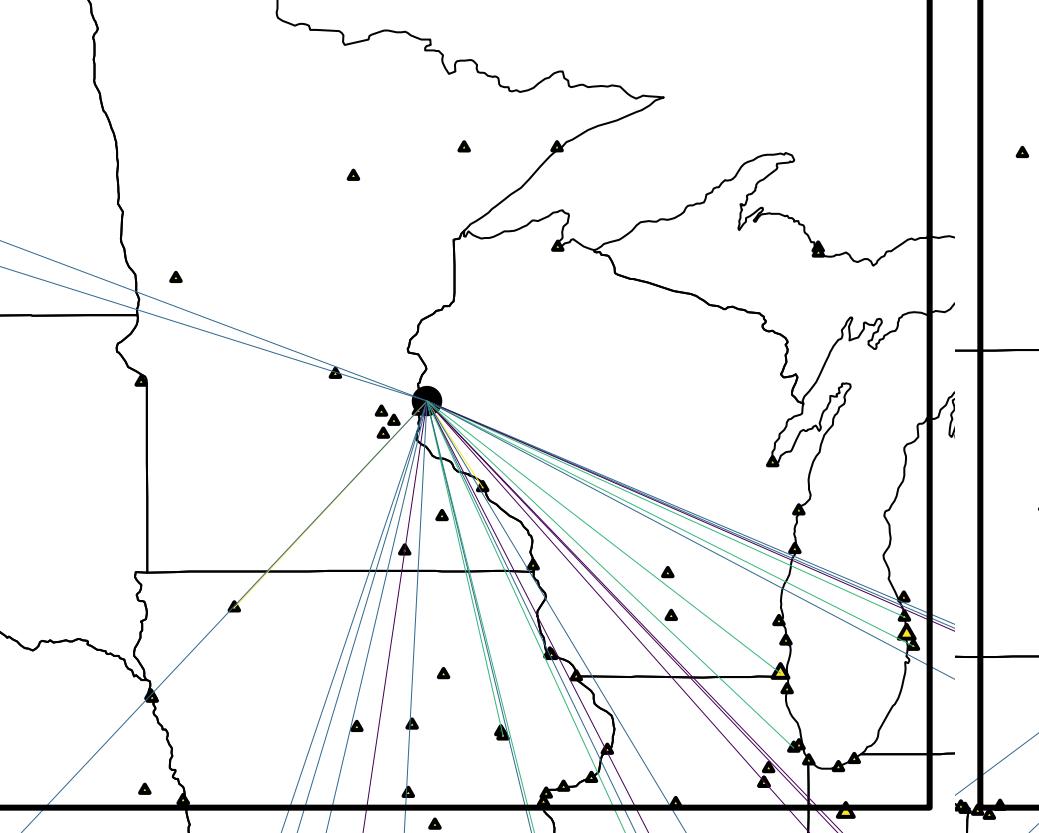
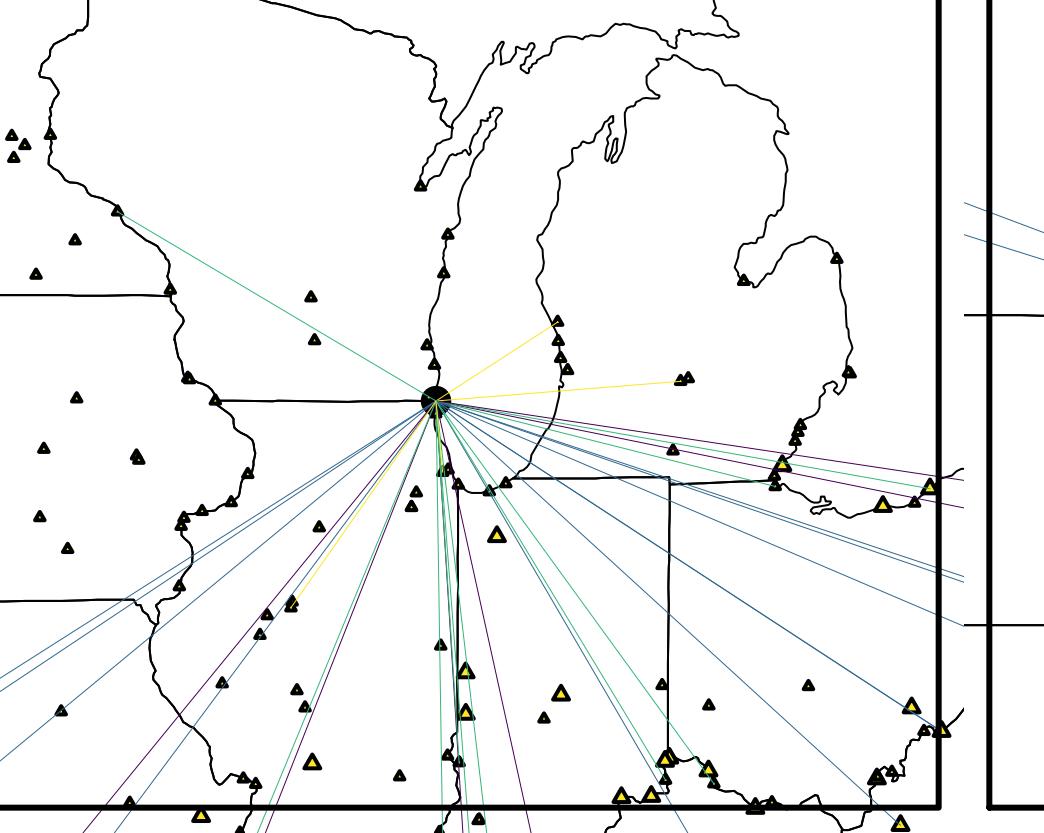
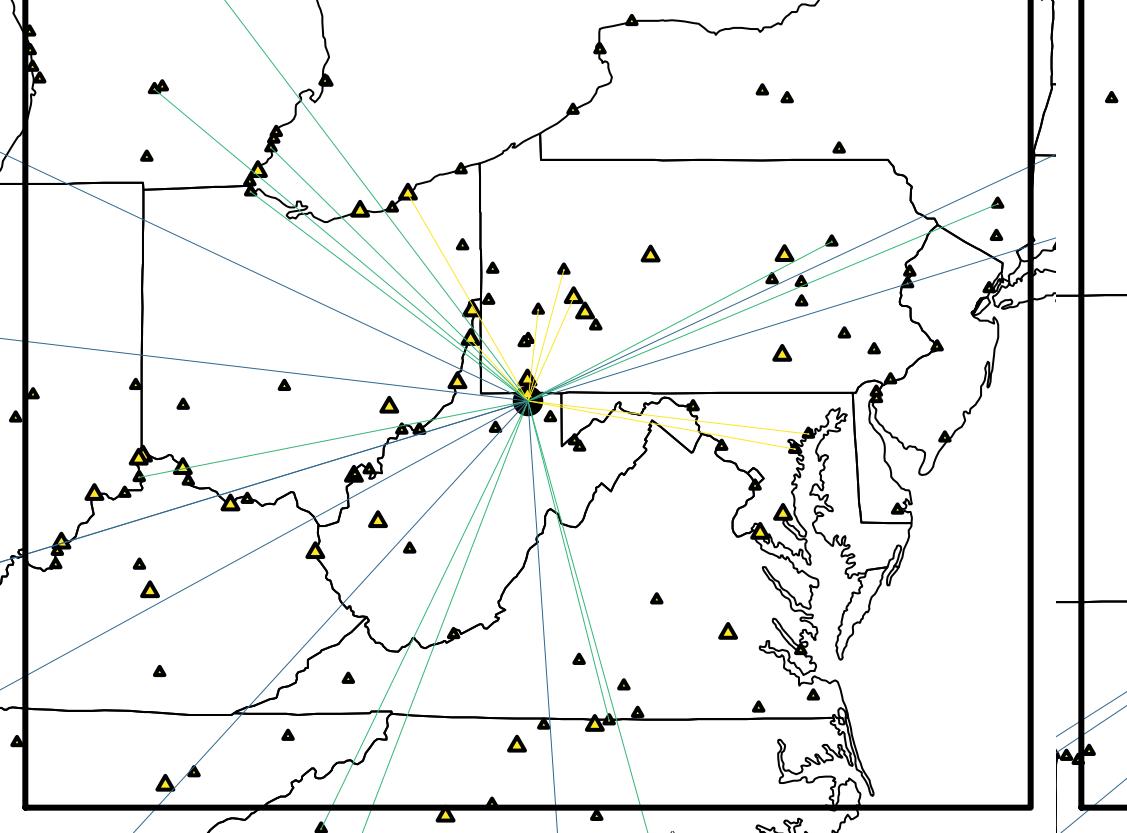
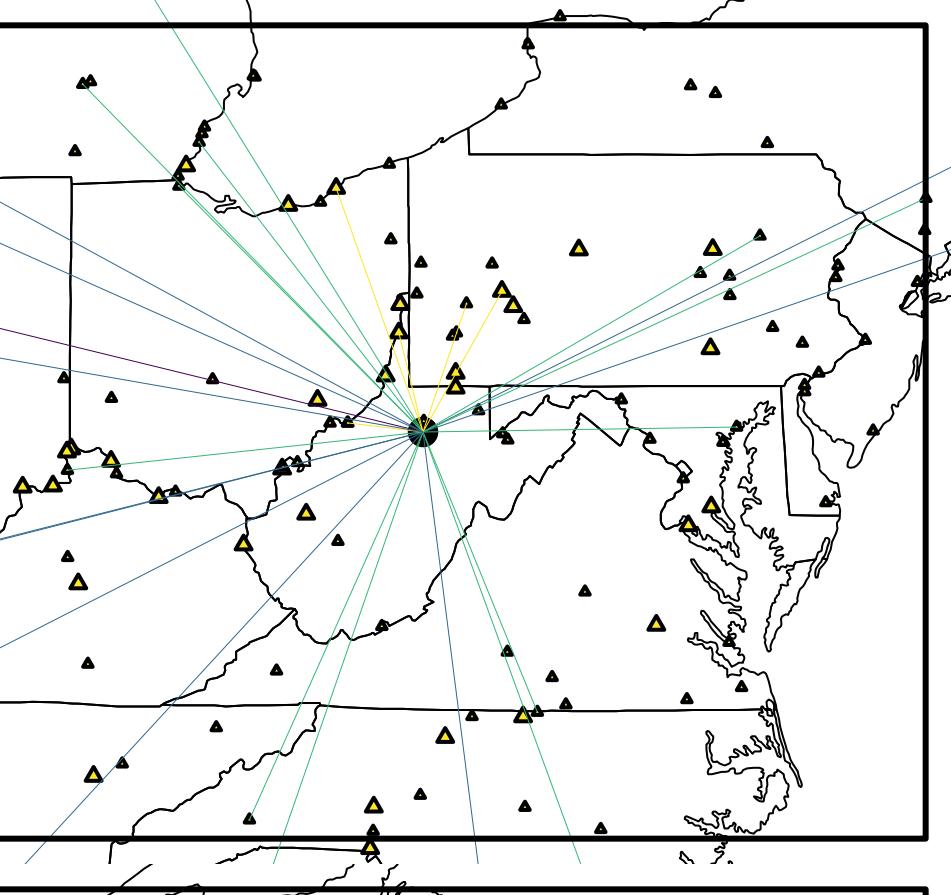
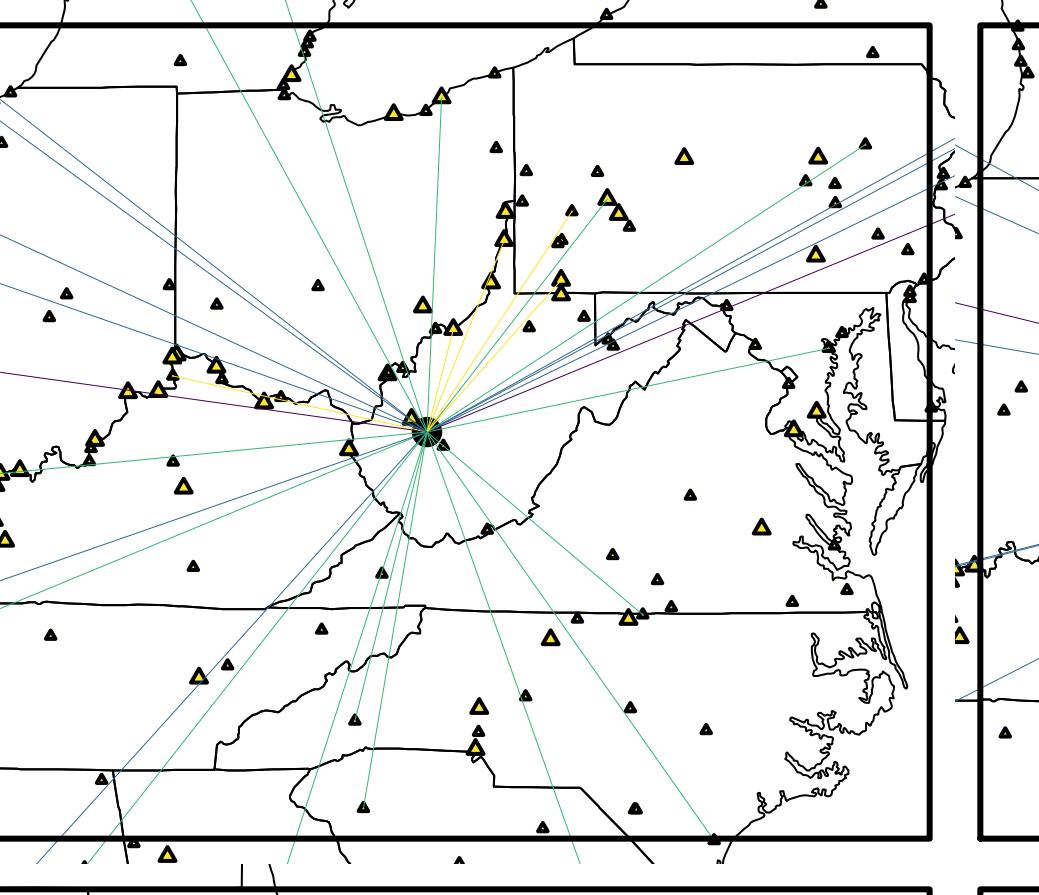
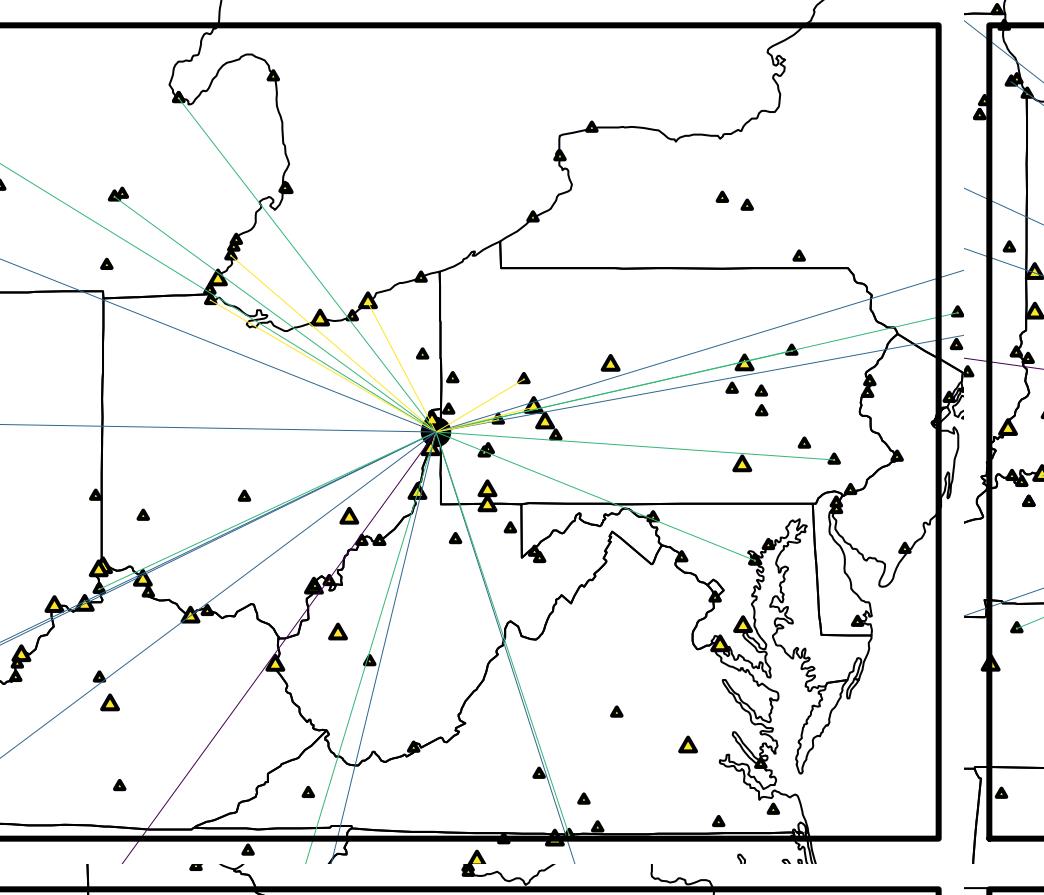
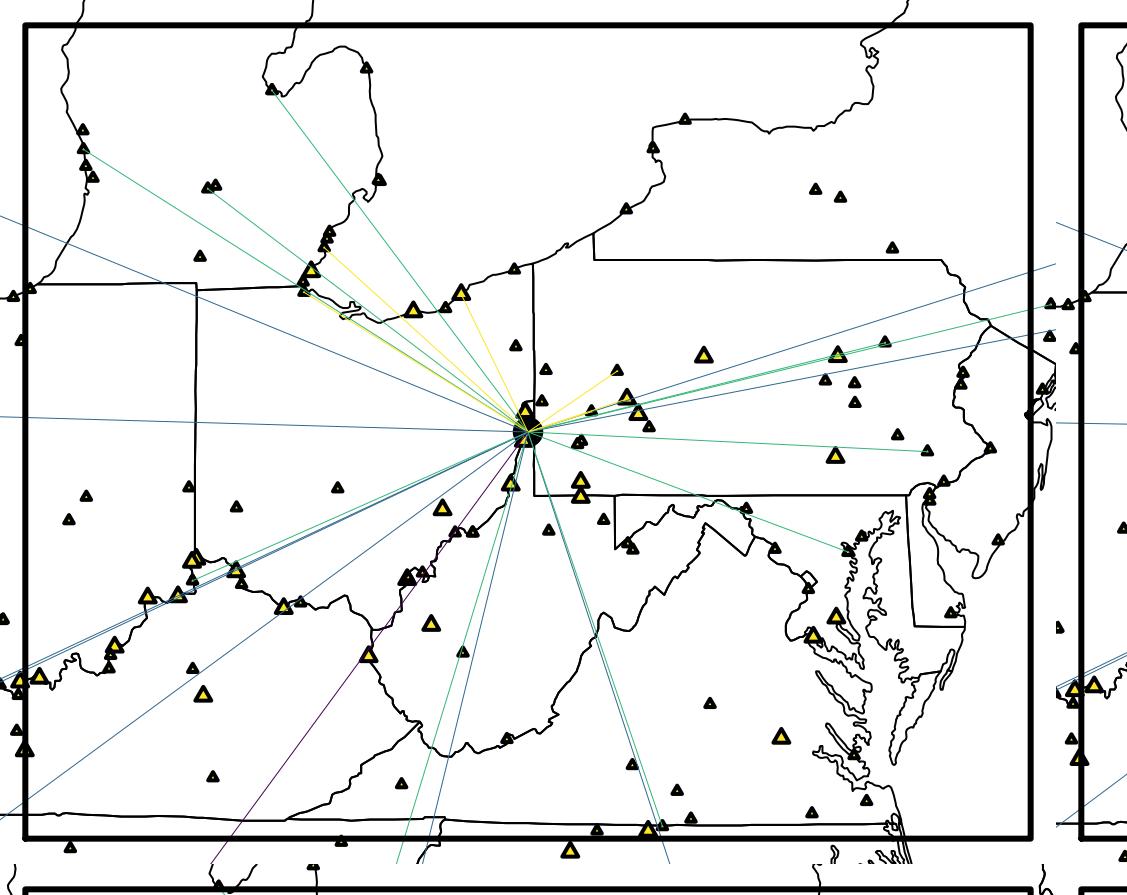


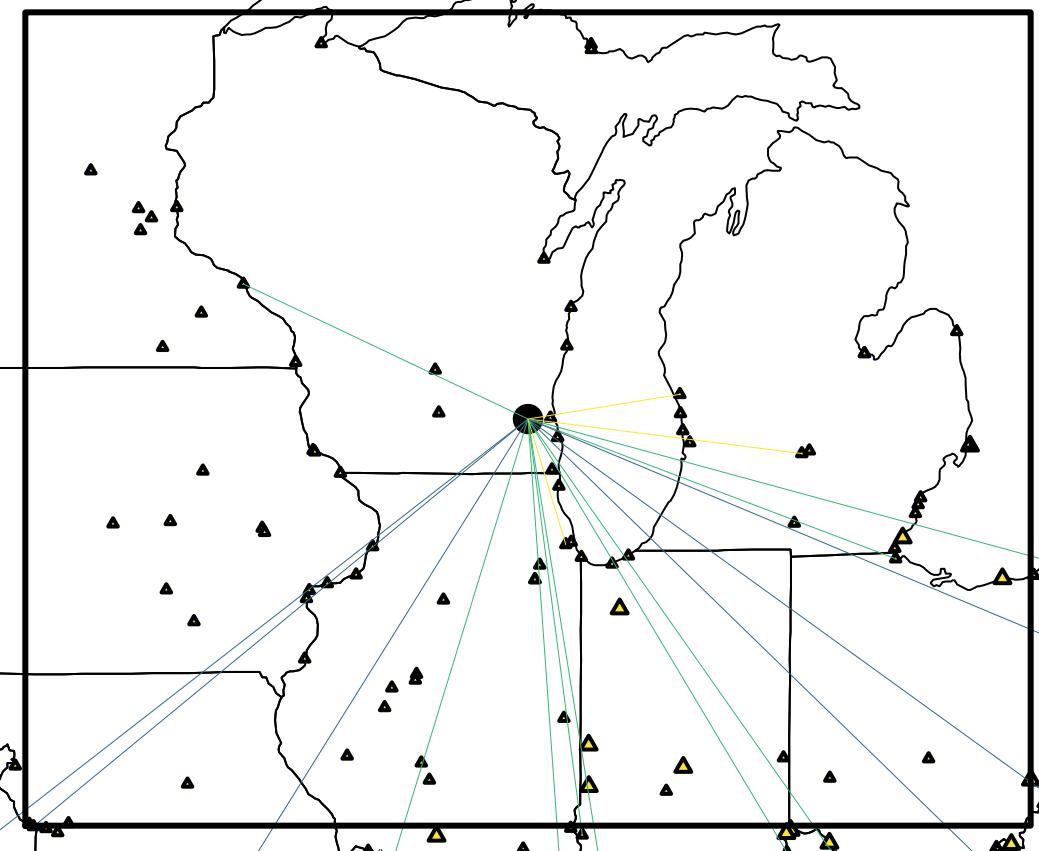
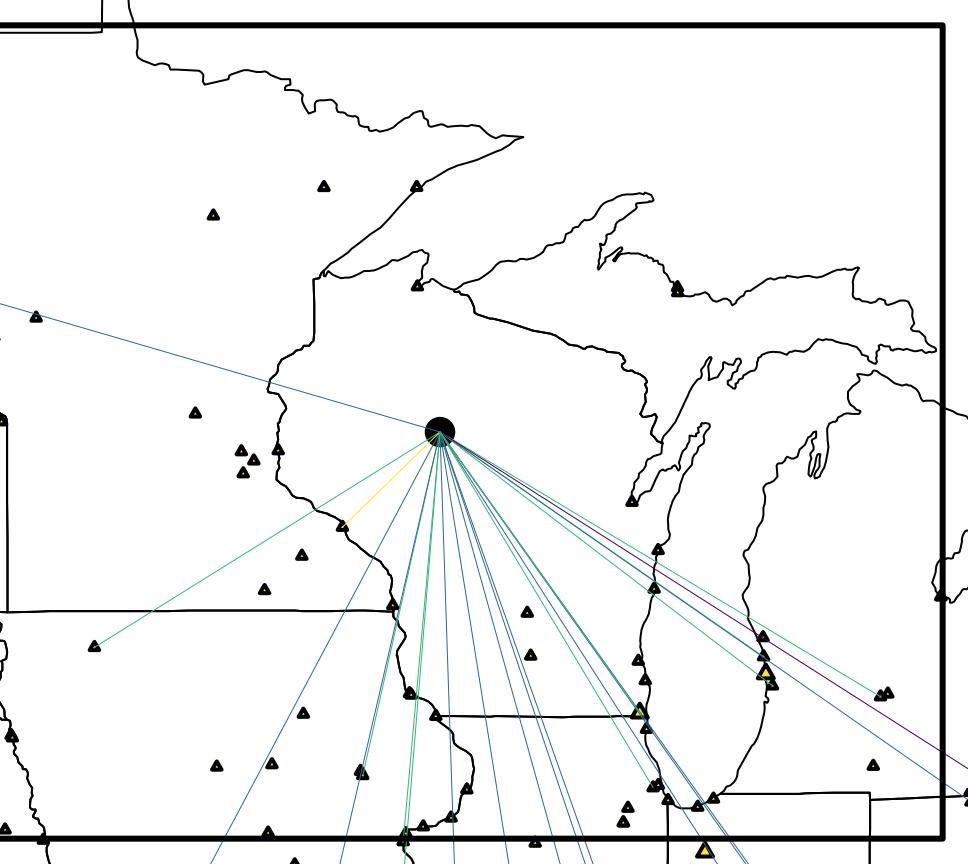
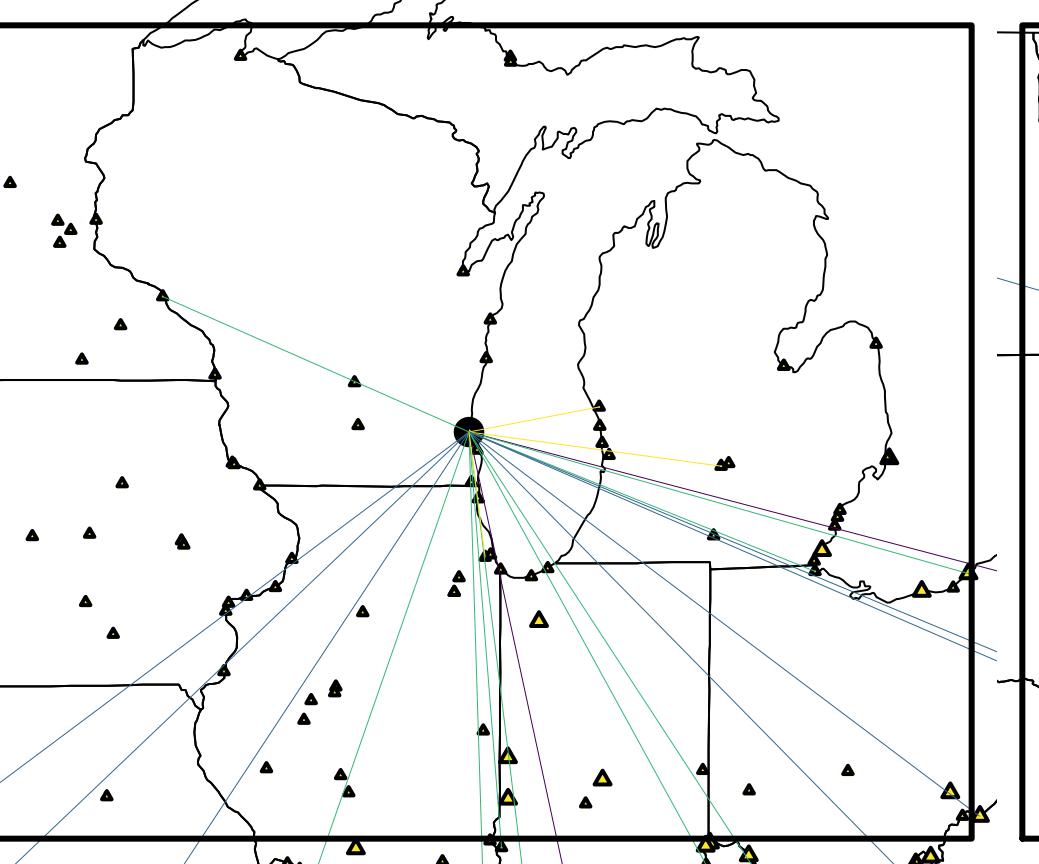
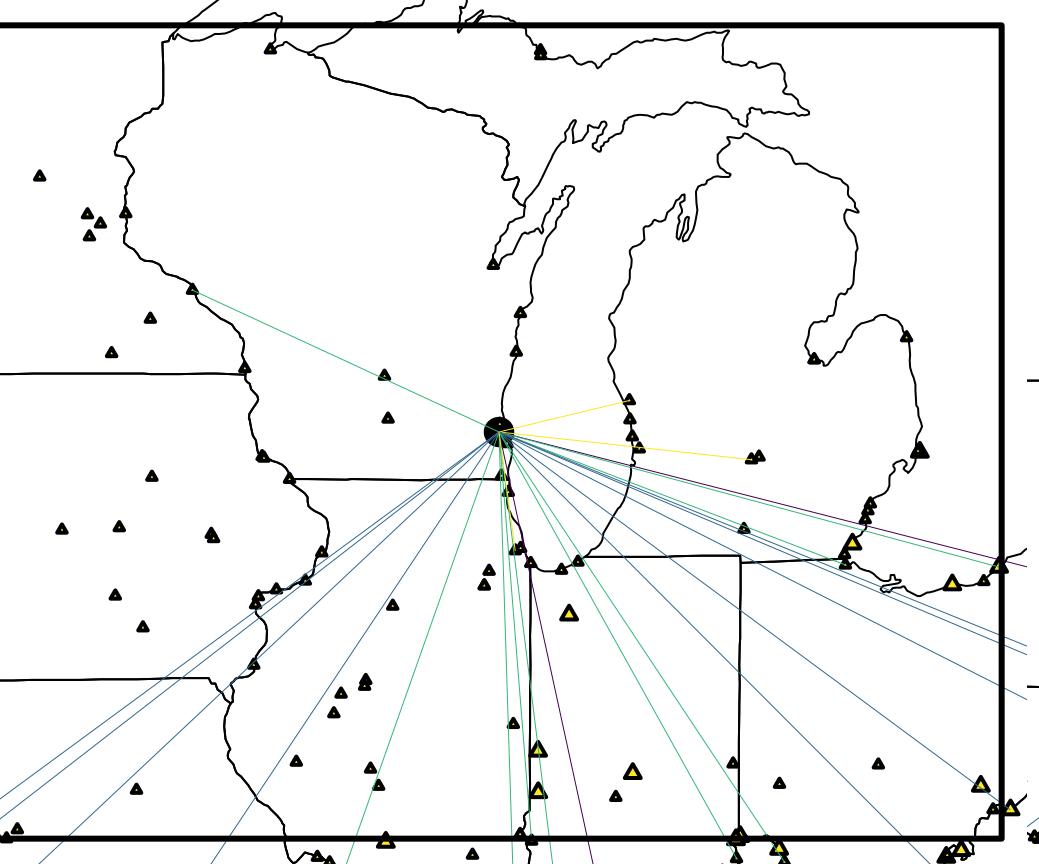
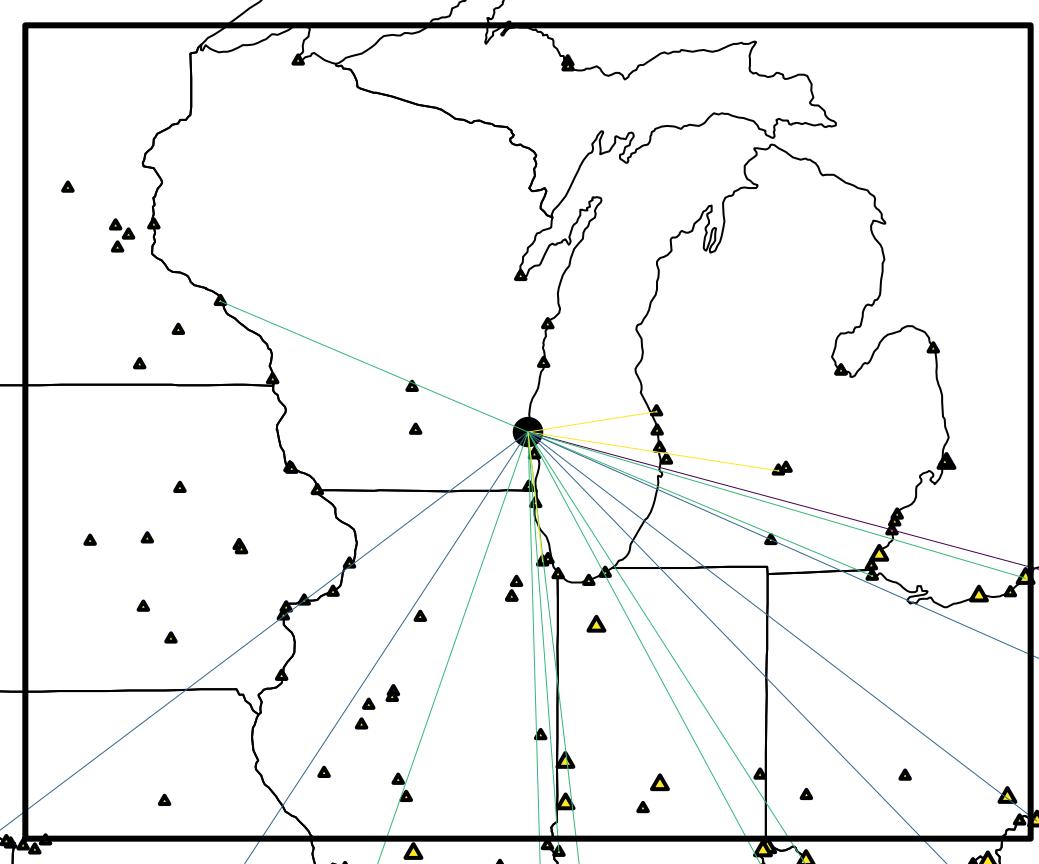


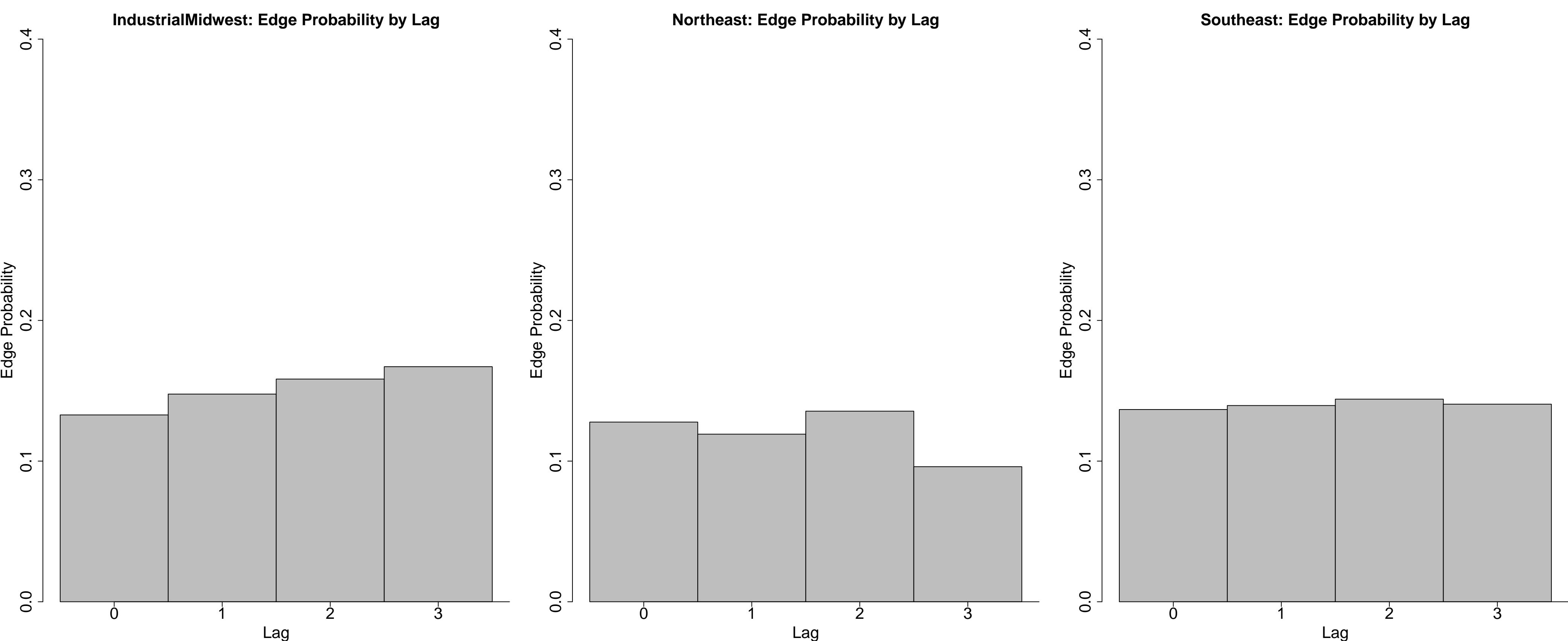




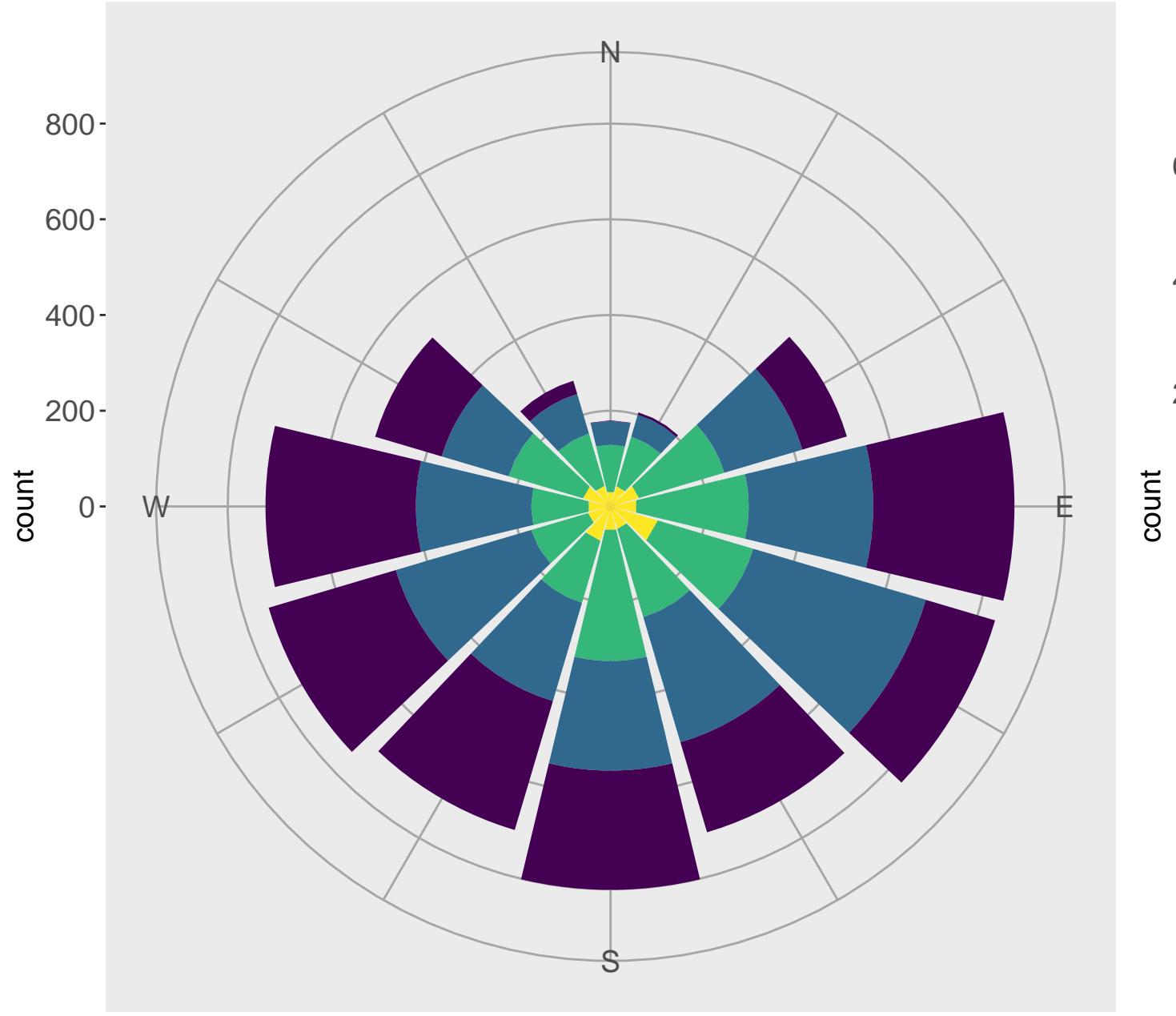




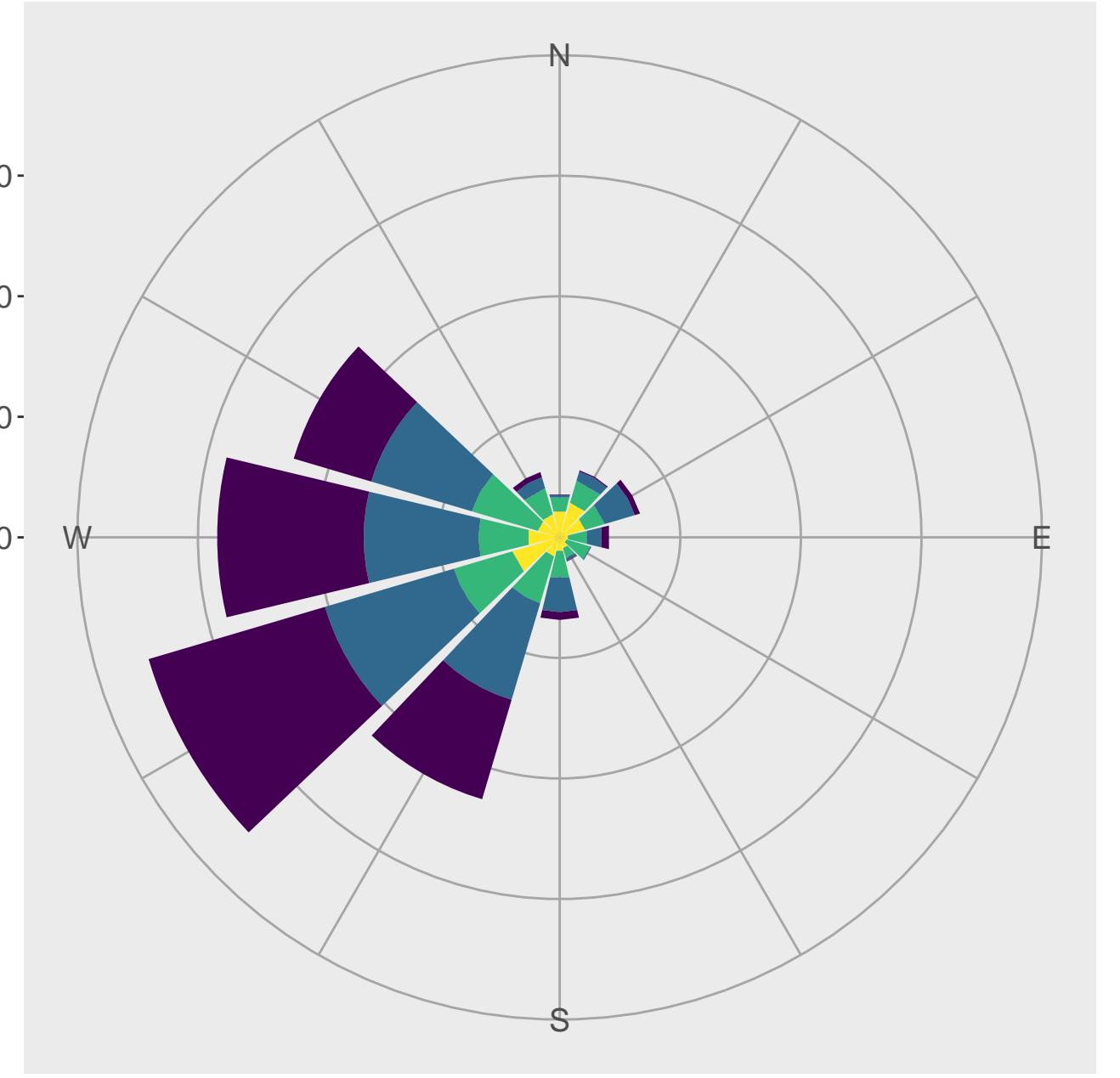




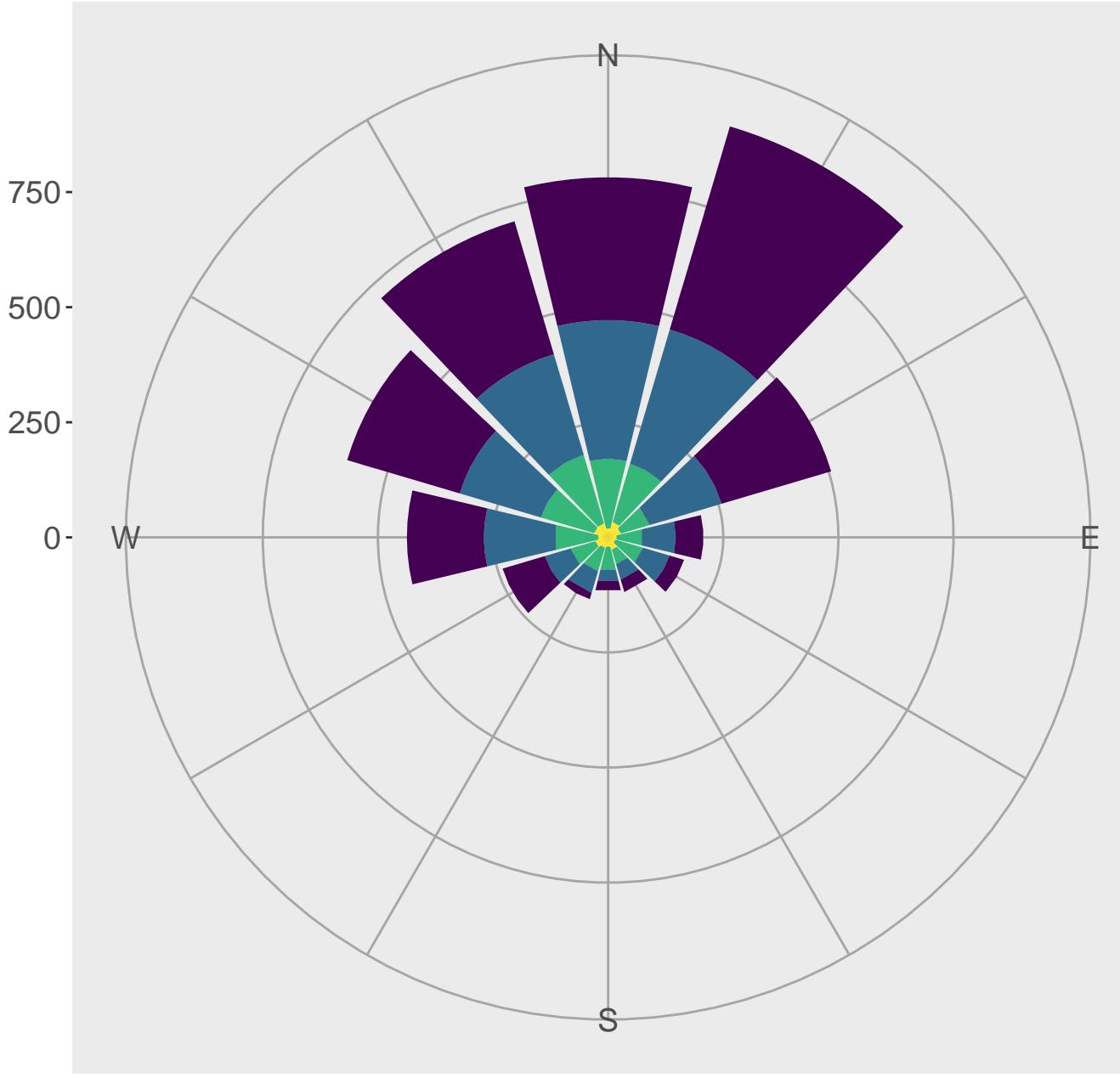
**Edge counts by distance/direction to source
Industrial Midwest receptors**



**Edge counts by distance/direction to source
Northeast receptors**



**Edge counts by distance/direction to source
Southeast receptors**

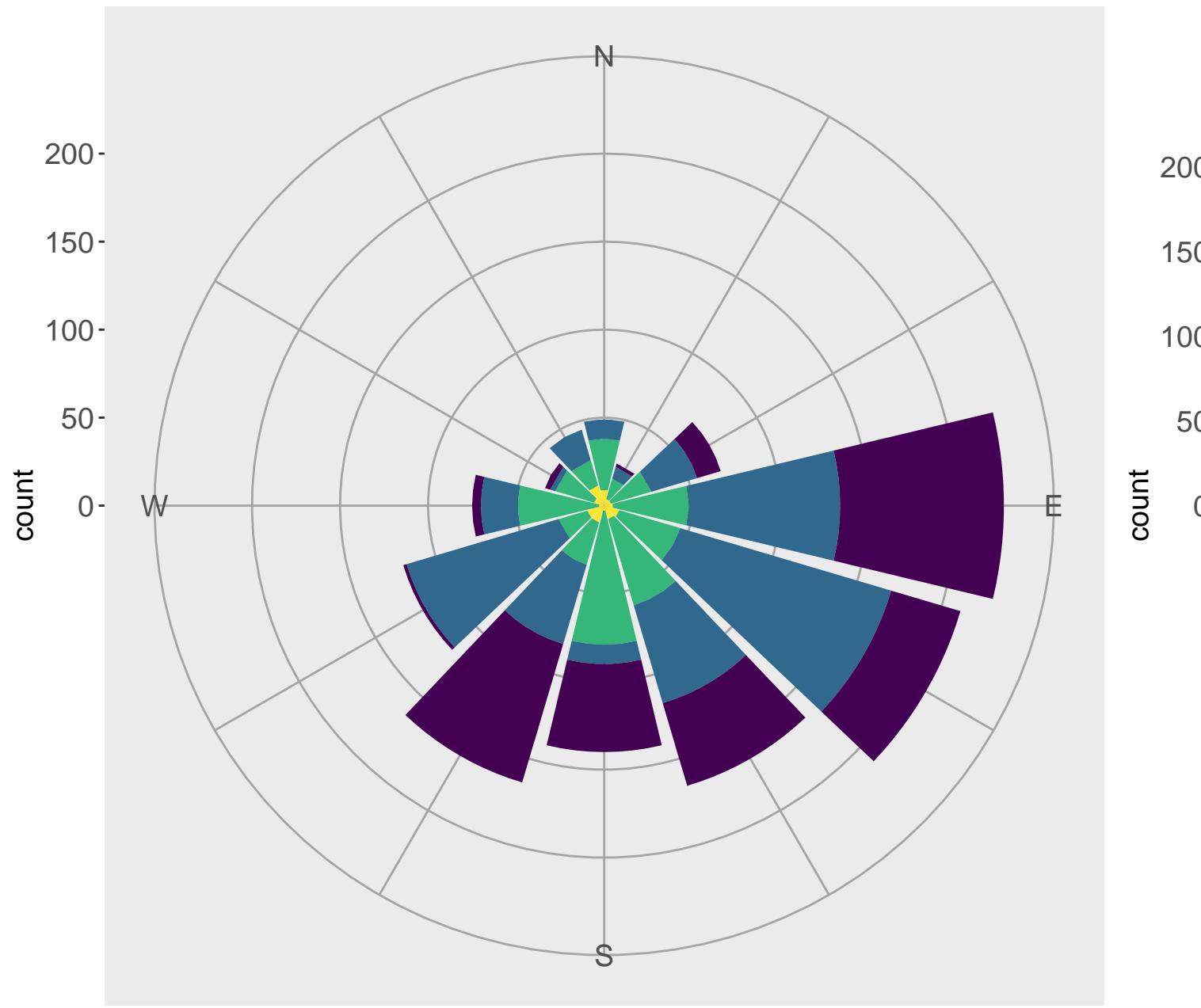


Distance to Source (km) 750–1000 500–750 250–500 0–250

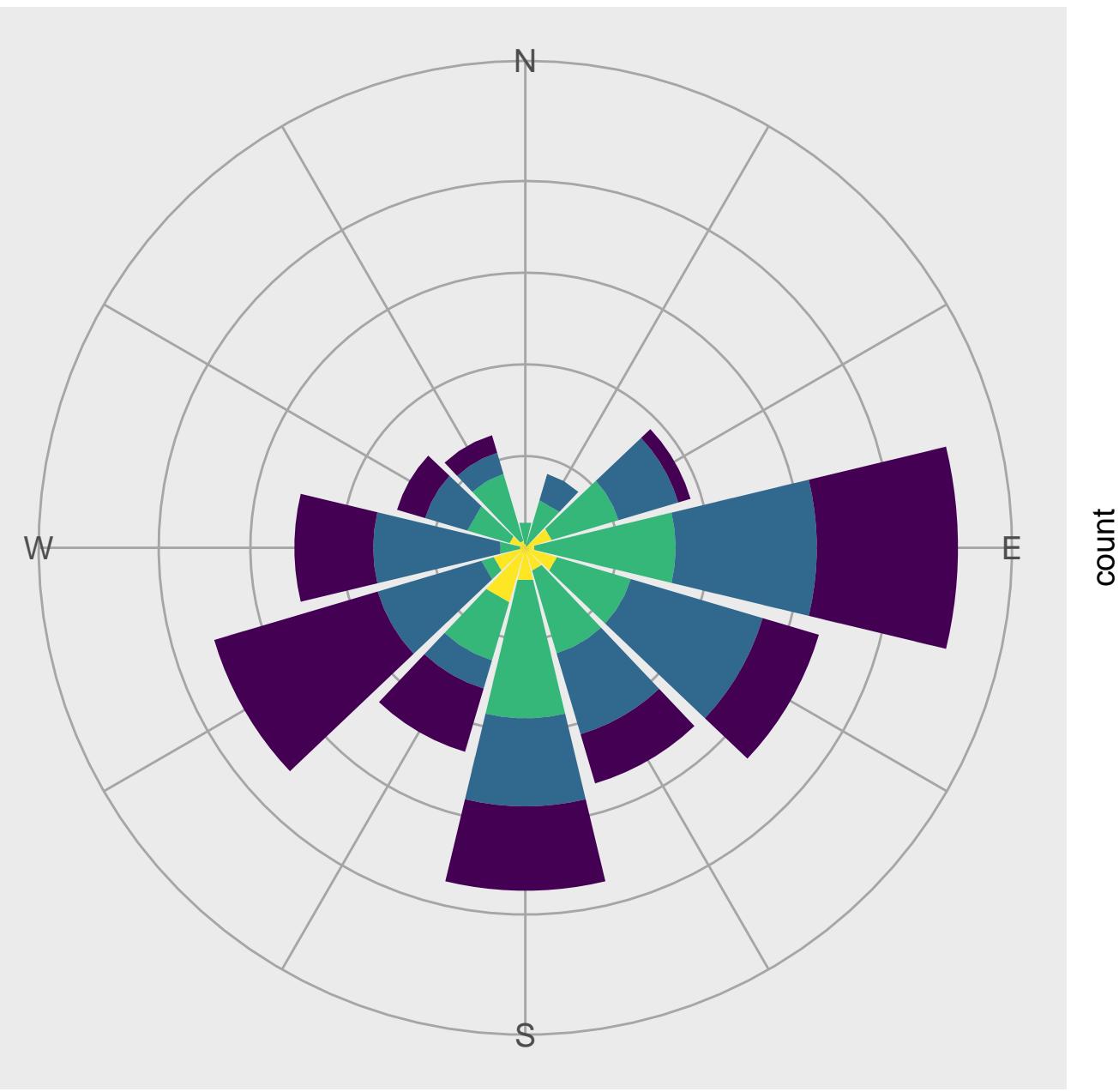
Distance to Source (km) 750–1000 500–750 250–500 0–250

Distance to Source (km) 750–1000 500–750 250–500 0–250

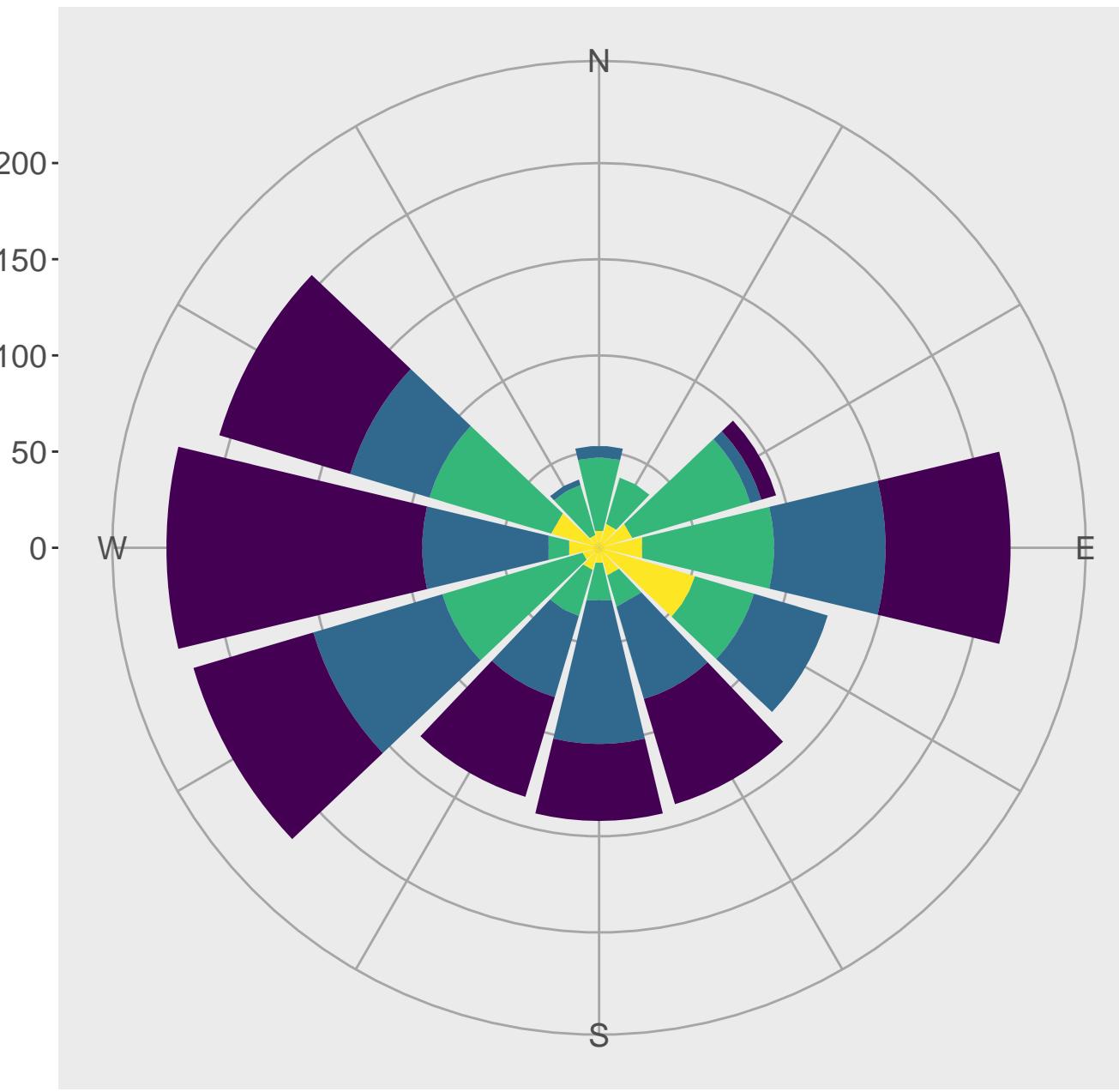
**Edge counts by distance/direction to source
Illinois receptors**



**Edge counts by distance/direction to source
Indiana receptors**



**Edge counts by distance/direction to source
Ohio receptors**

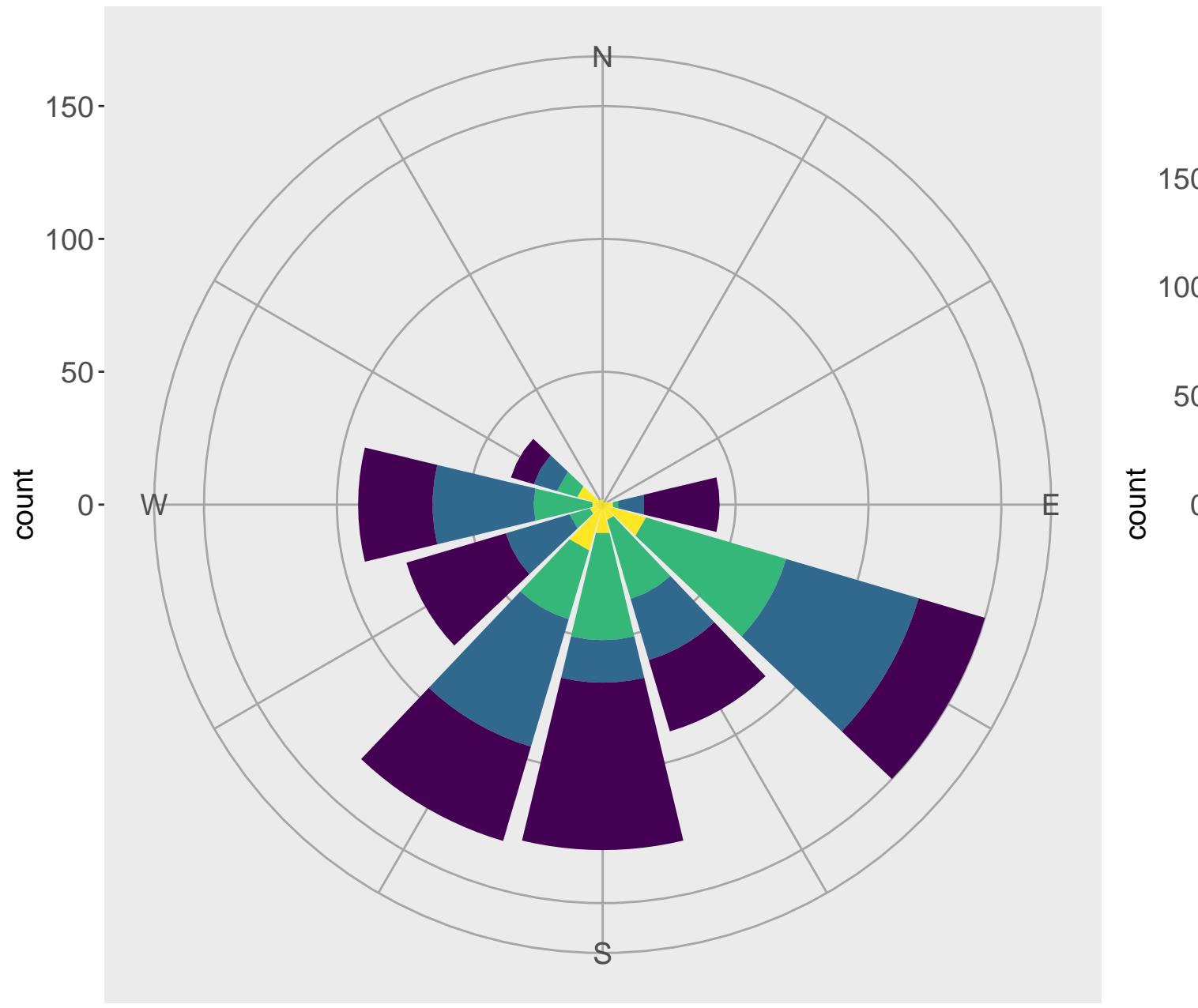


Distance to Source (km) 750–1000 500–750 250–500 0–250

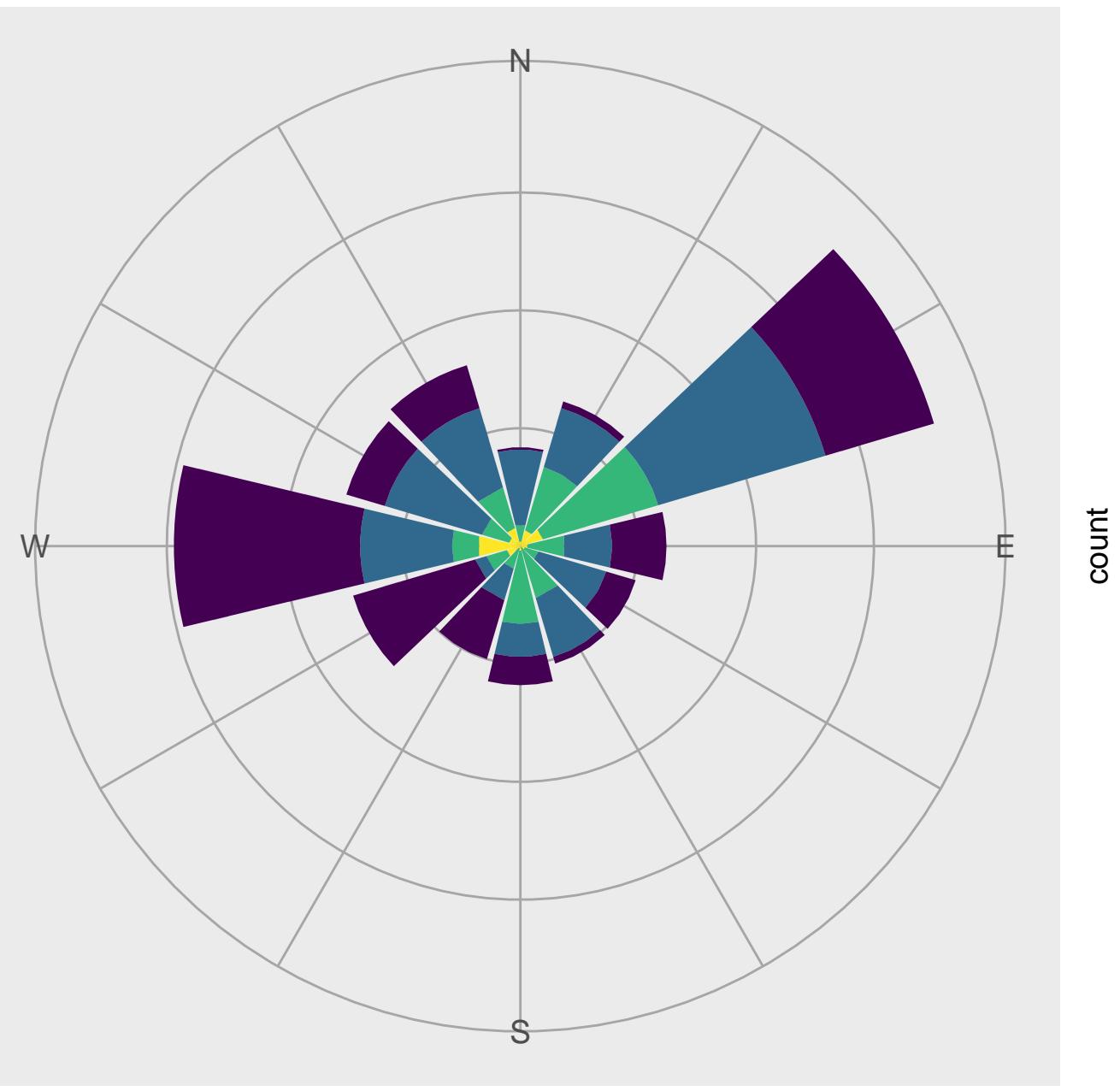
Distance to Source (km) 750–1000 500–750 250–500 0–250

Distance to Source (km) 750–1000 500–750 250–500 0–250

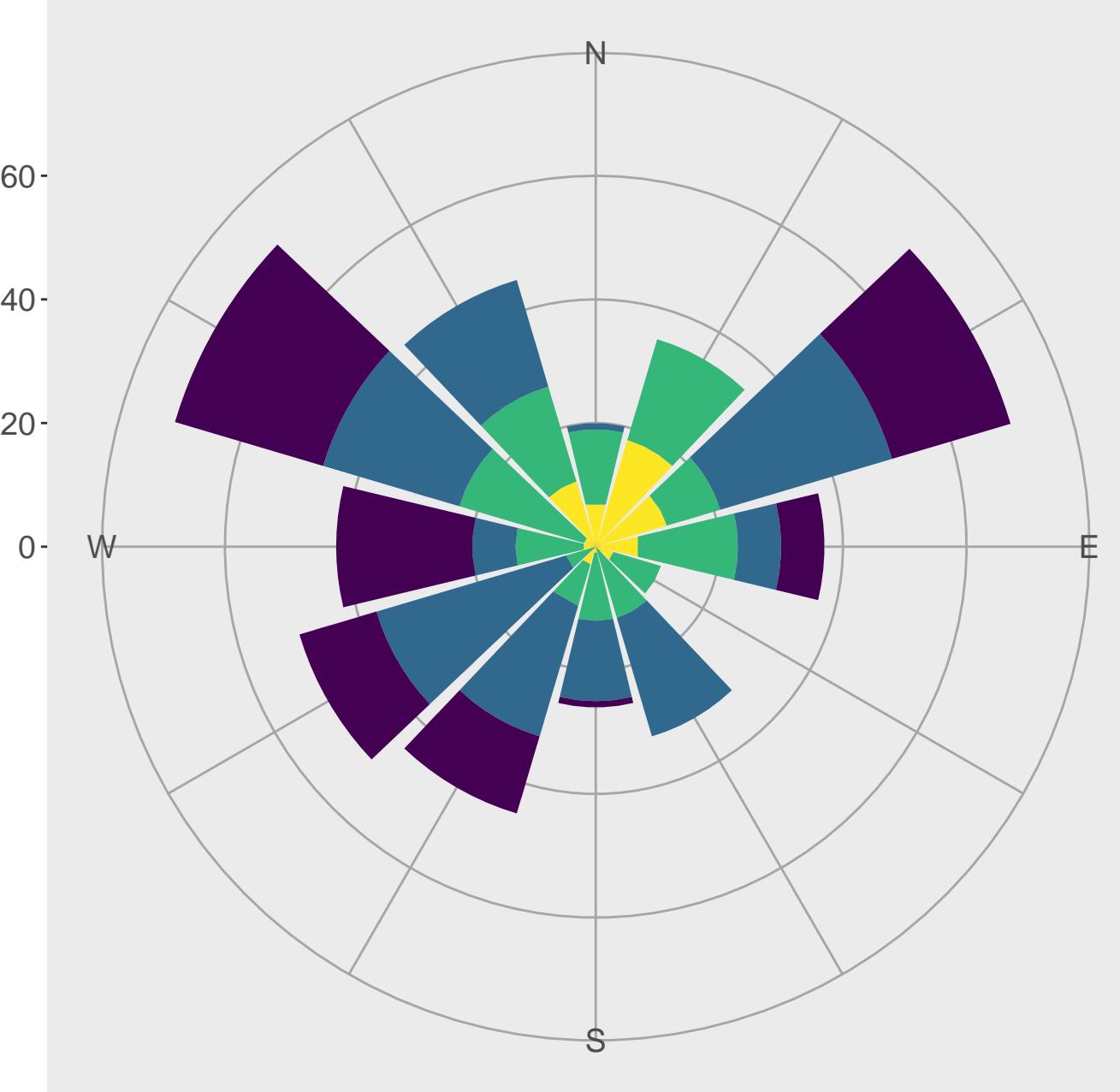
Edge counts by distance/direction to source
Michigan receptors



Edge counts by distance/direction to source
Kentucky receptors



Edge counts by distance/direction to source
West Virginia receptors

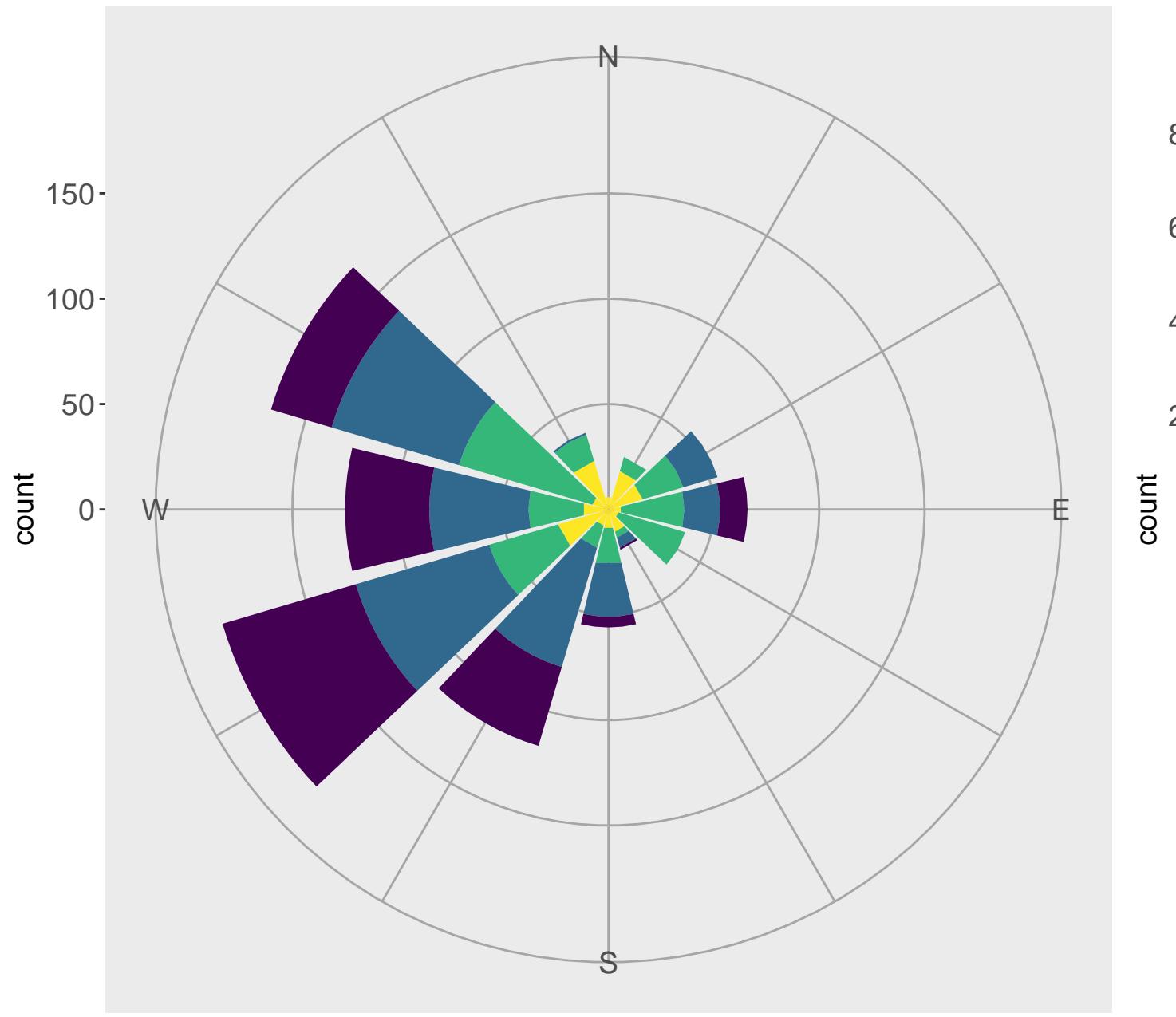


Distance to Source (km) 750–1000 500–750 250–500 0–250

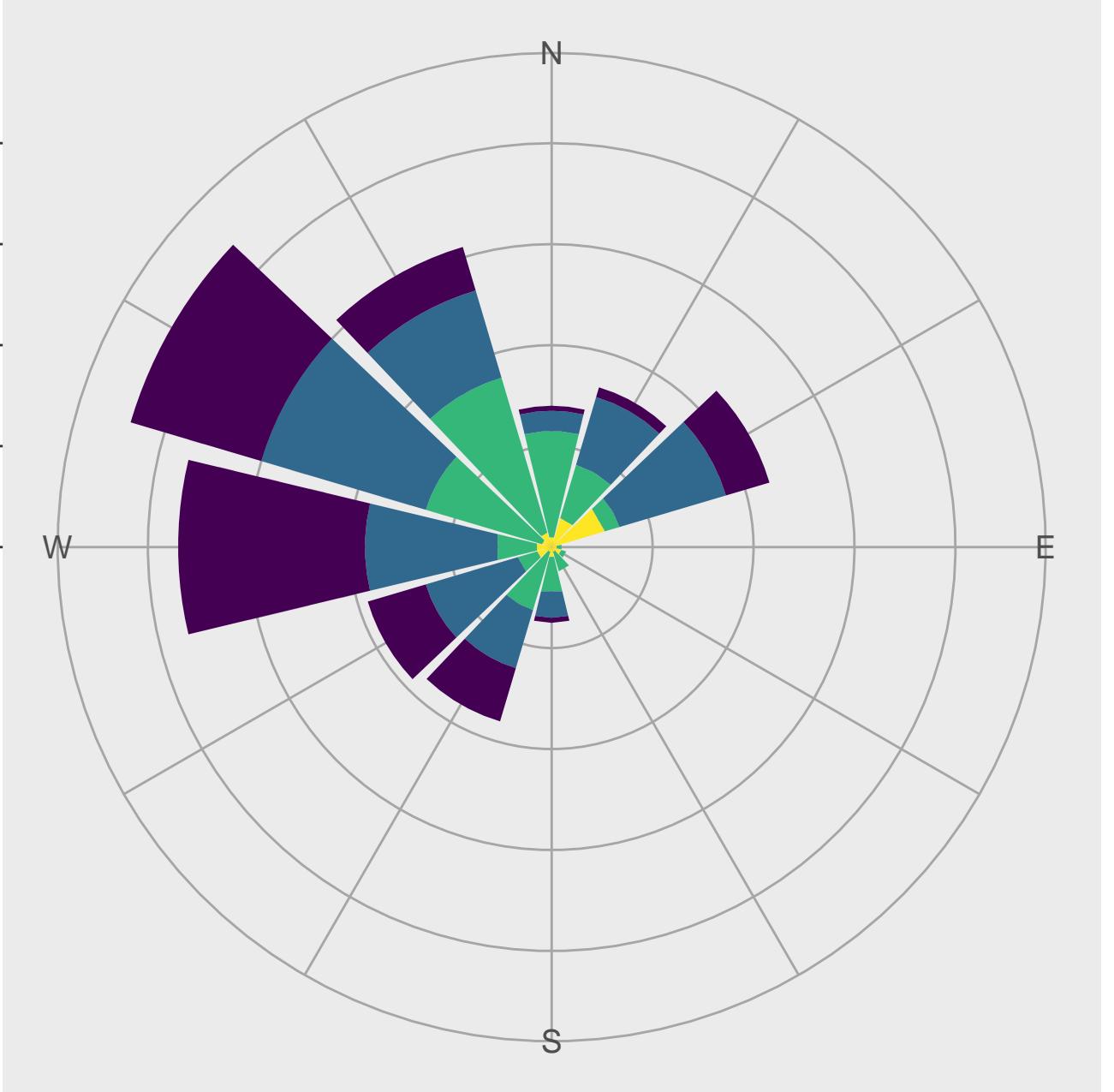
Distance to Source (km) 750–1000 500–750 250–500 0–250

Distance to Source (km) 750–1000 500–750 250–500 0–250

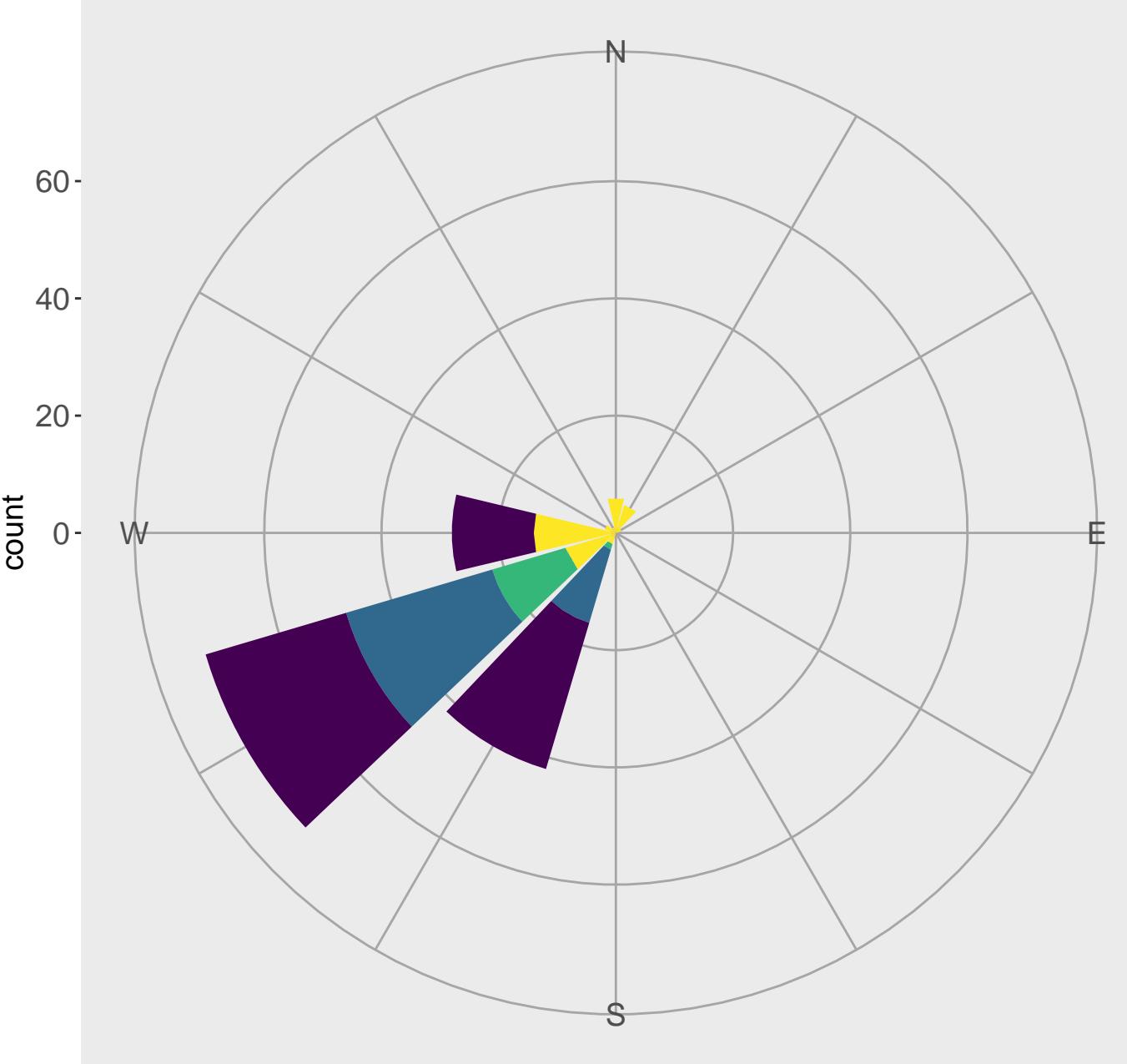
Edge counts by distance/direction to source
Pennsylvania receptors



Edge counts by distance/direction to source
Virginia receptors



Edge counts by distance/direction to source
Connecticut receptors

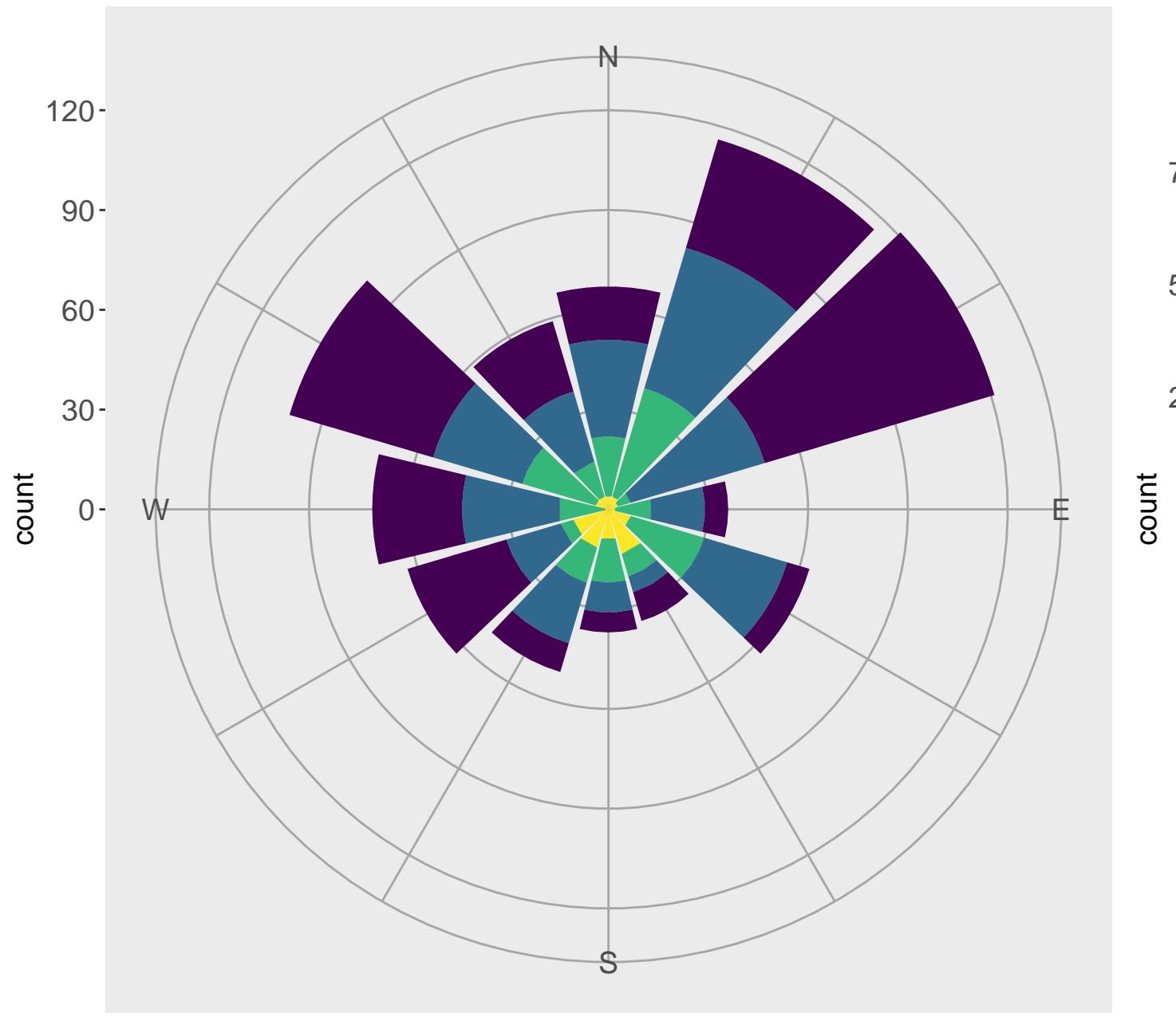


Distance to Source (km) 750–1000 500–750 250–500 0–250

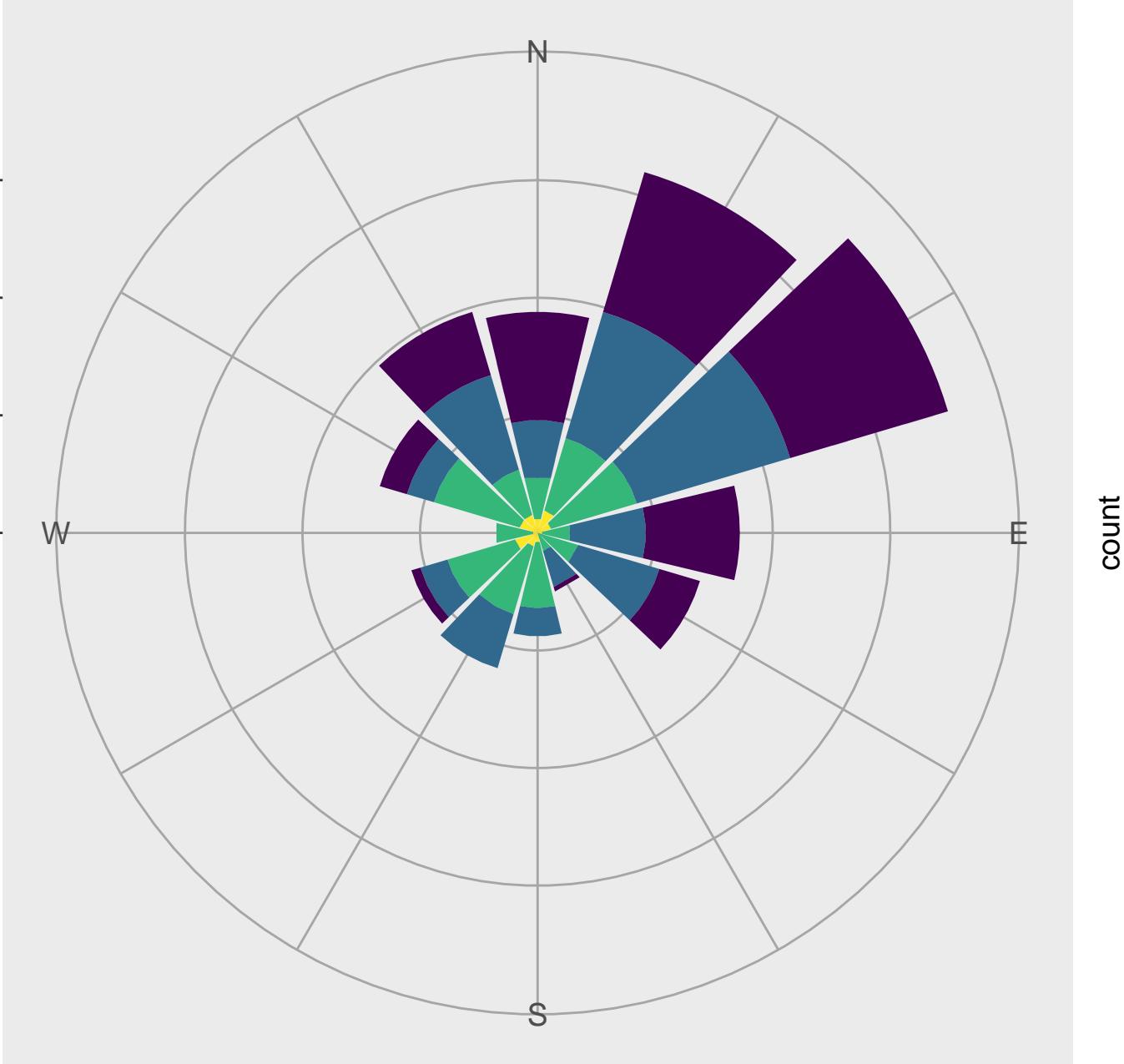
Distance to Source (km) 750–1000 500–750 250–500 0–250

Distance to Source (km) 750–1000 500–750 250–500 0–250

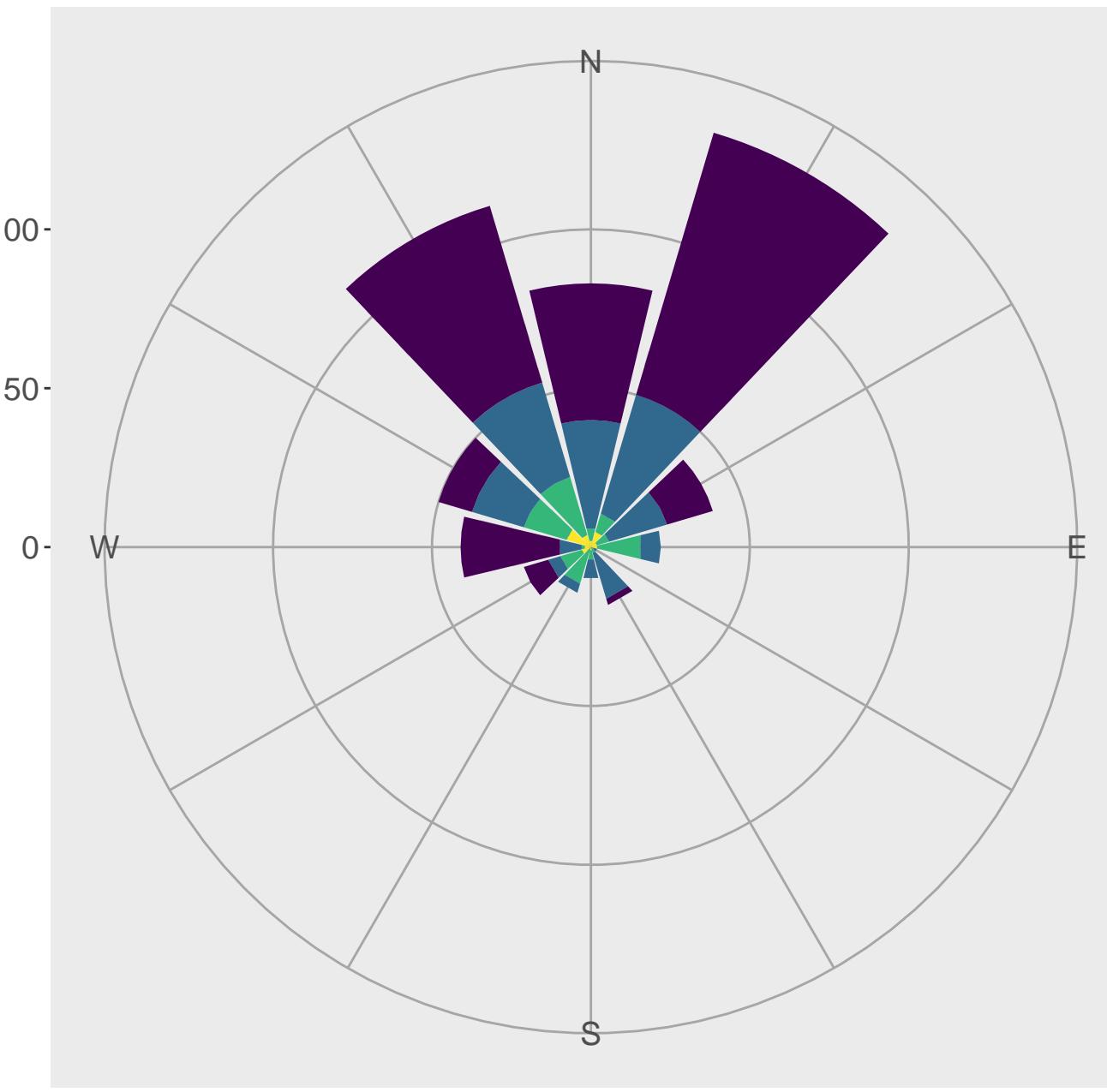
Edge counts by distance/direction to source
Tennessee receptors



Edge counts by distance/direction to source
Arkansas receptors



Edge counts by distance/direction to source
Georgia receptors

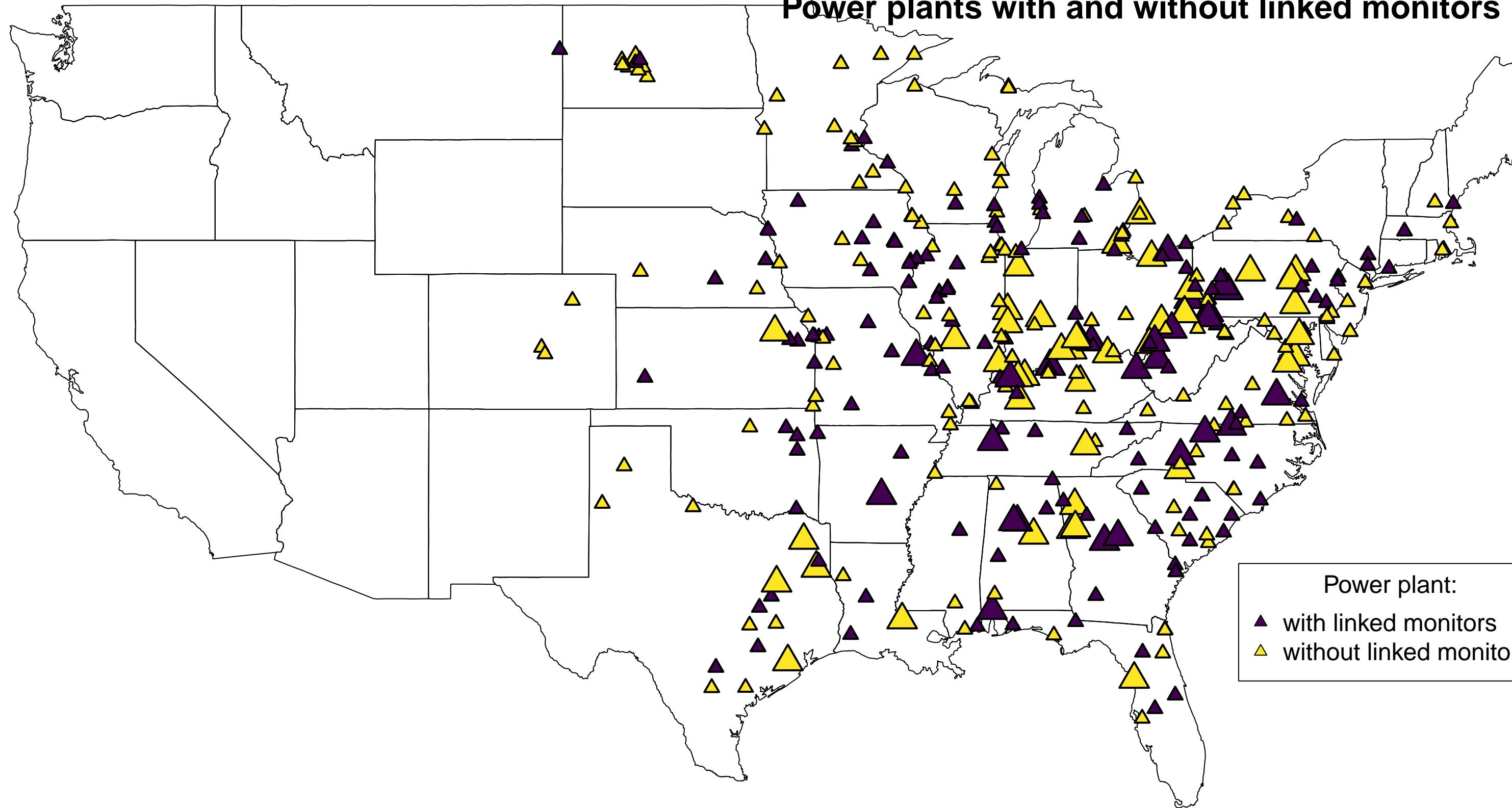


Distance to Source (km) 750–1000 500–750 250–500 0–250

Distance to Source (km) 750–1000 500–750 250–500 0–250

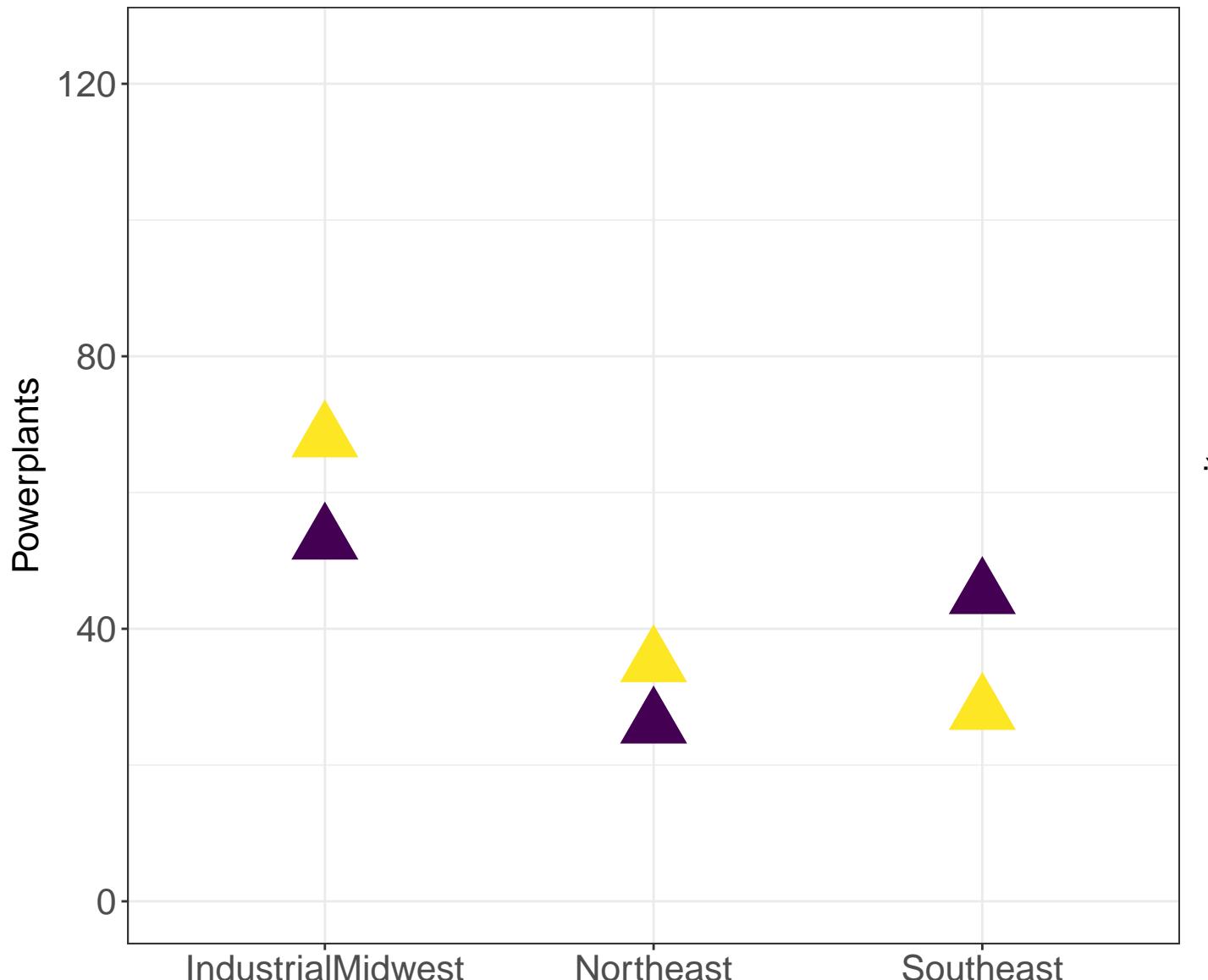
Distance to Source (km) 750–1000 500–750 250–500 0–250

Power plants with and without linked monitors

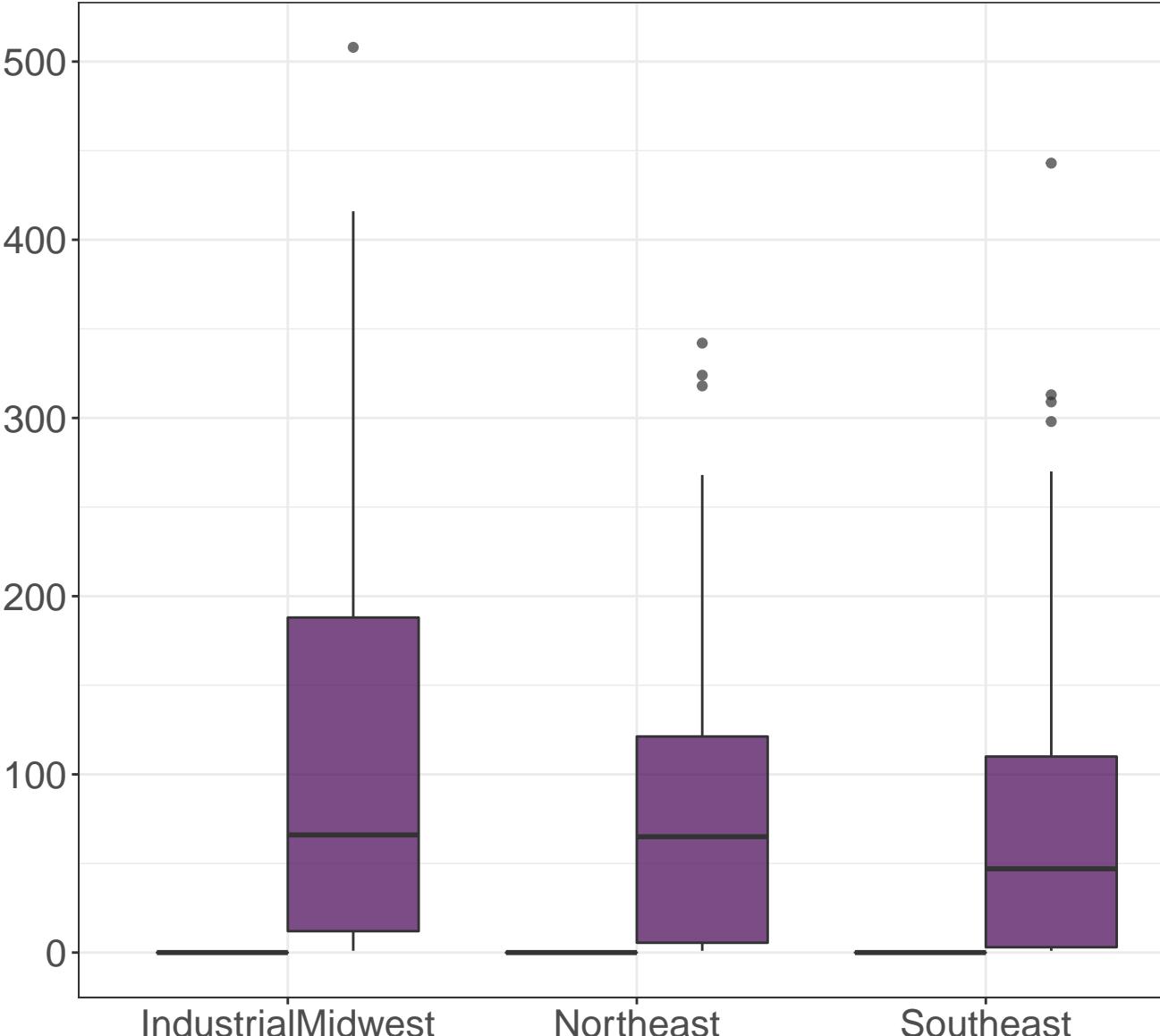


Why do some power plants have linked monitors and others do not?

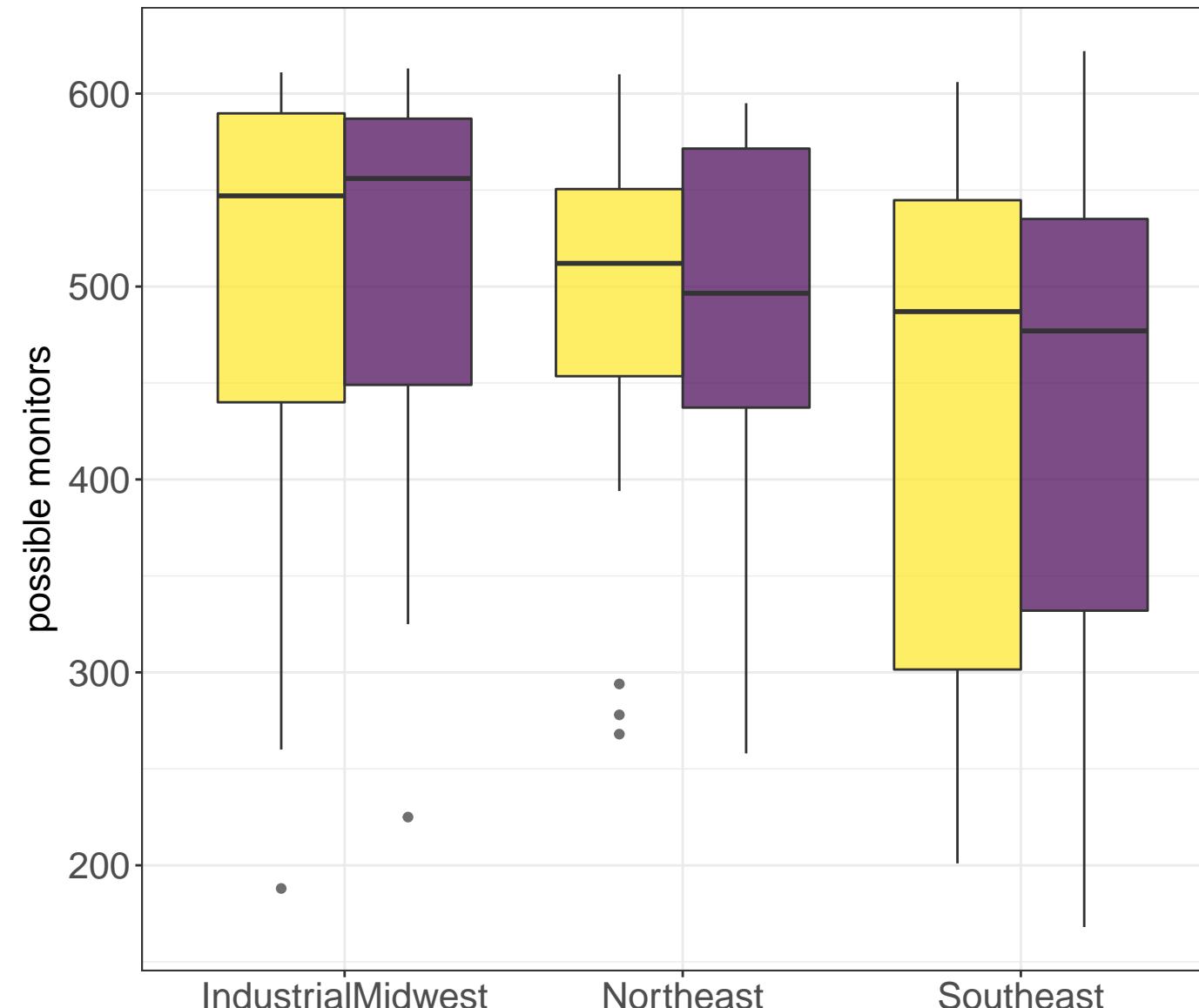
Number of powerplants



Number of linked monitors



Number of possible linked monitors

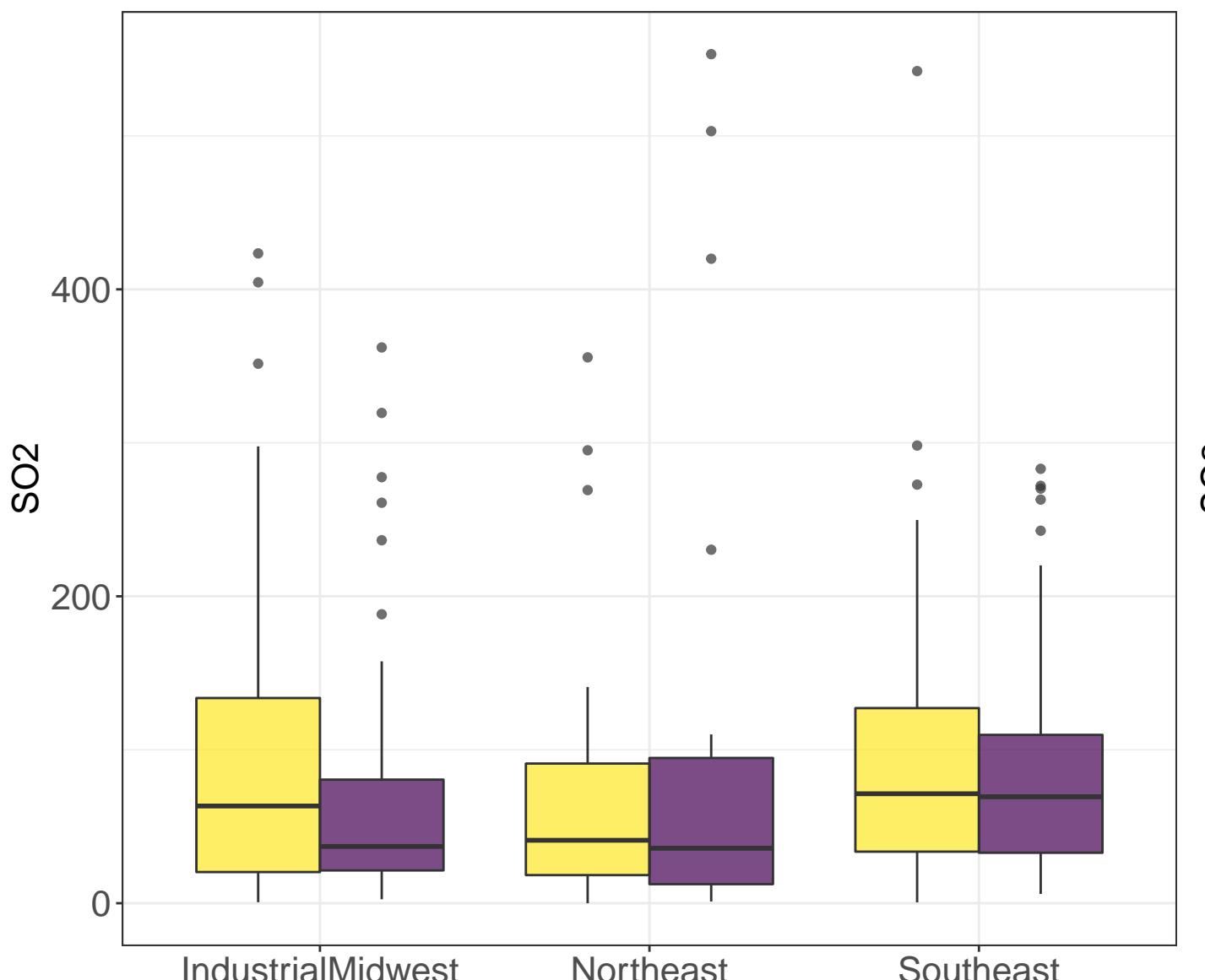


Powerplants: without edges

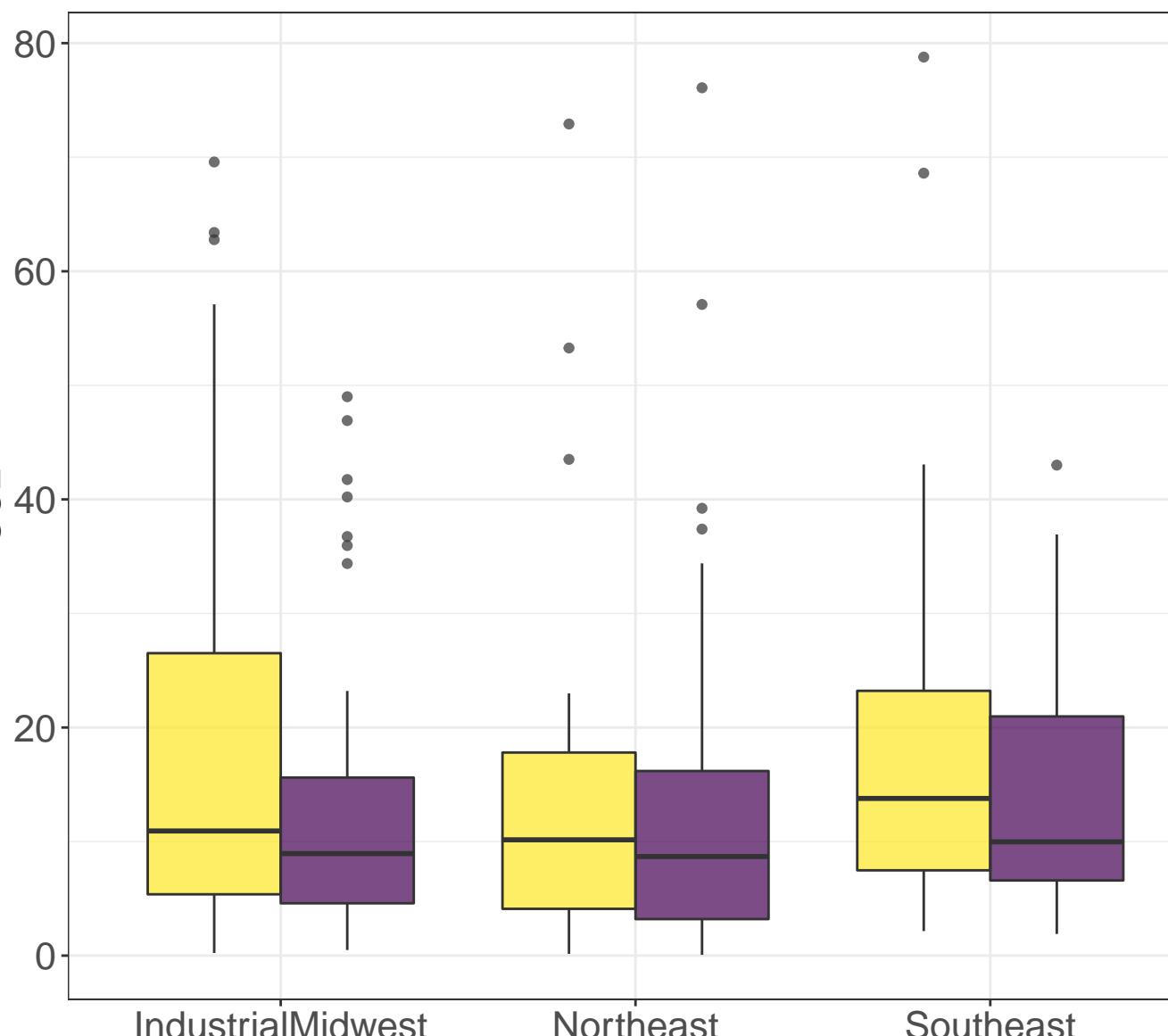


Why do some power plants have linked monitors and others do not?

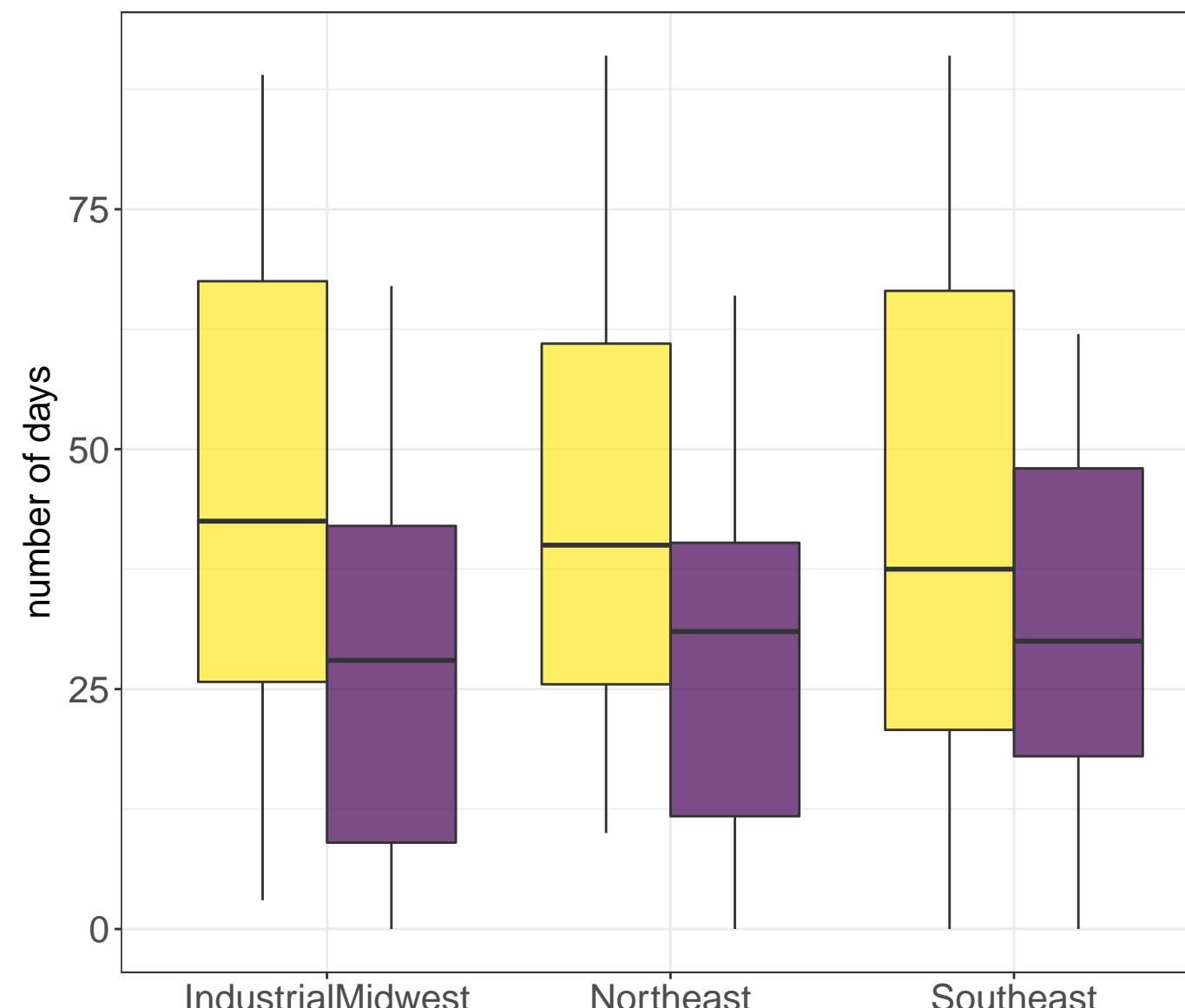
Average daily emissions



Standard deviation in daily emissions



Number of days with missing emissions data



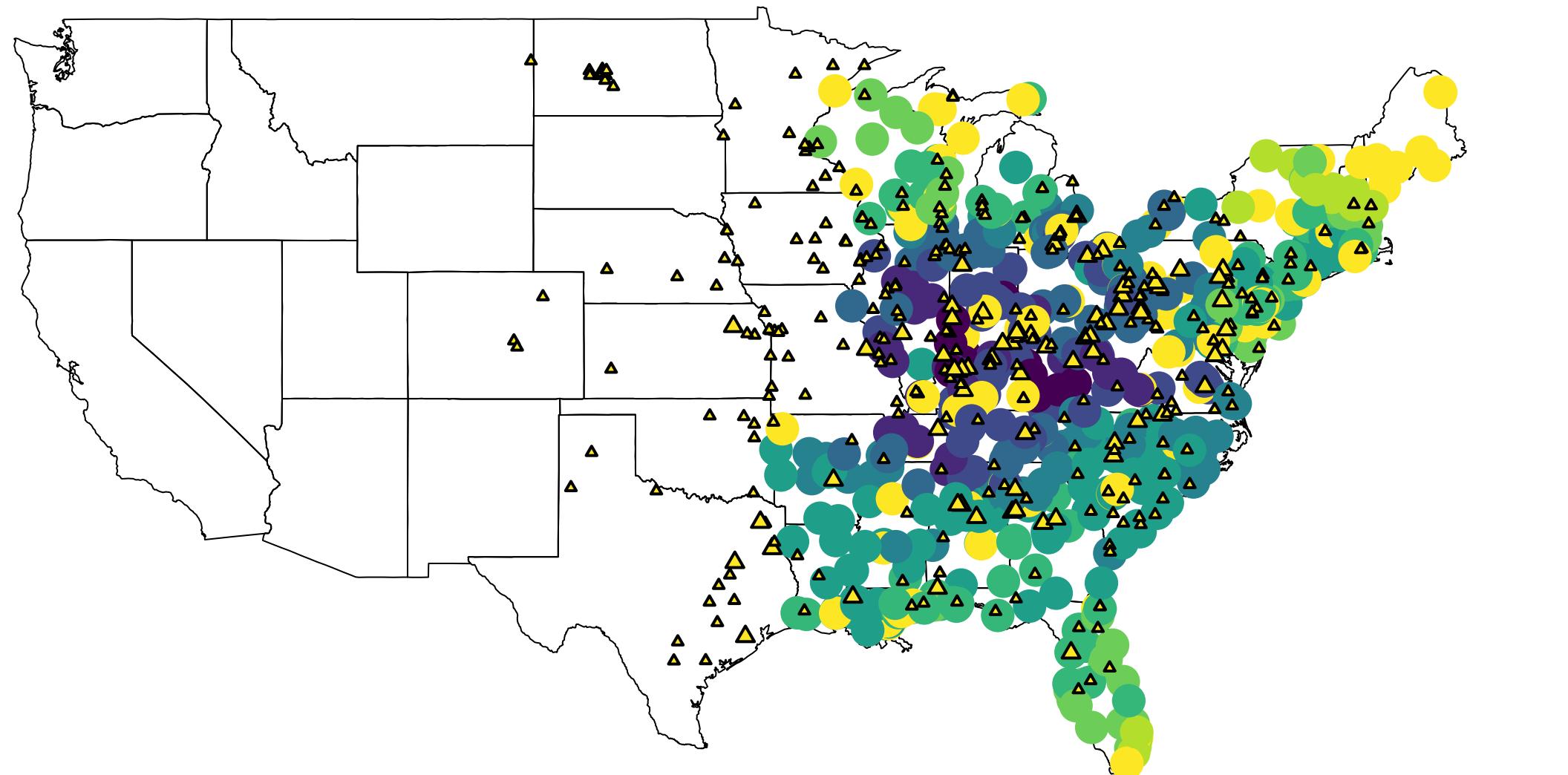
Powerplants: without edges



with edges

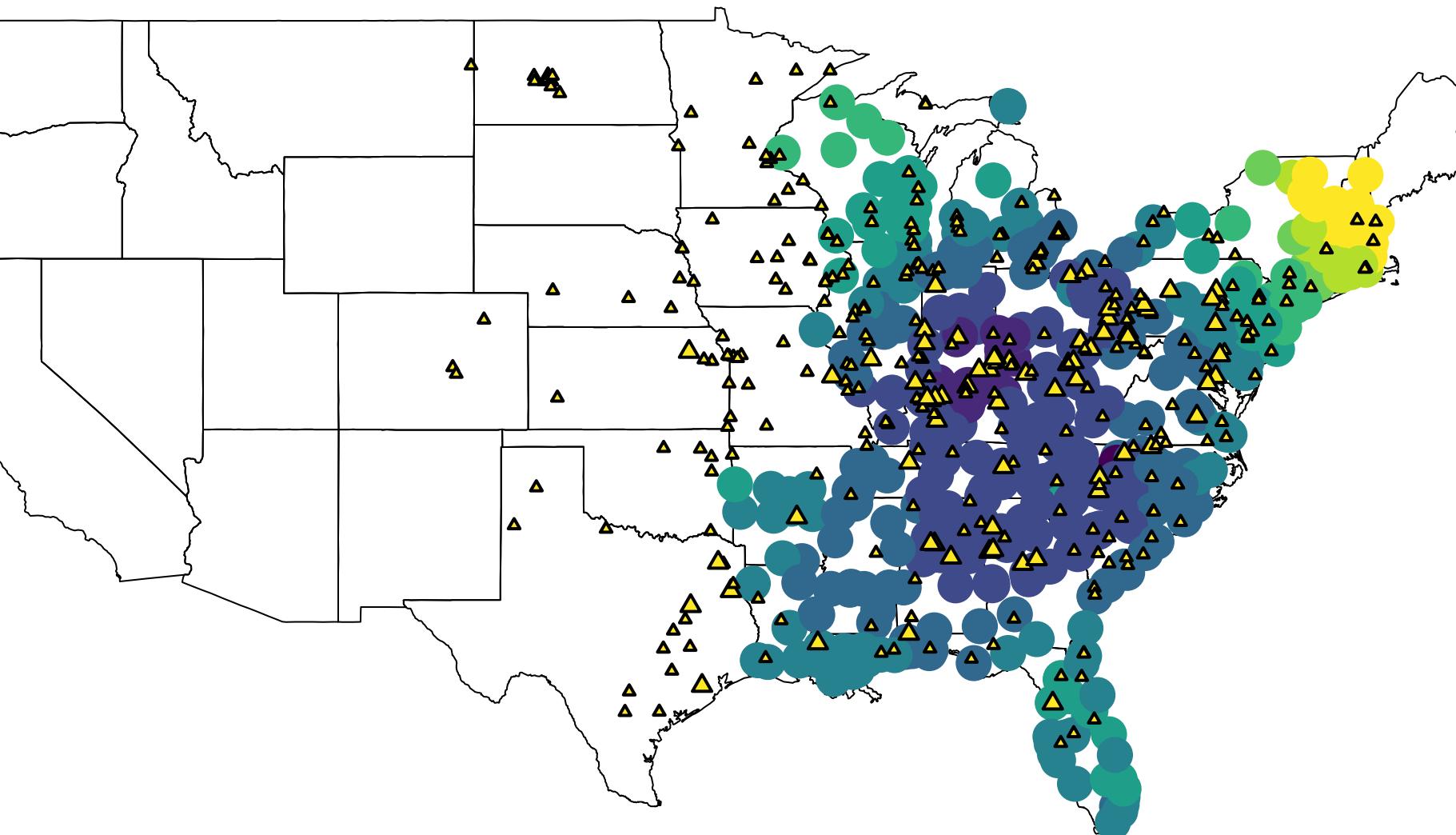
Monitor exposure:

sum of avgemissions*(1/log(distance)), spring_distLag 2005

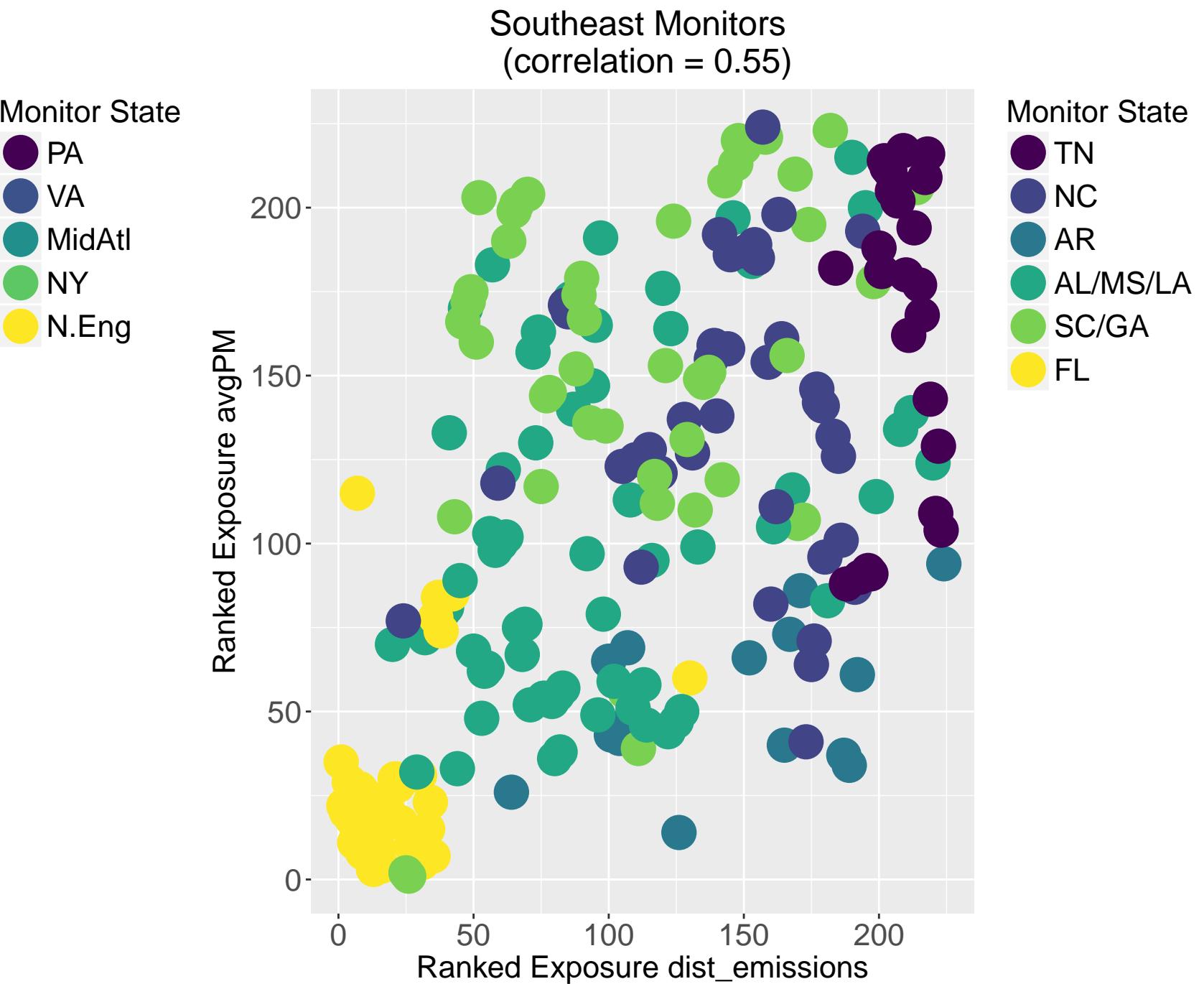
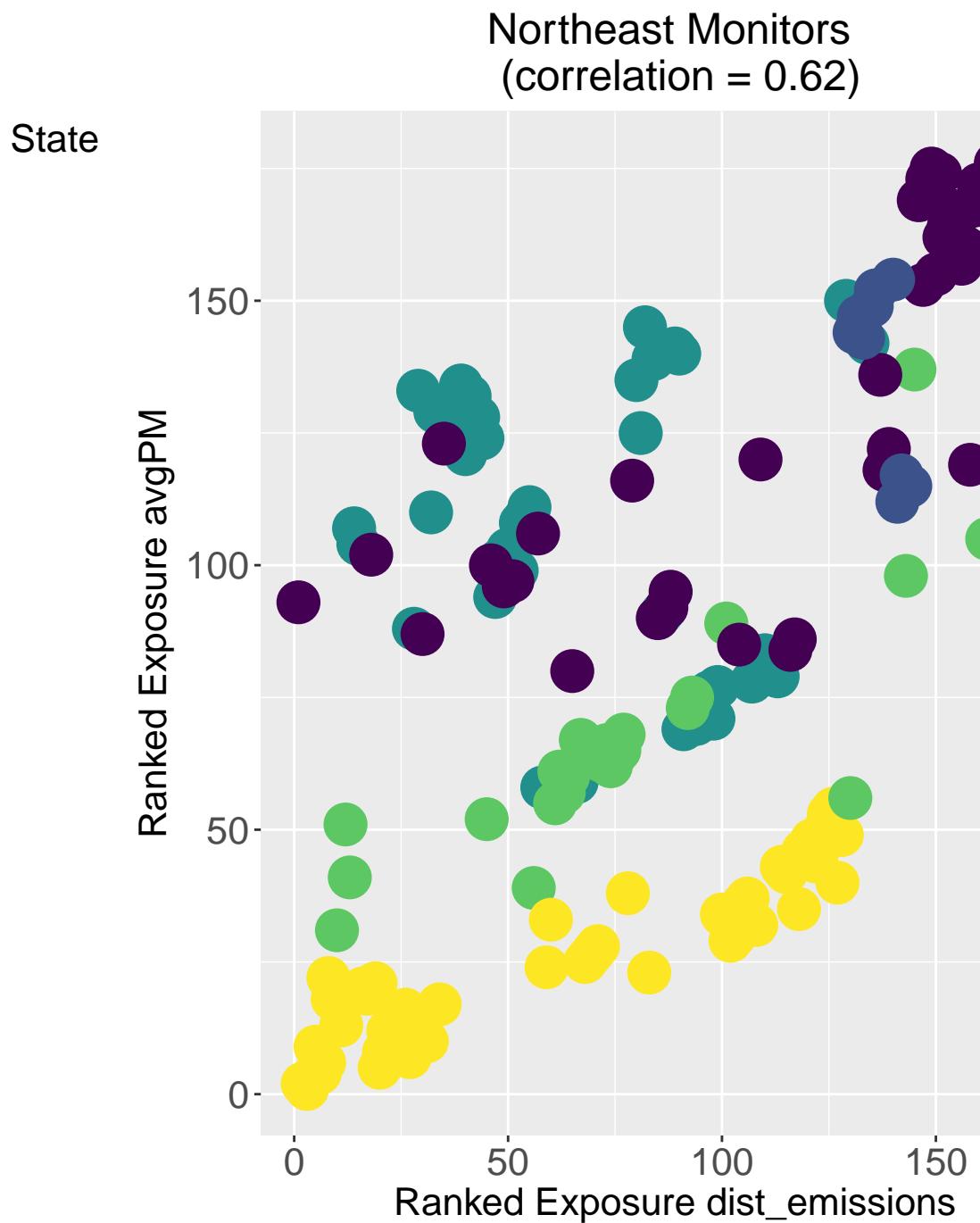
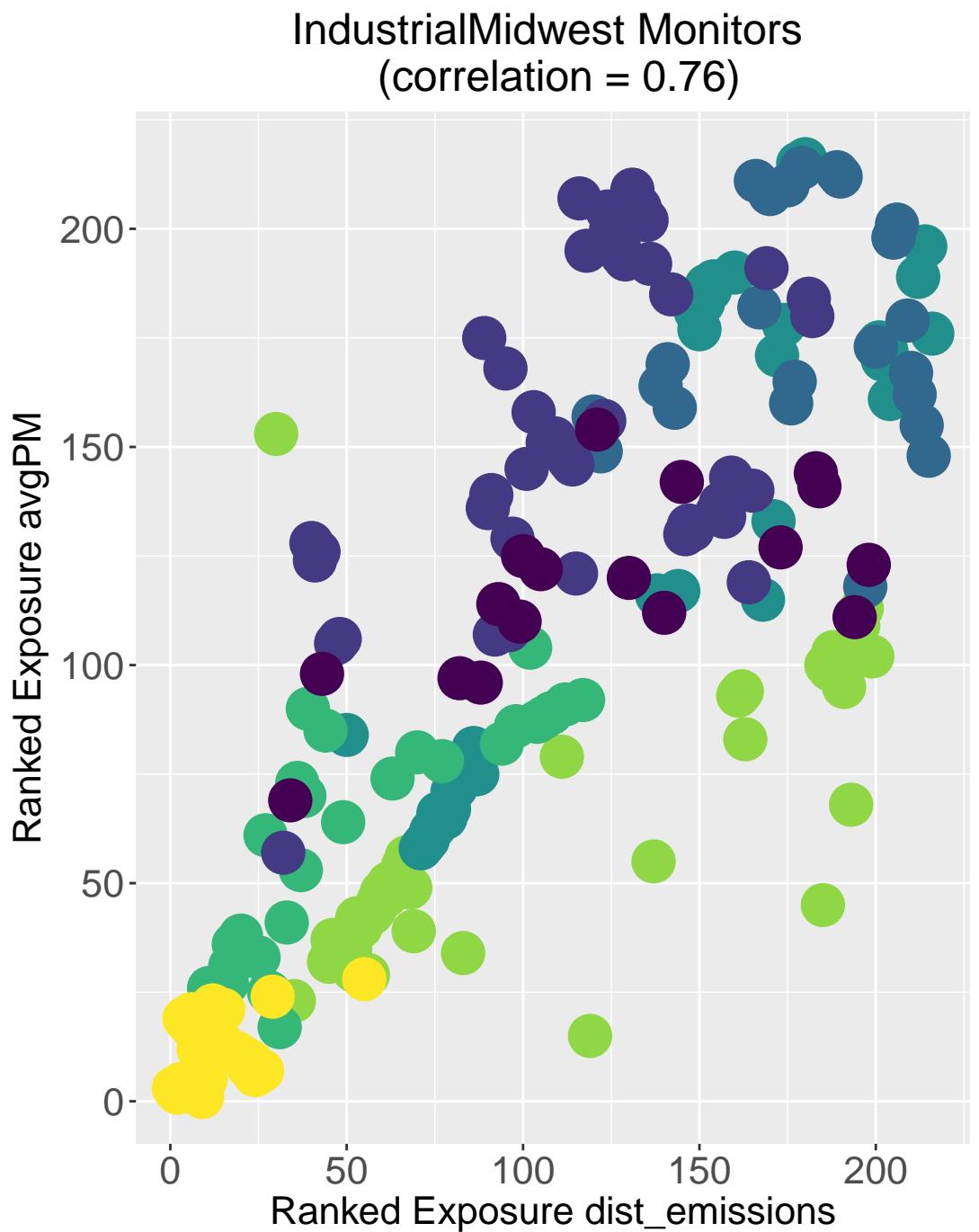


Monitor exposure:

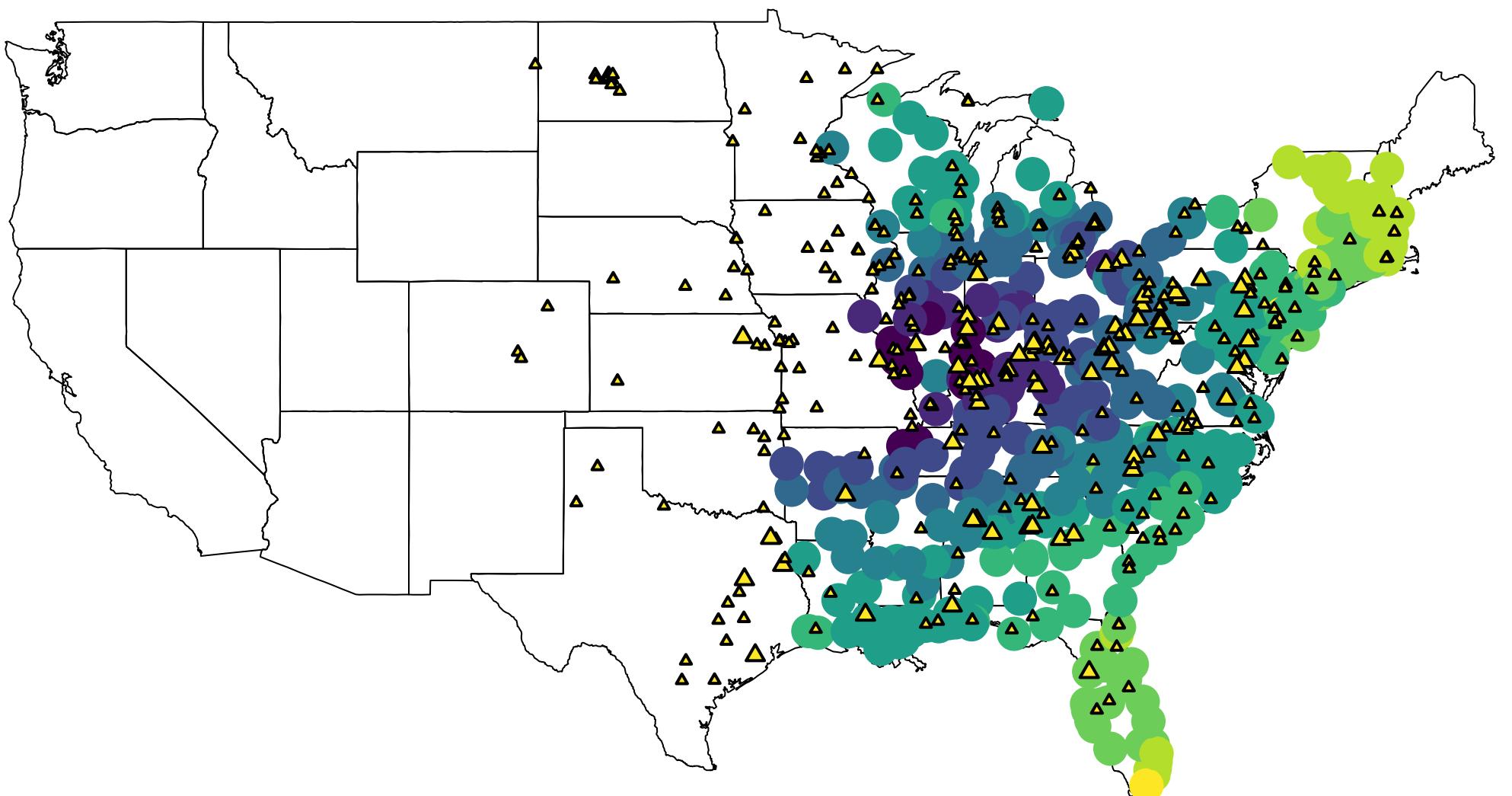
avgPM, decomposed75 spring_distLag 2005



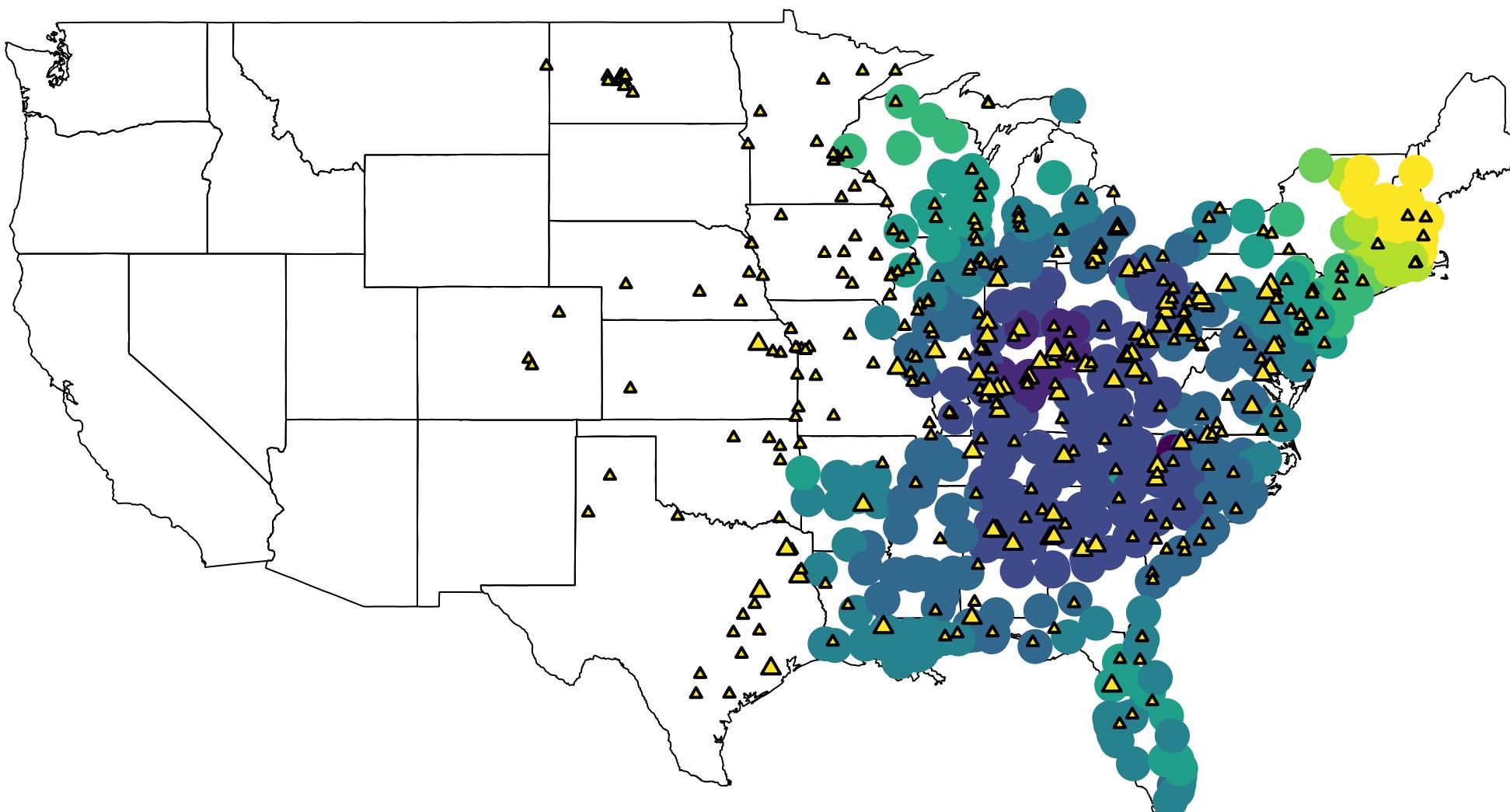
Comparison of coal emissions exposure (sum of $(1/\log(\text{distance})) * \text{avgemissions}$ vs. low freq PM)



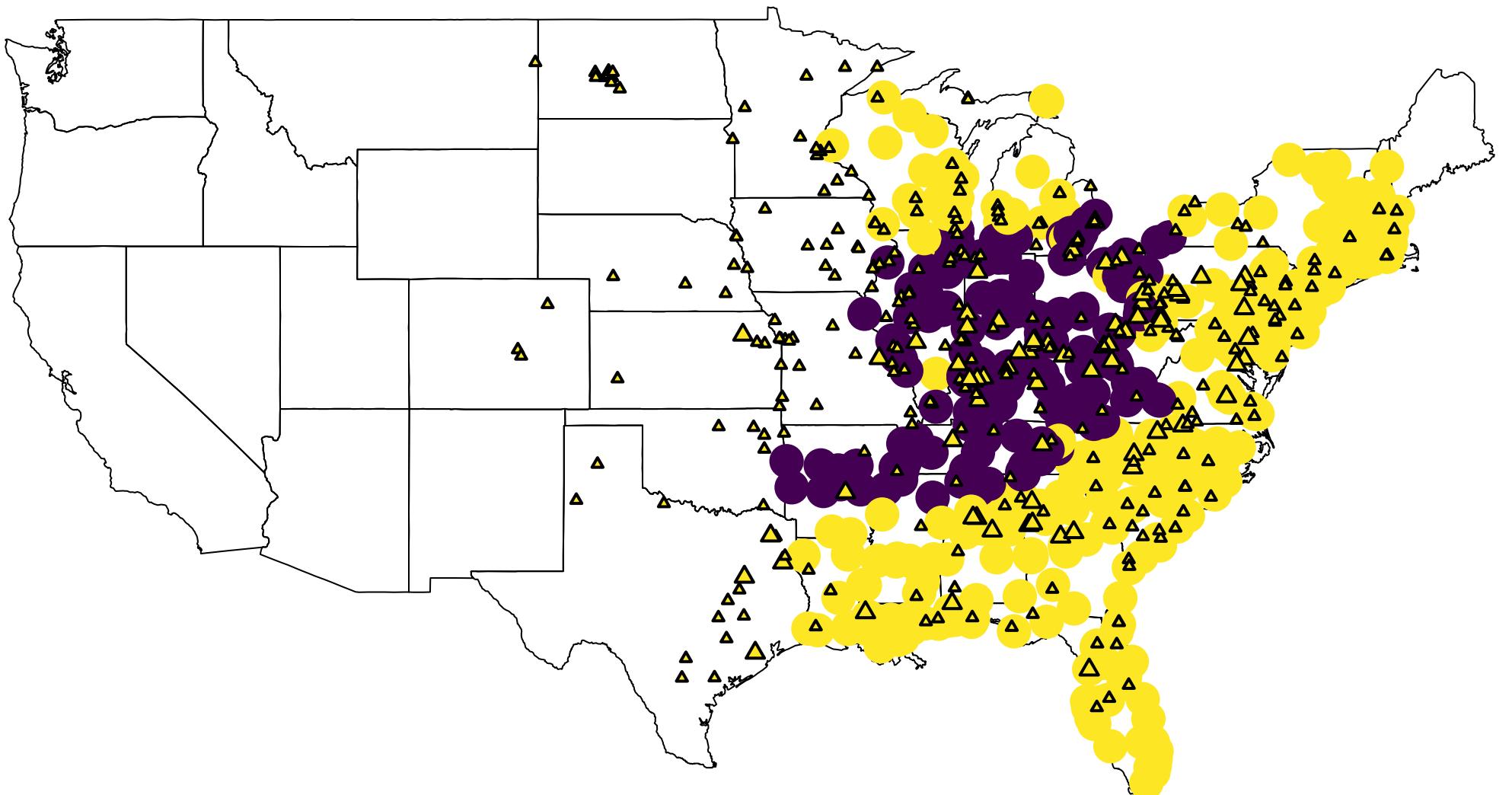
Monitor exposure: num_edges, spring_distLag 2005



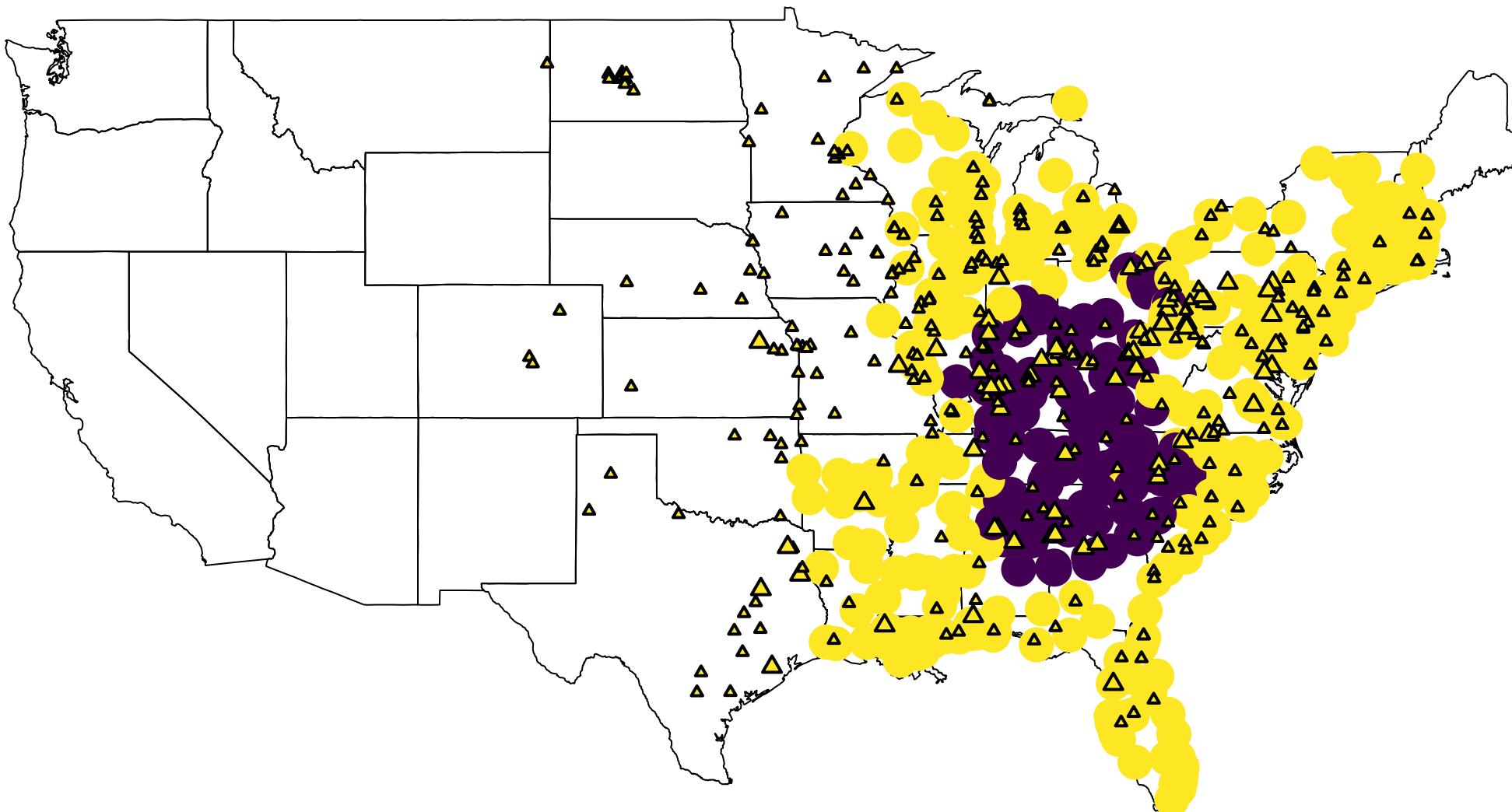
Monitor exposure: avgPM, decomposed75 spring_distLag 2005



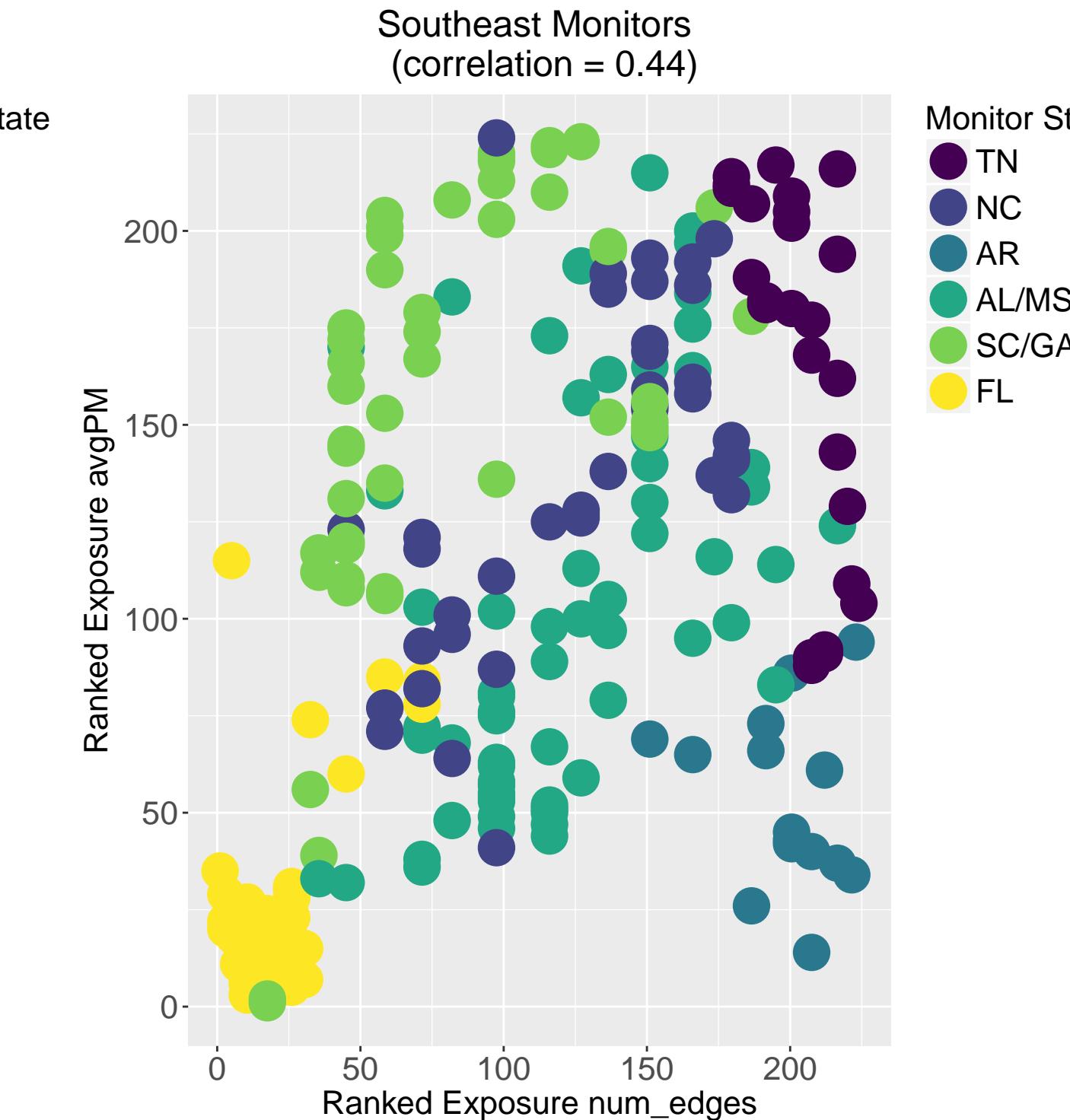
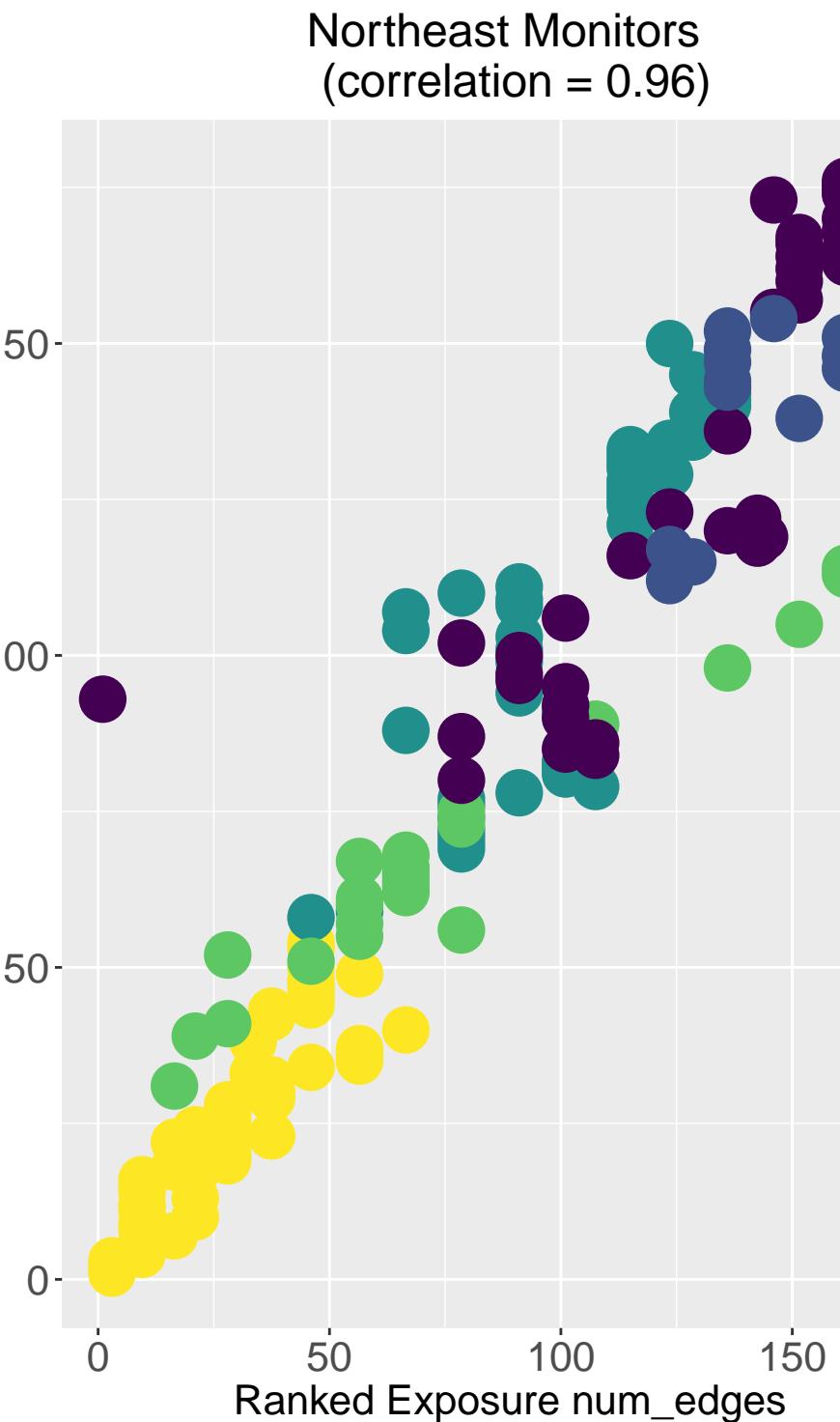
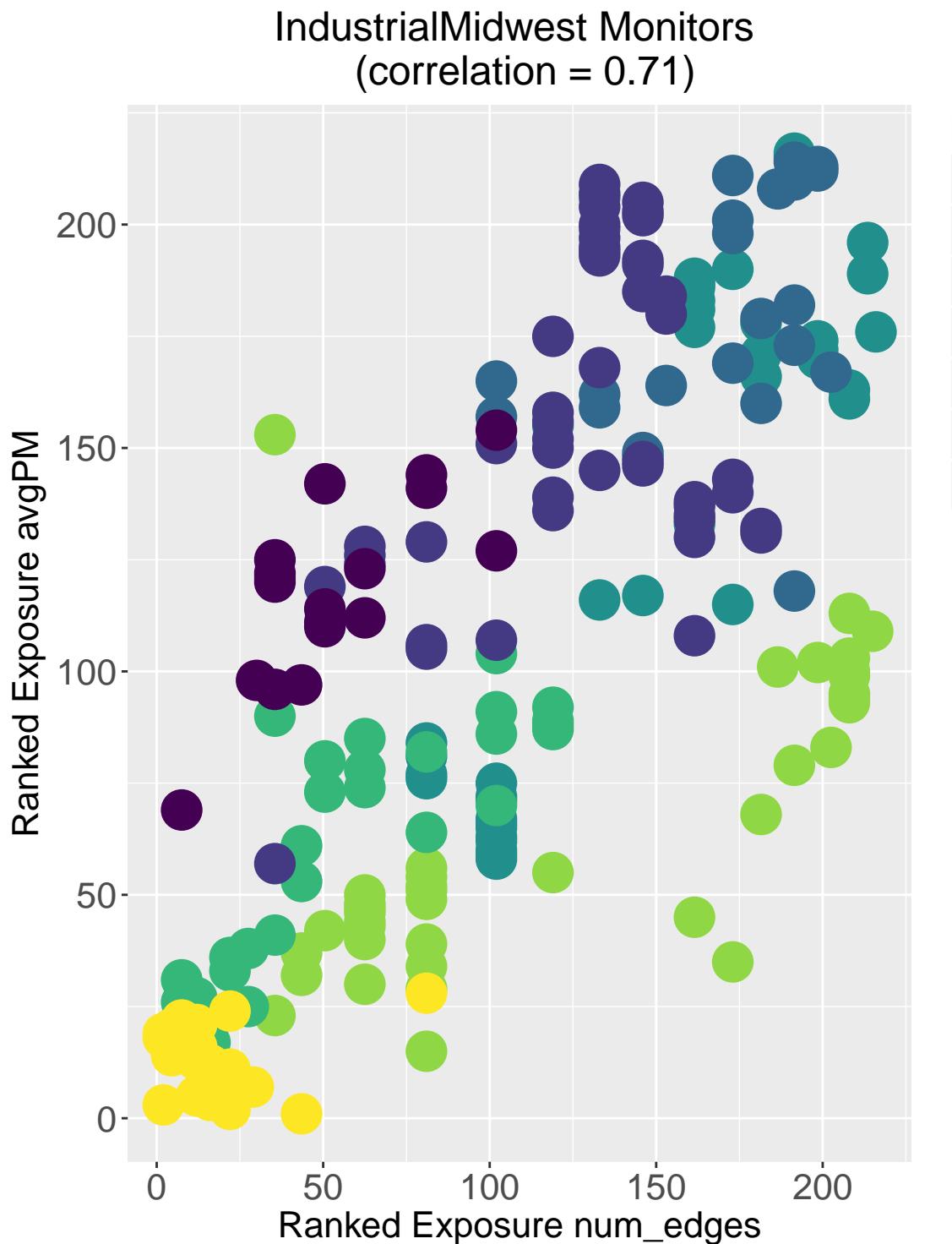
Highest exposed: num_edges, spring_distLag 2005



Highest exposed: avgPM, decomposed75 spring_distLag 2005

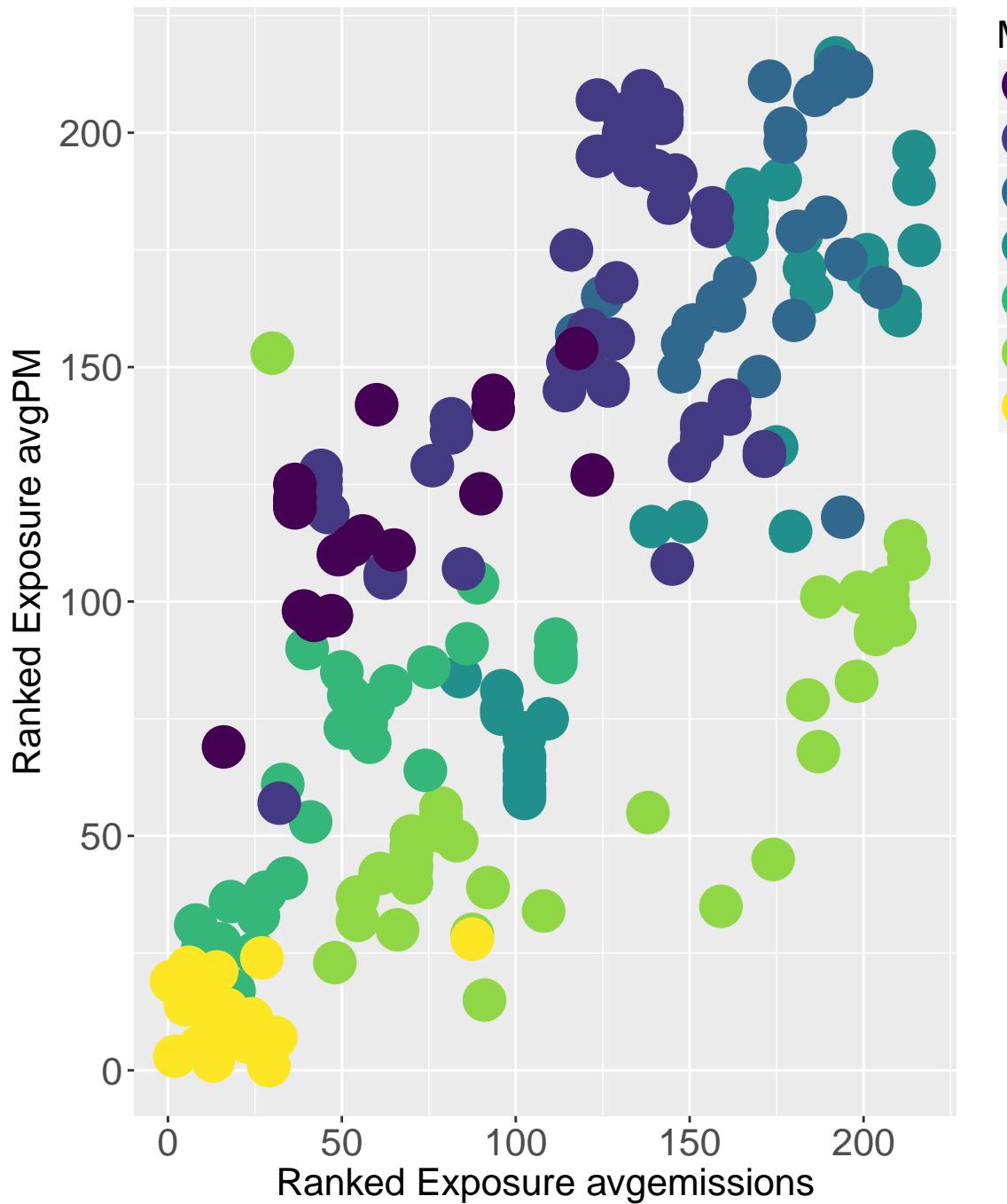


Comparison of coal emissions exposure (num_edges vs. low freq PM)

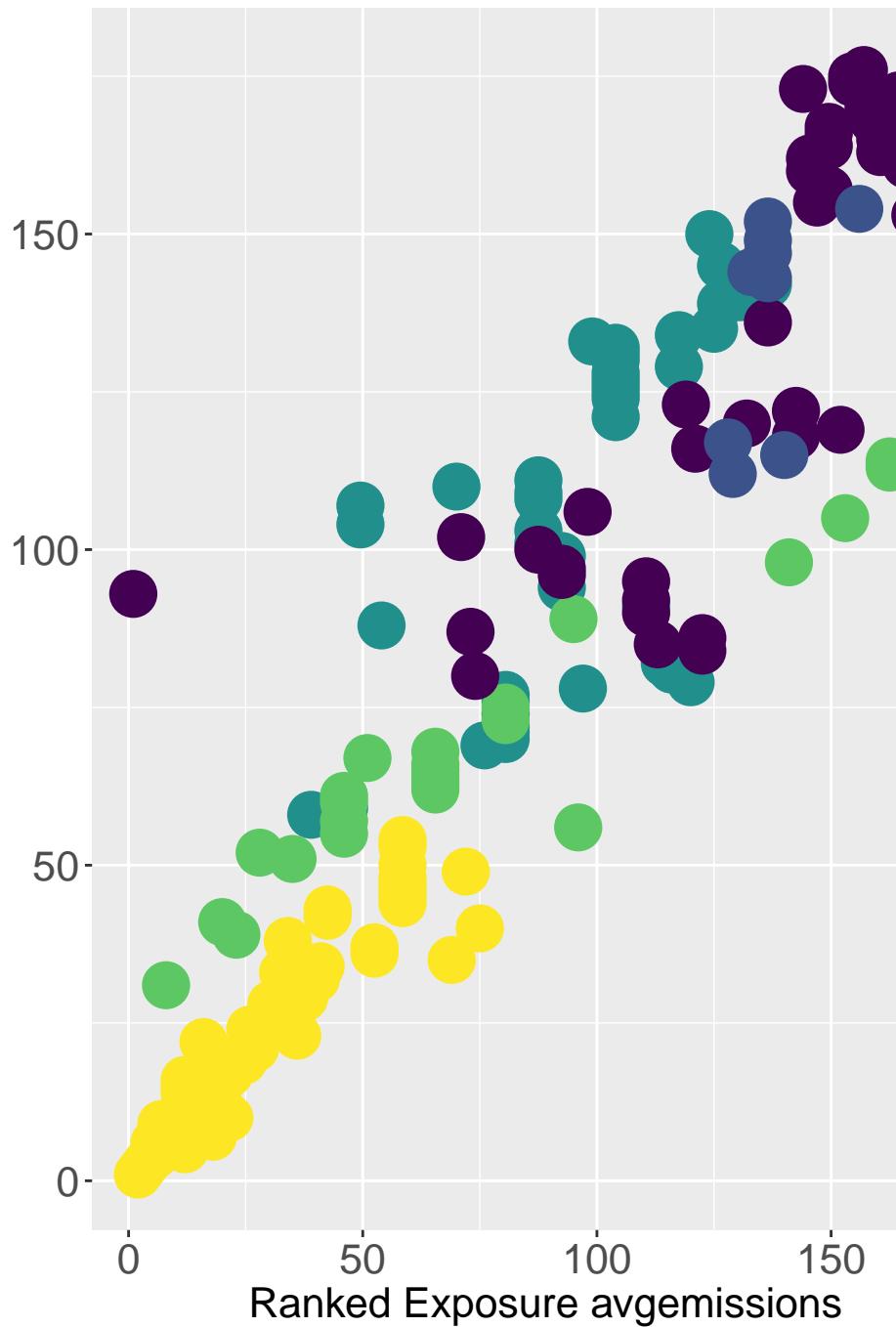


Comparison of coal emissions exposure (avgemissions vs. low freq PM)

IndustrialMidwest Monitors
(correlation = 0.71)



Northeast Monitors
(correlation = 0.93)



Southeast Monitors
(correlation = 0.48)

