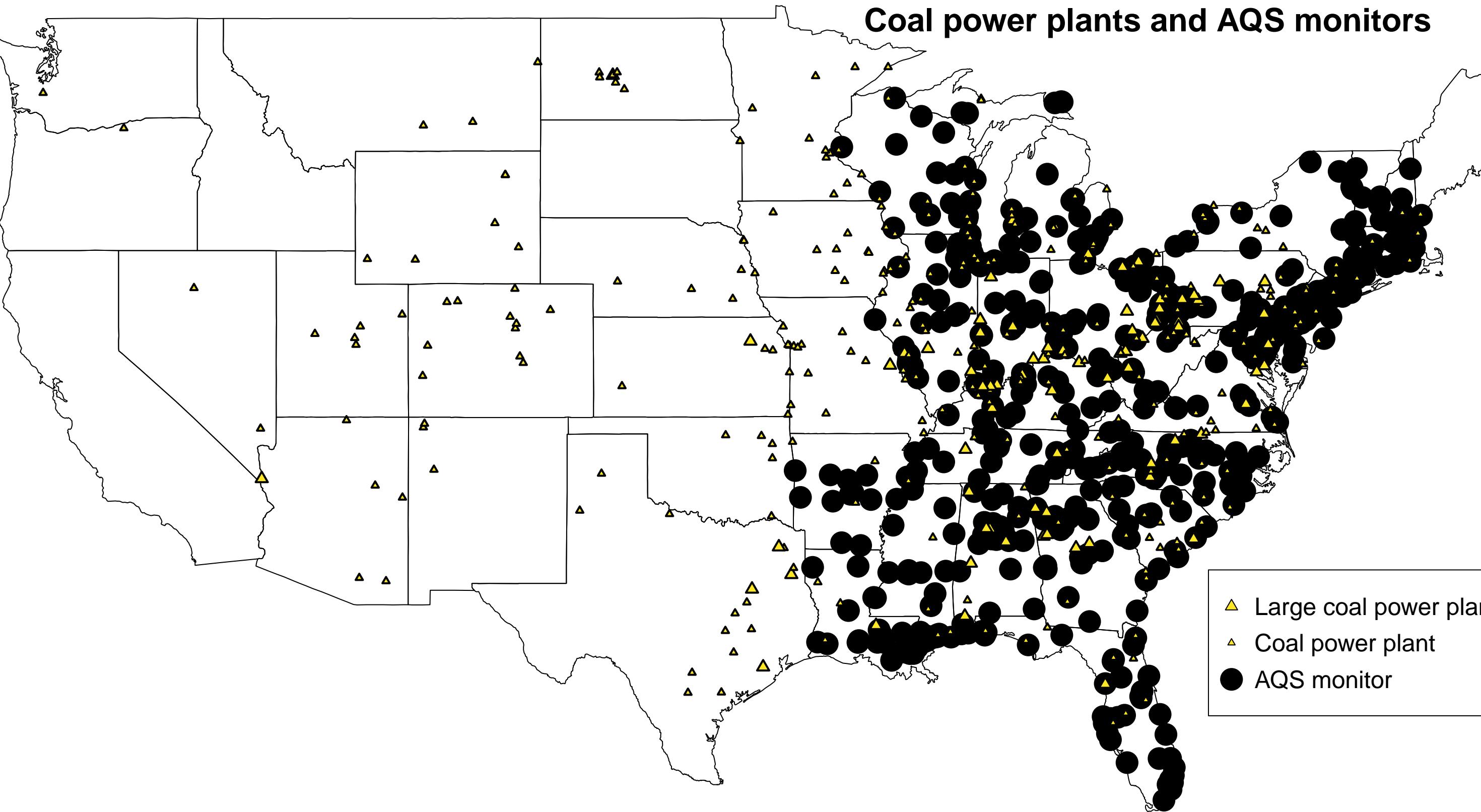
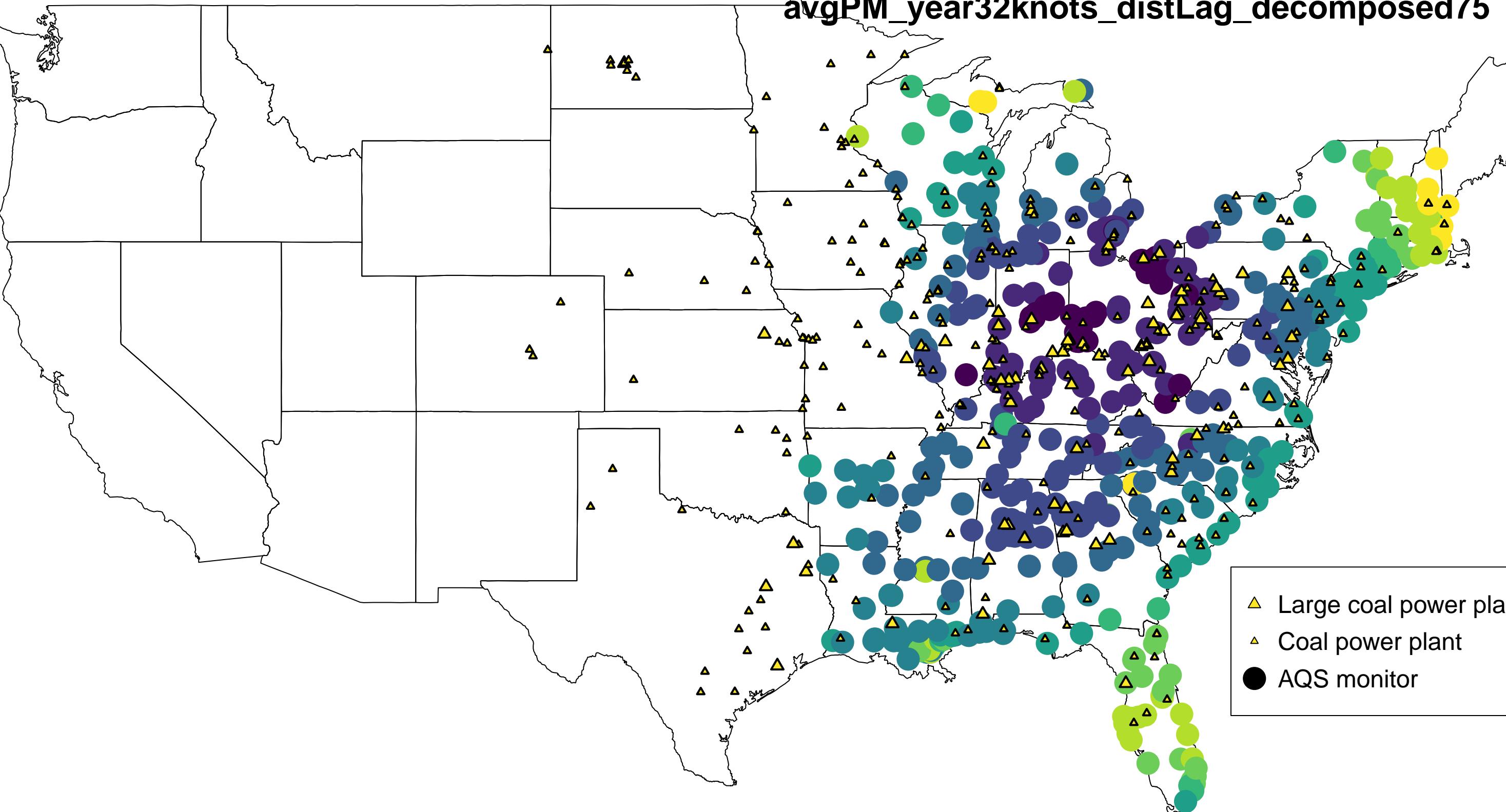


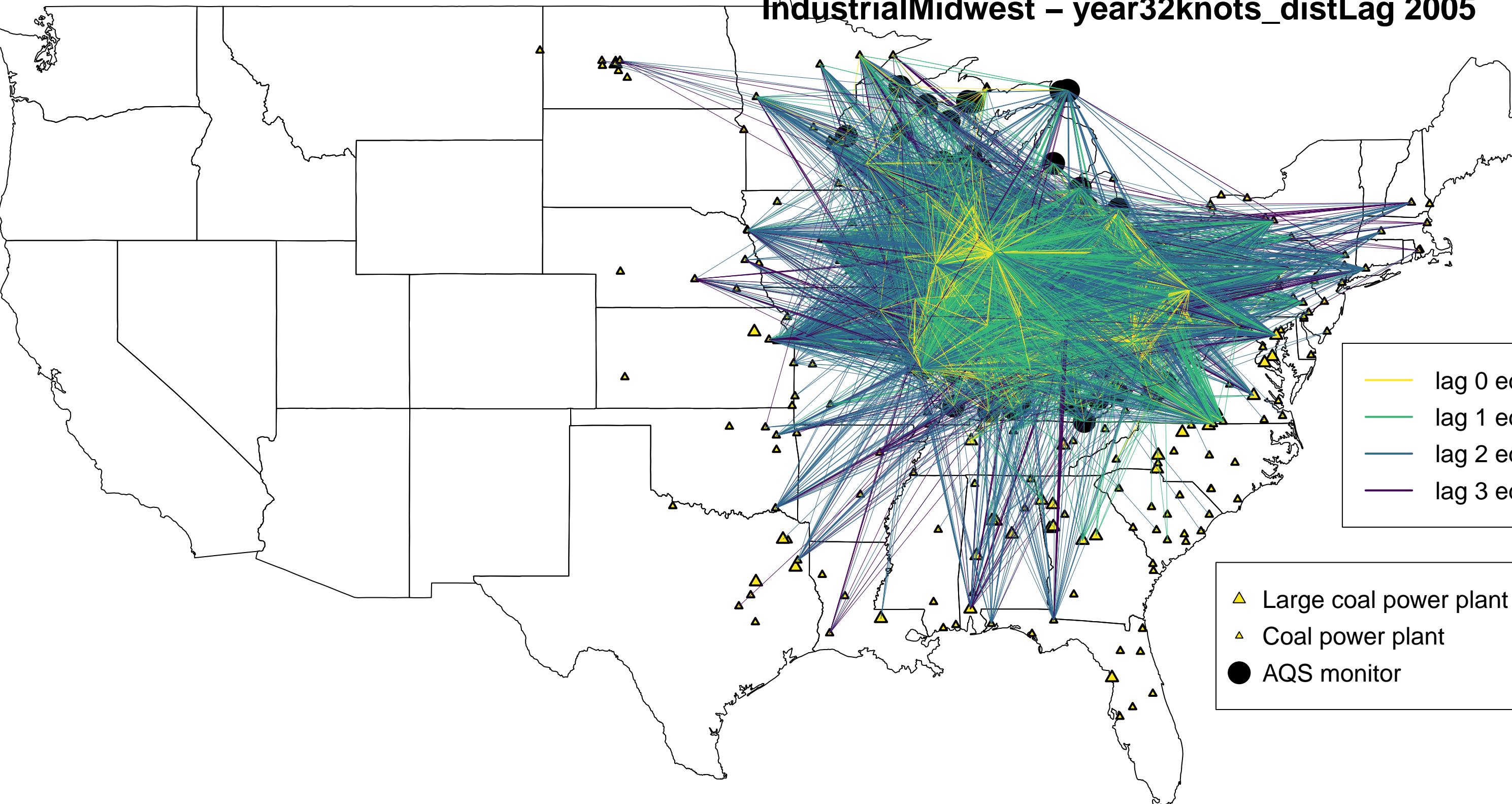
Coal power plants and AQS monitors



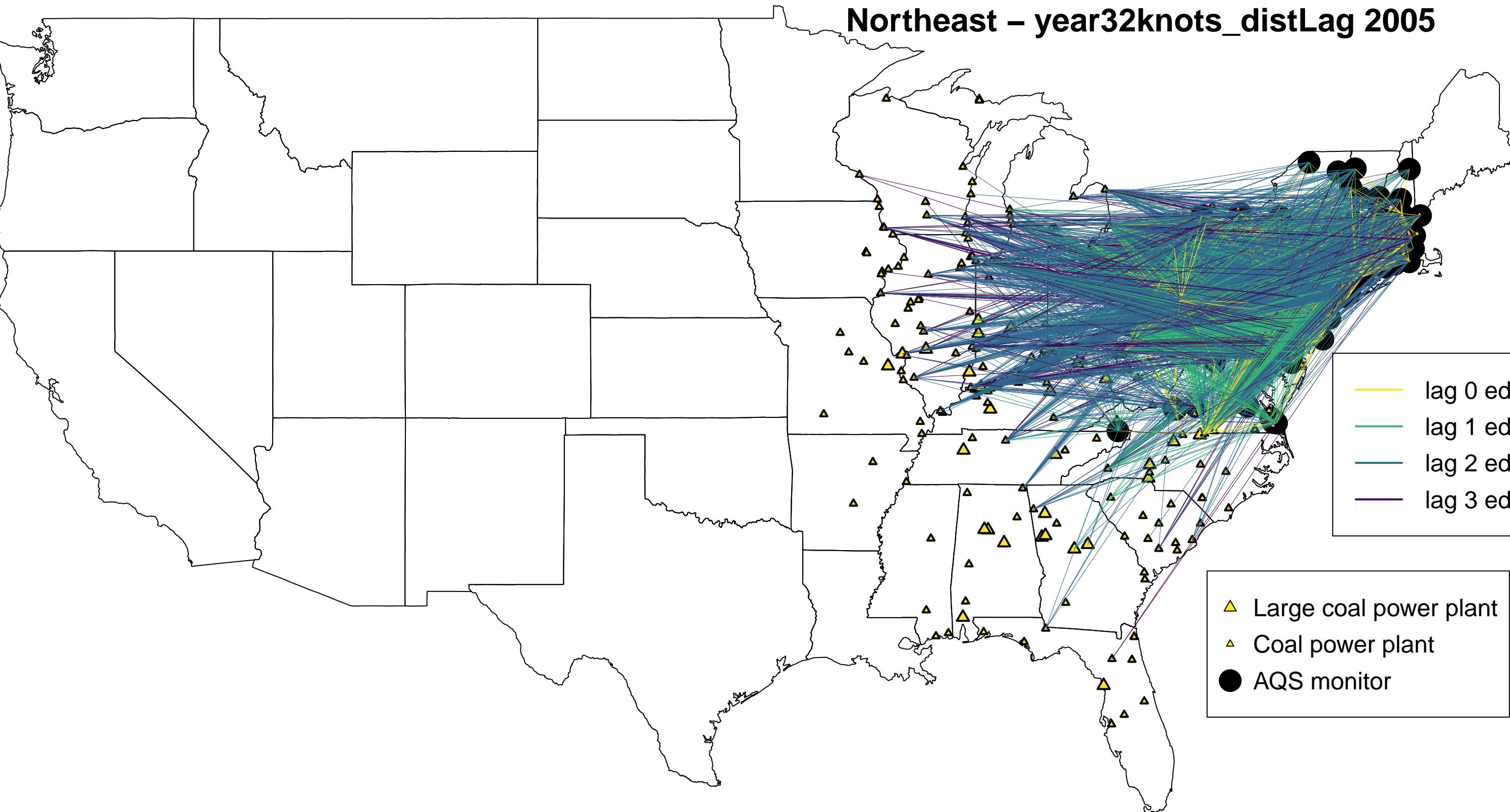
avgPM_year32knots_distLag_decomposed75



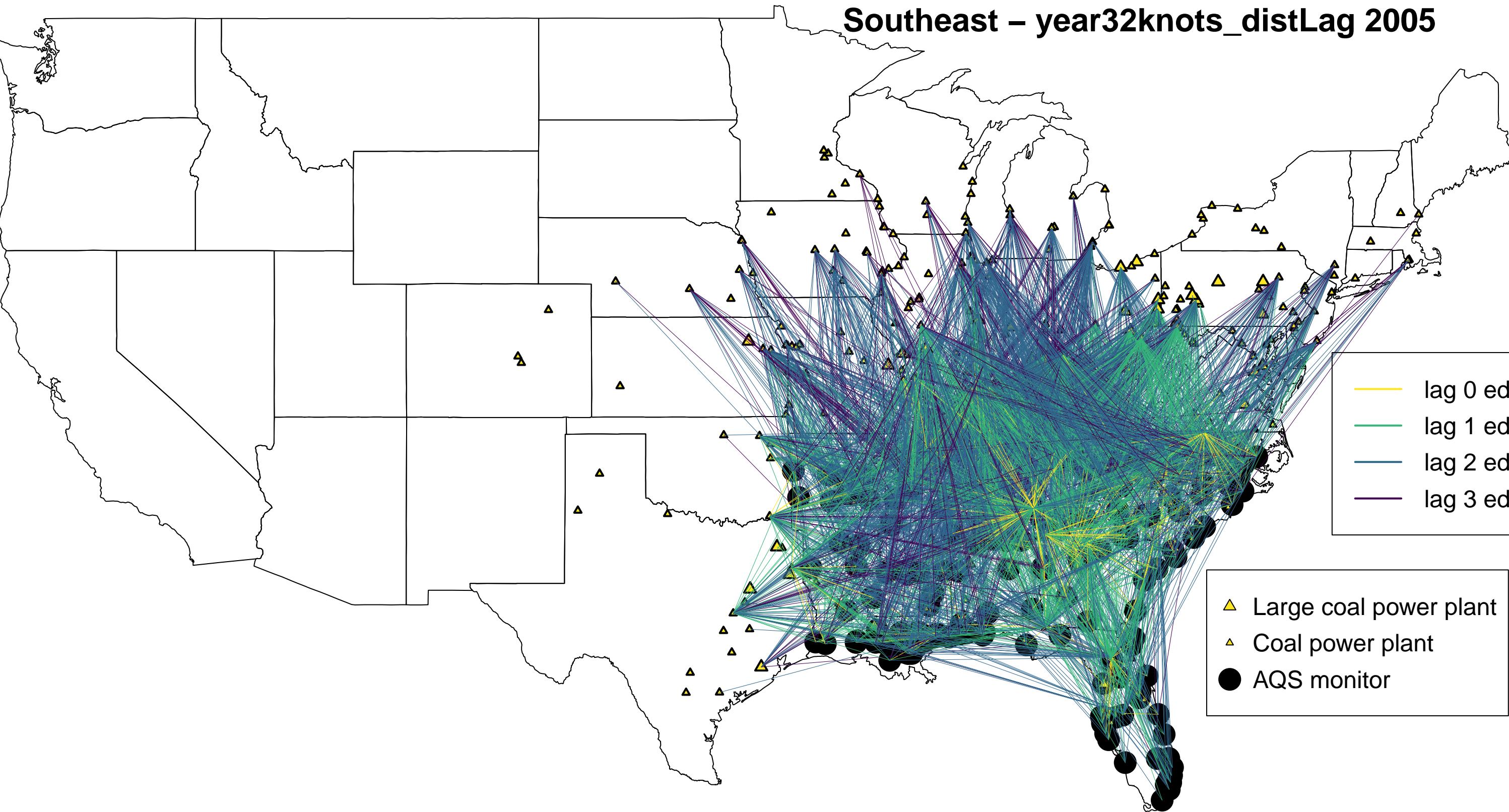
IndustrialMidwest – year32knots_distLag 2005



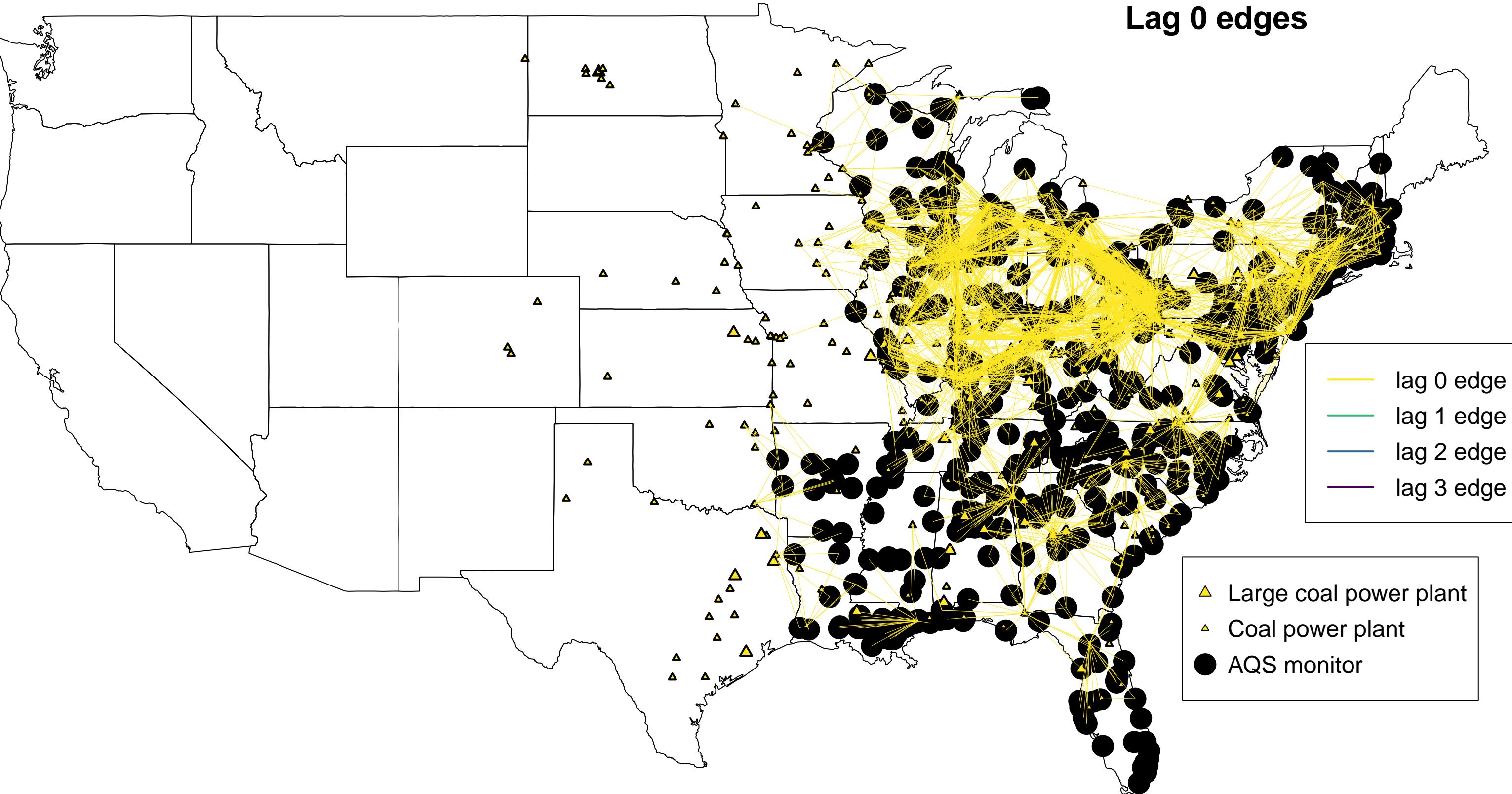
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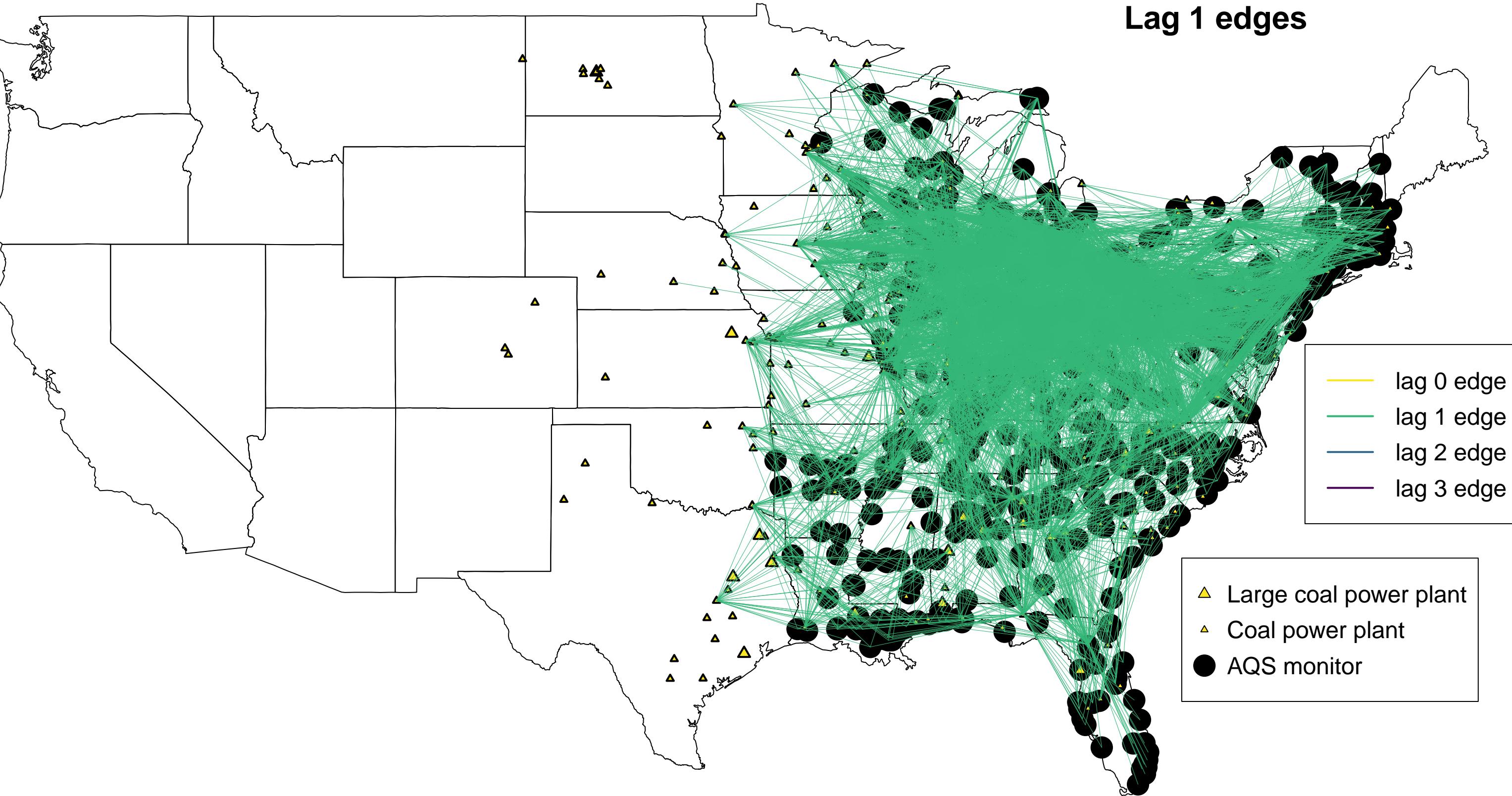
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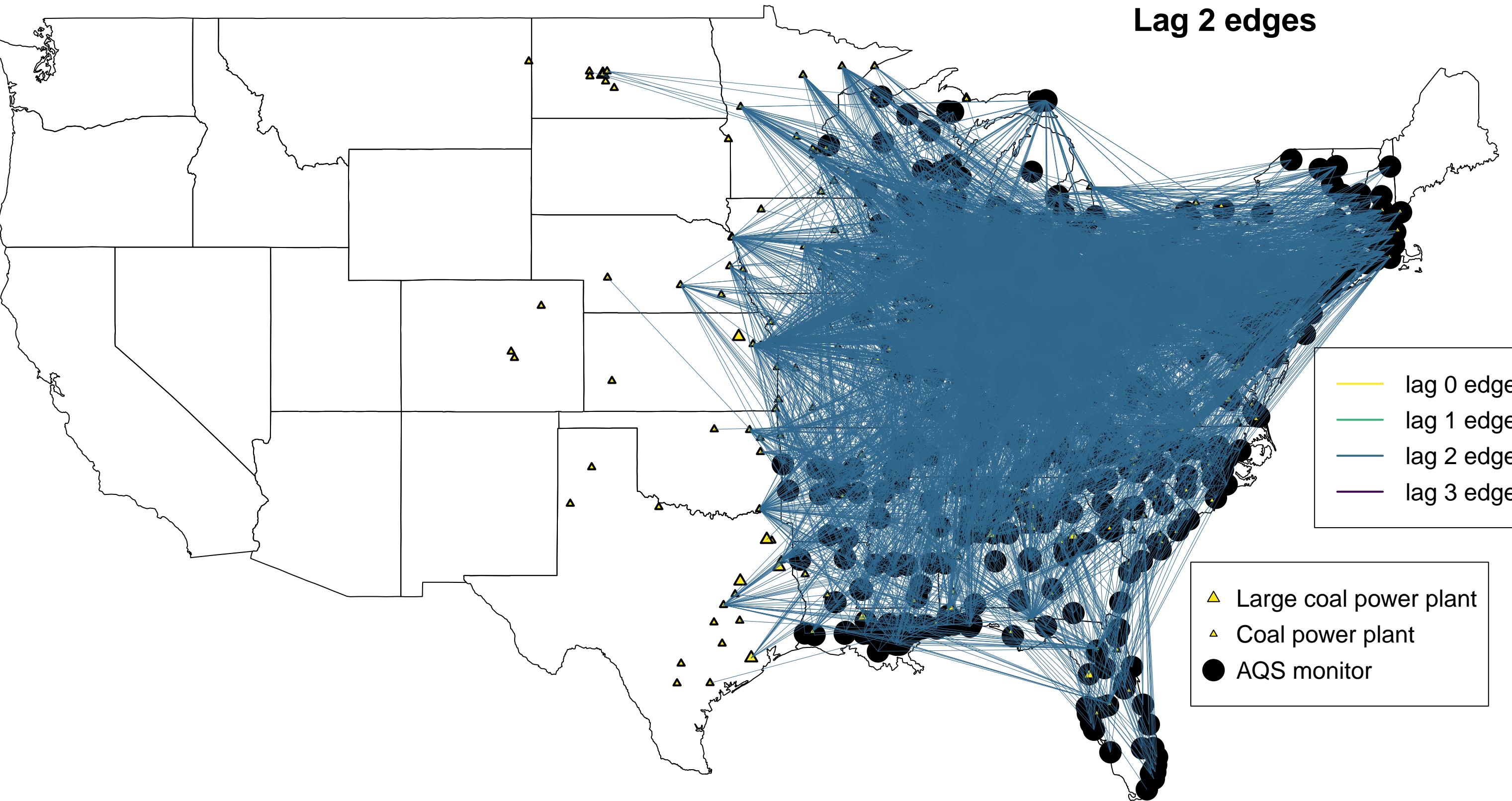
Lag 0 edges



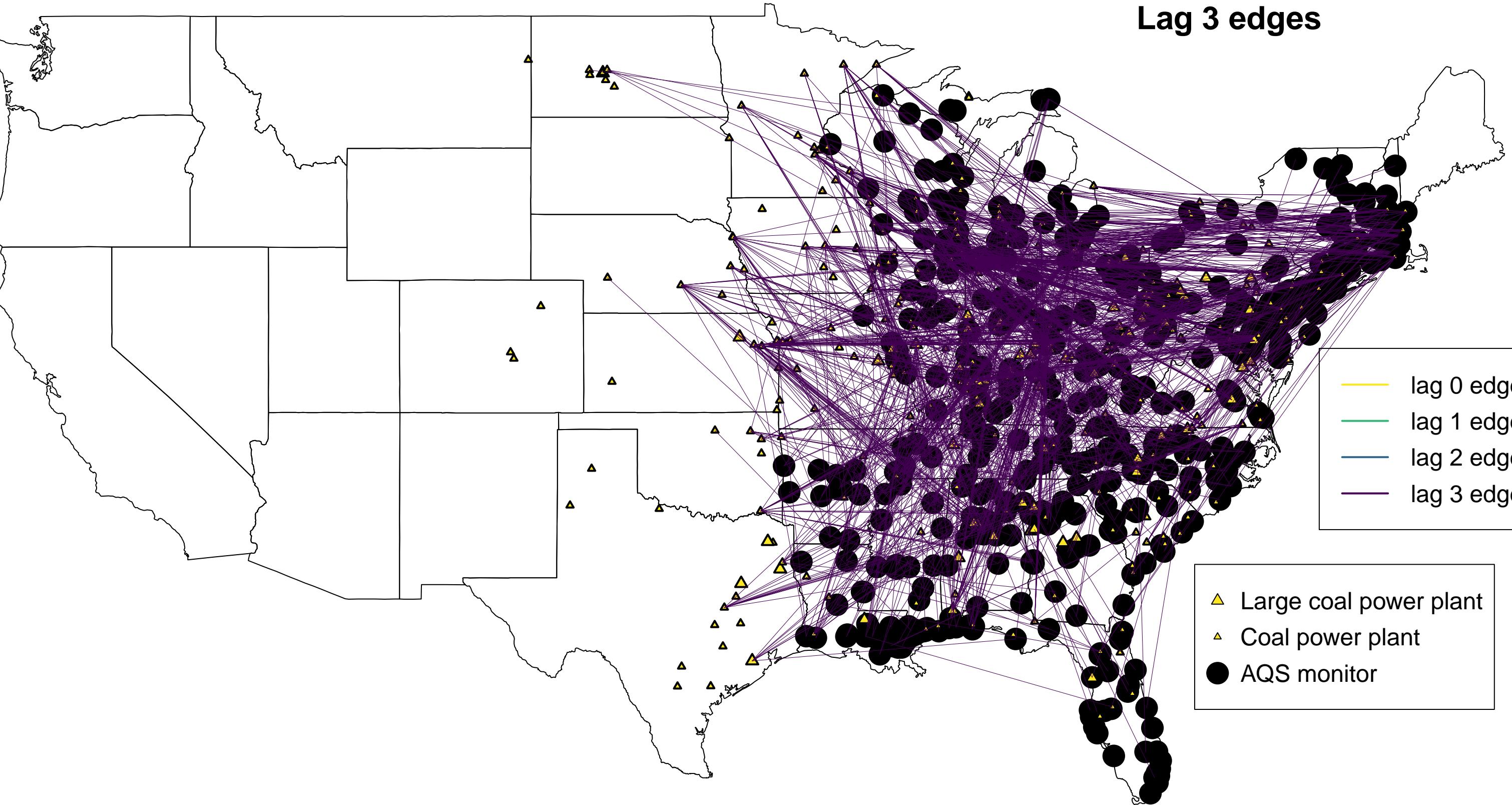
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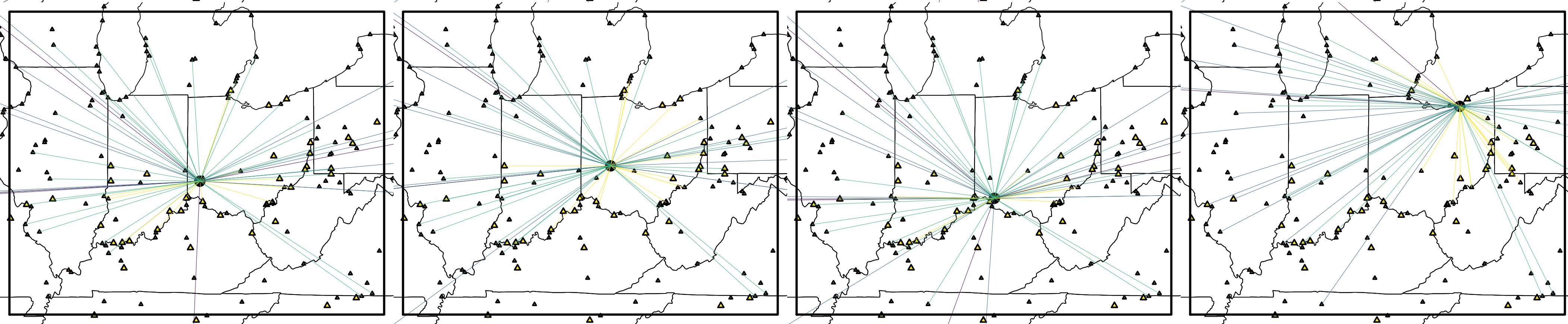
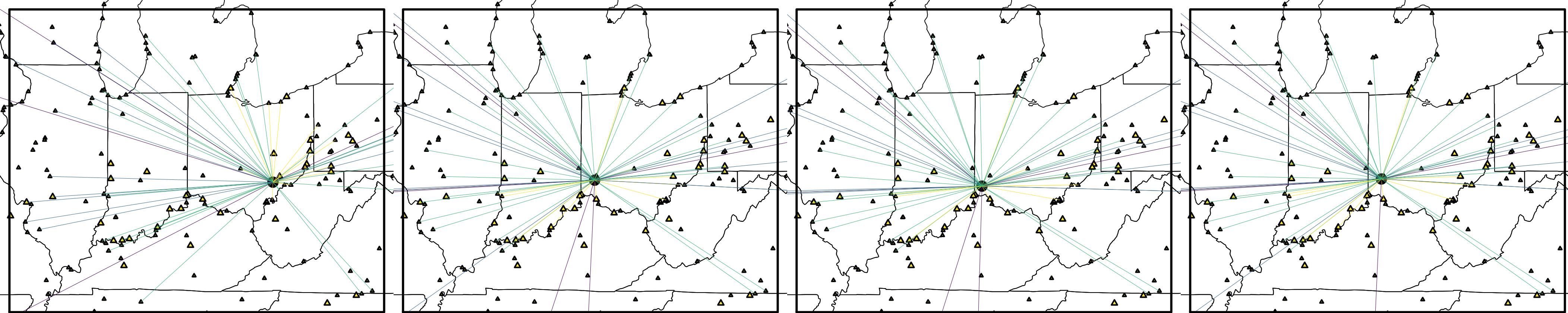


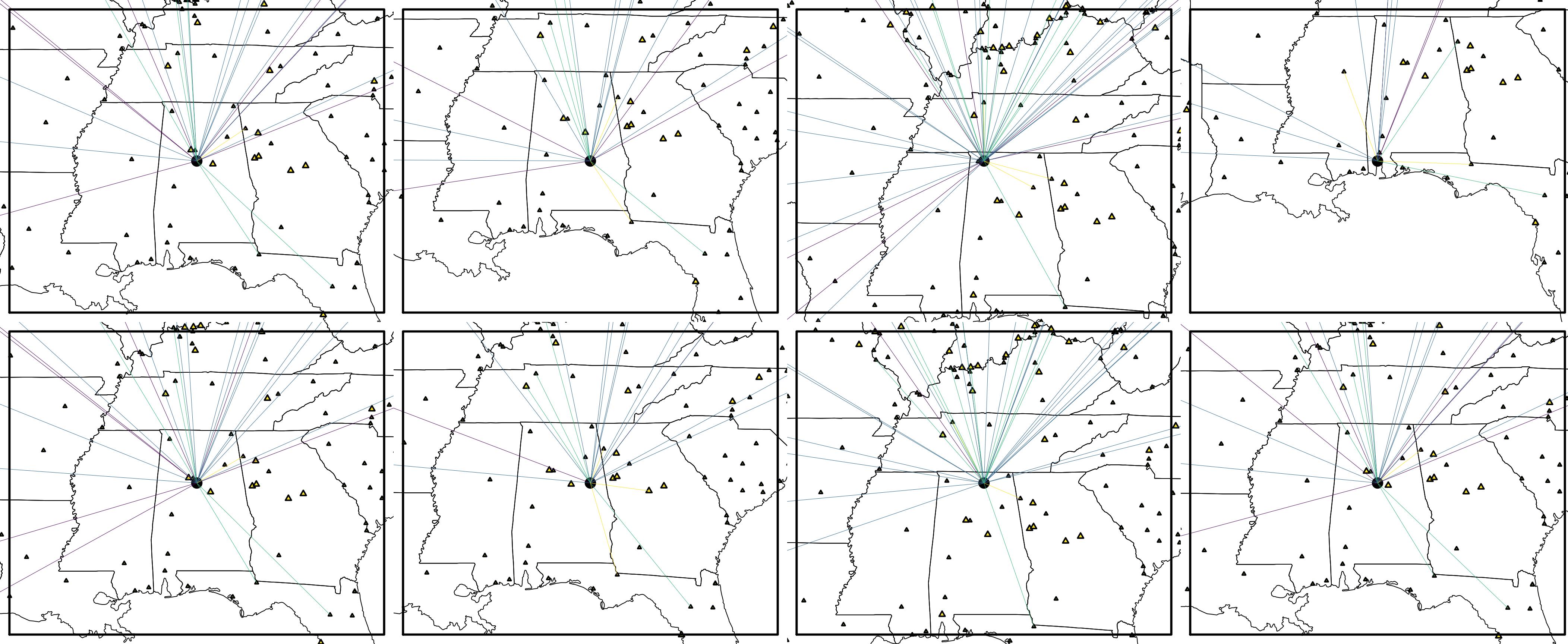
Lag 2 edges

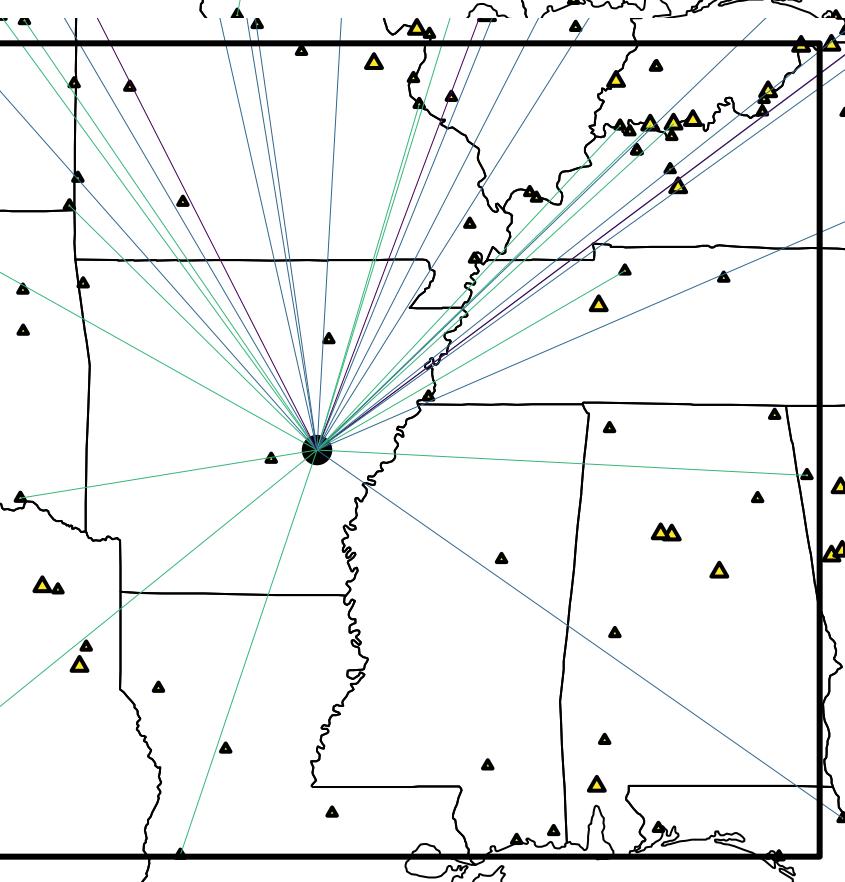
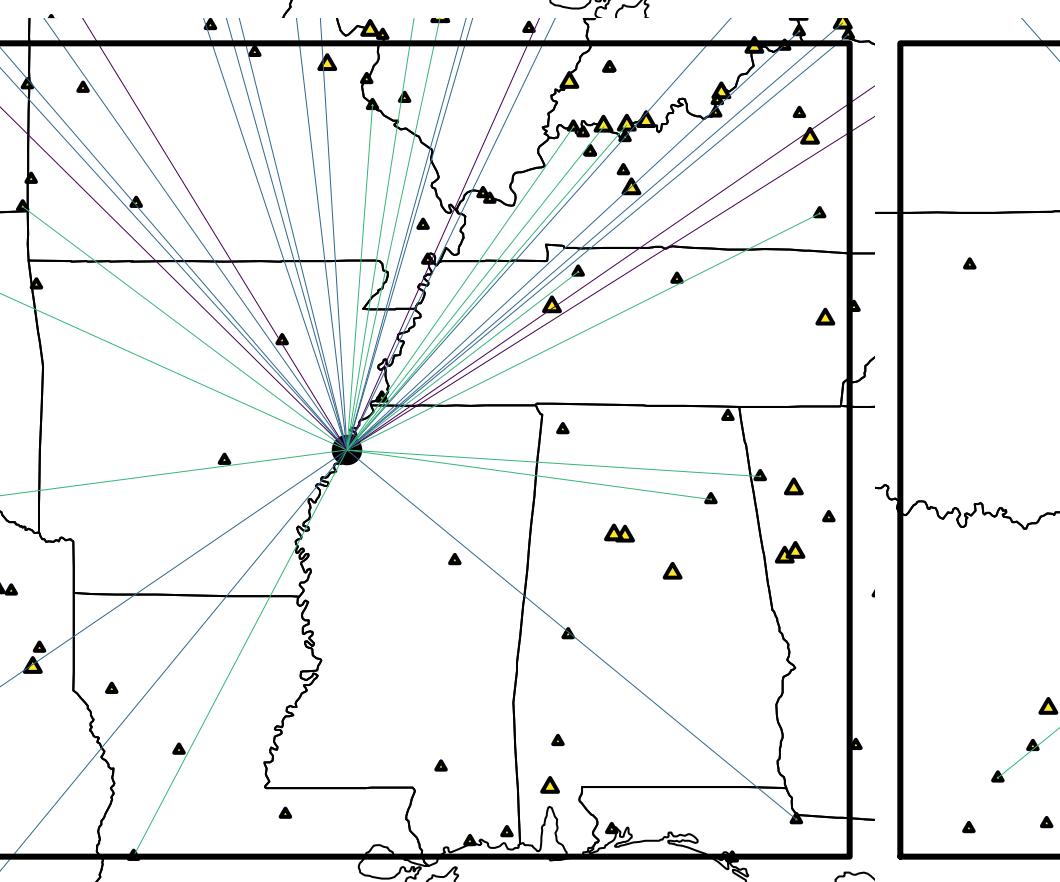
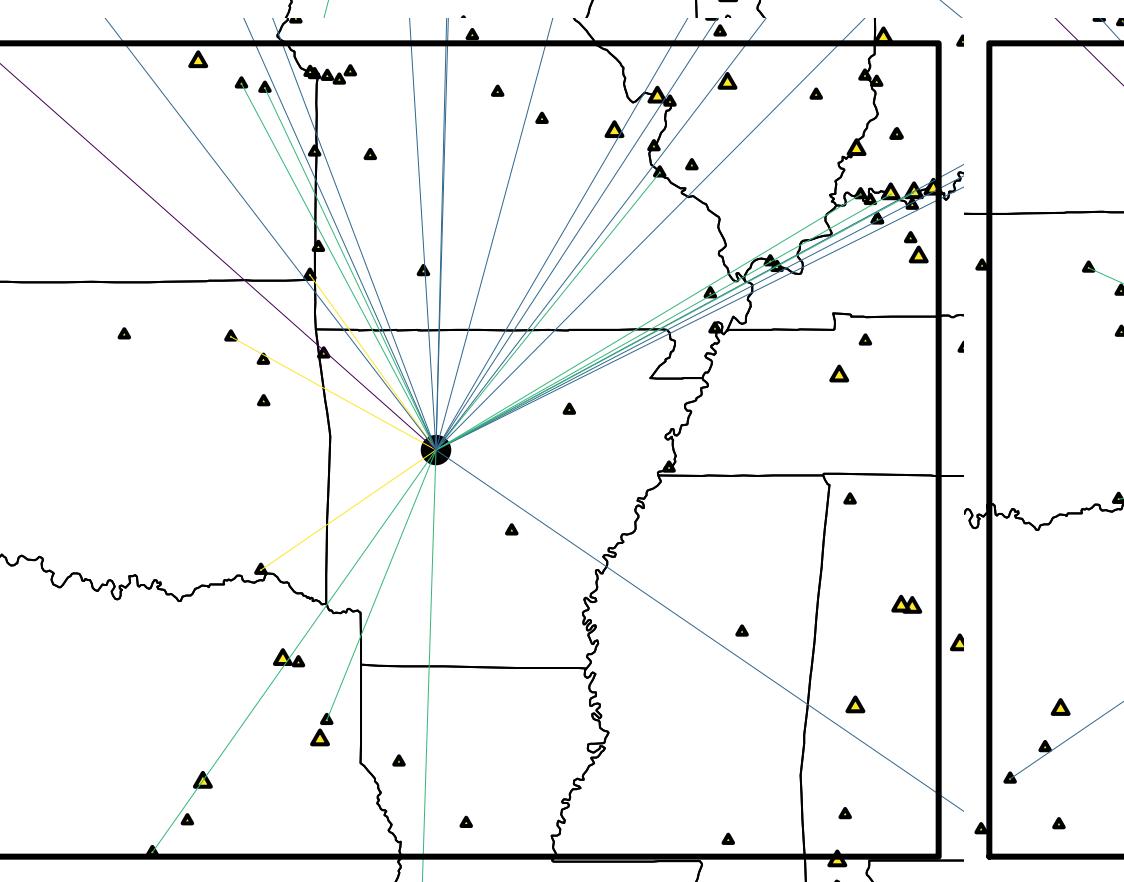
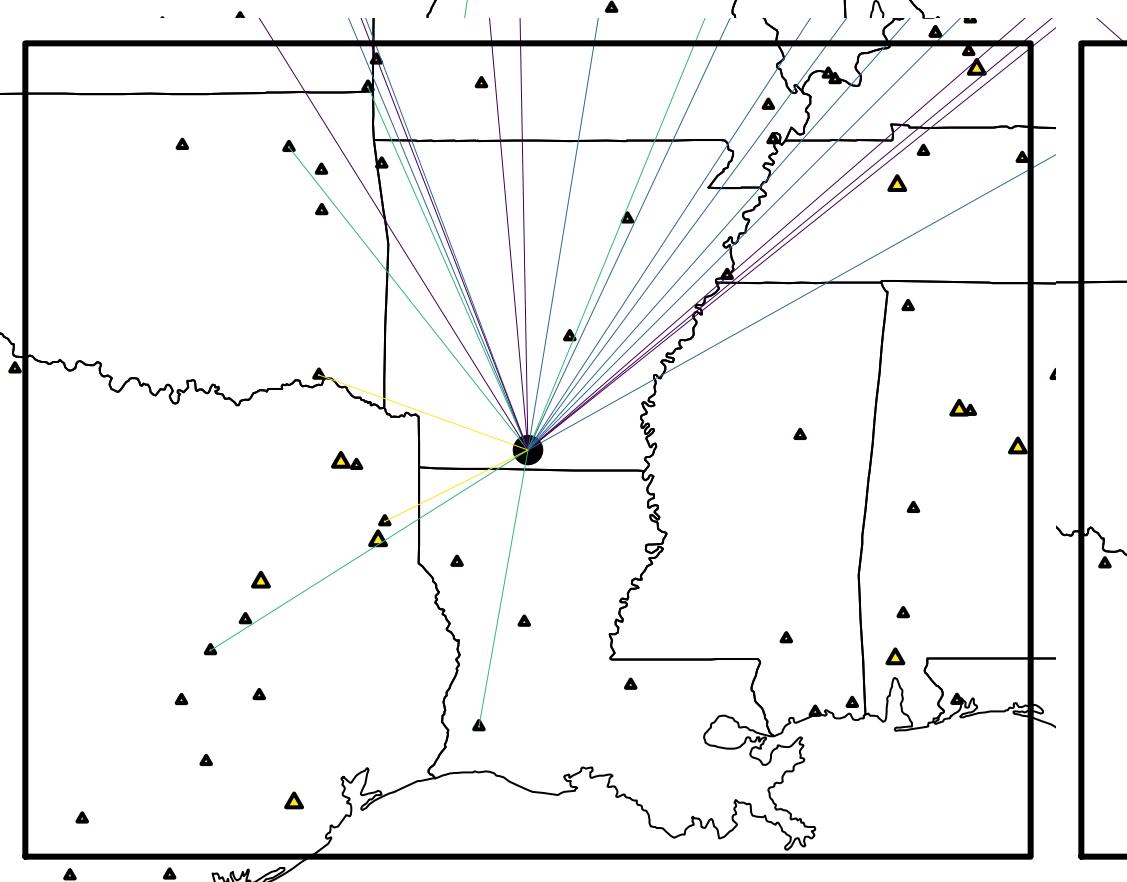
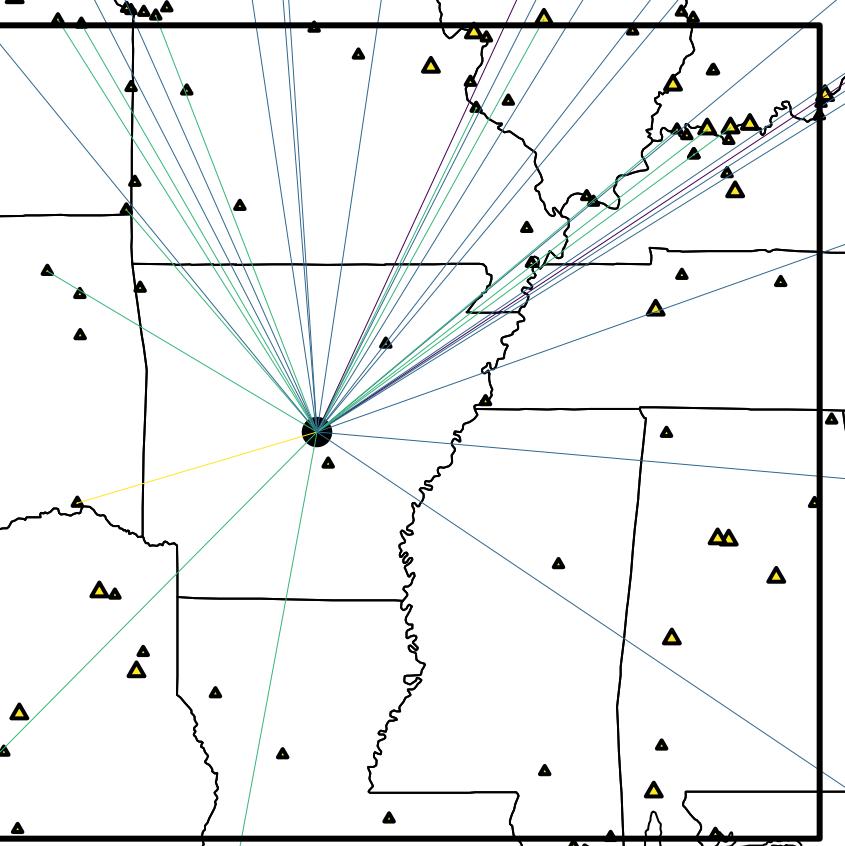
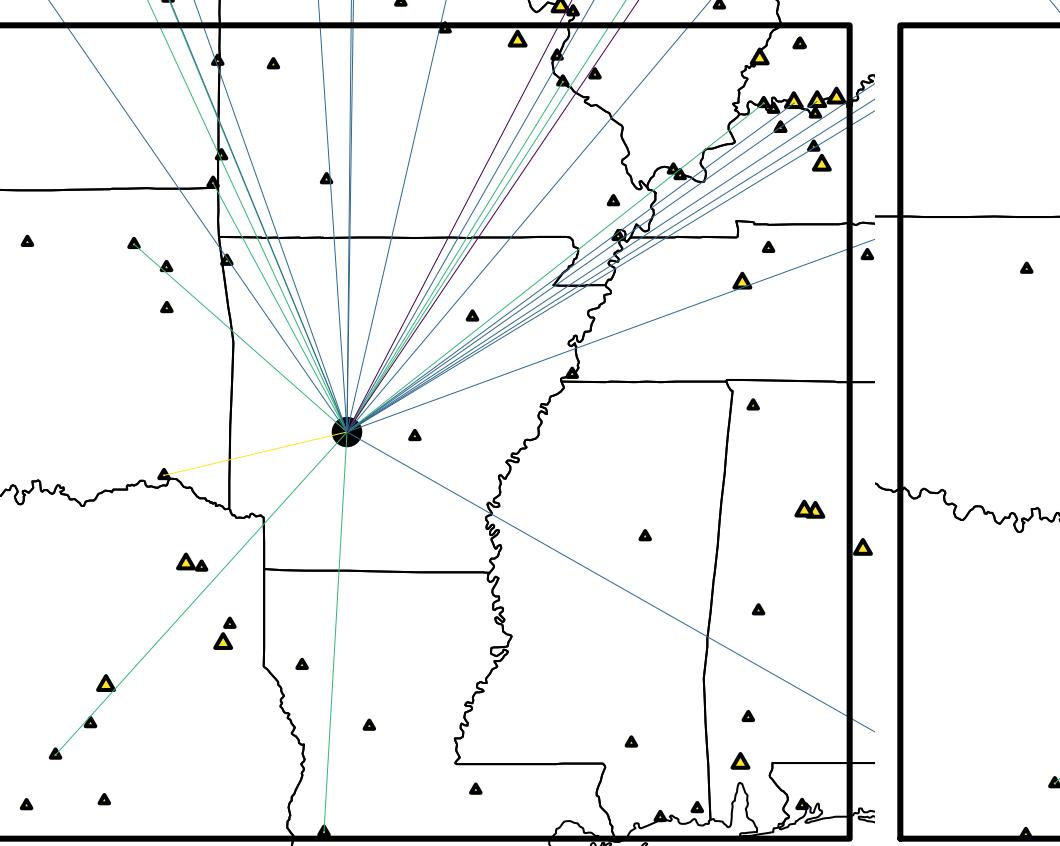
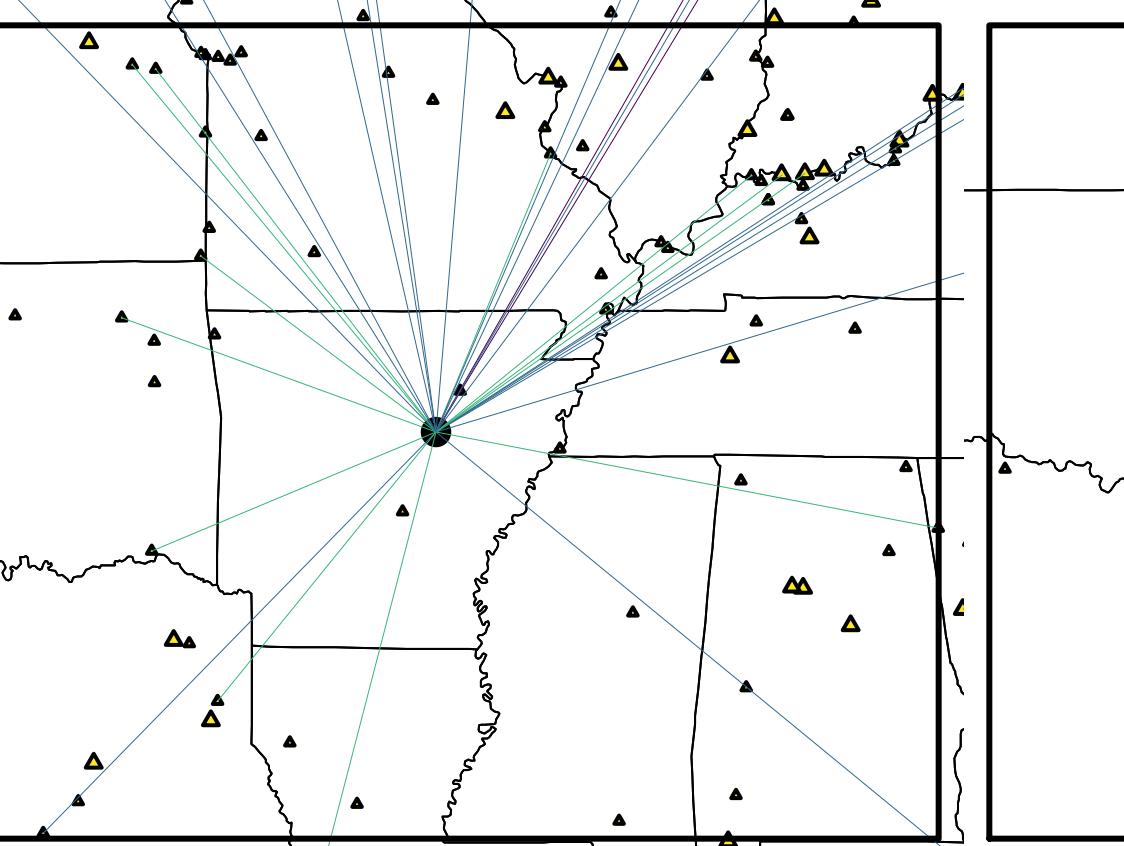
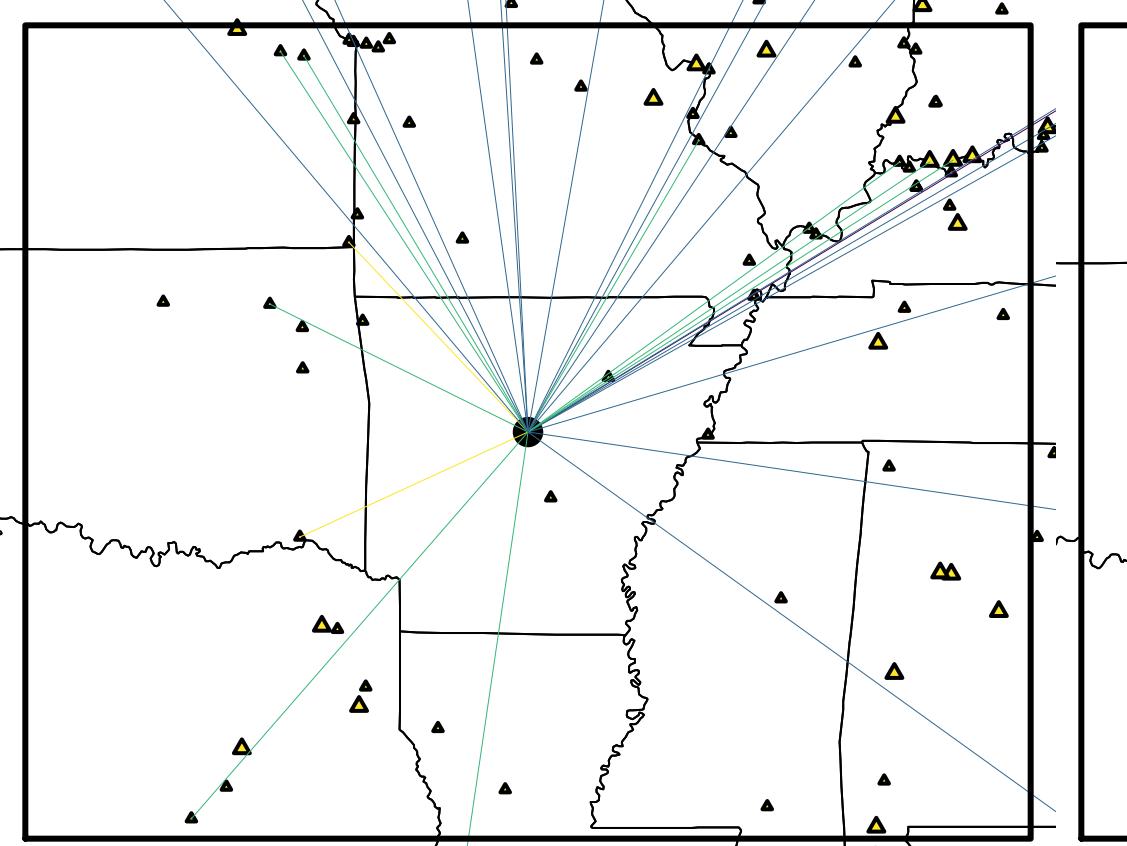


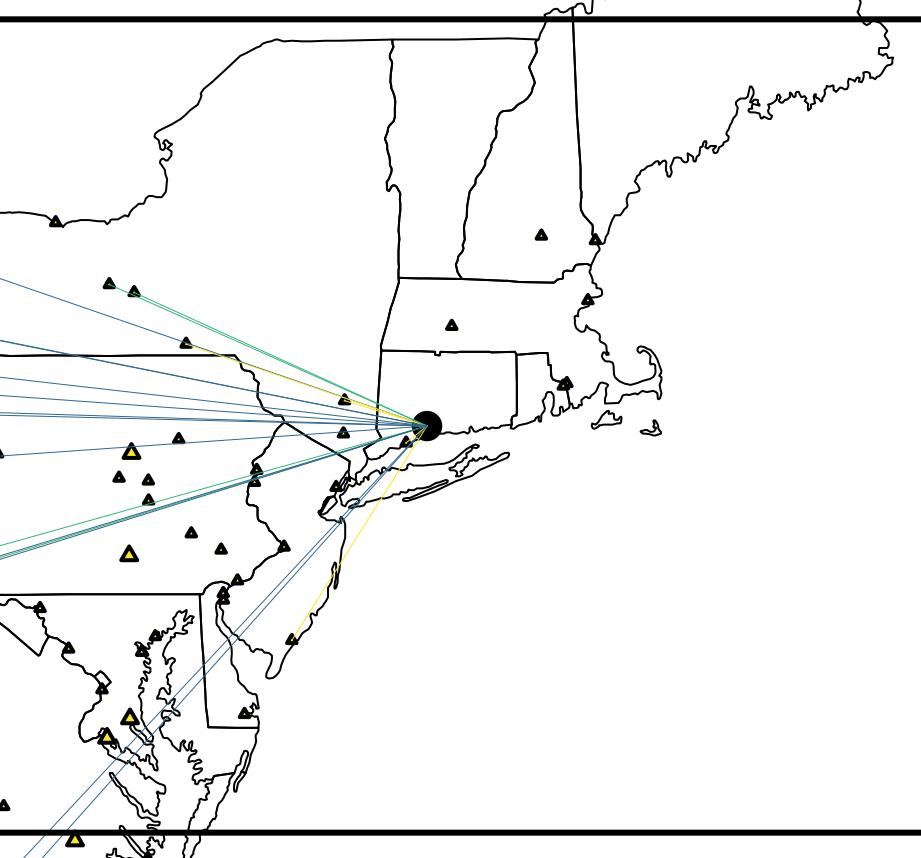
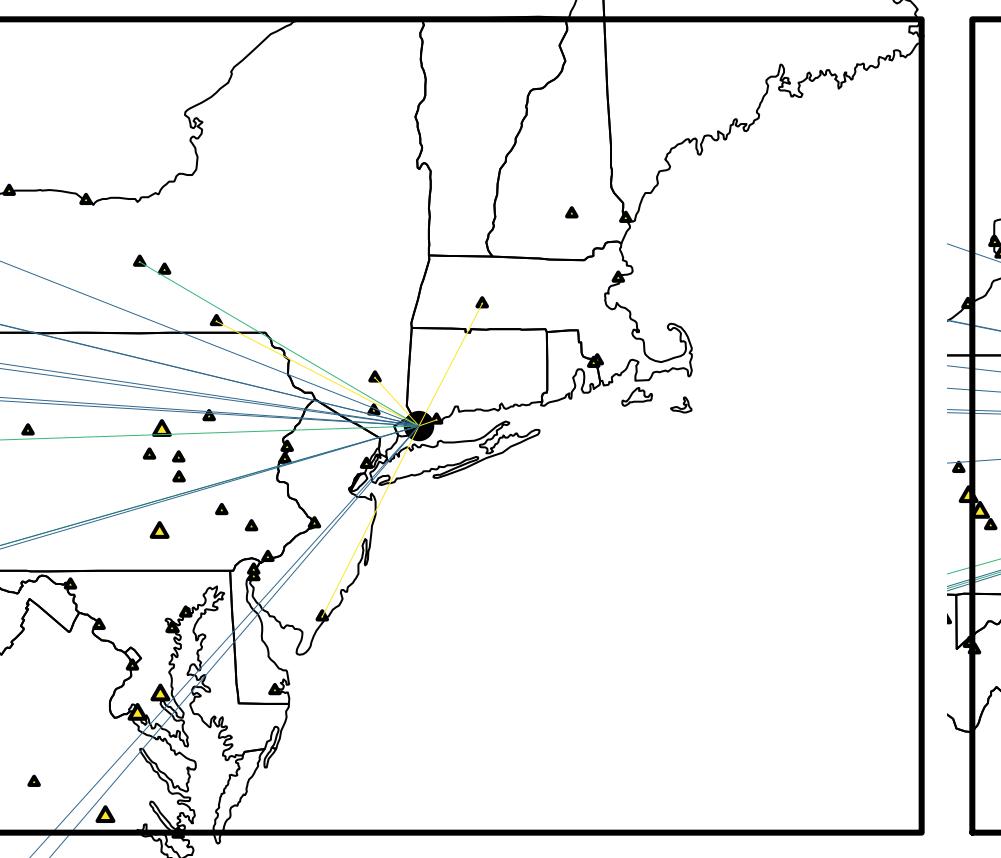
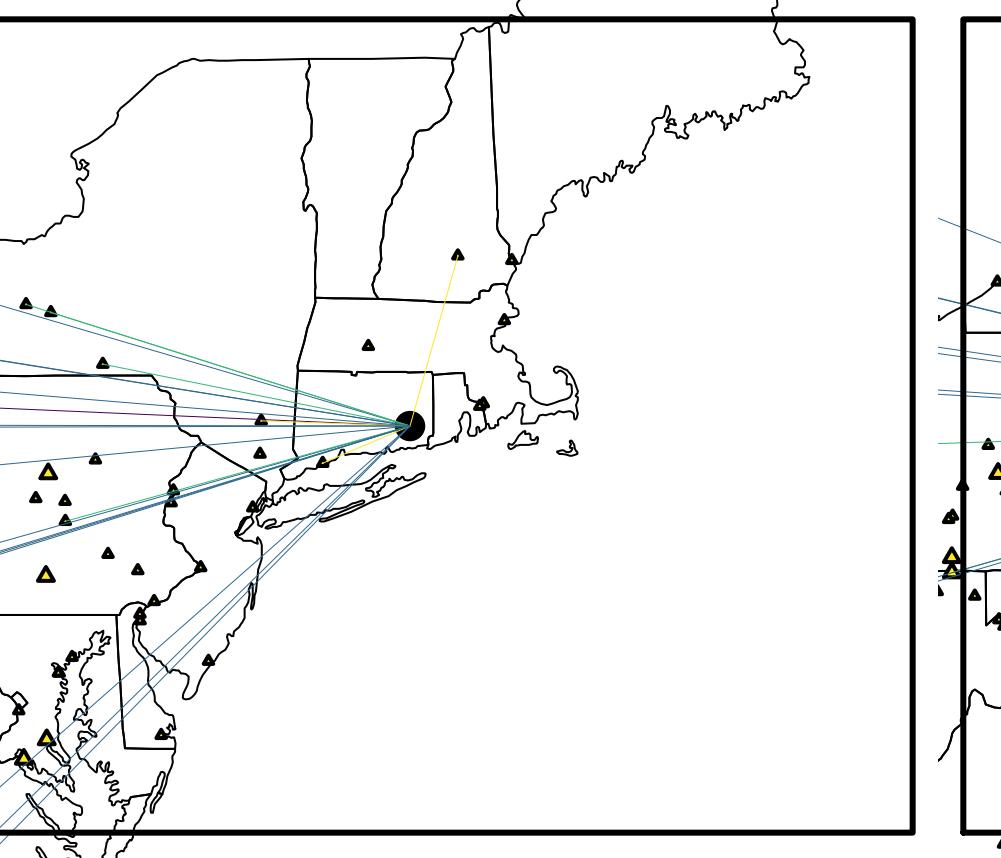
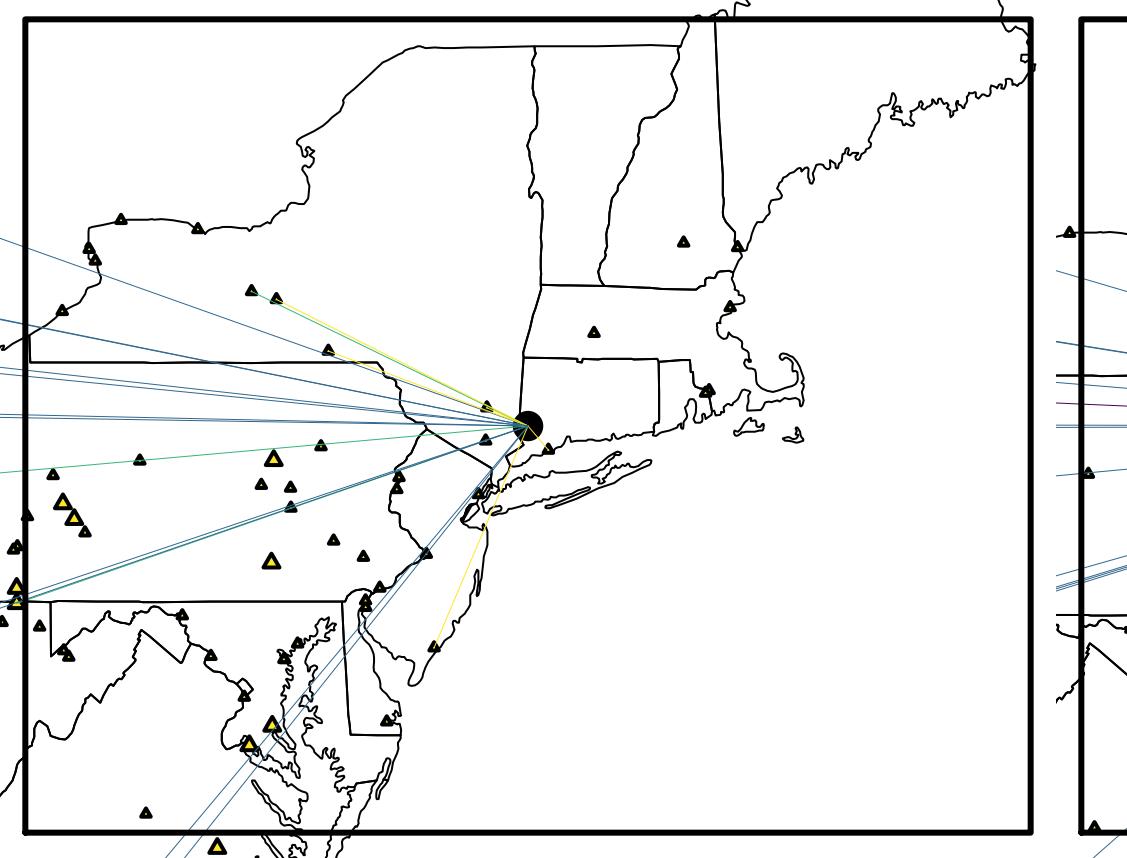
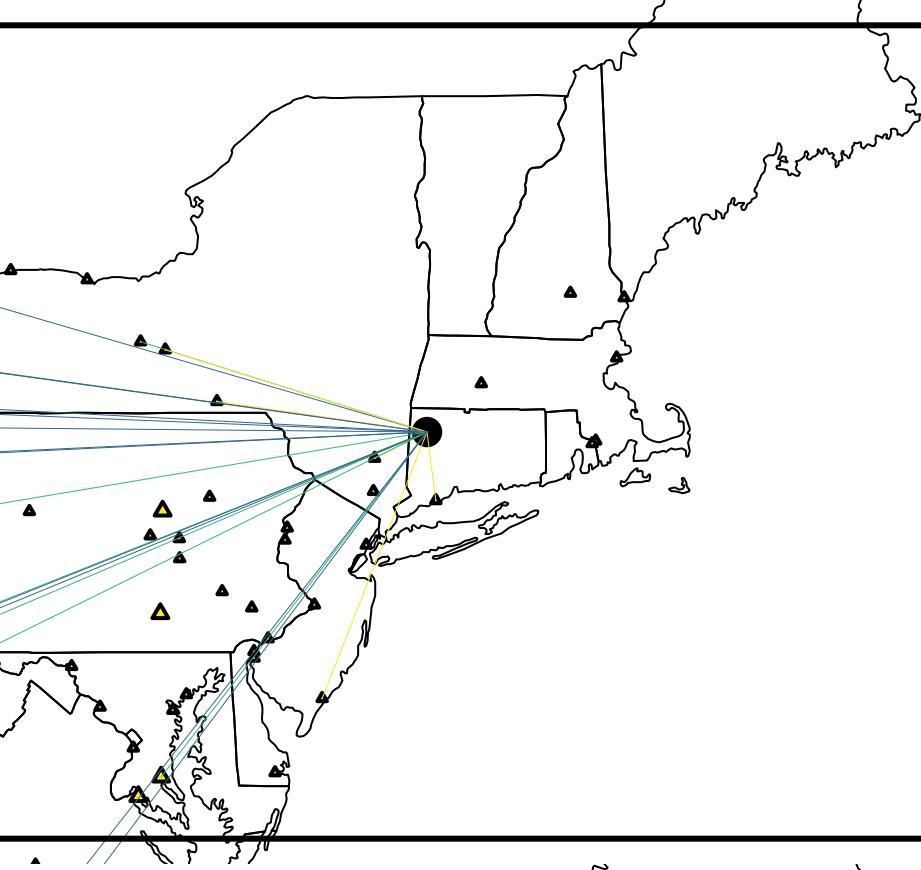
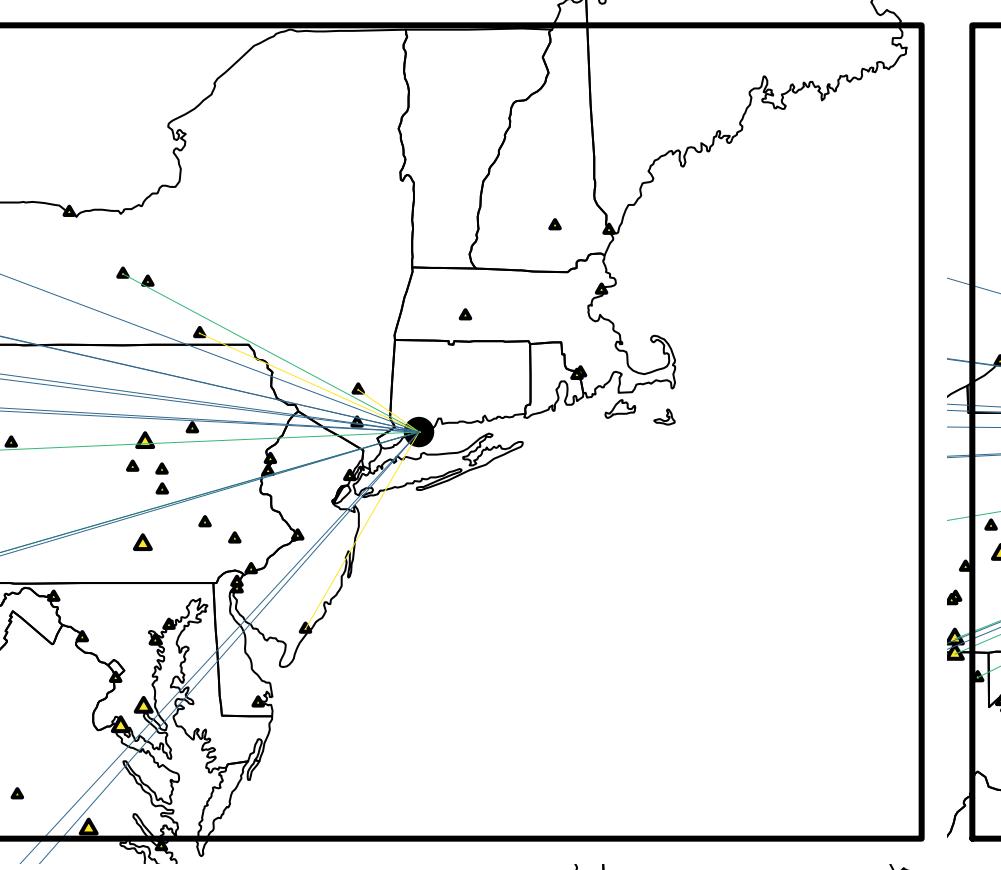
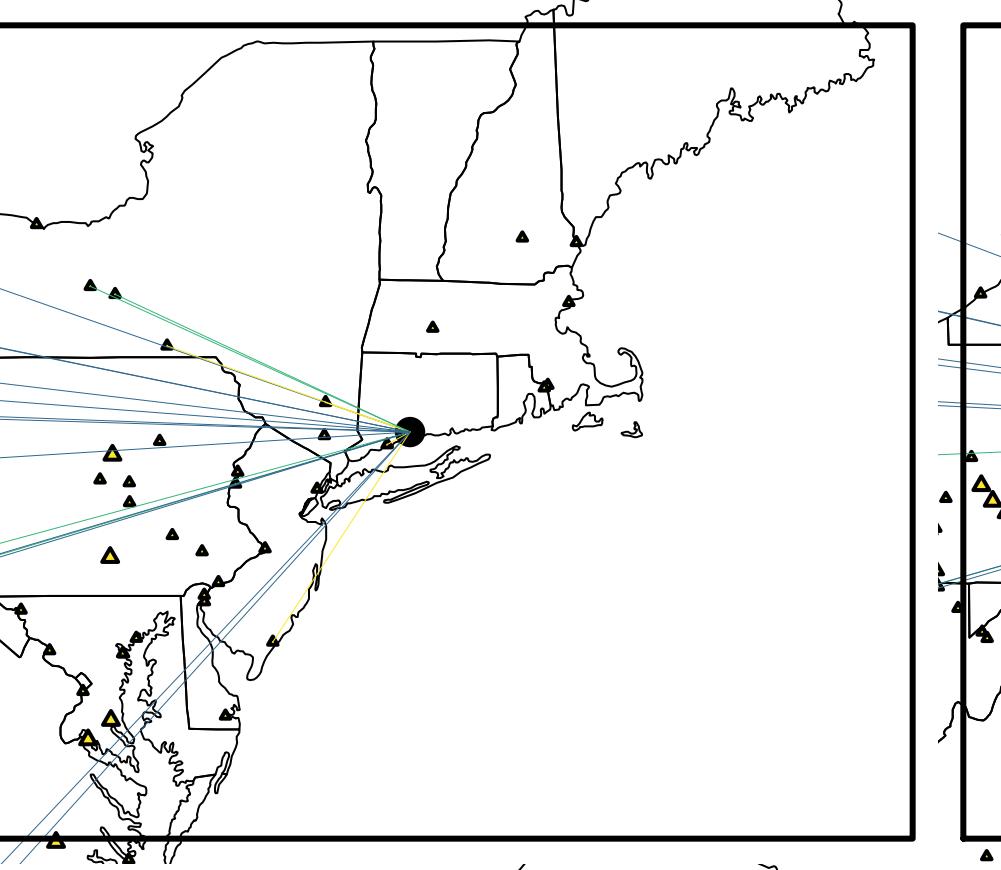
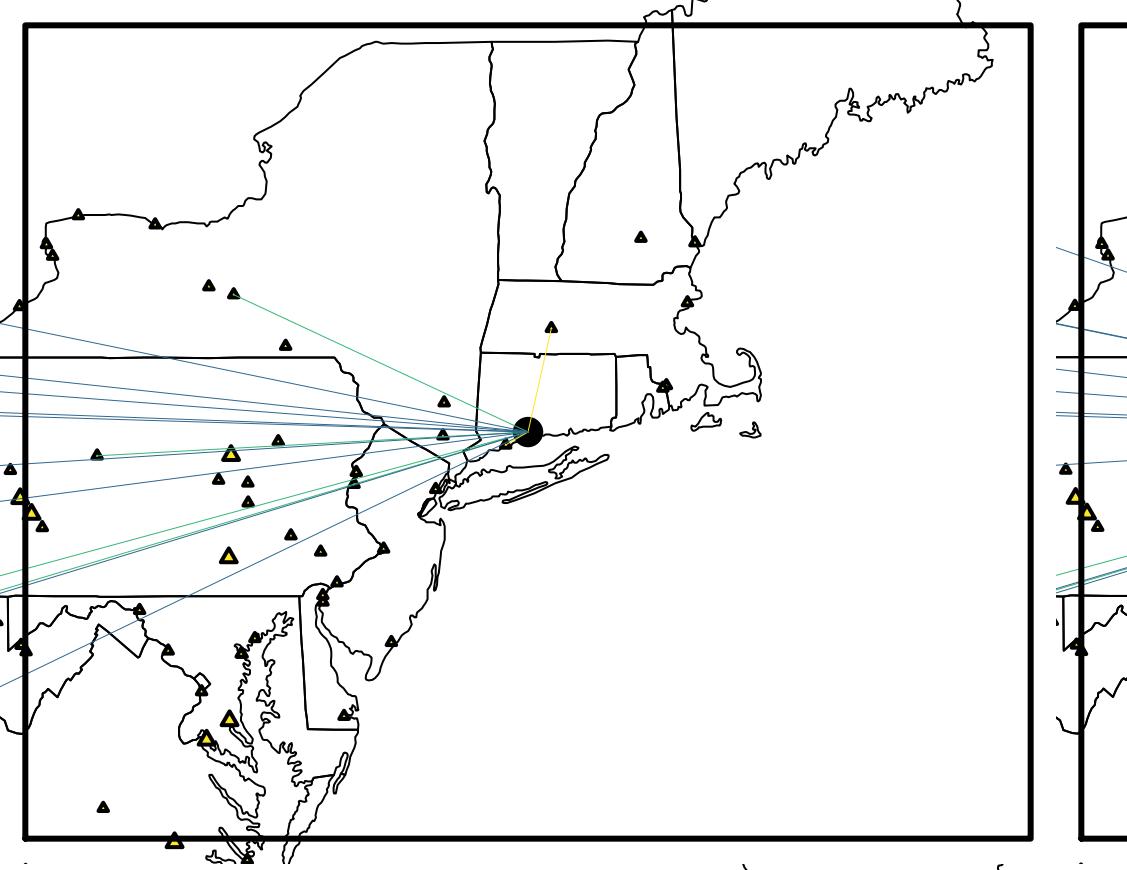
Lag 3 edges

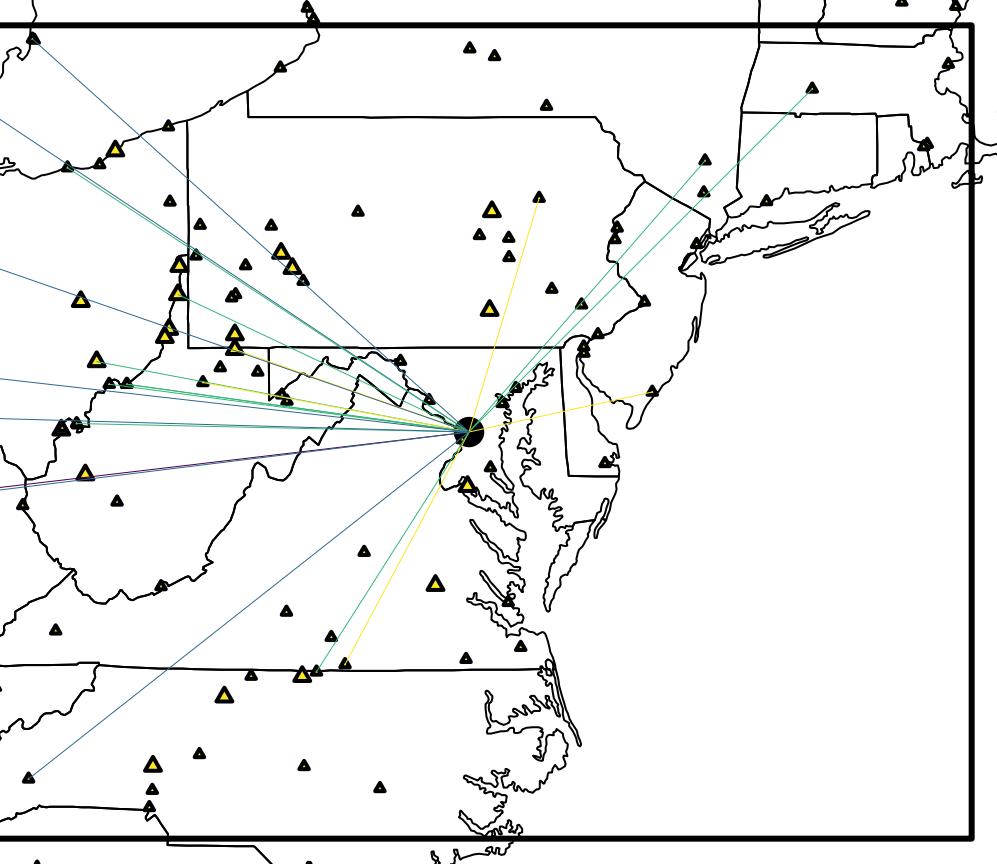
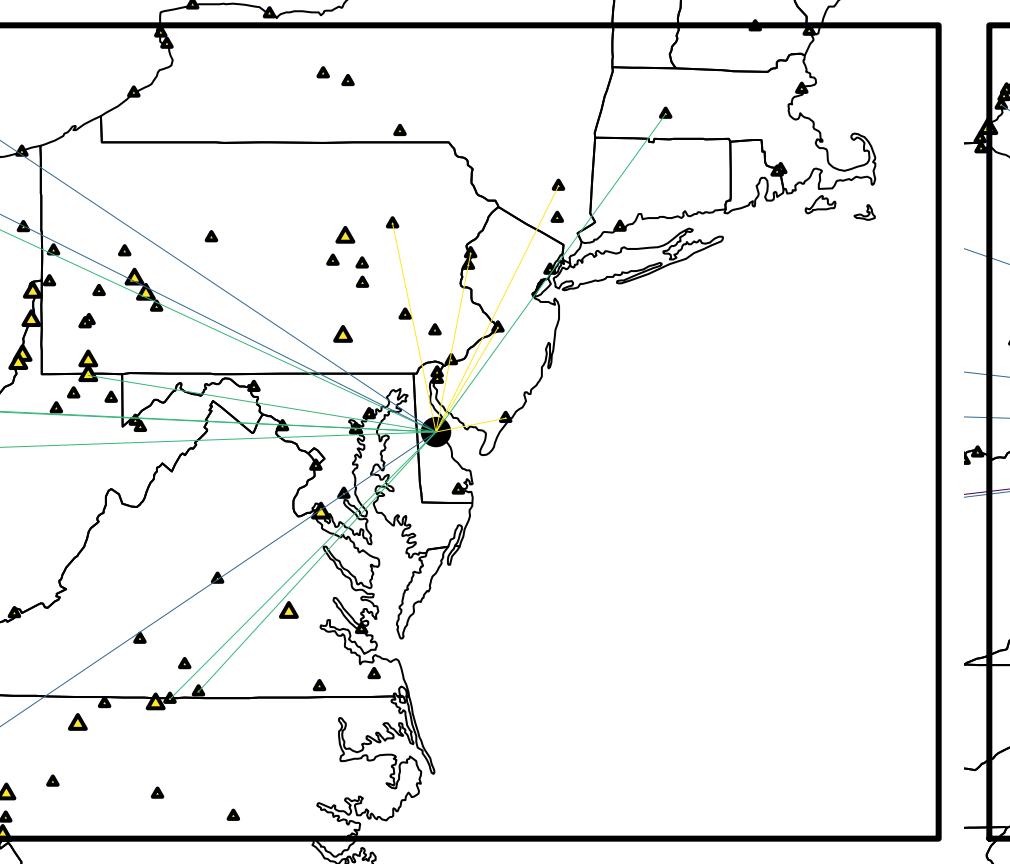
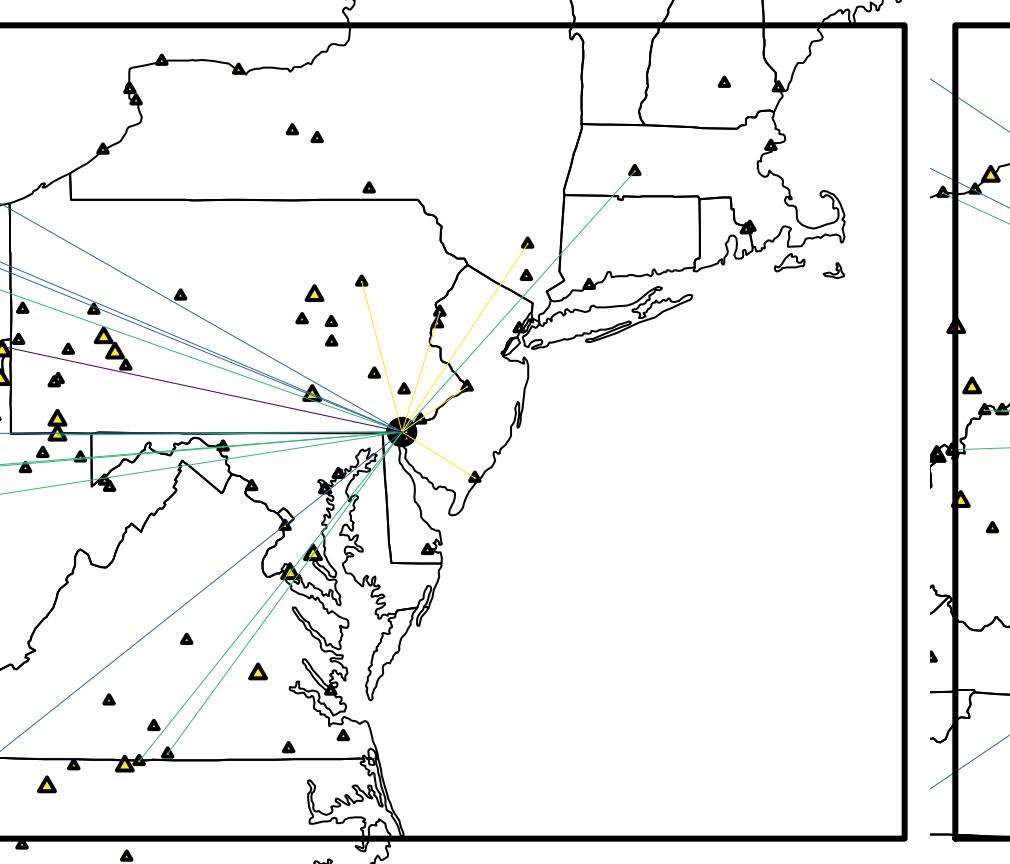
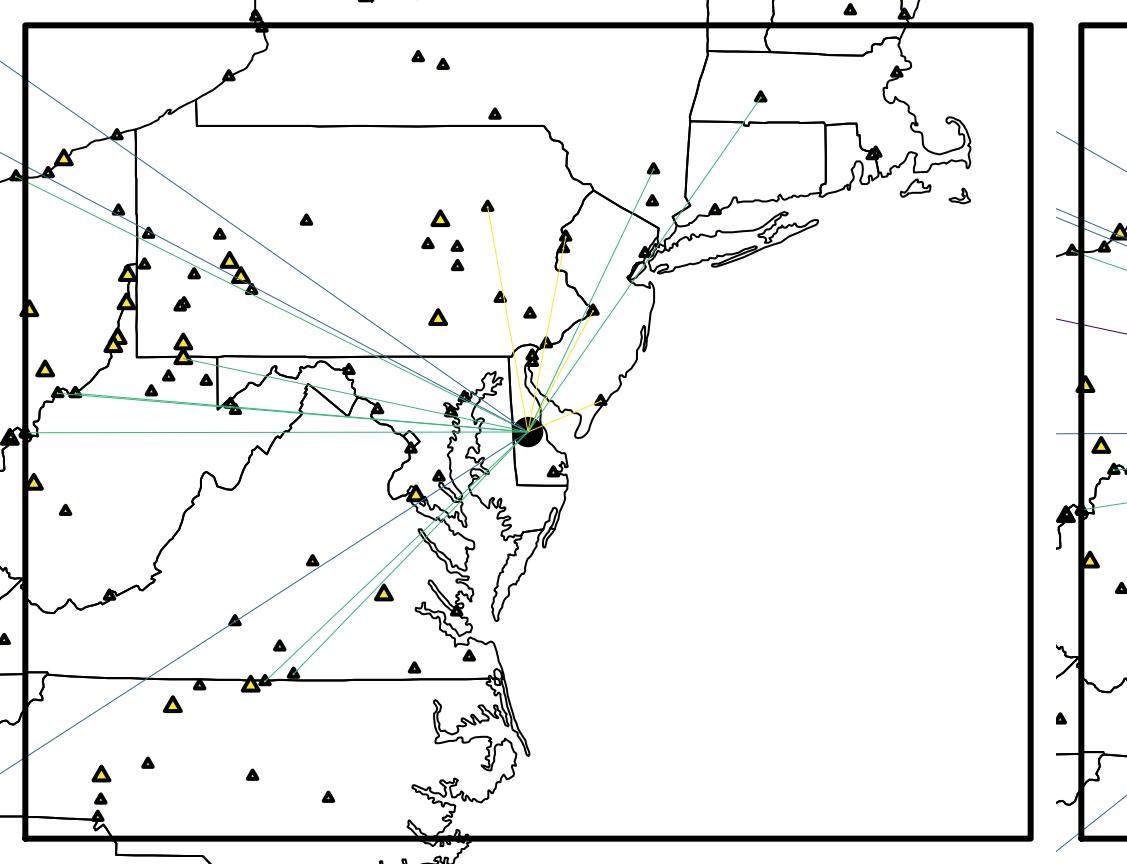
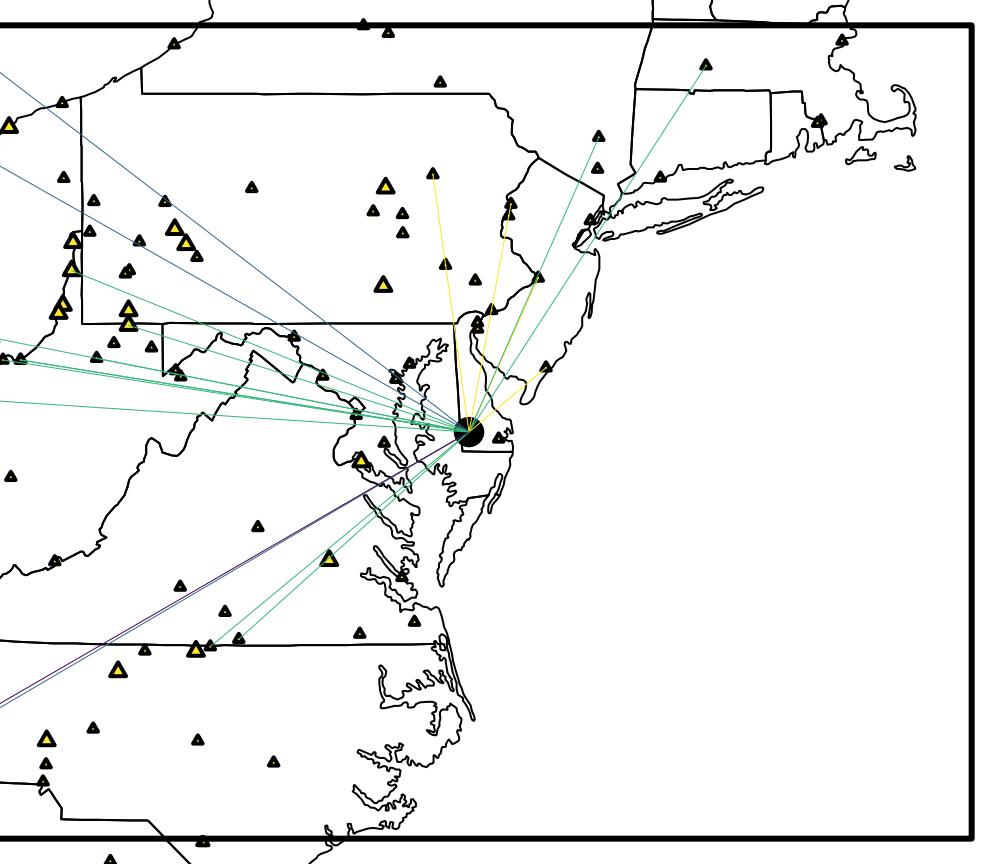
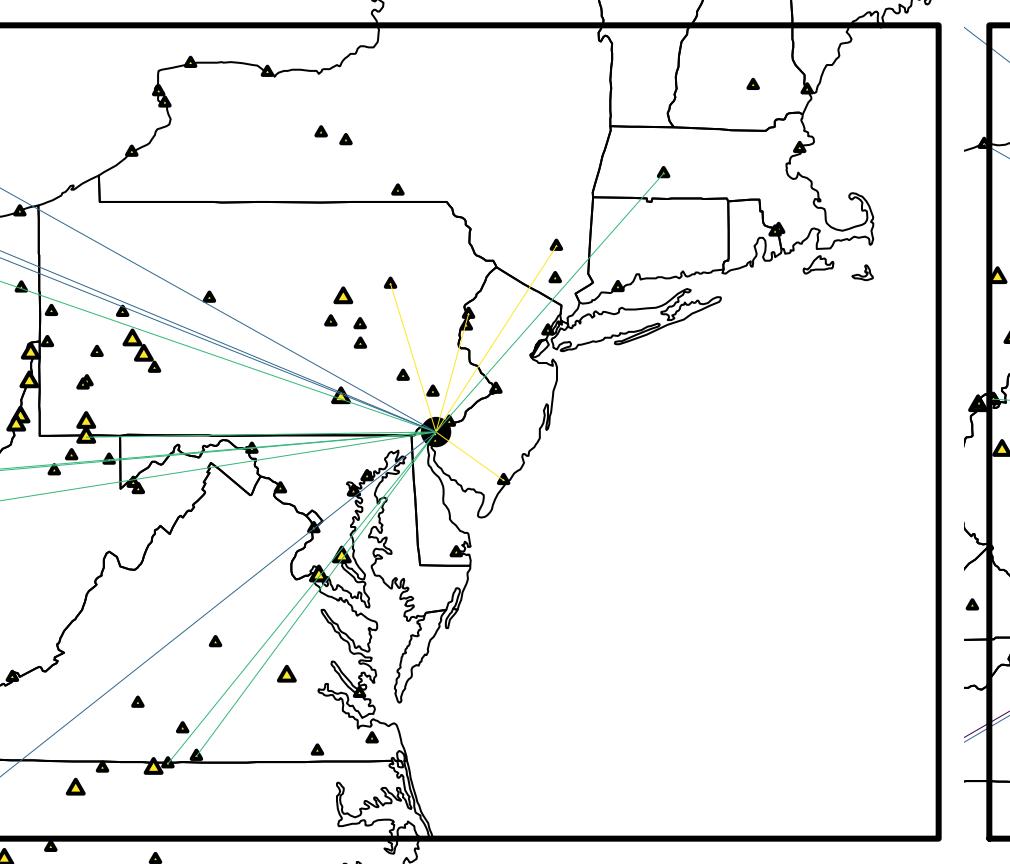
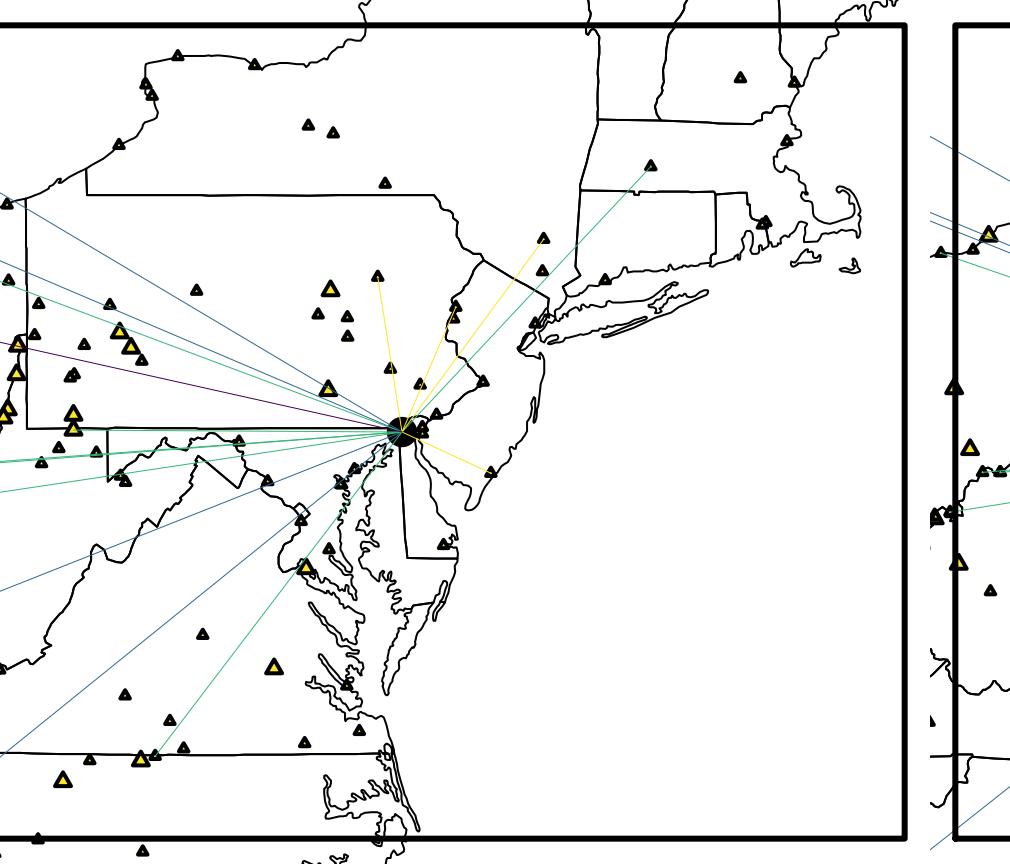
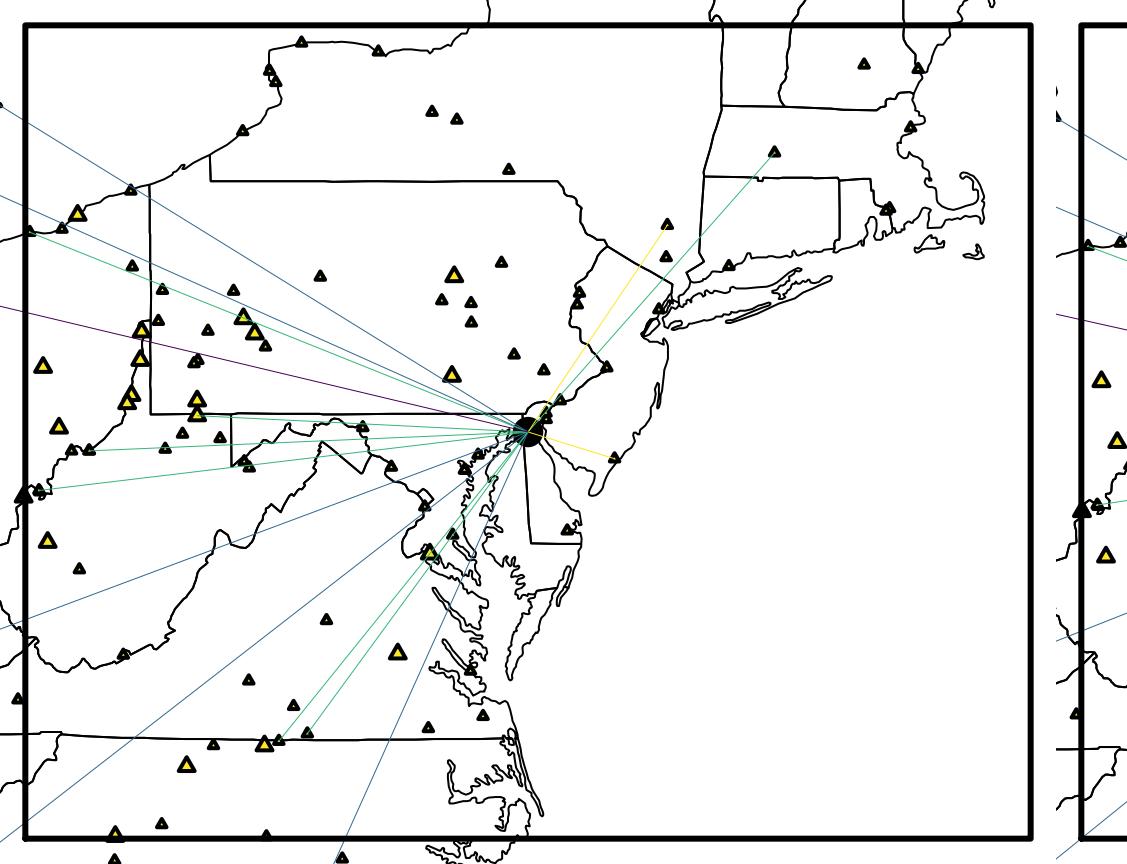


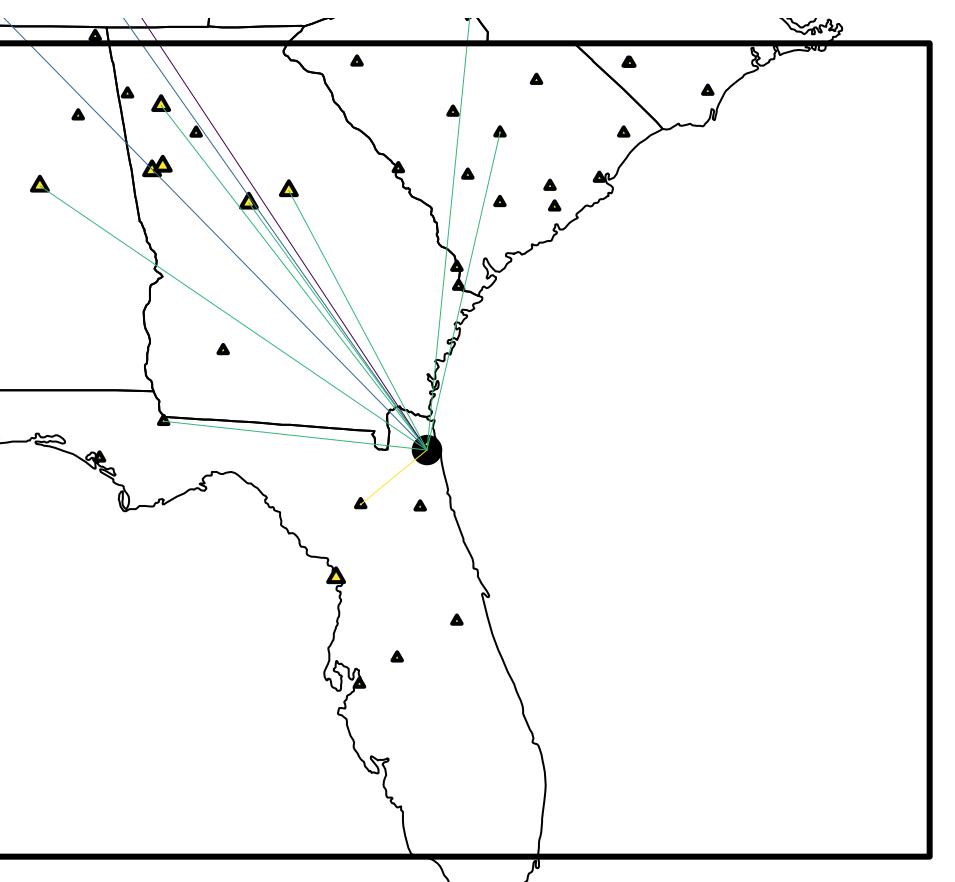
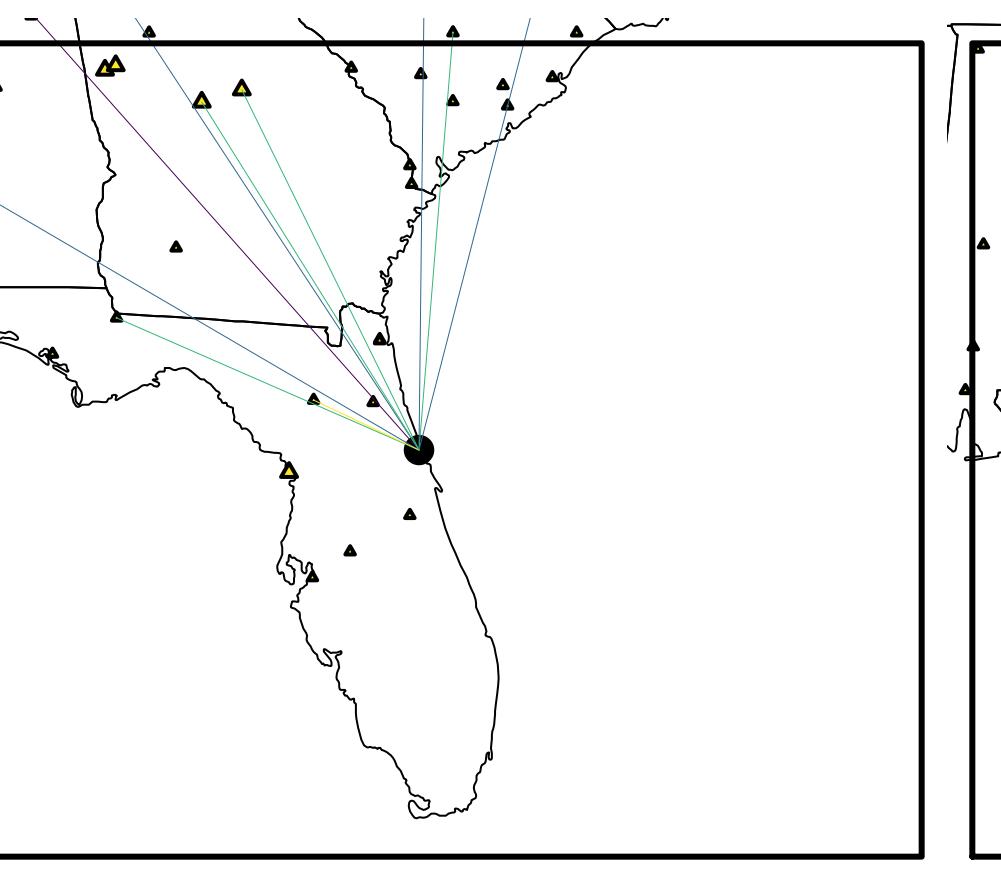
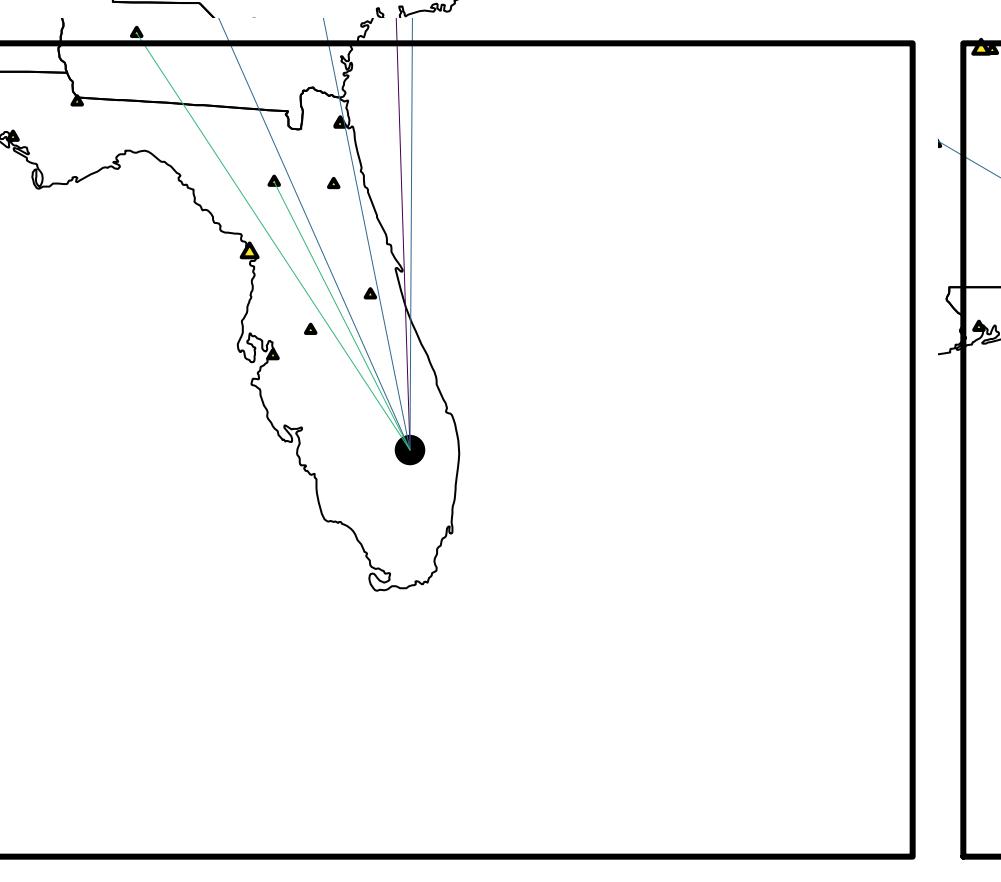
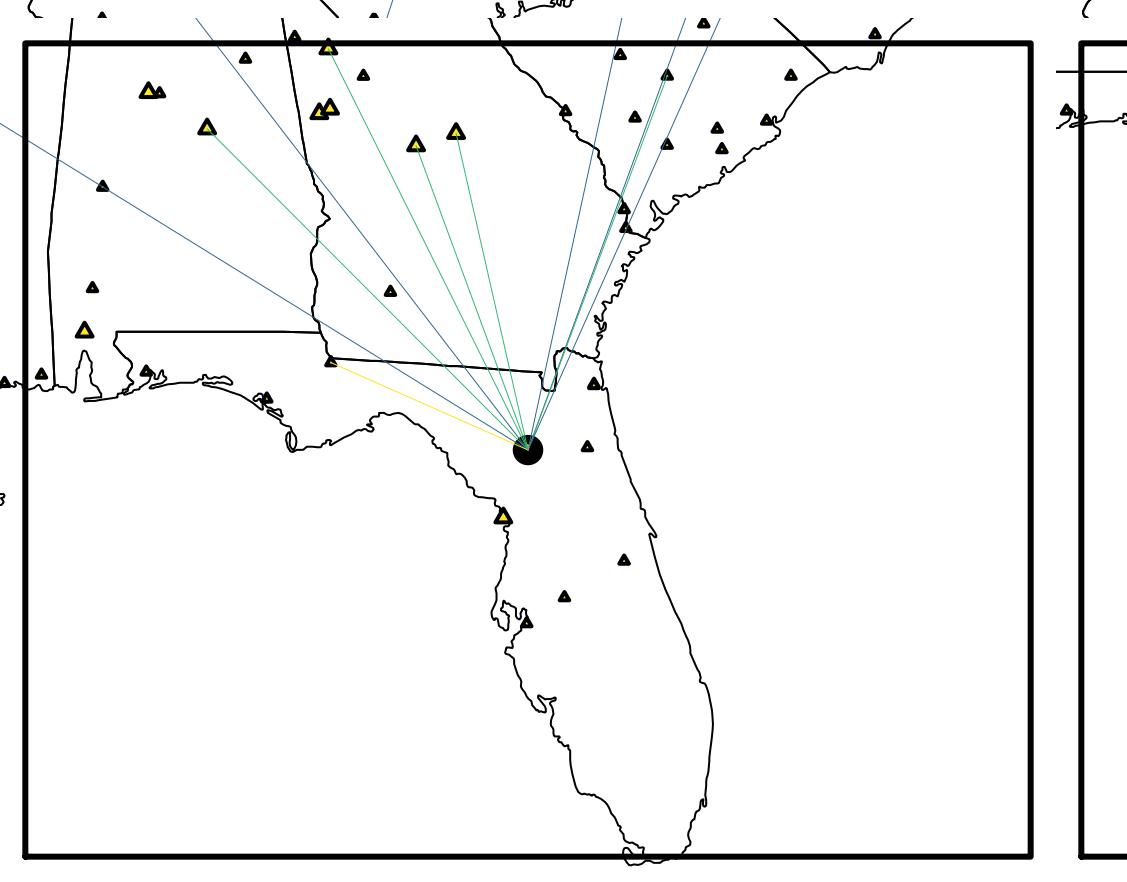
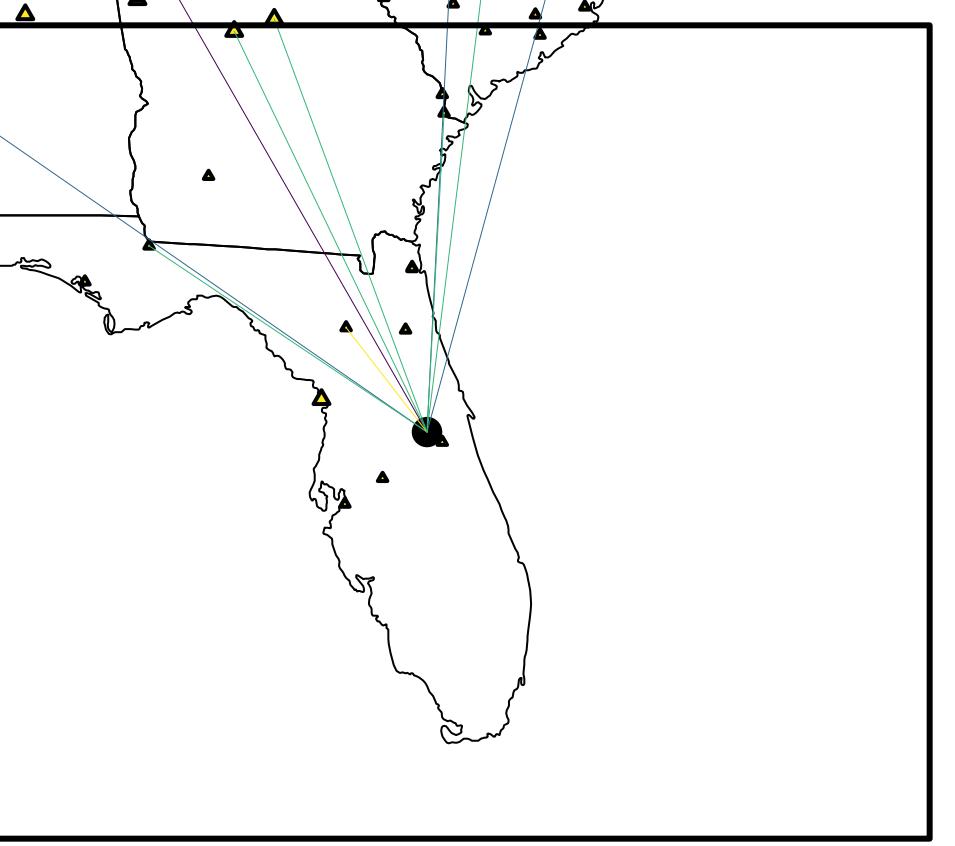
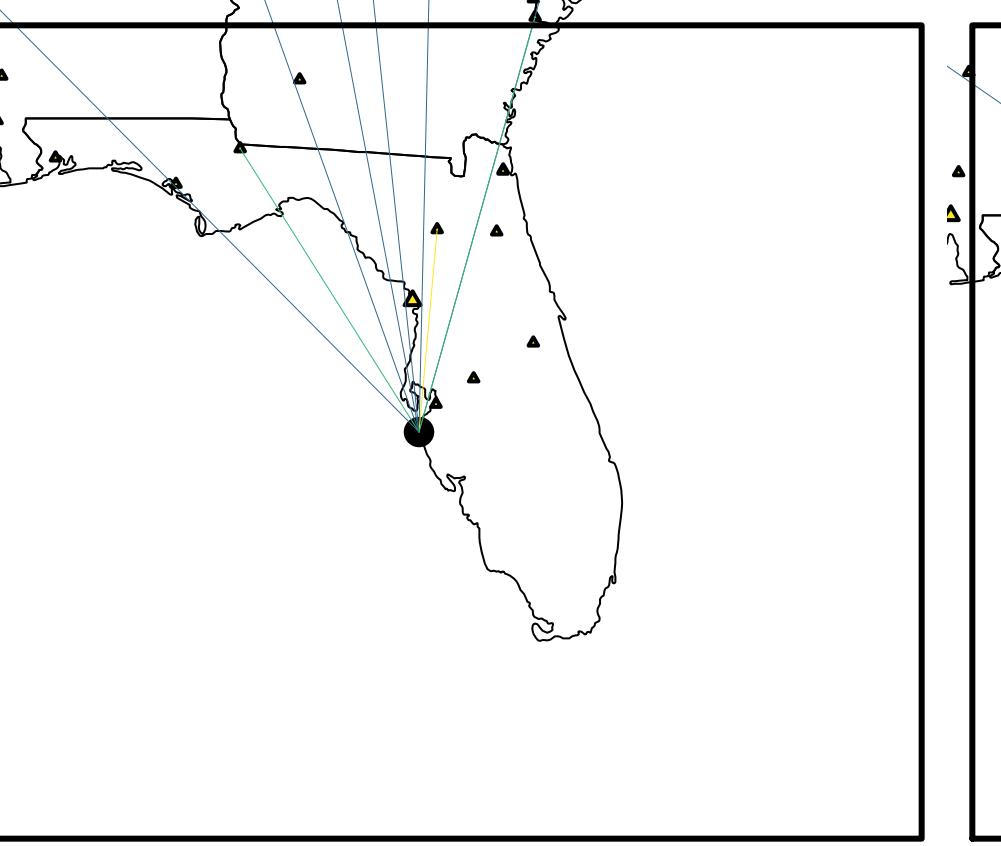
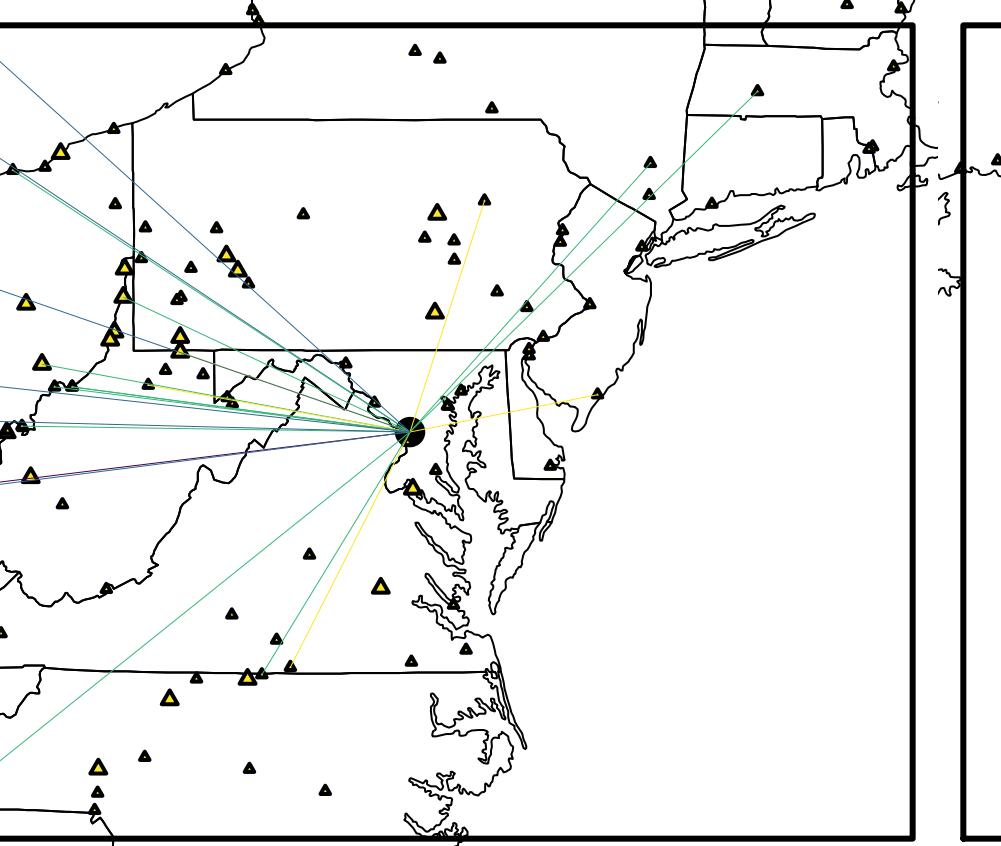
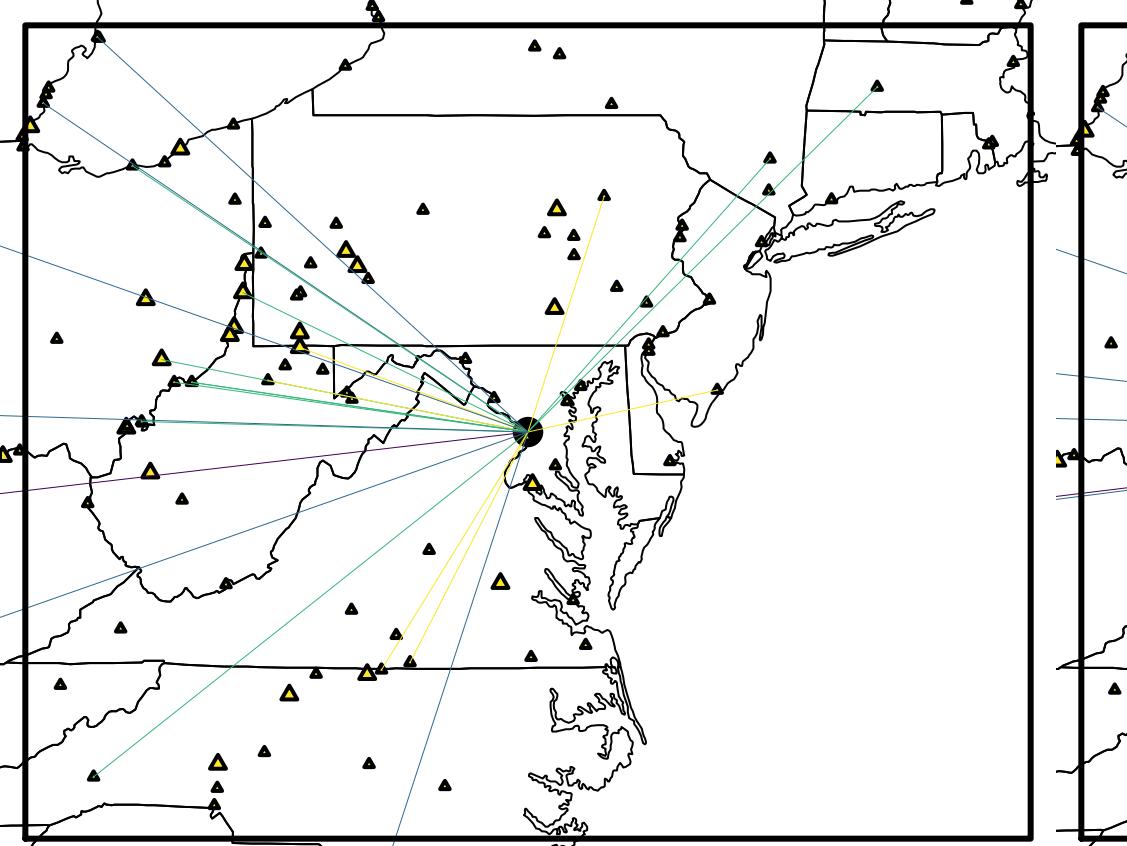


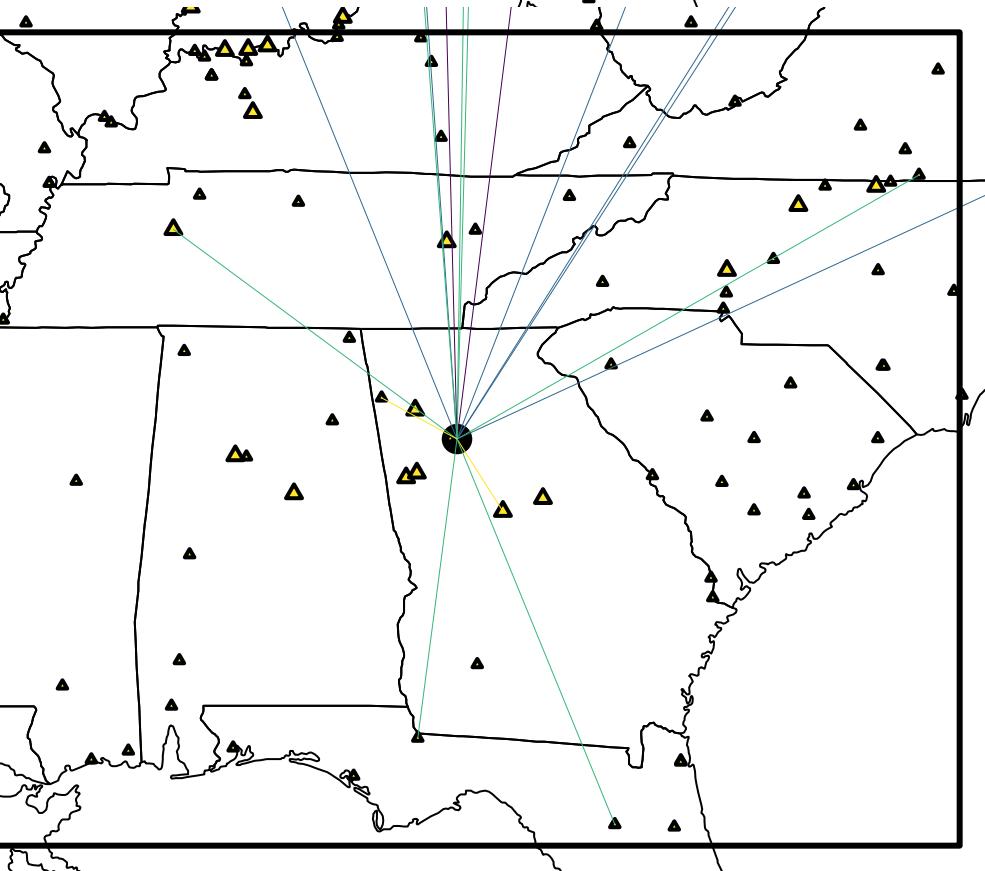
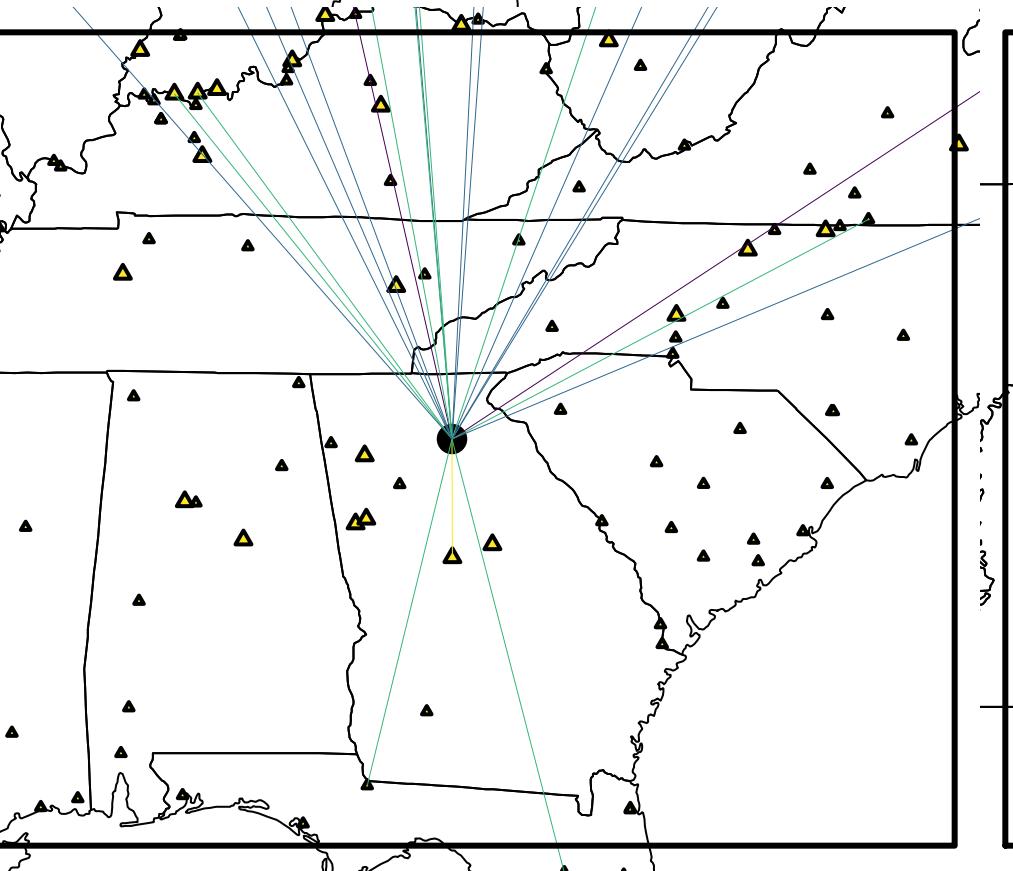
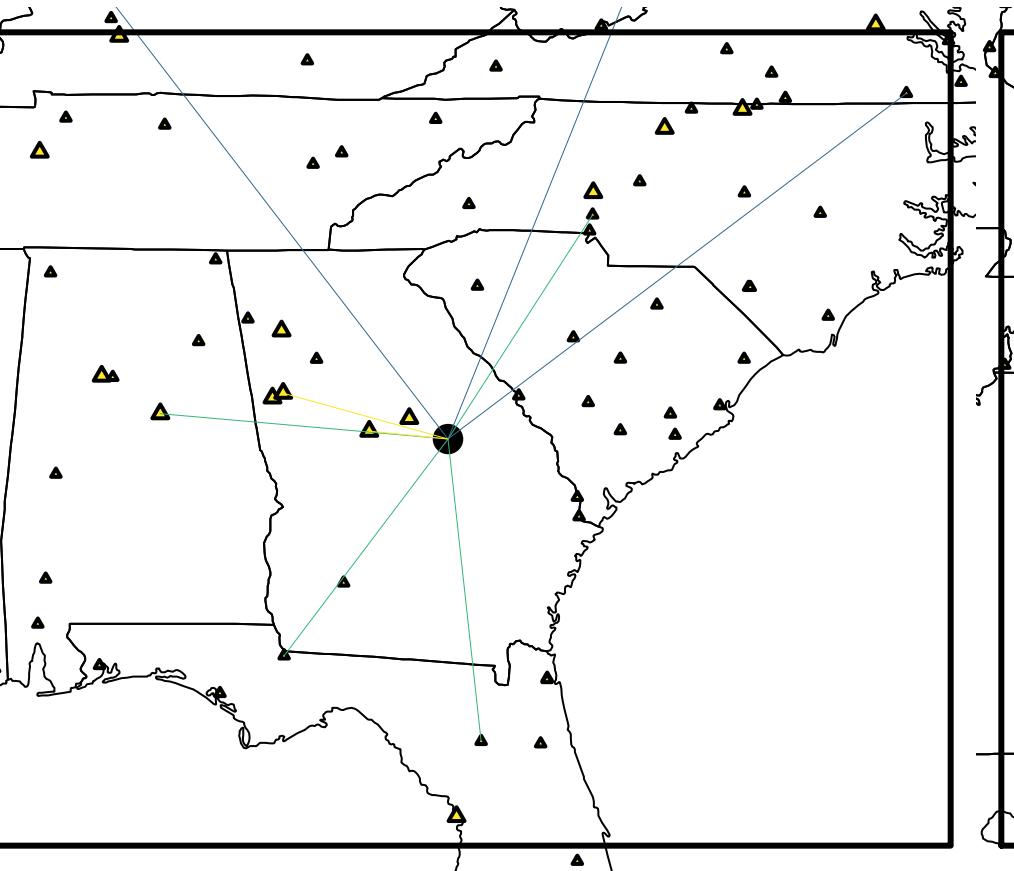
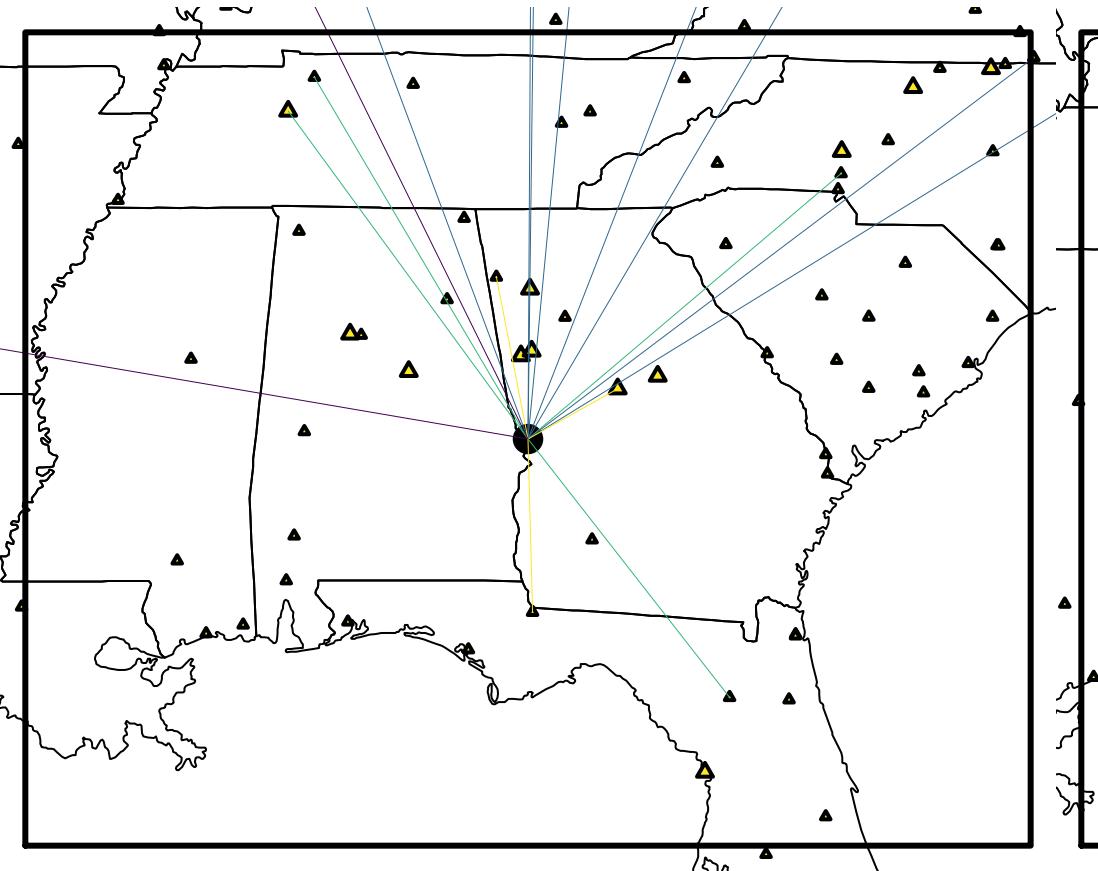
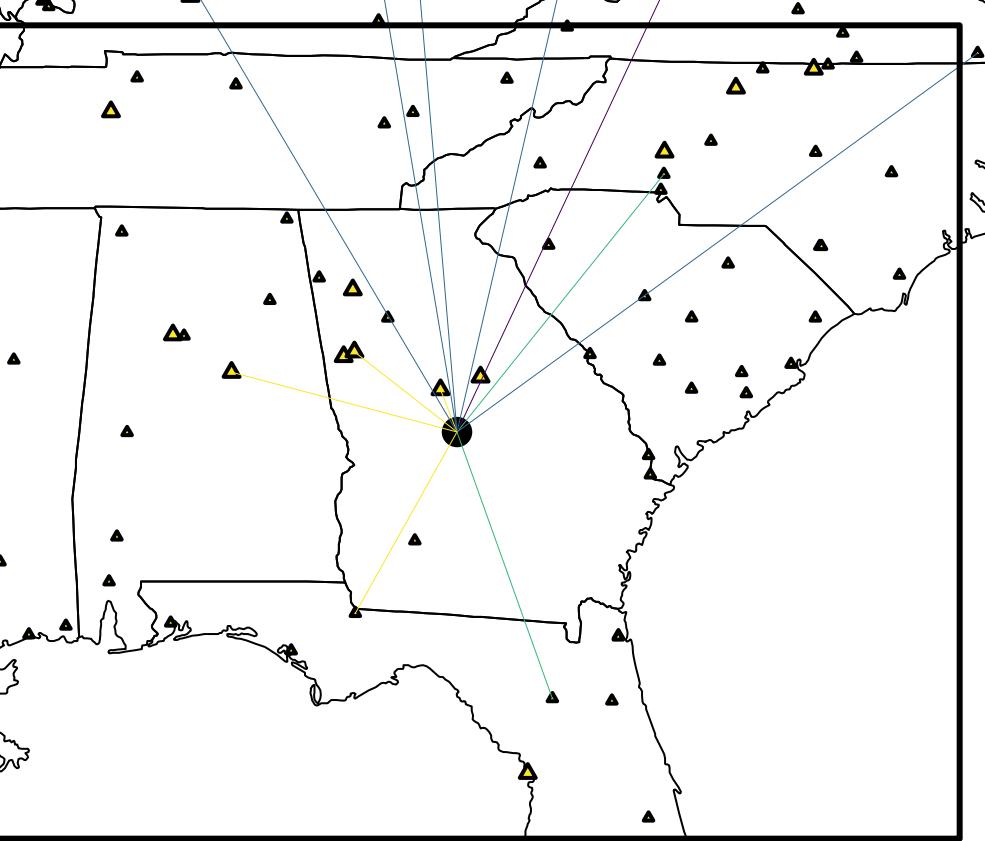
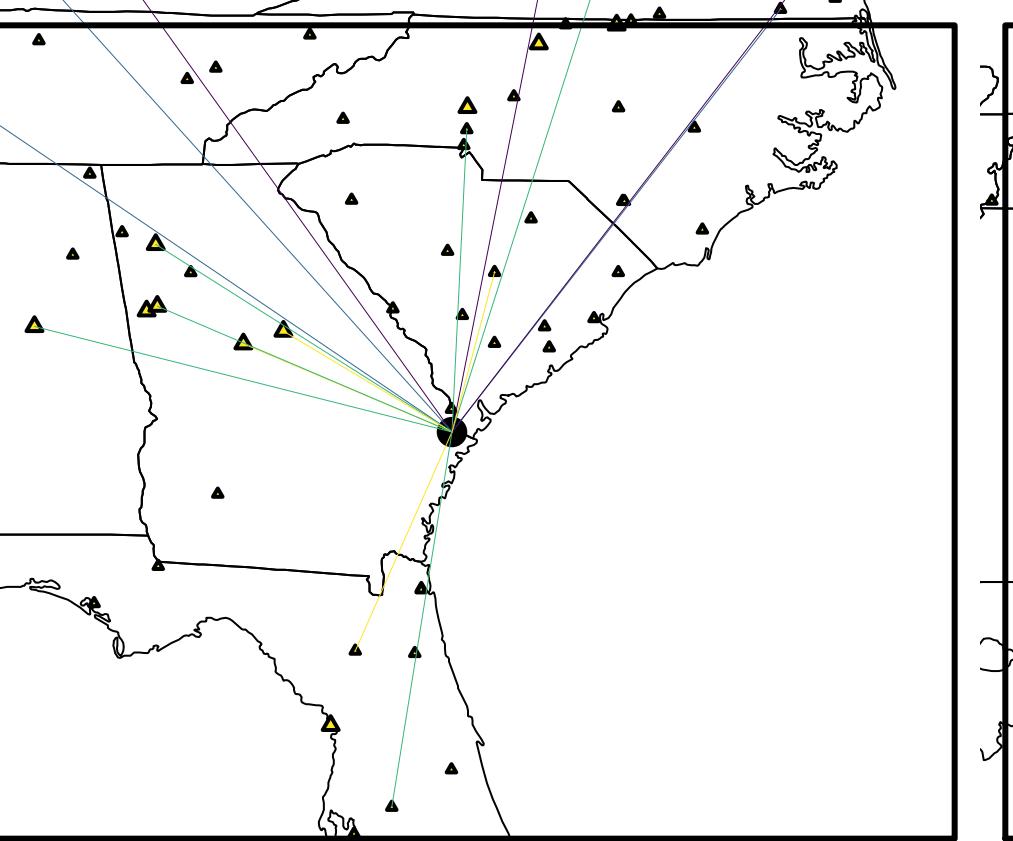
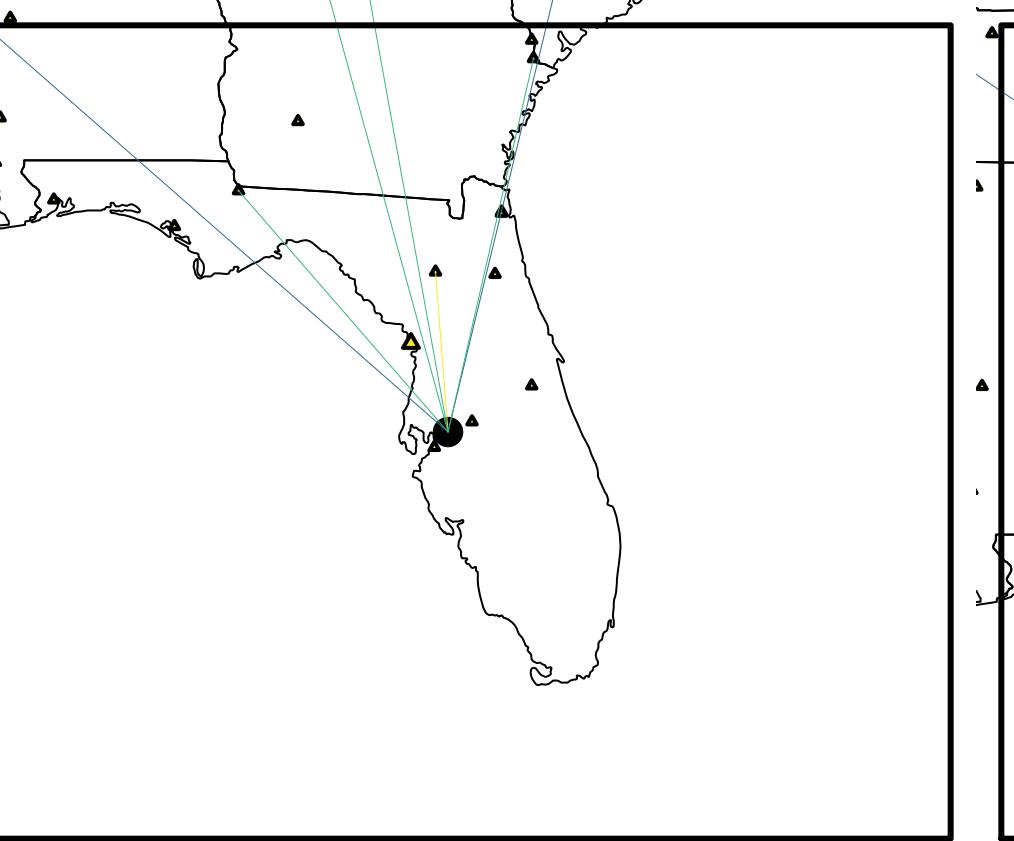
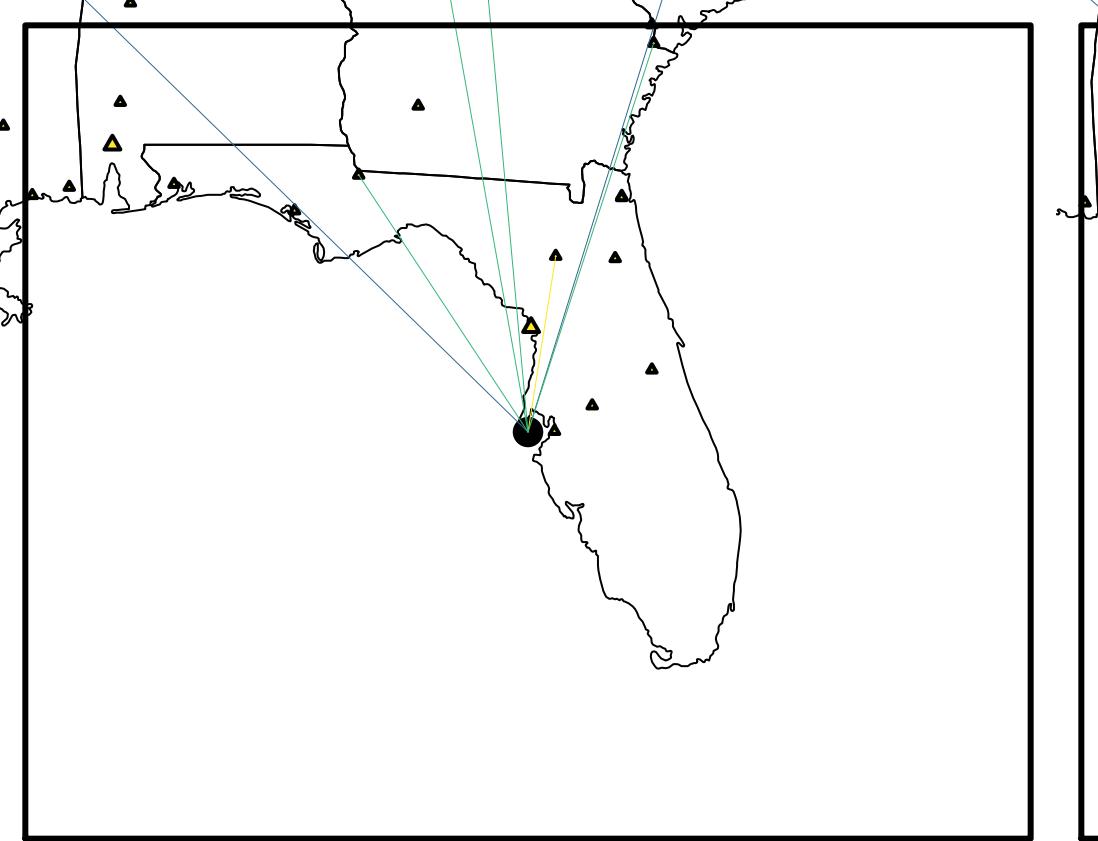


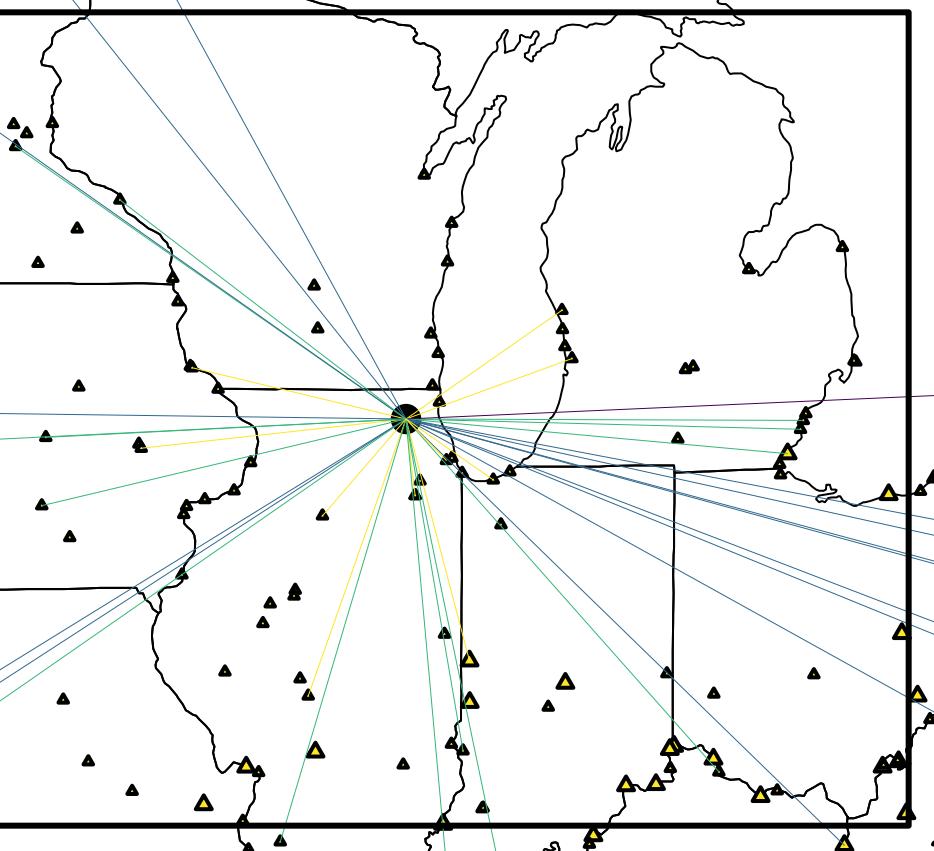
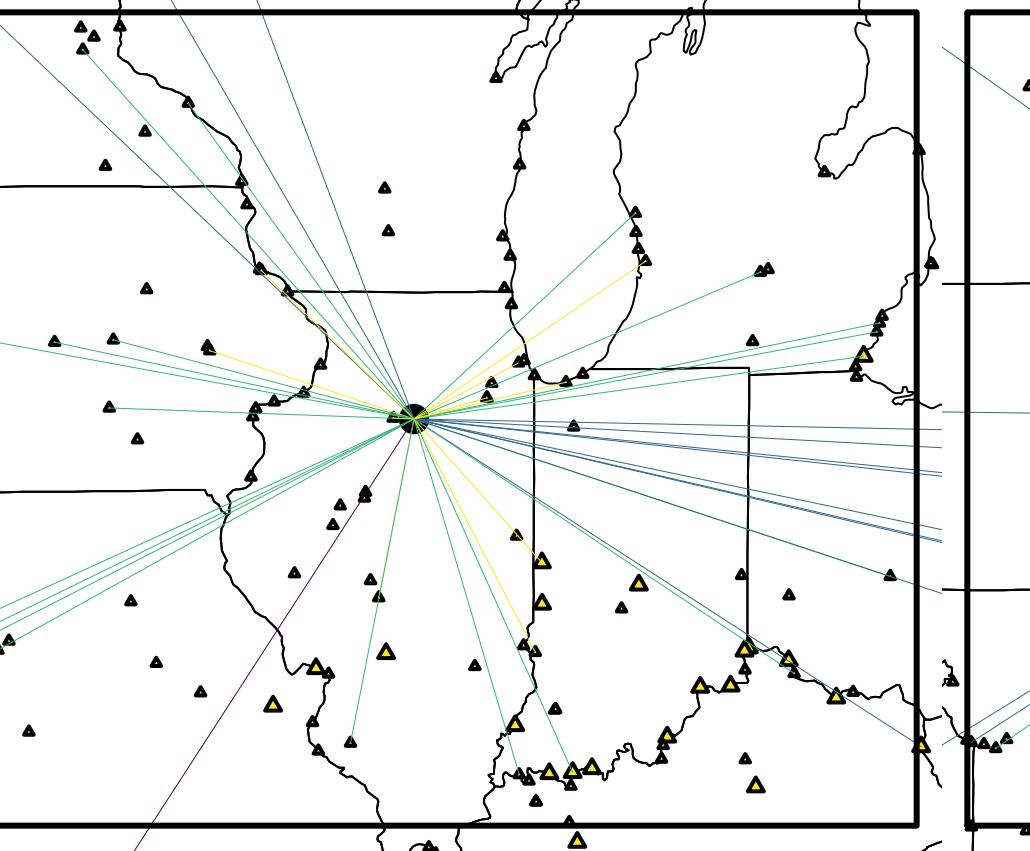
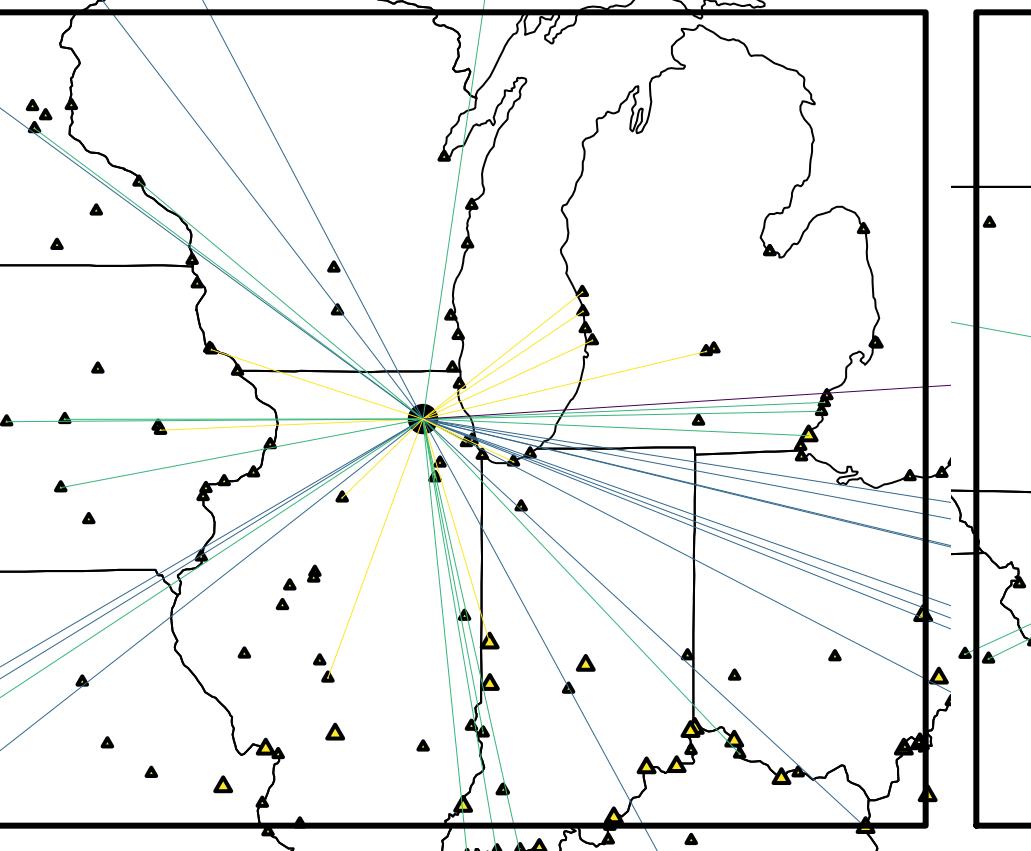
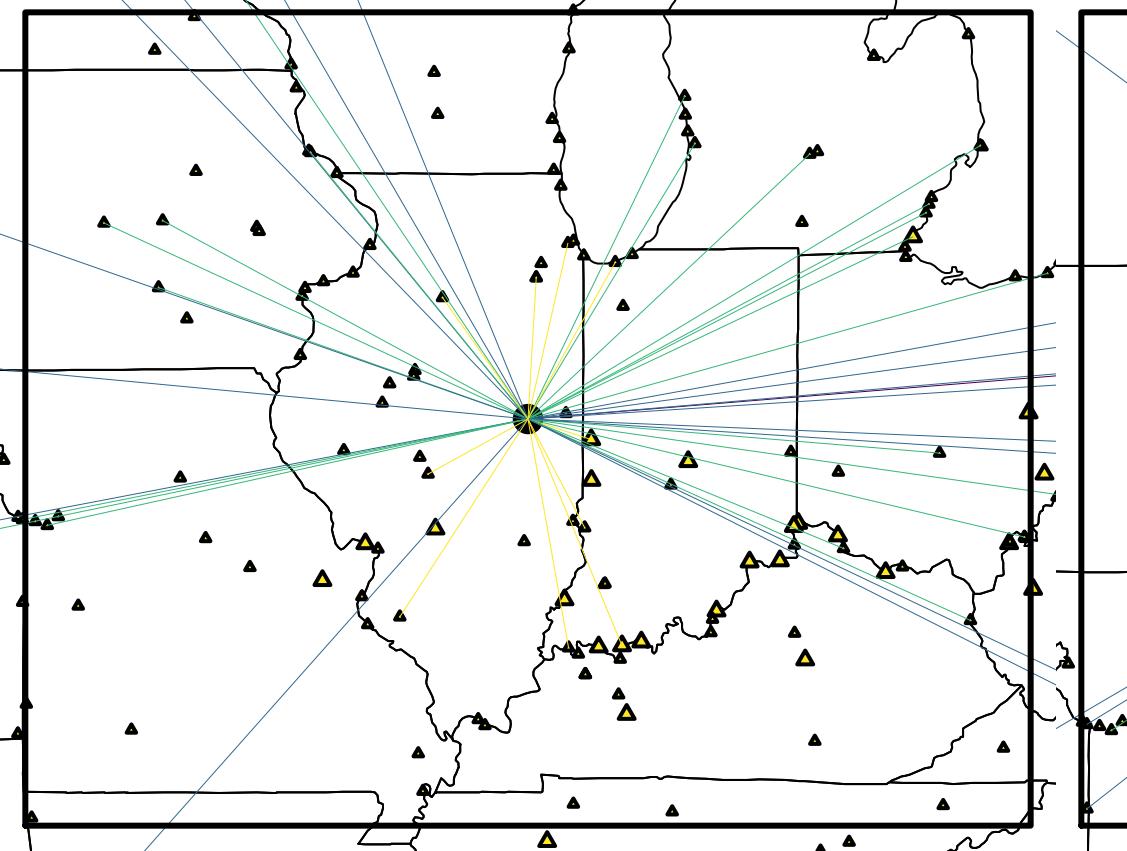
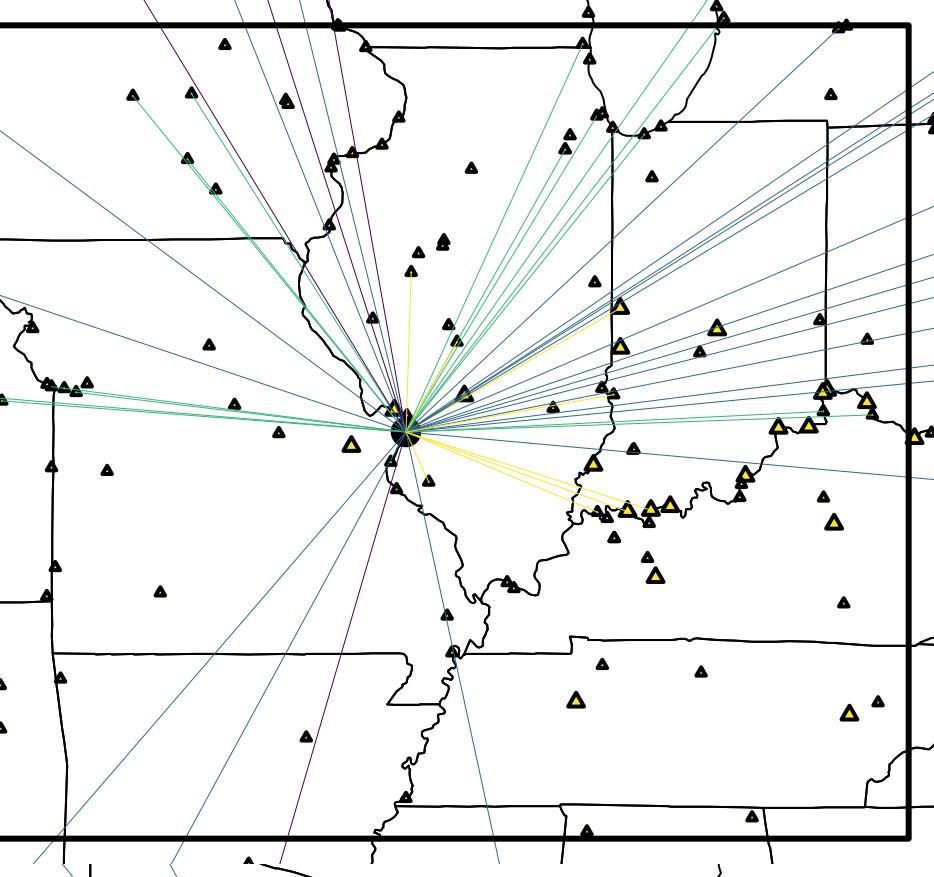
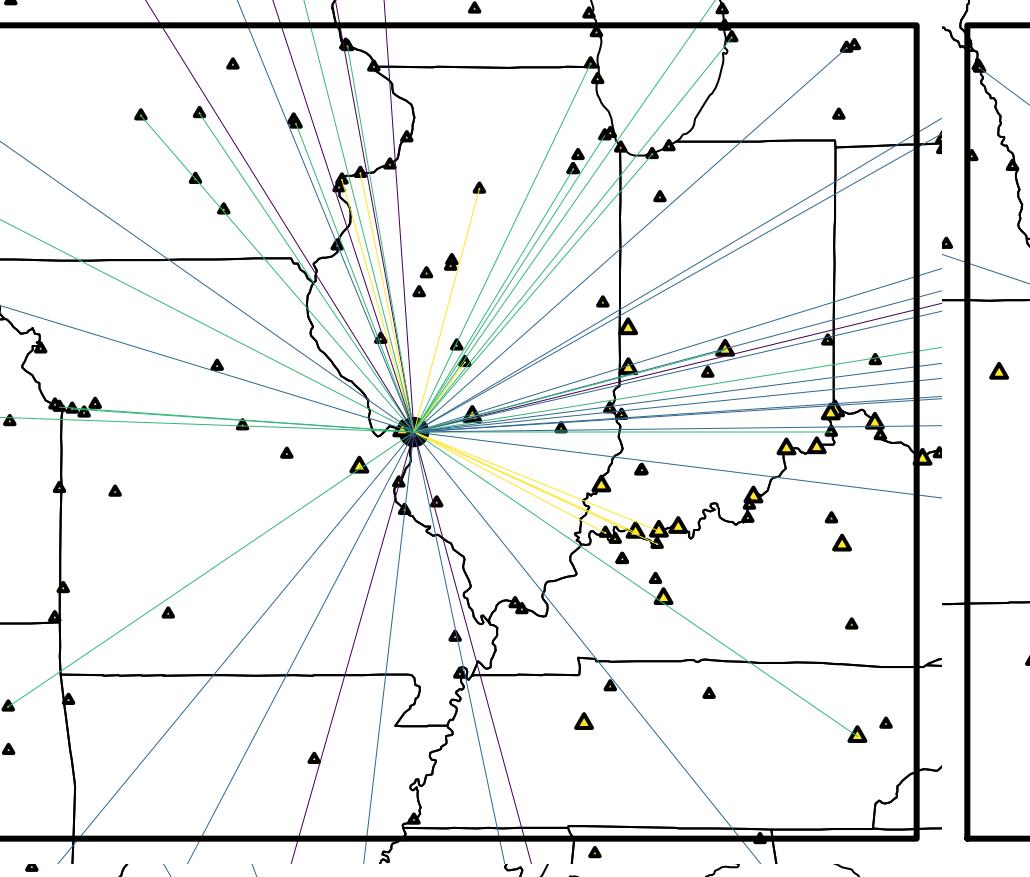
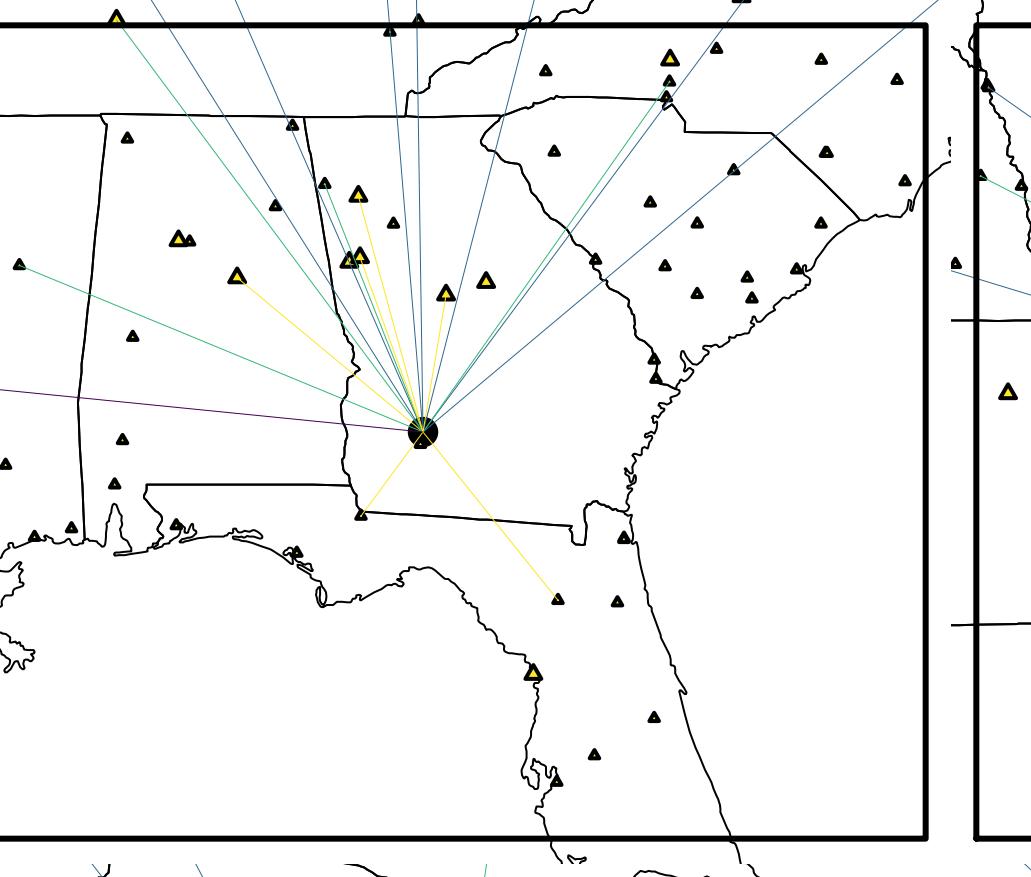
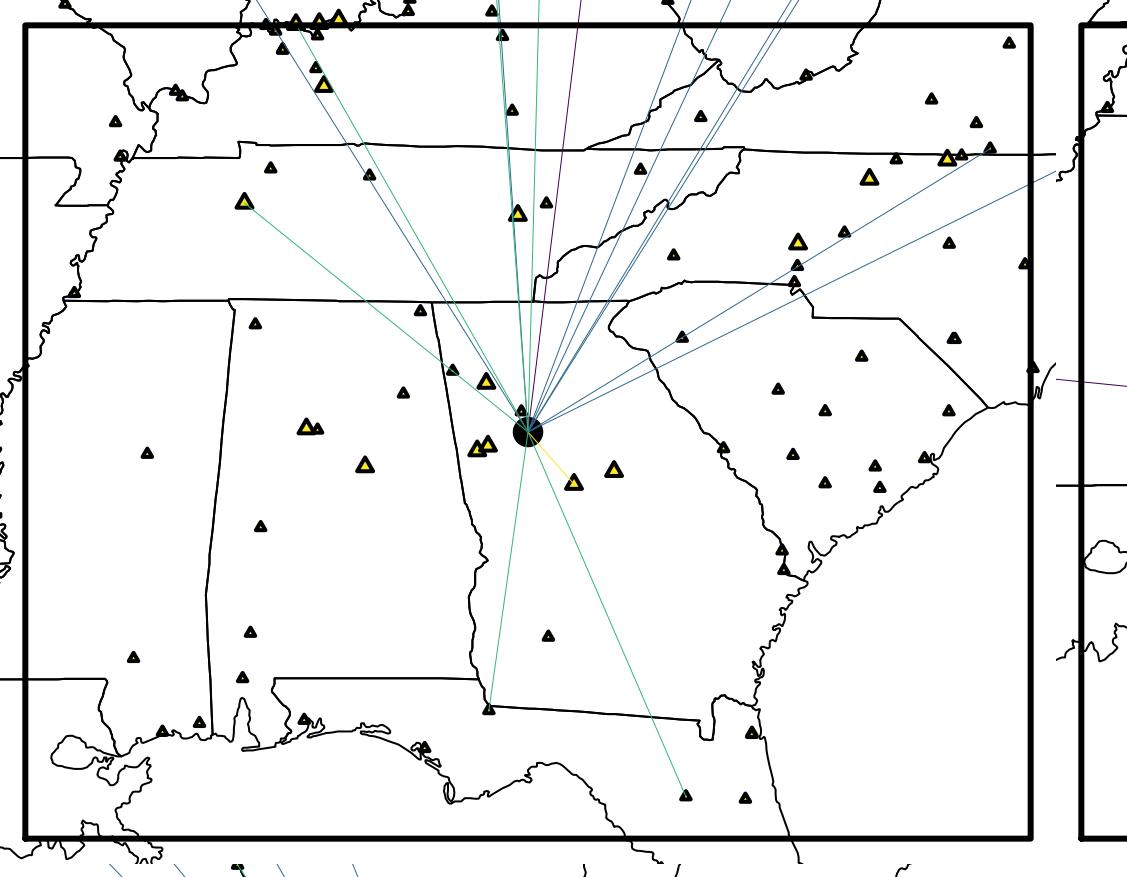


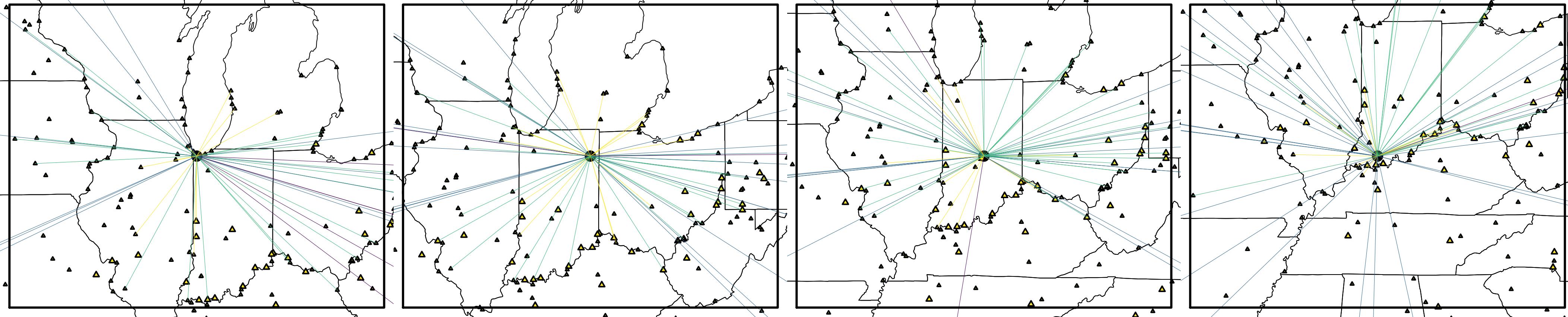
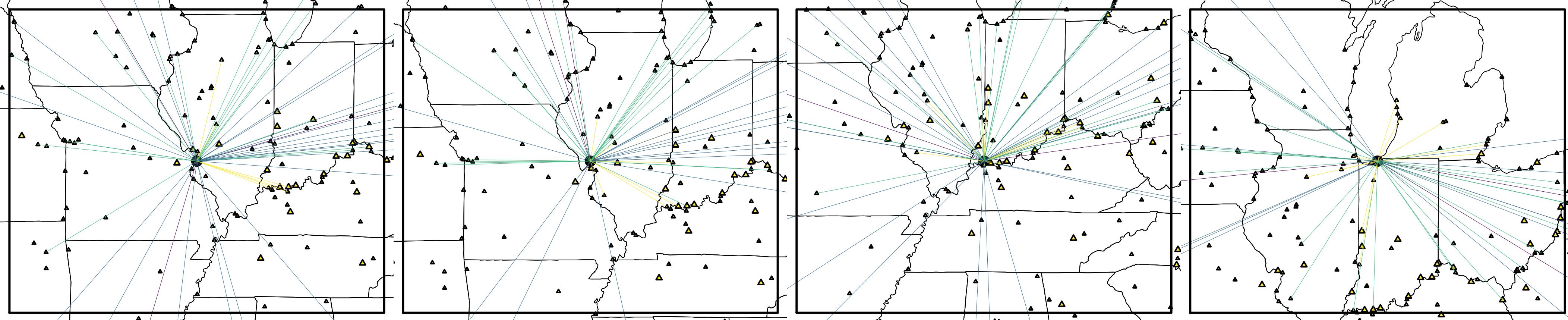


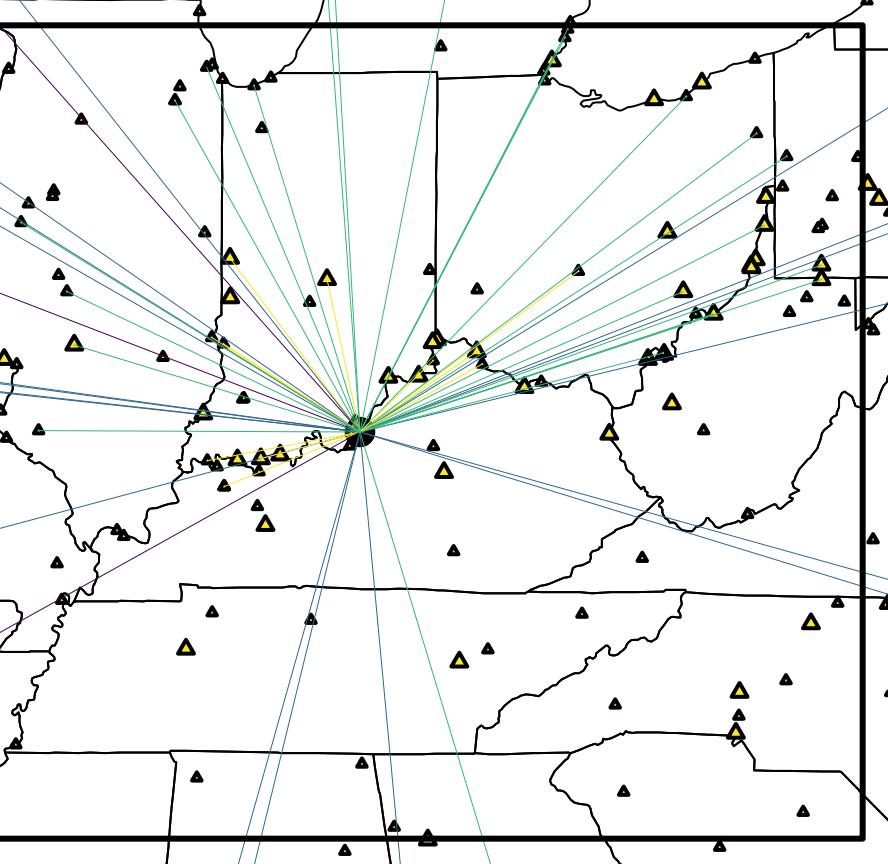
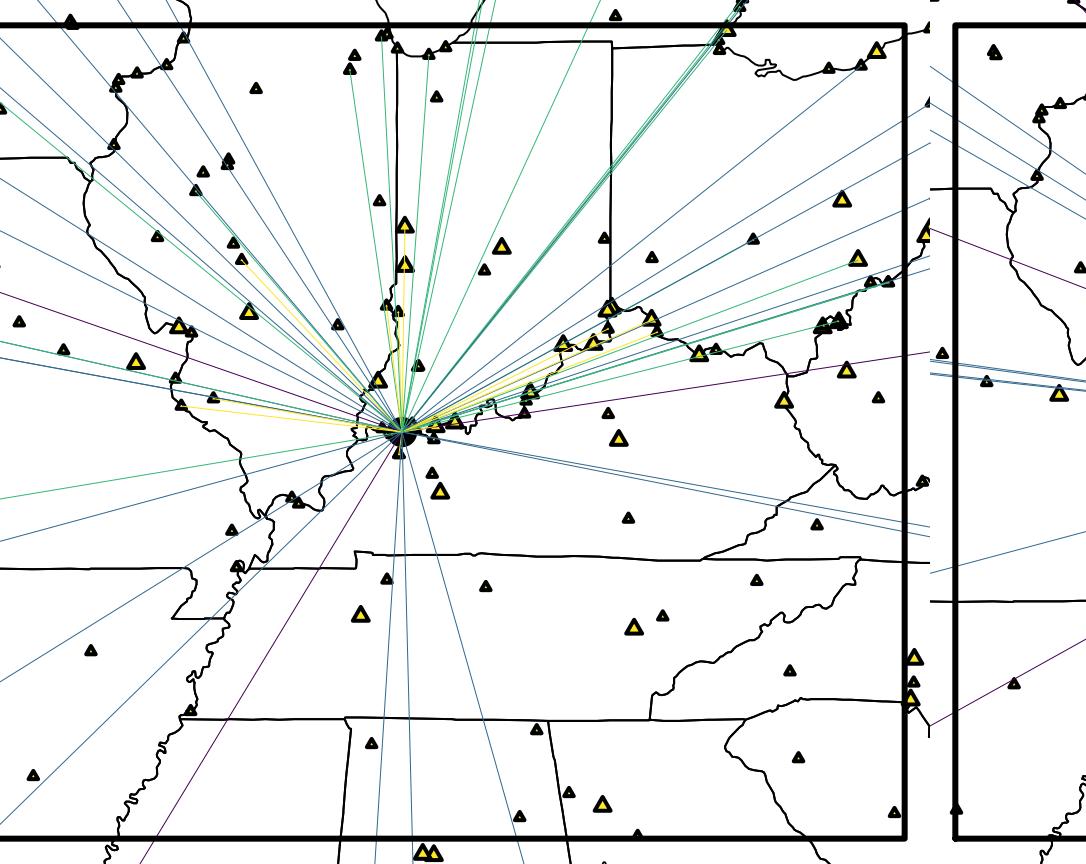
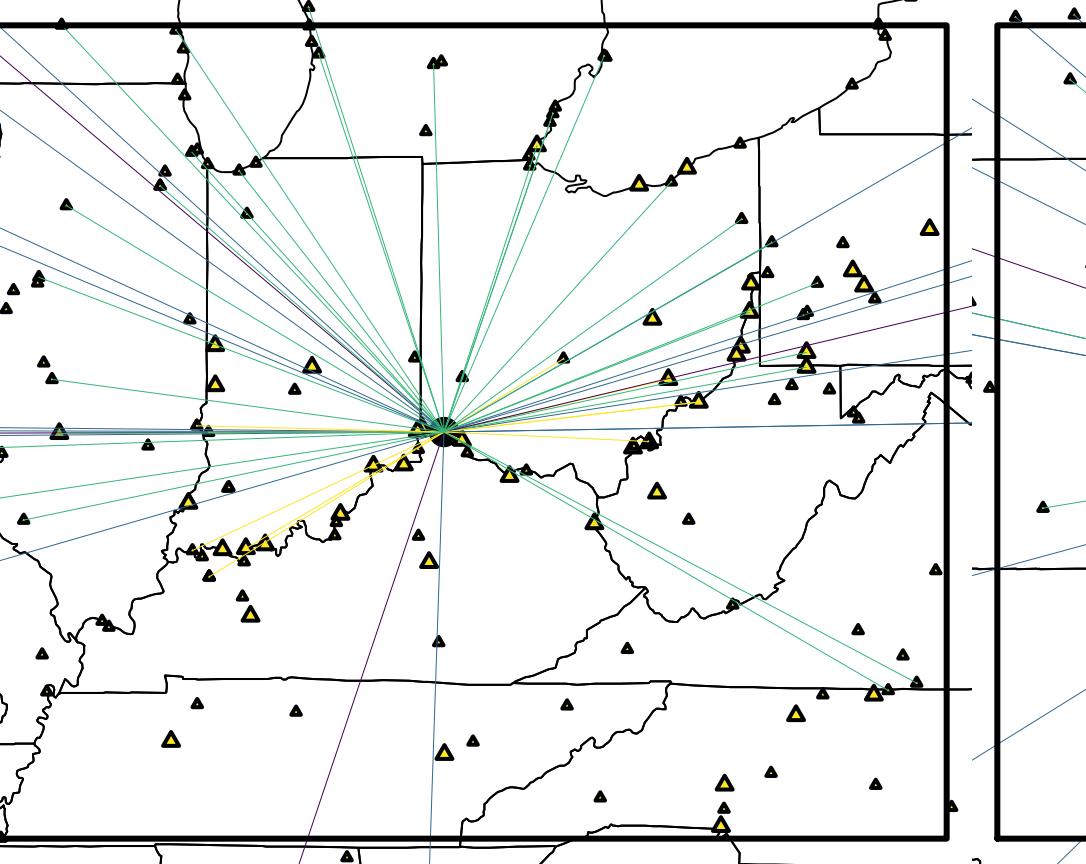
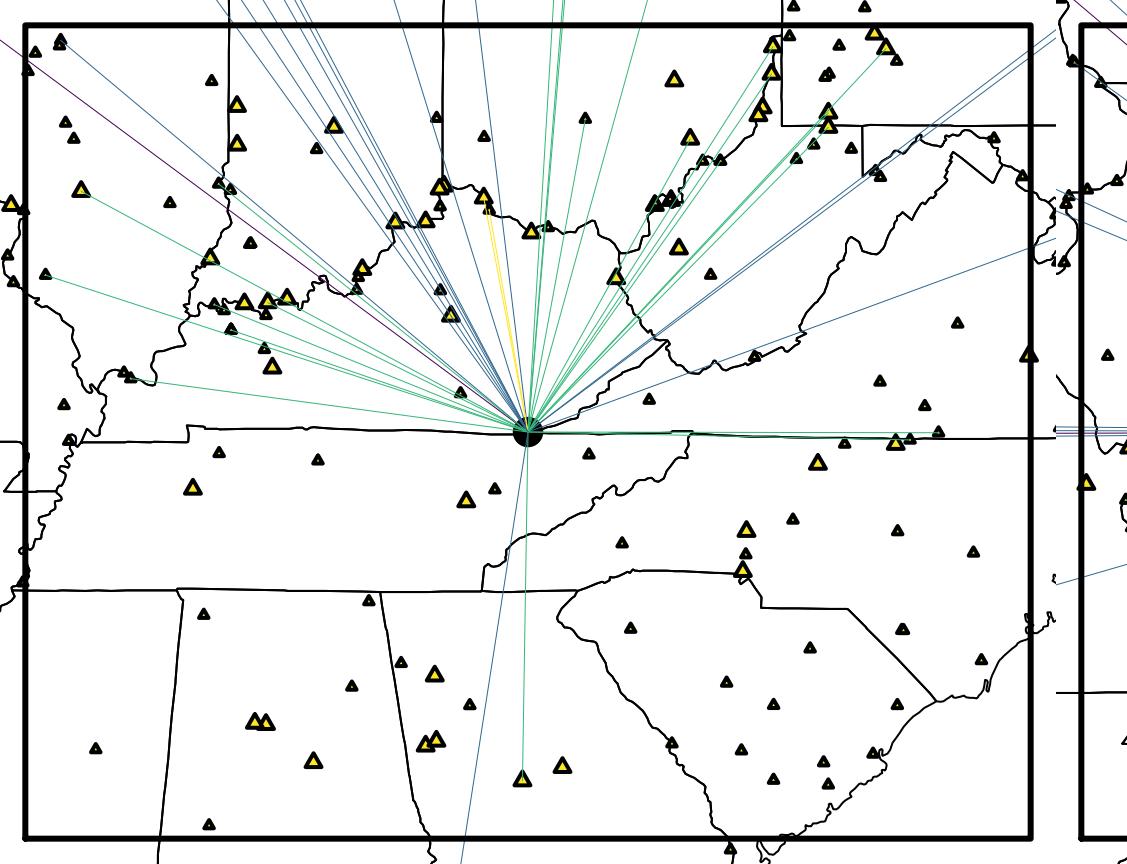
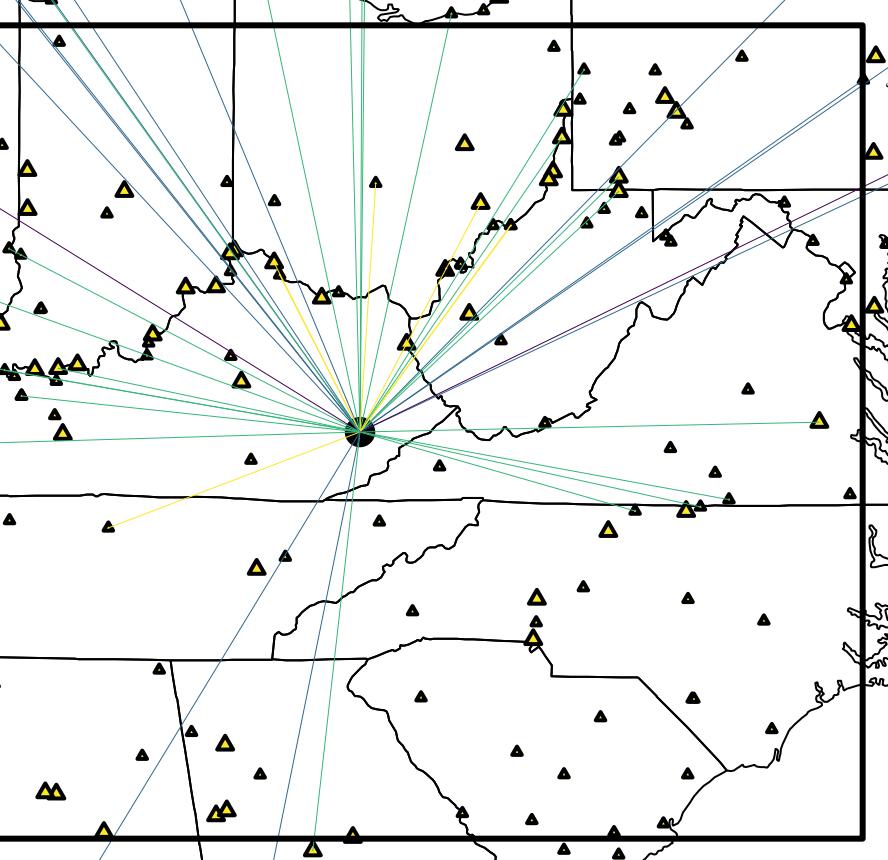
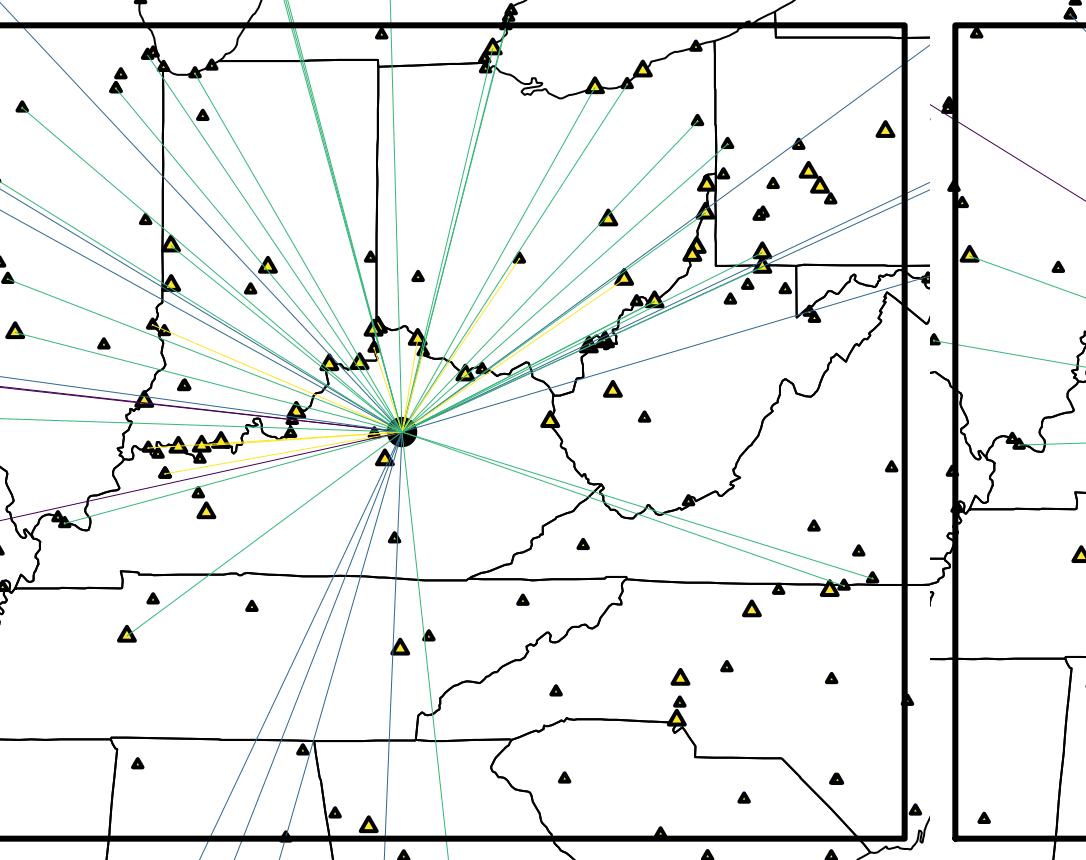
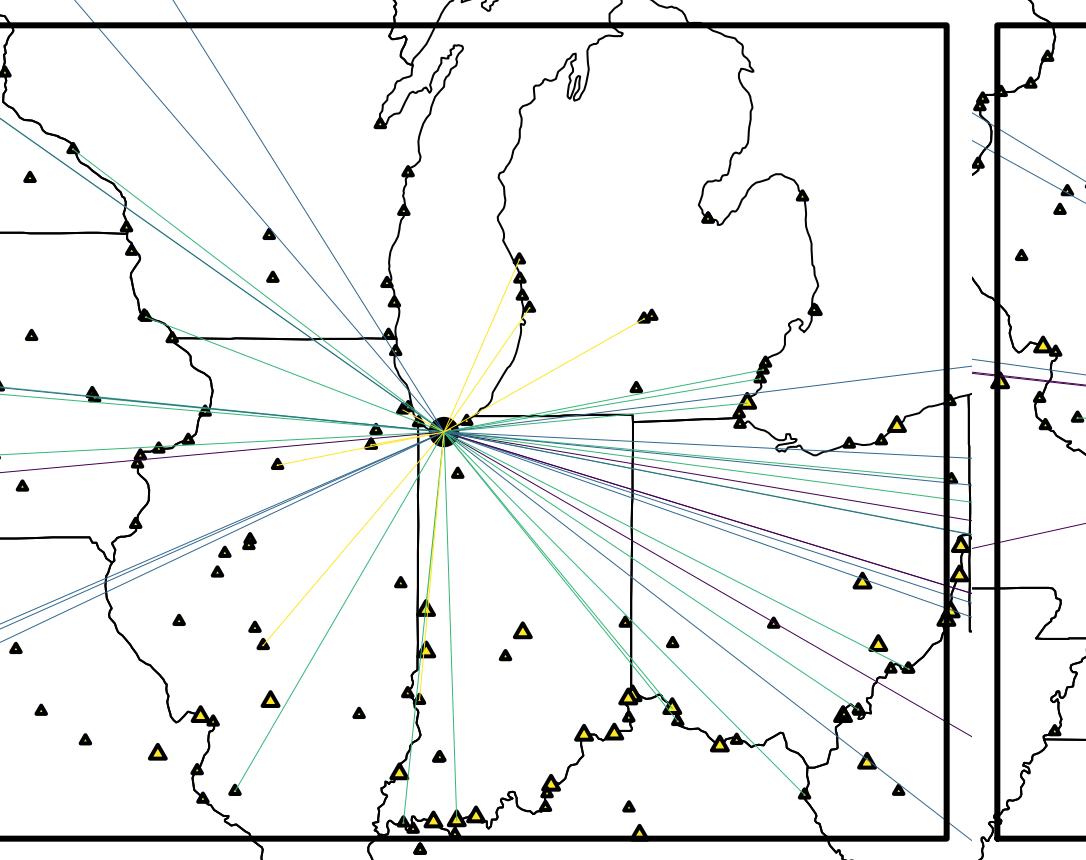
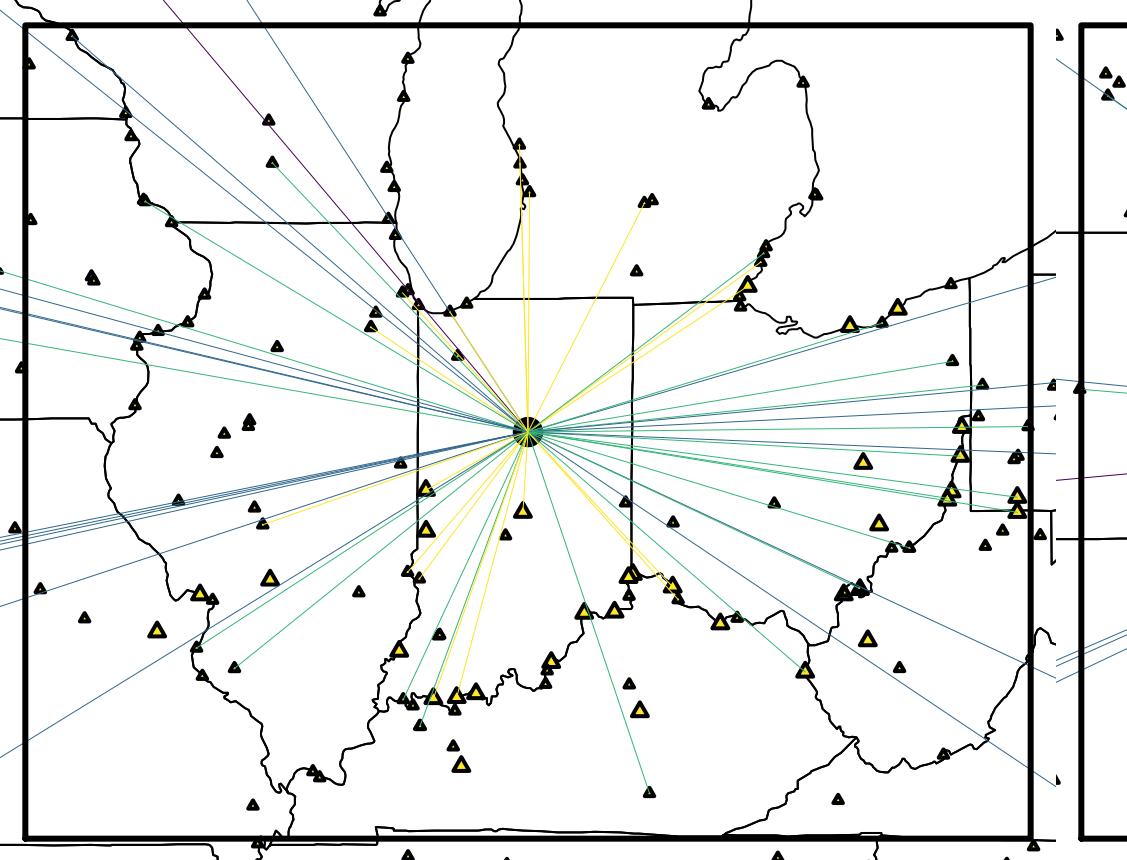


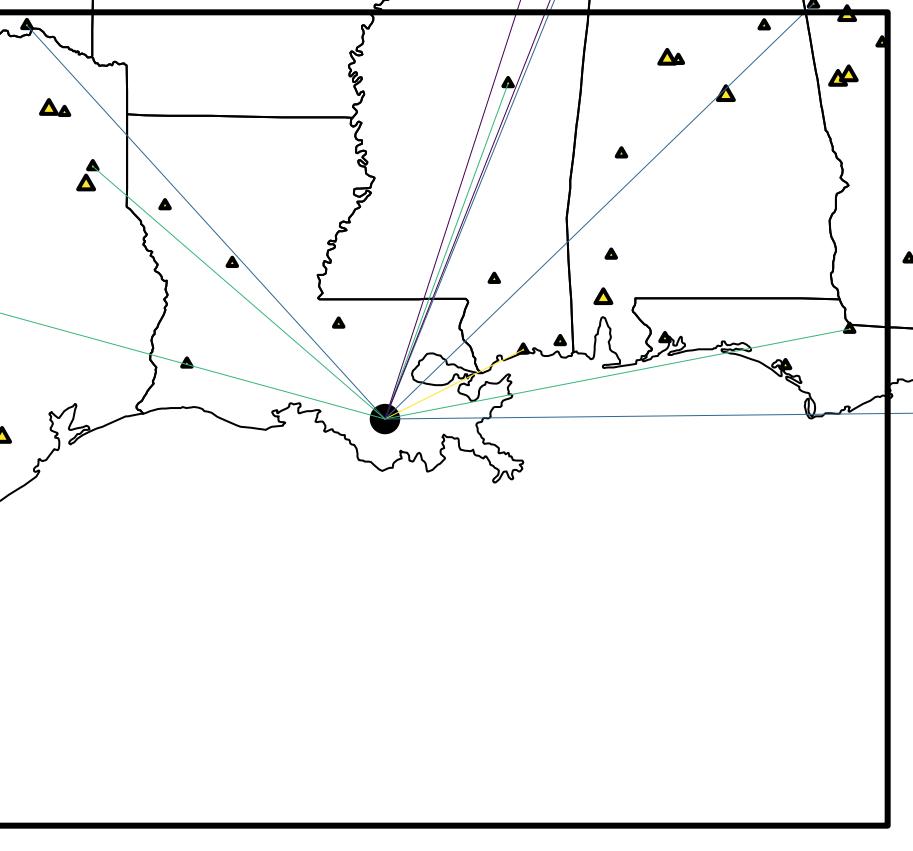
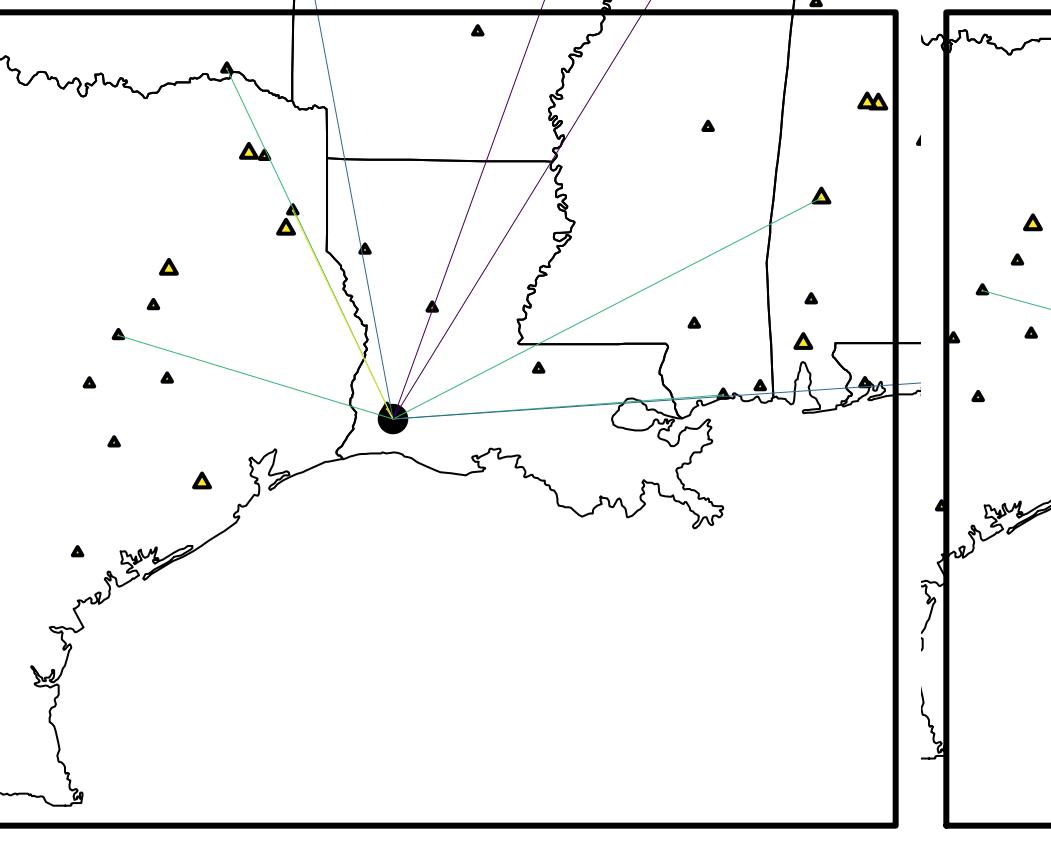
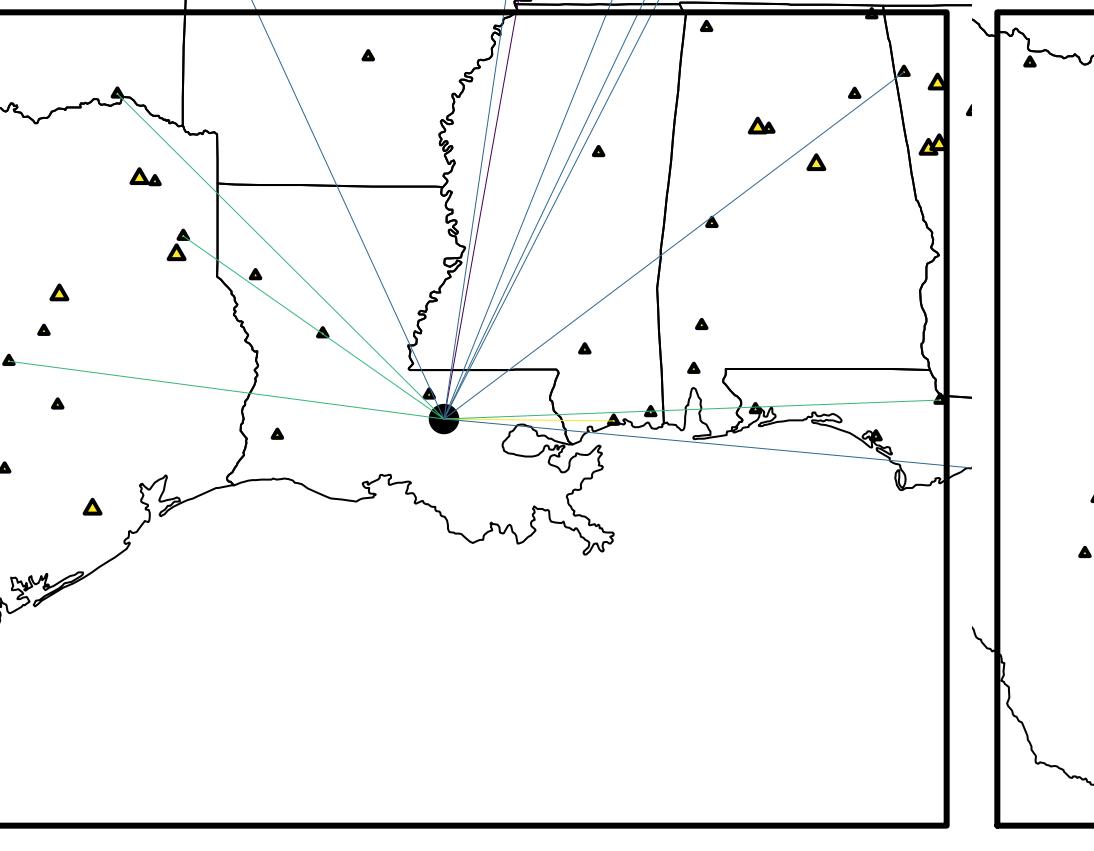
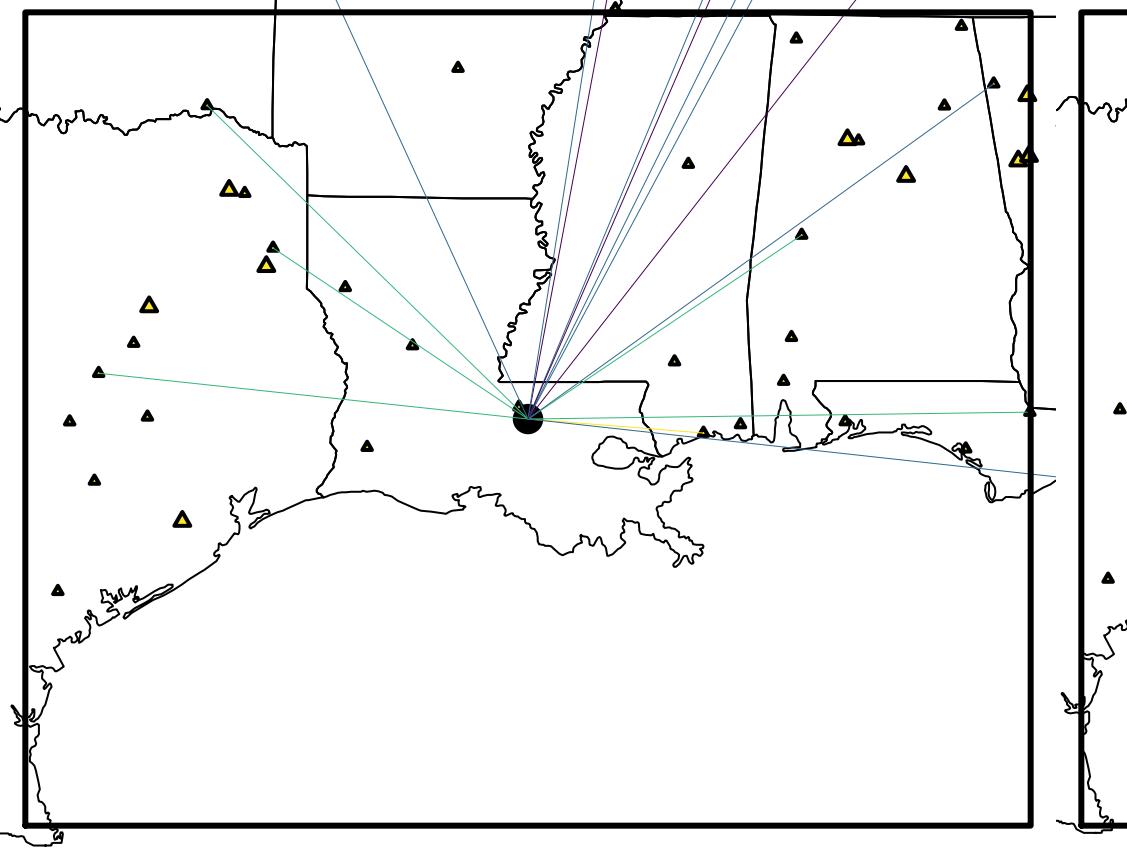
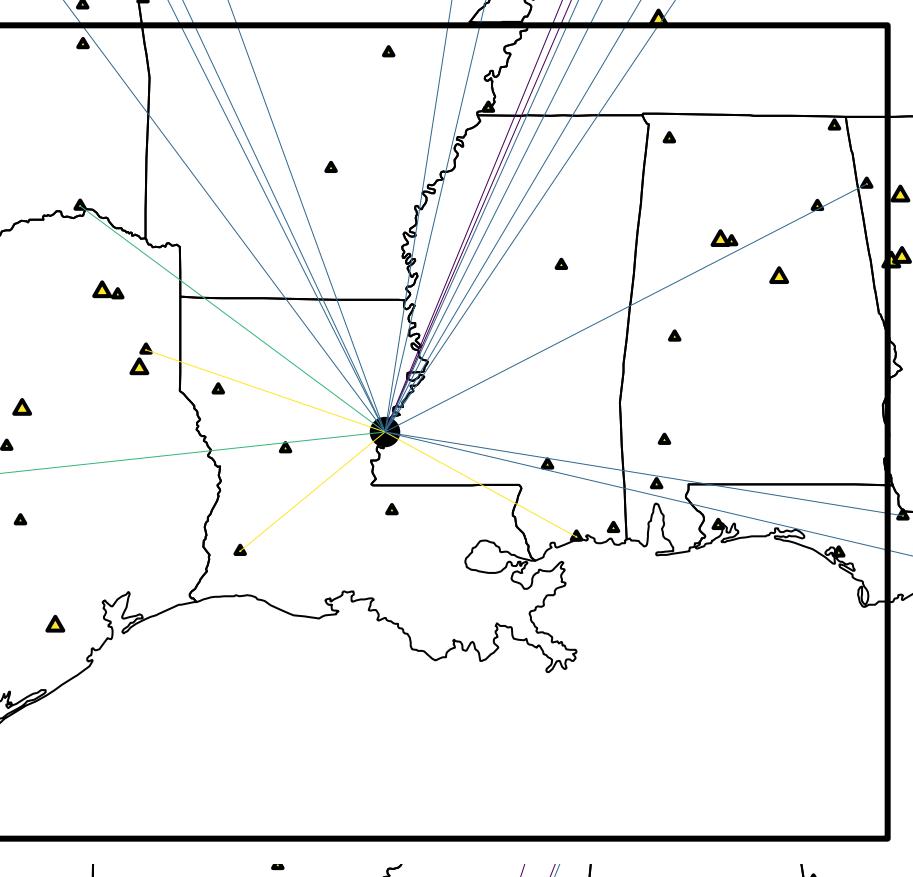
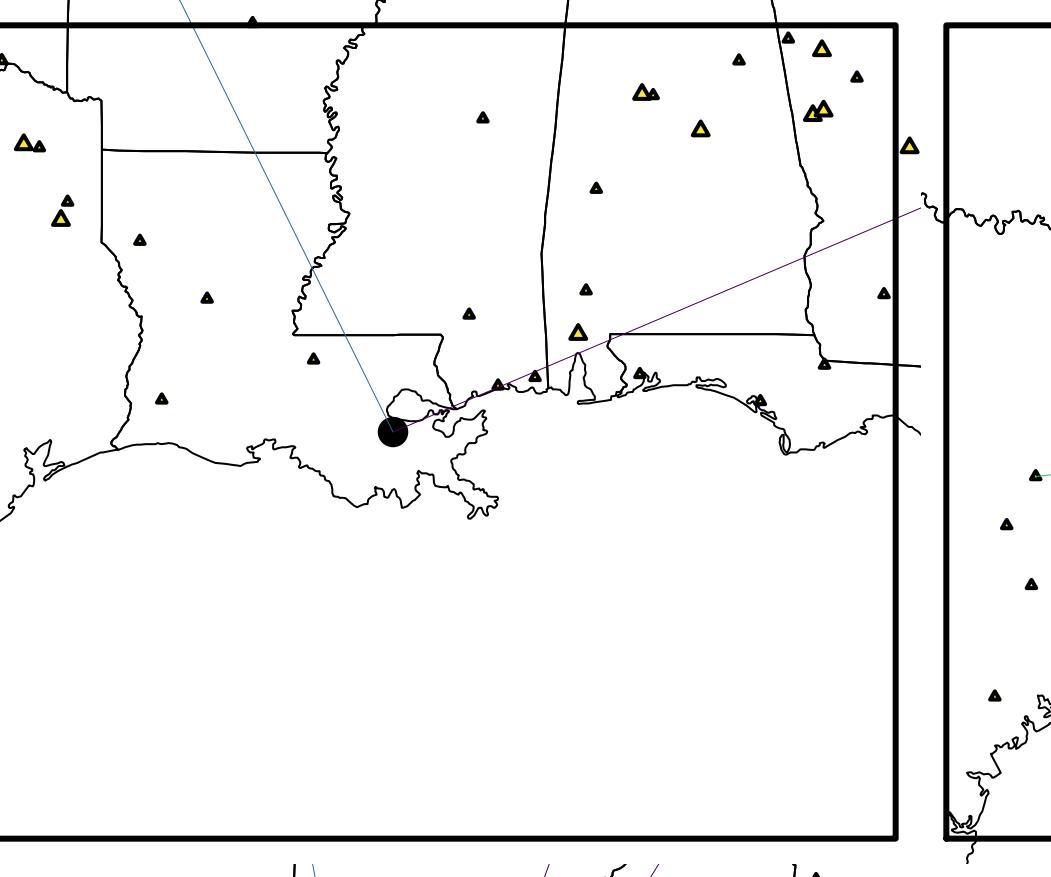
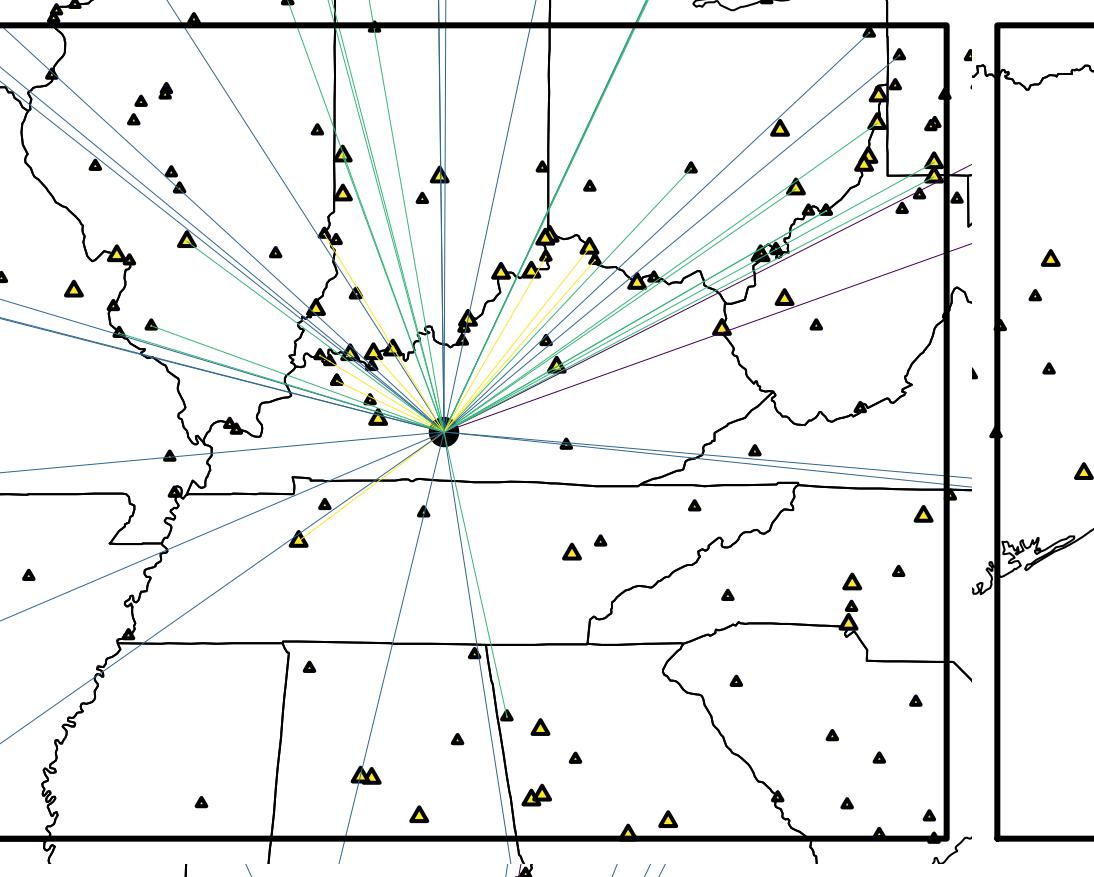
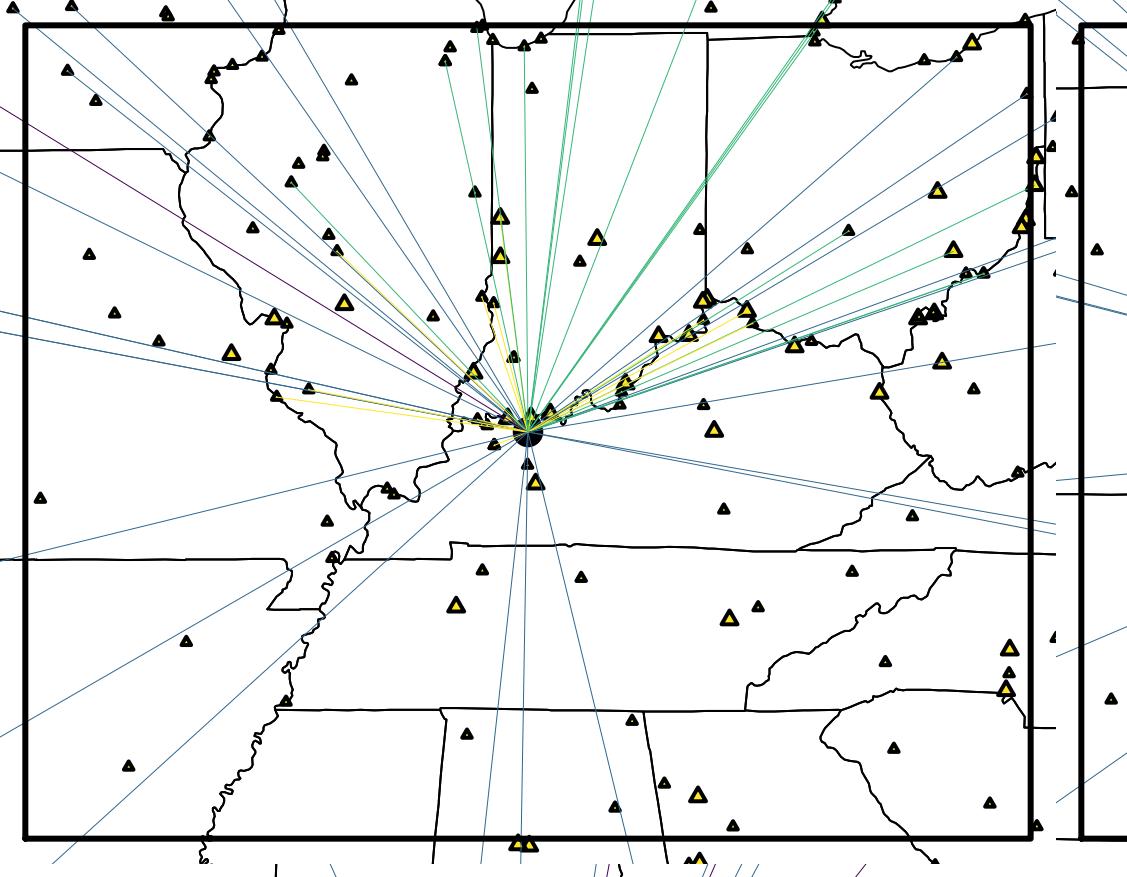


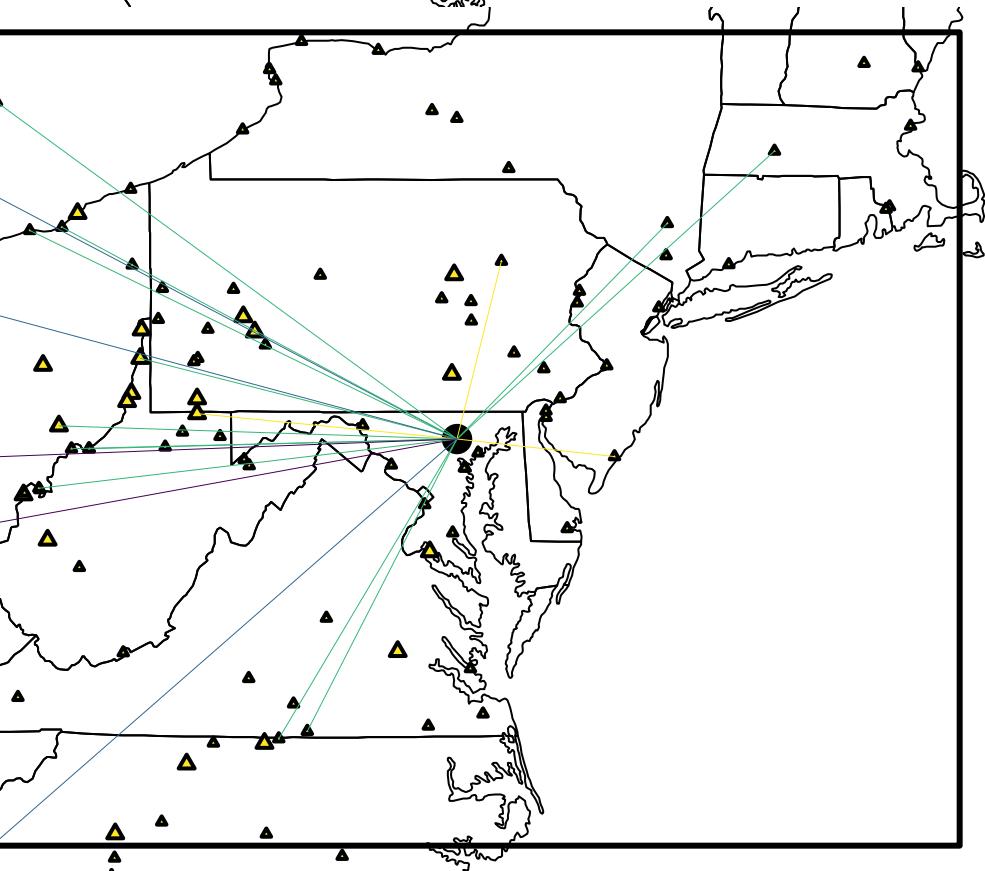
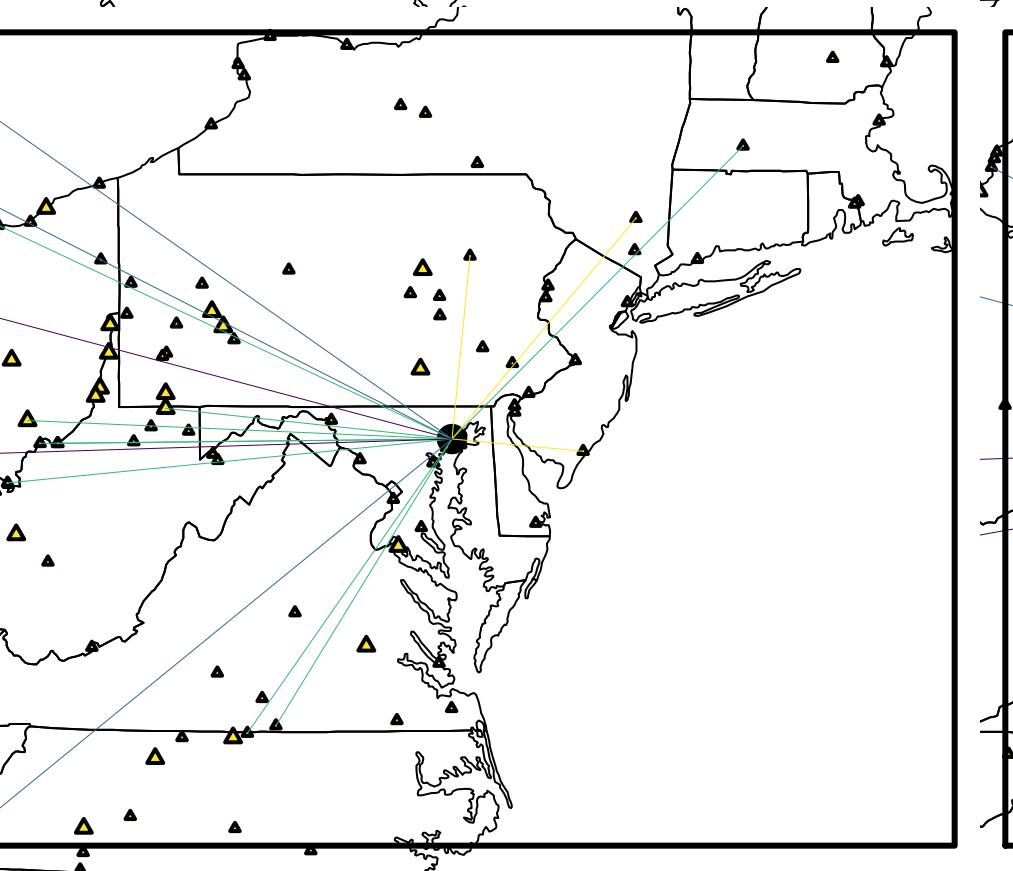
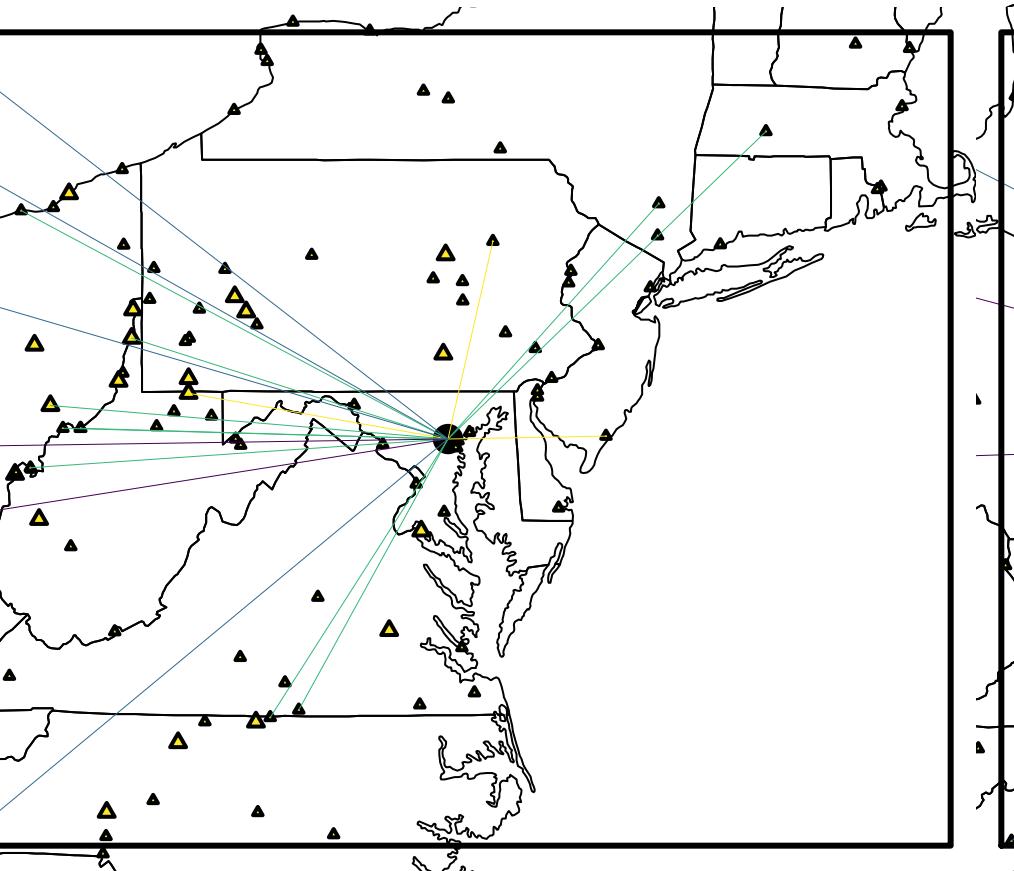
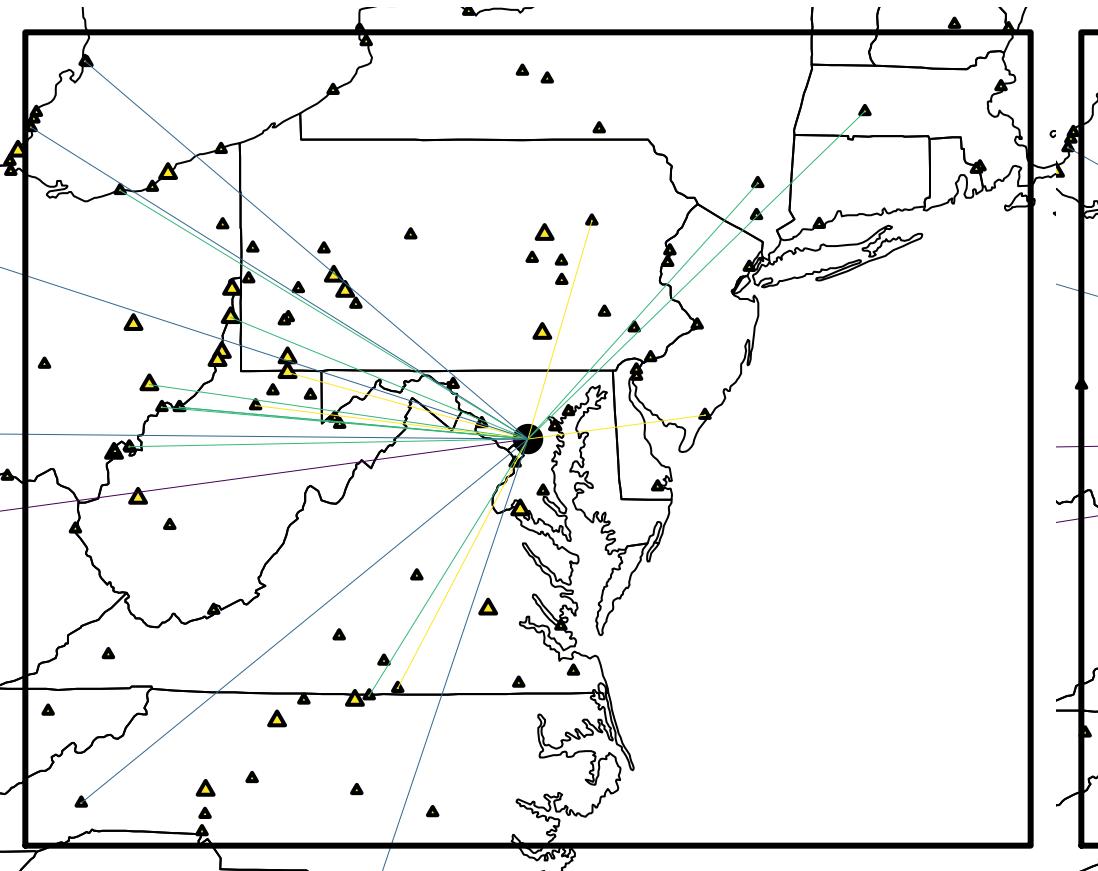
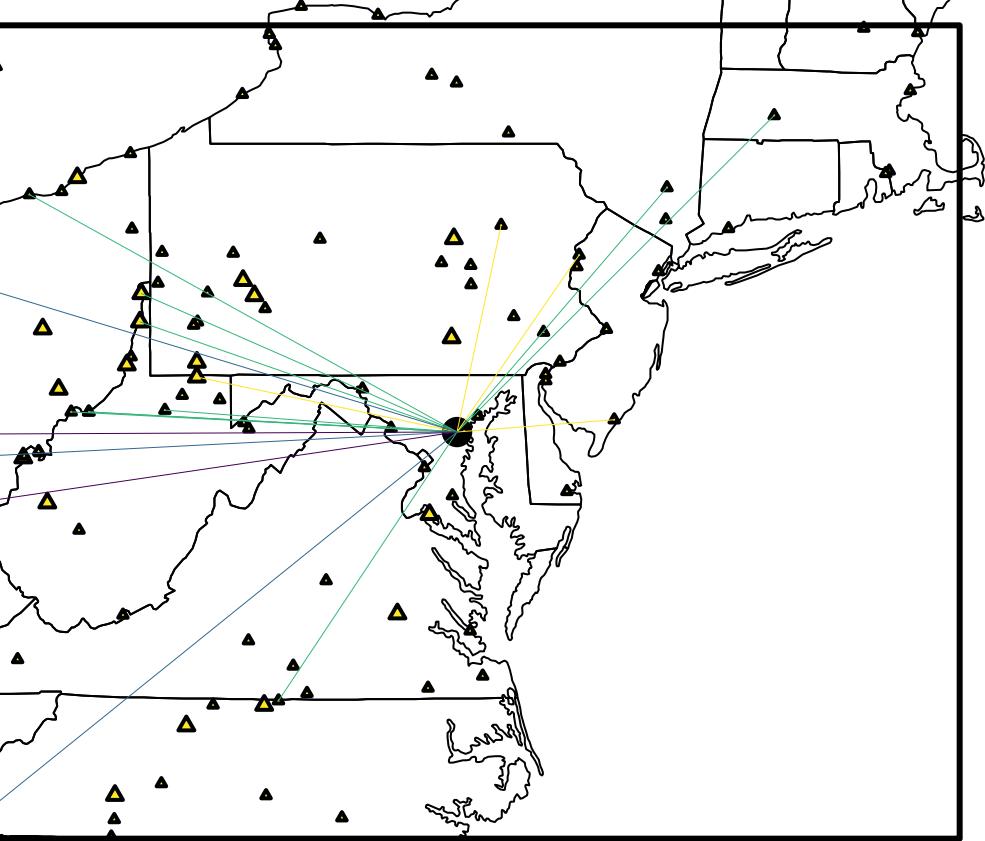
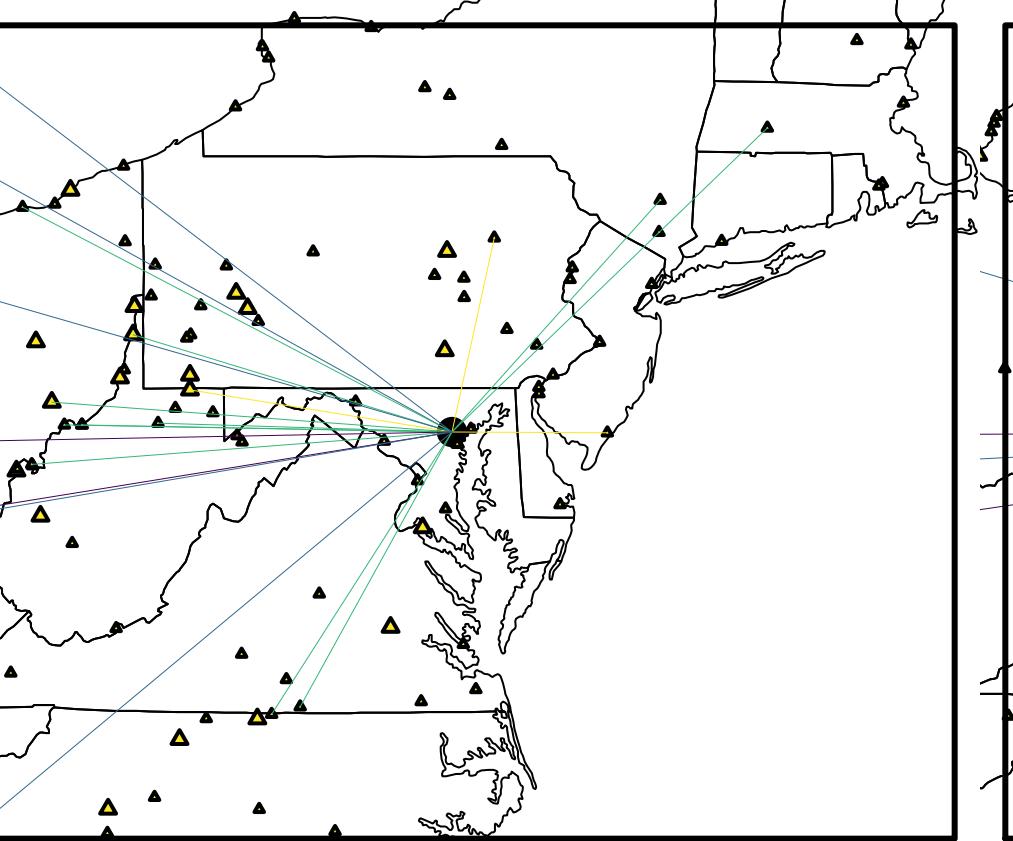
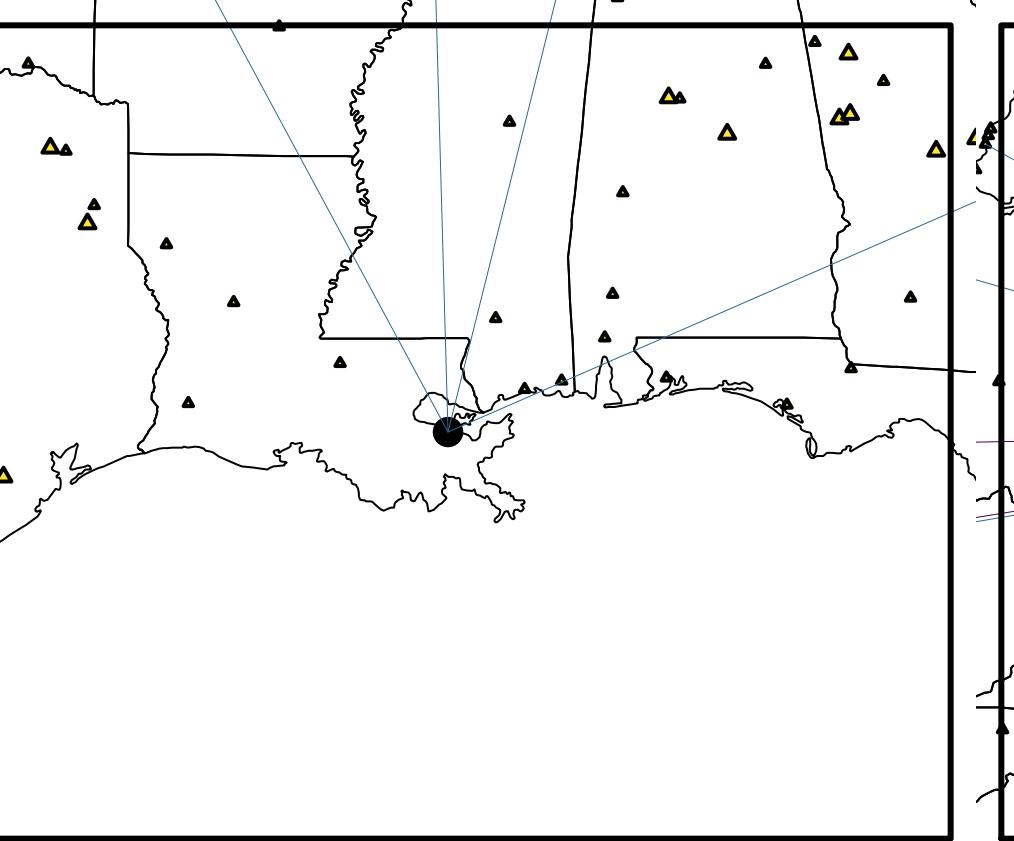
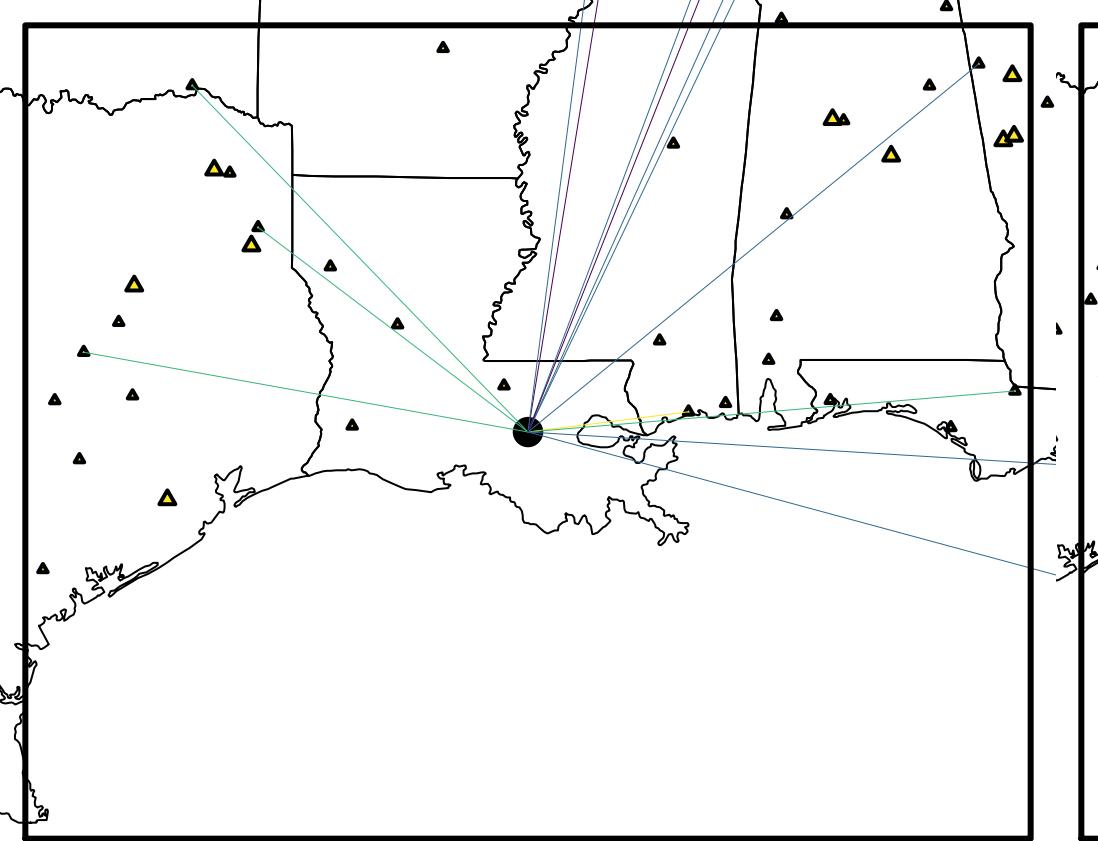


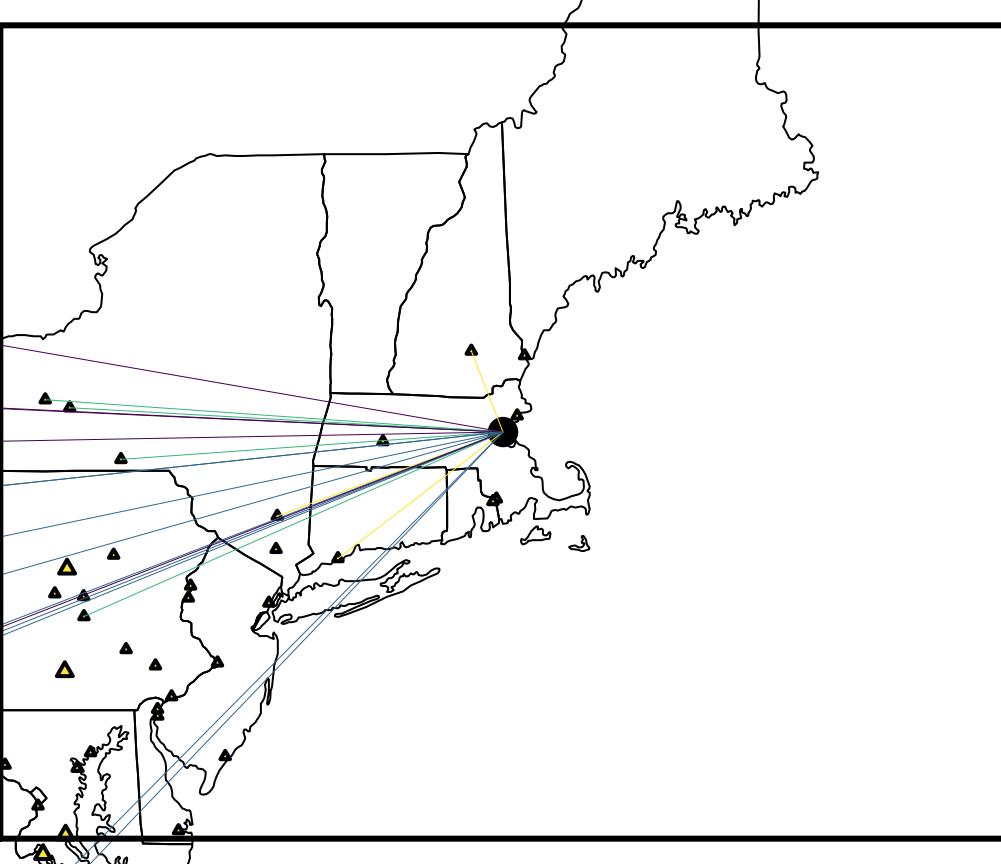
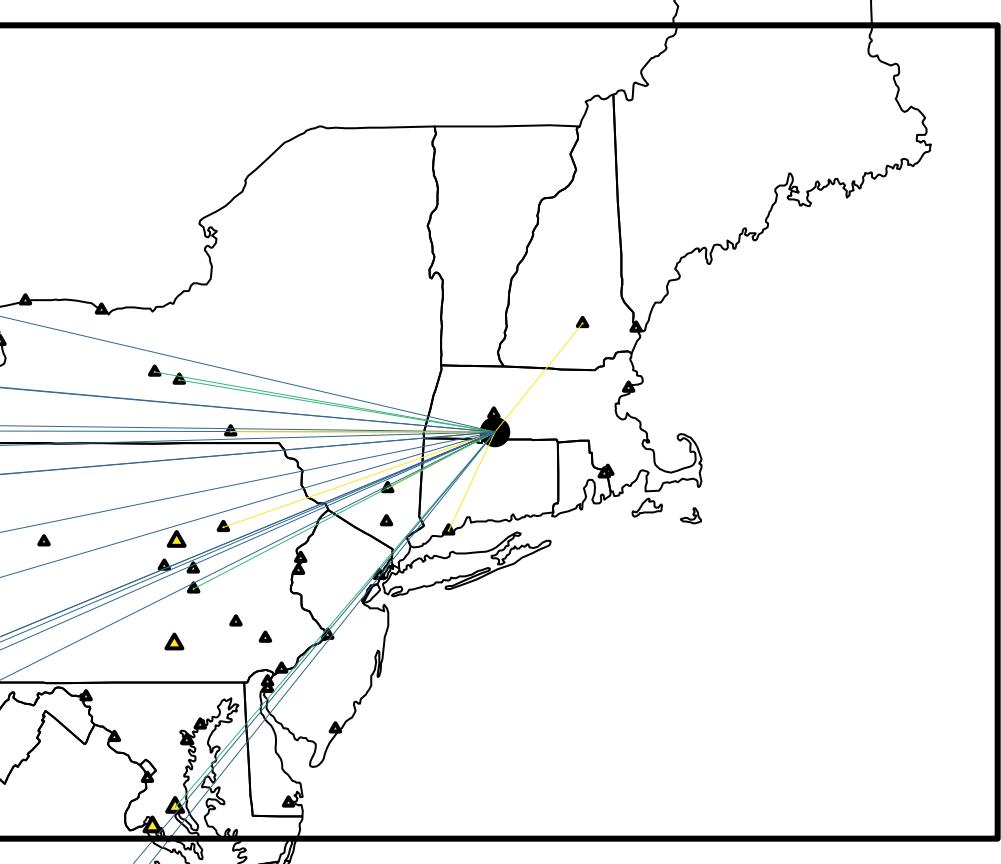
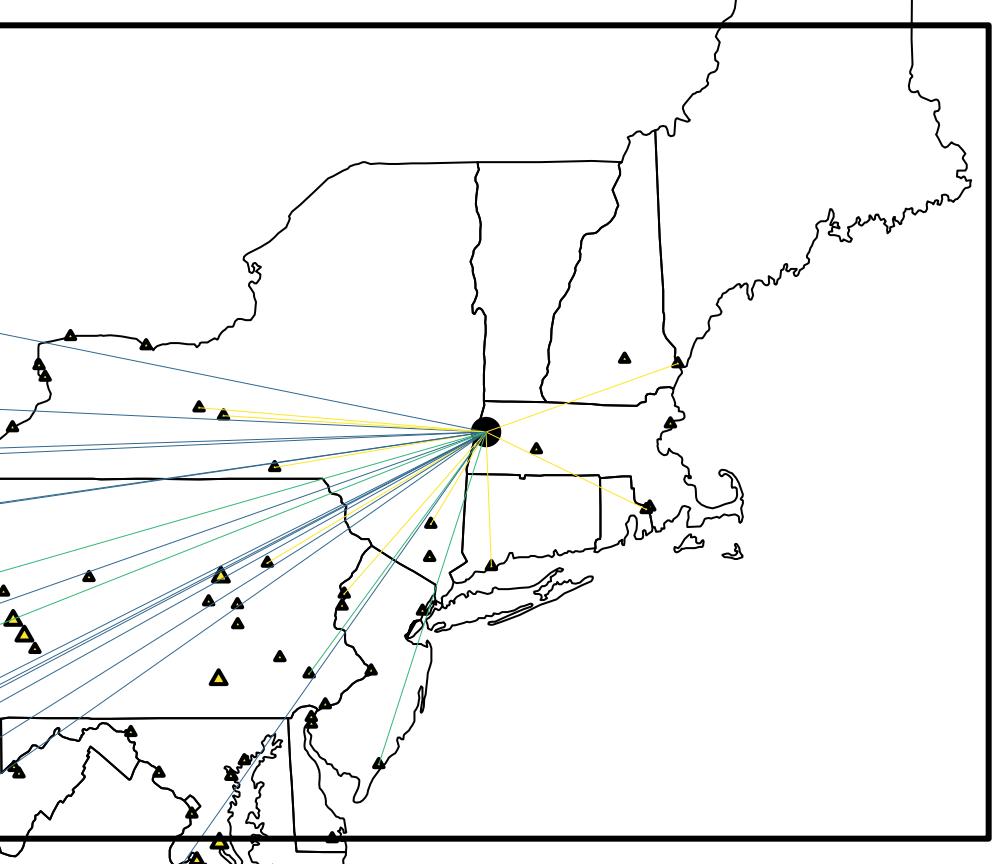
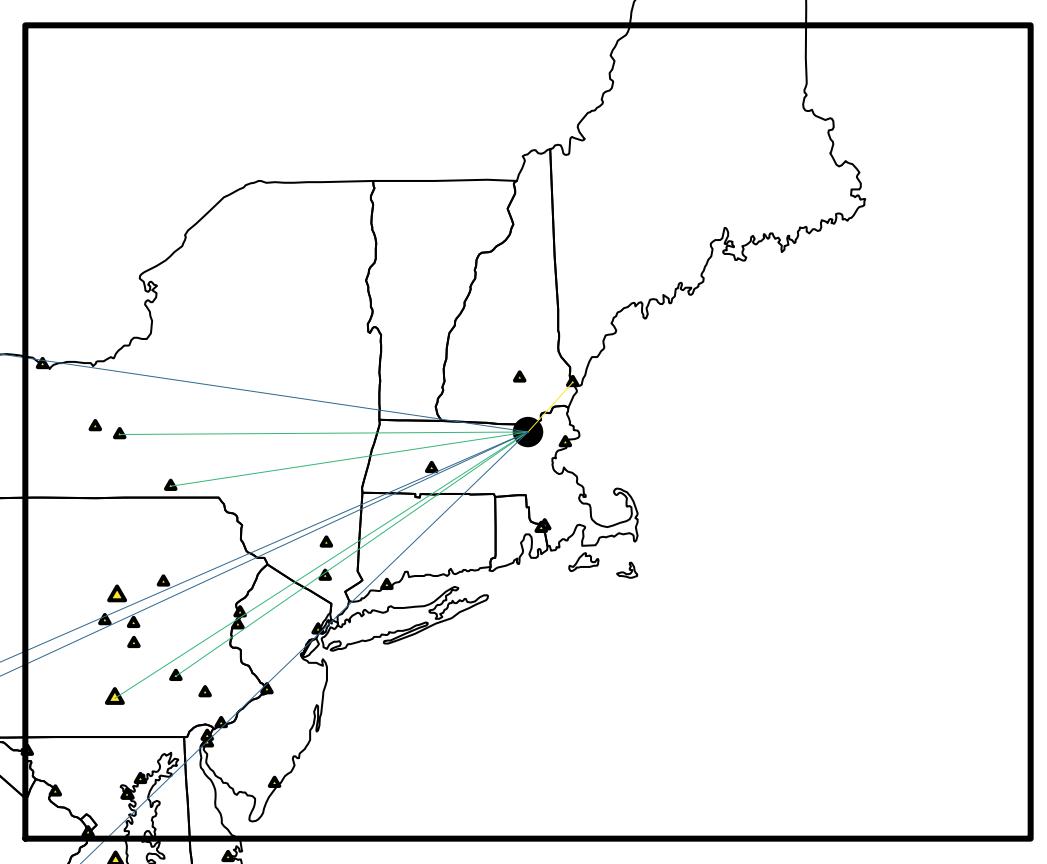
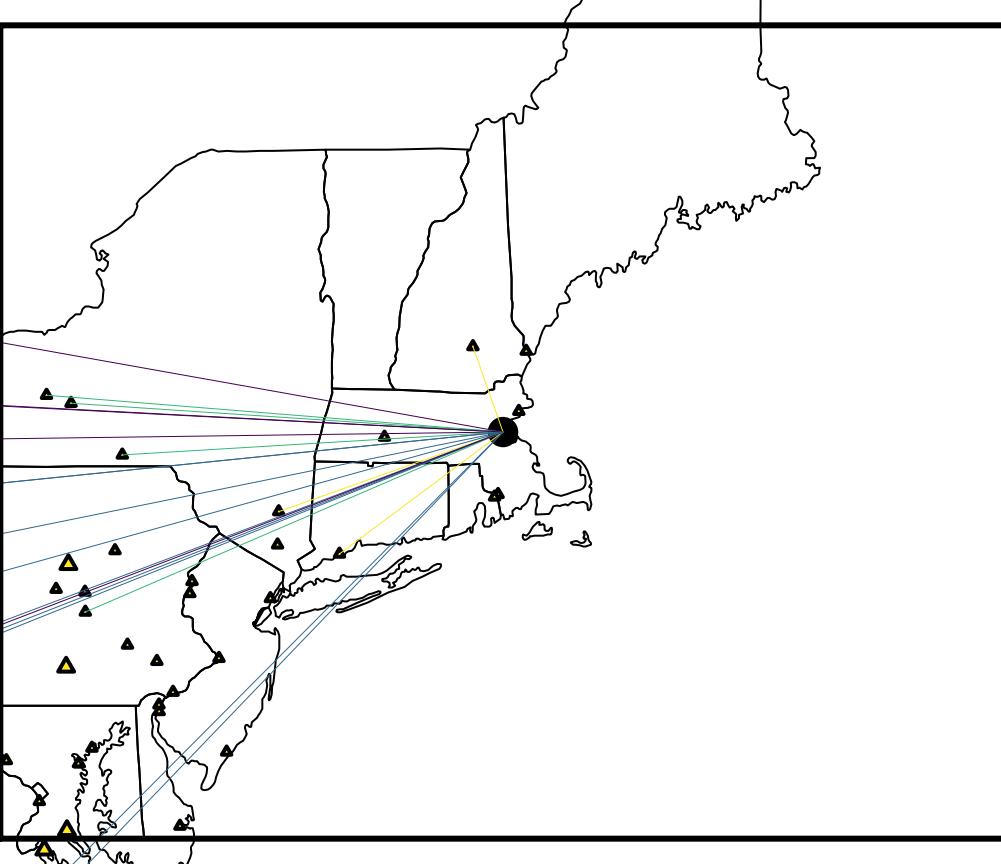
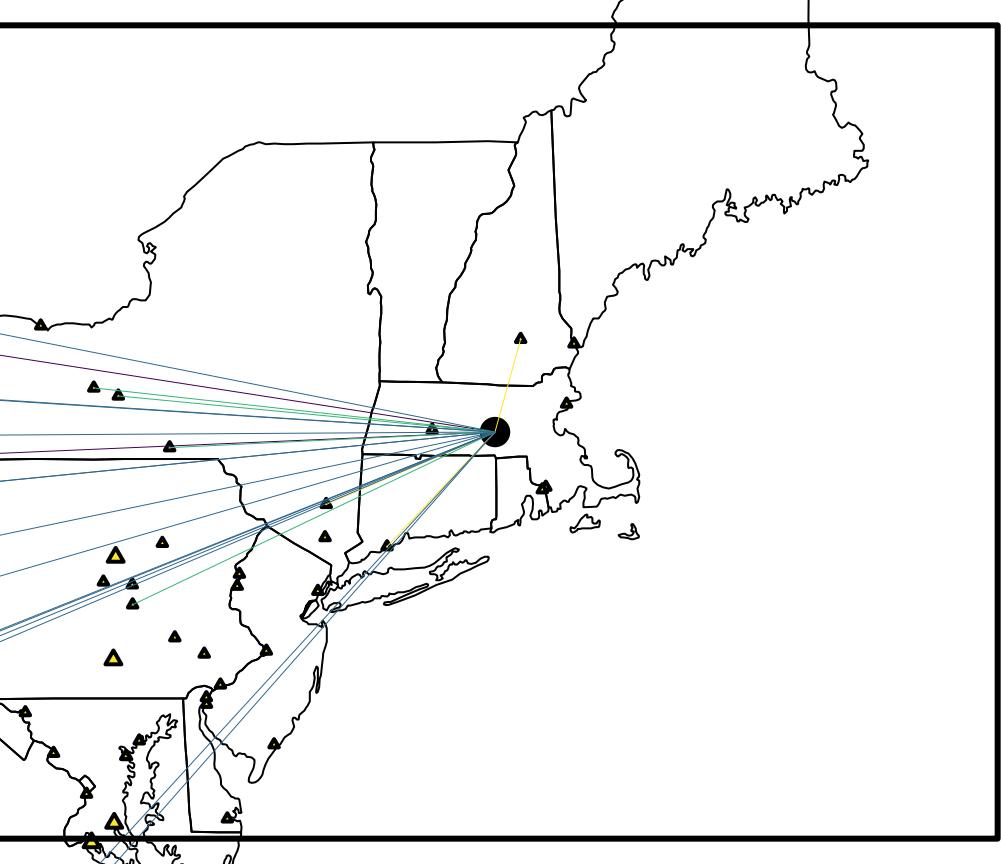
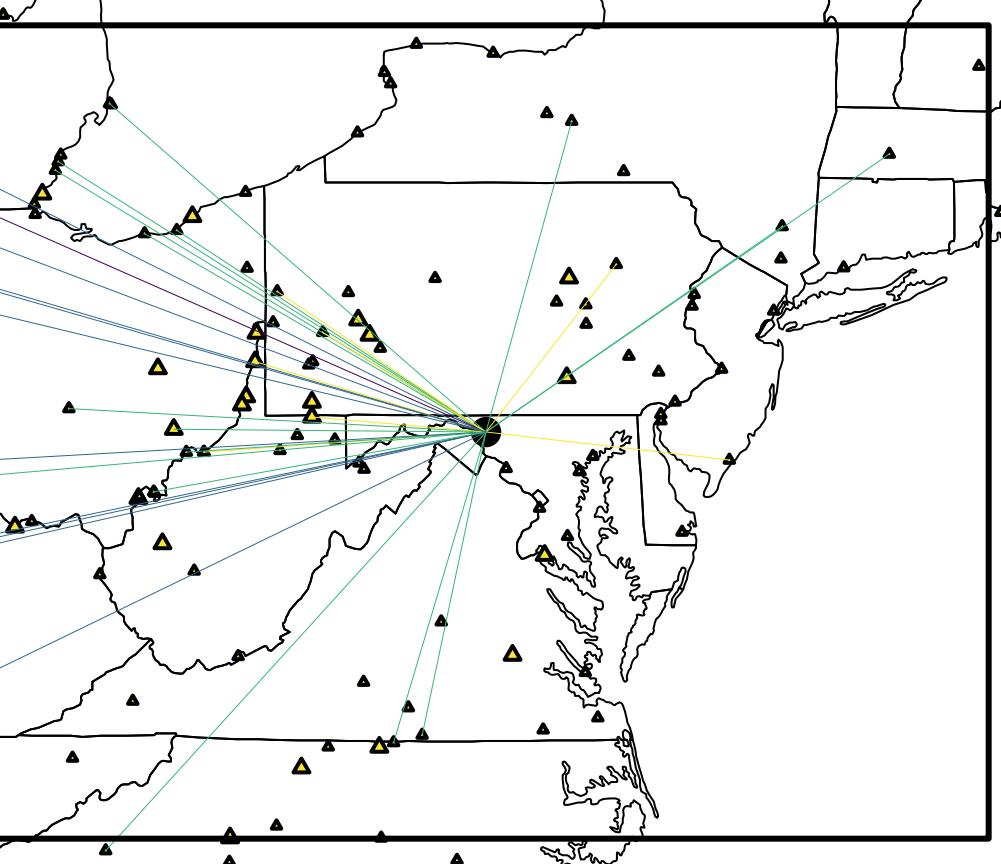
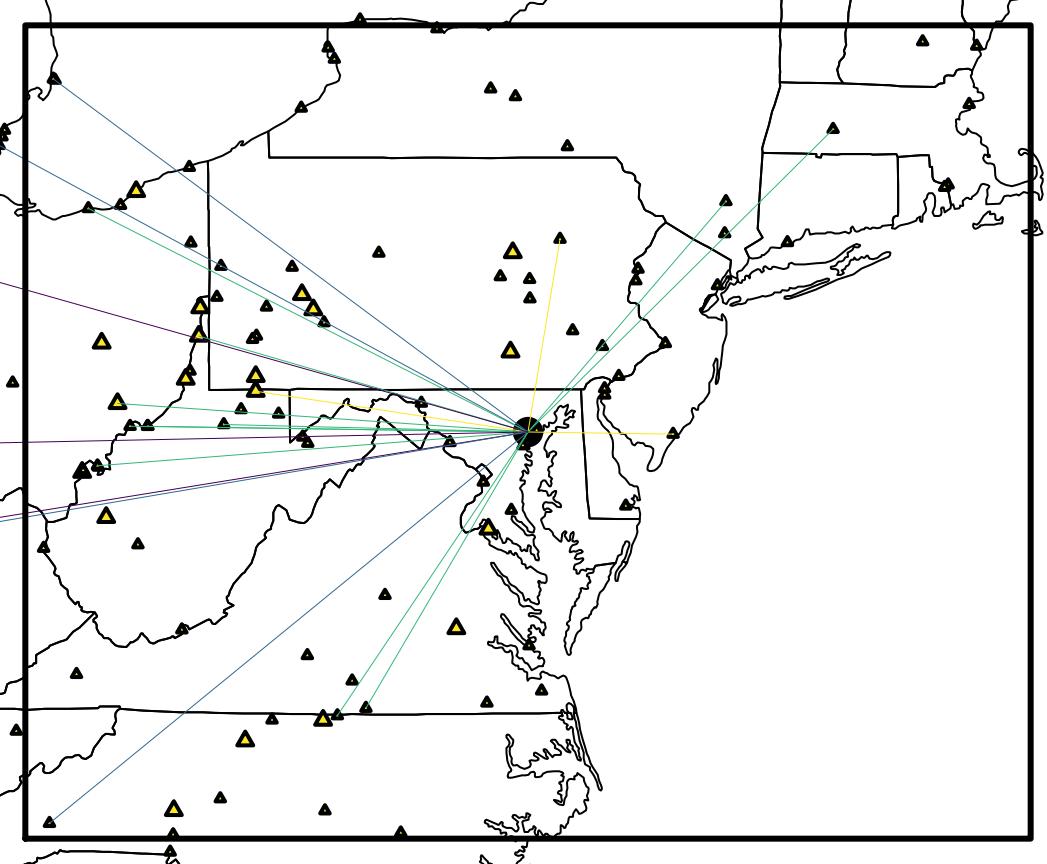


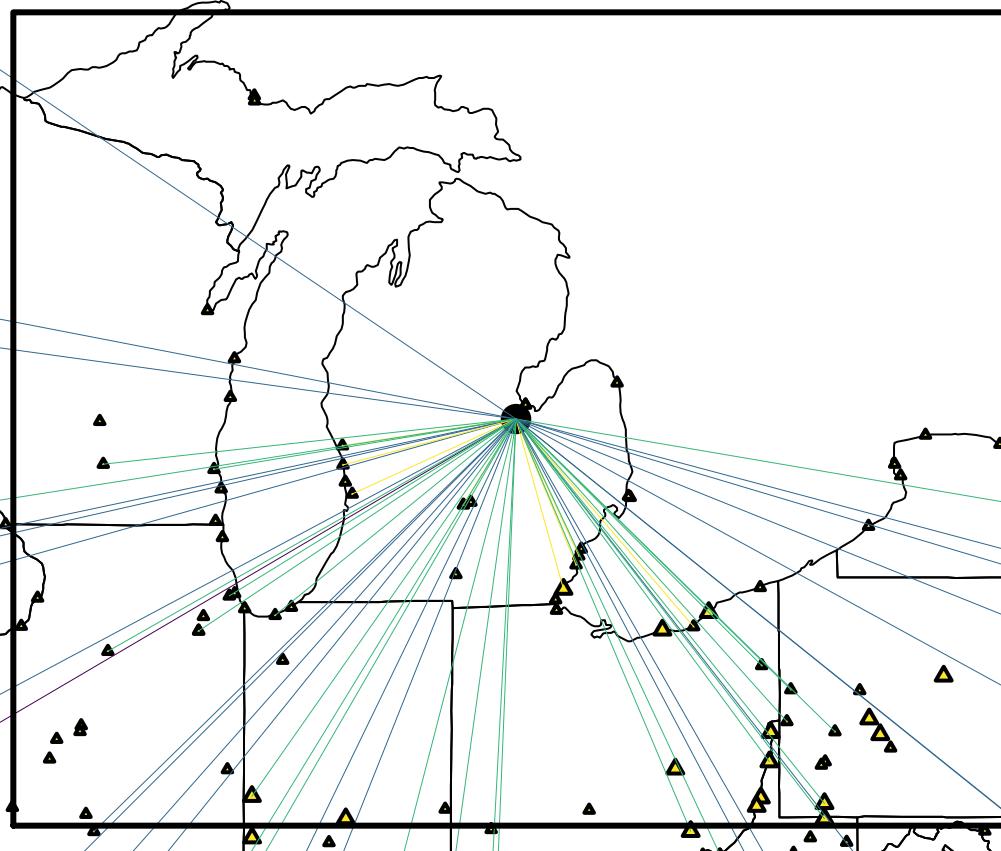
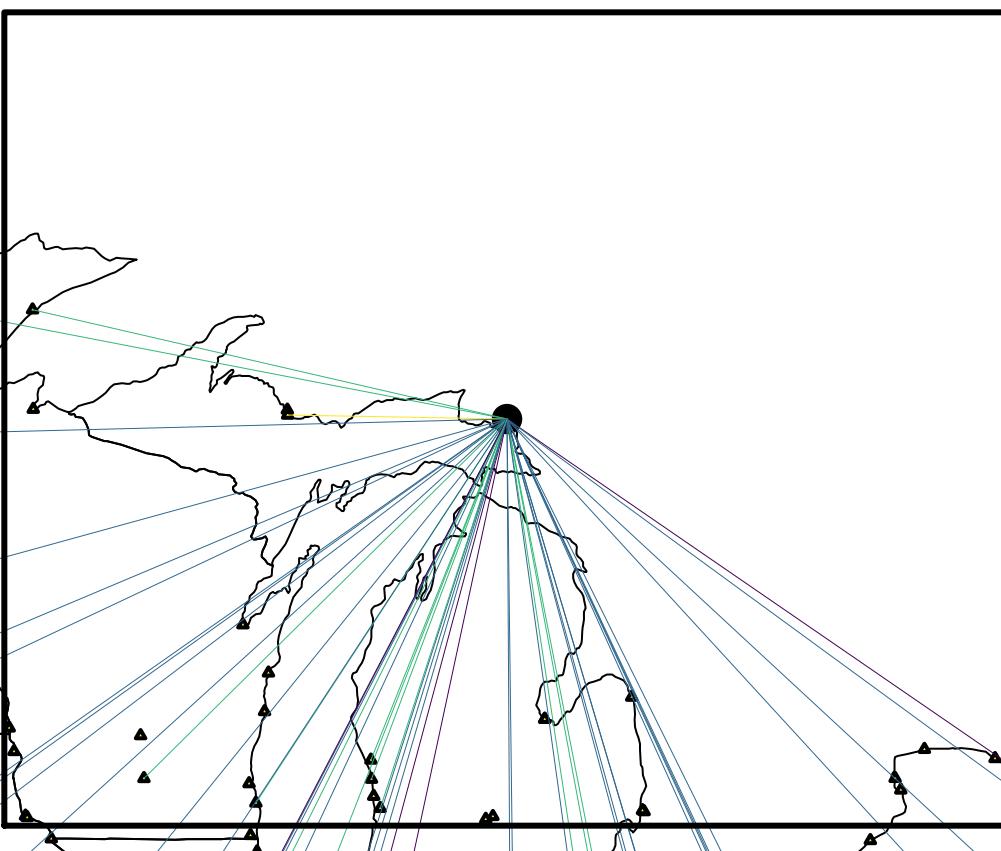
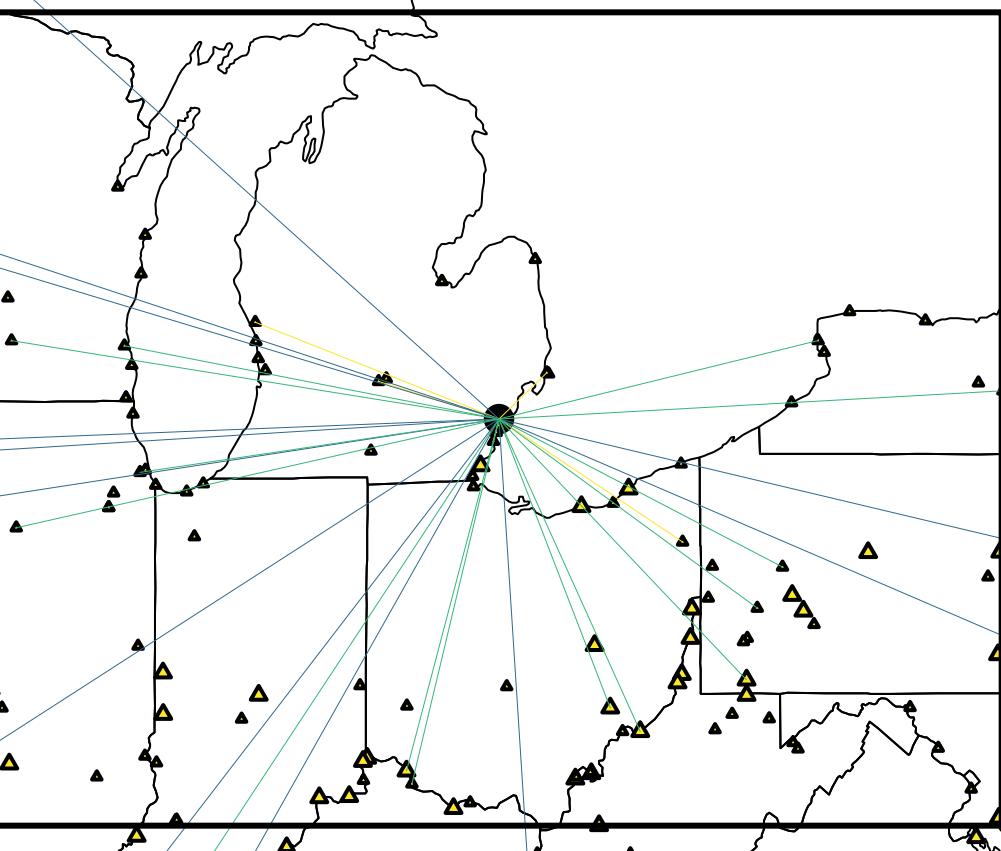
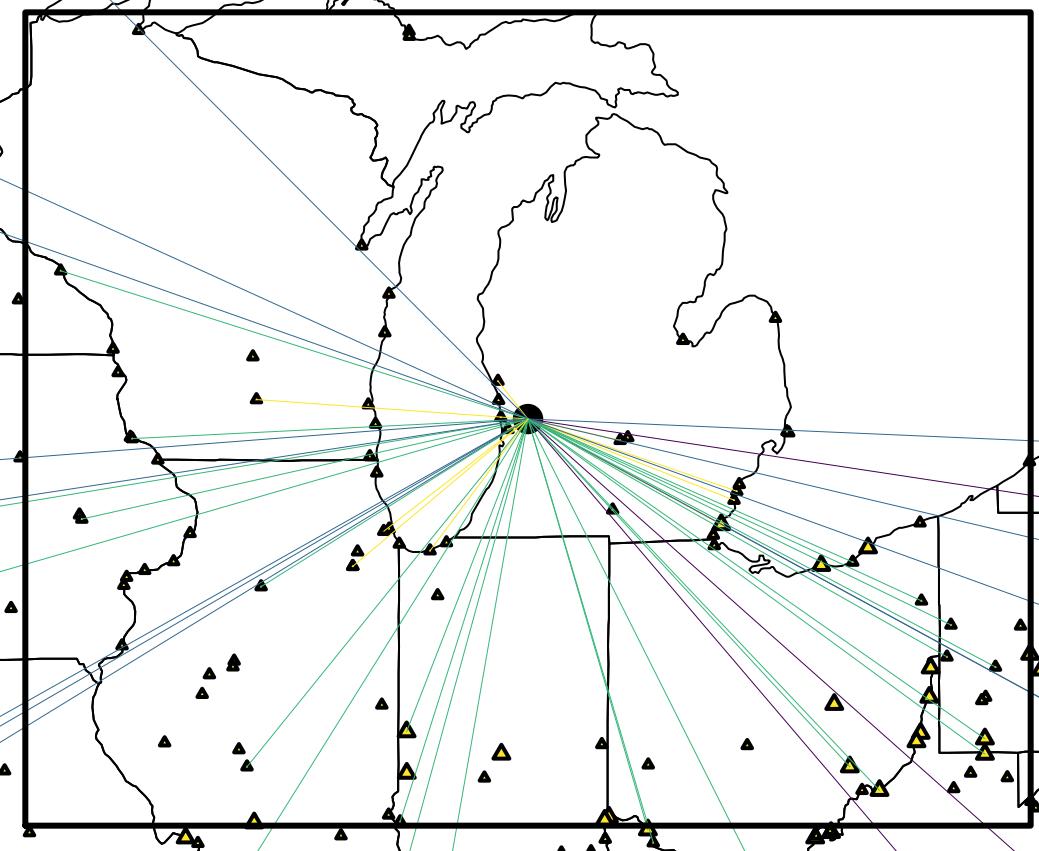
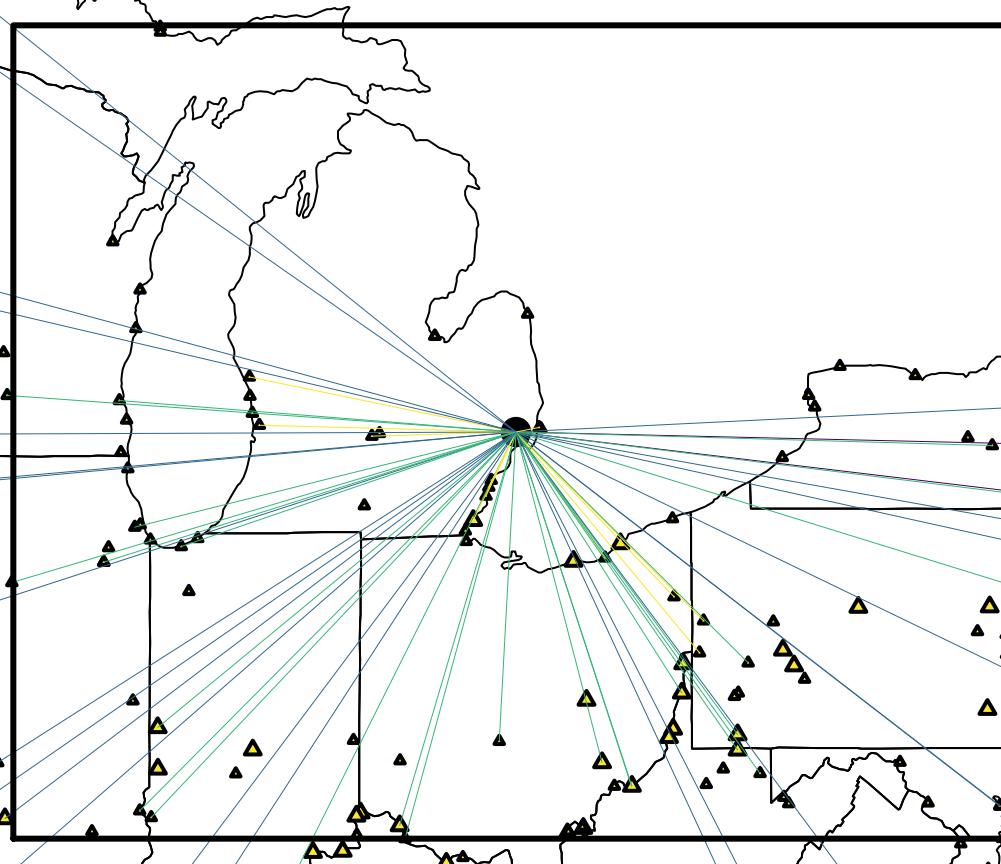
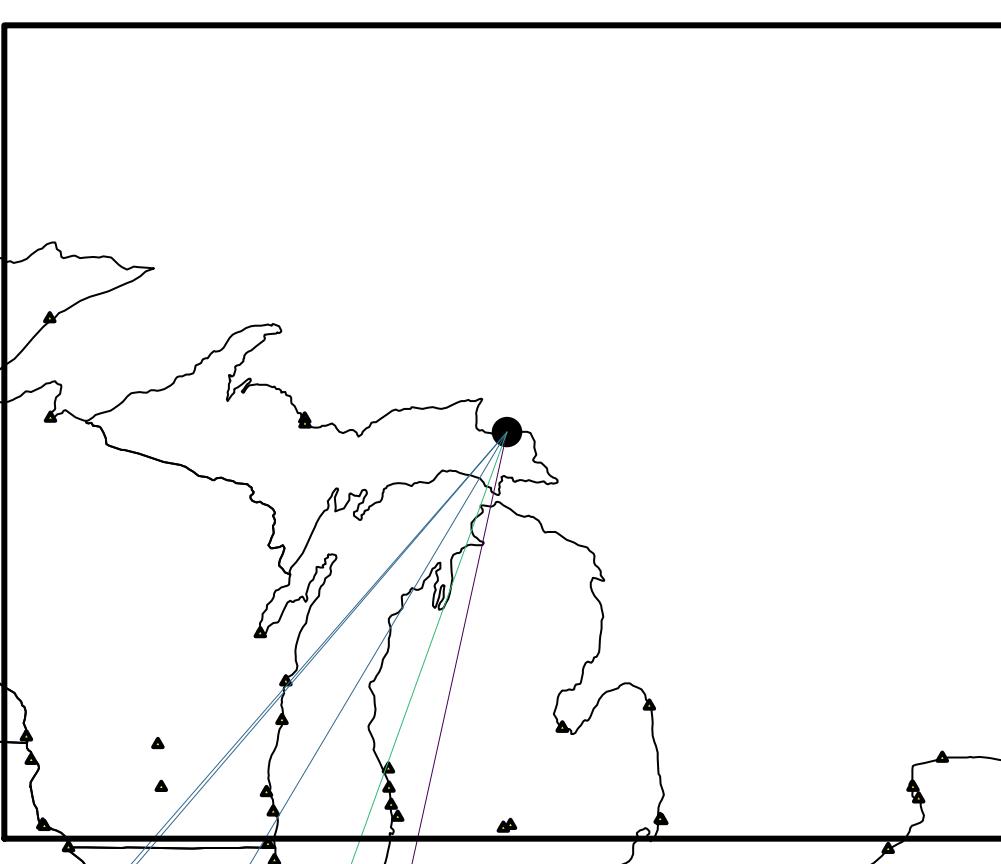
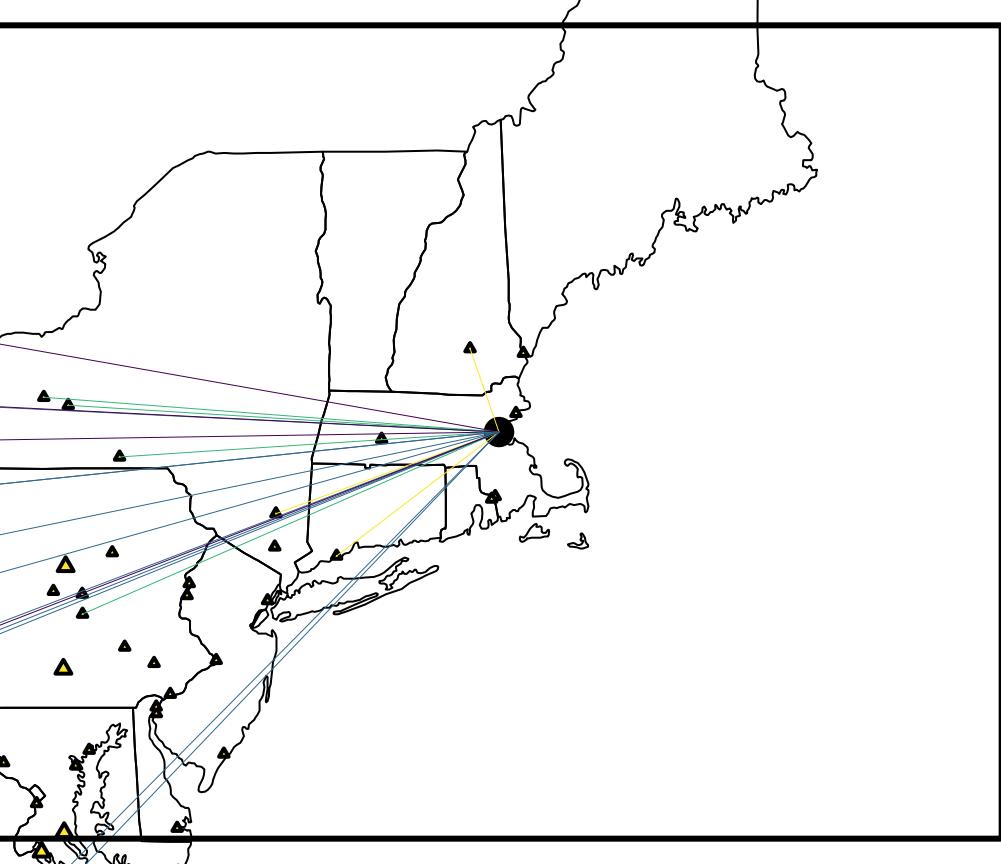
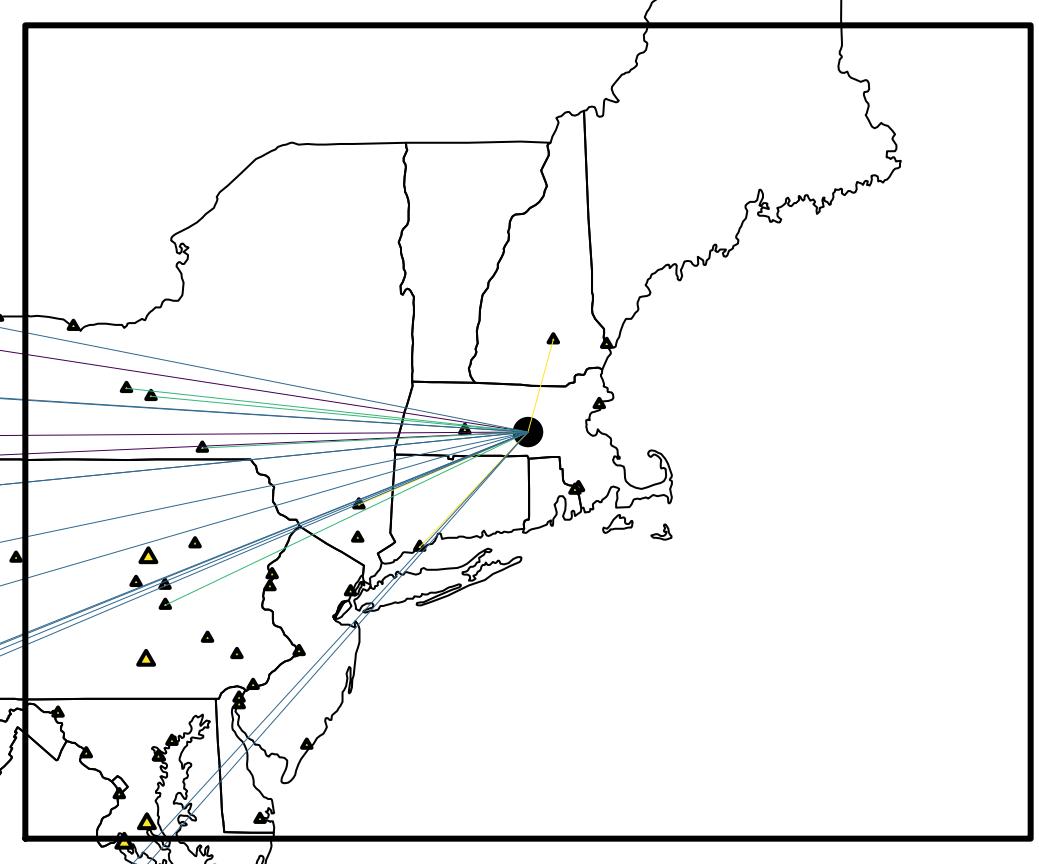


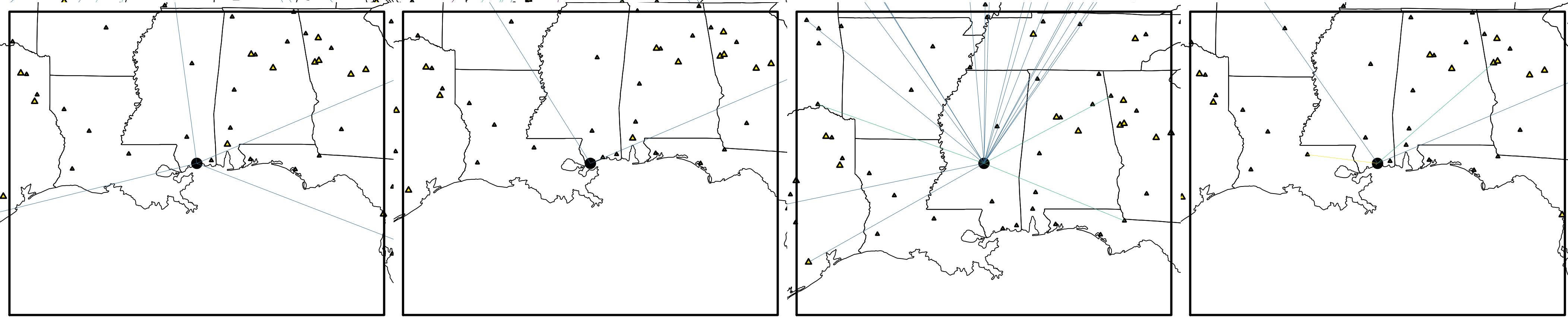
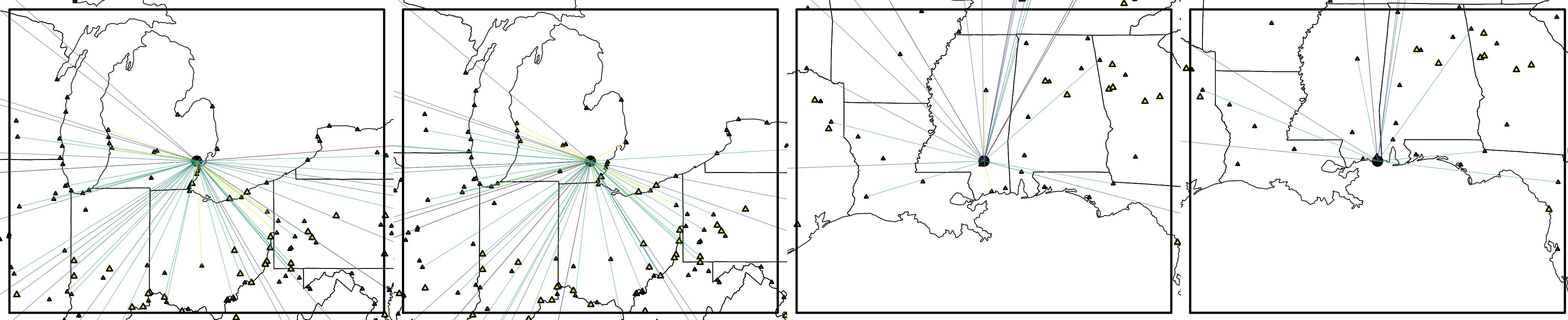


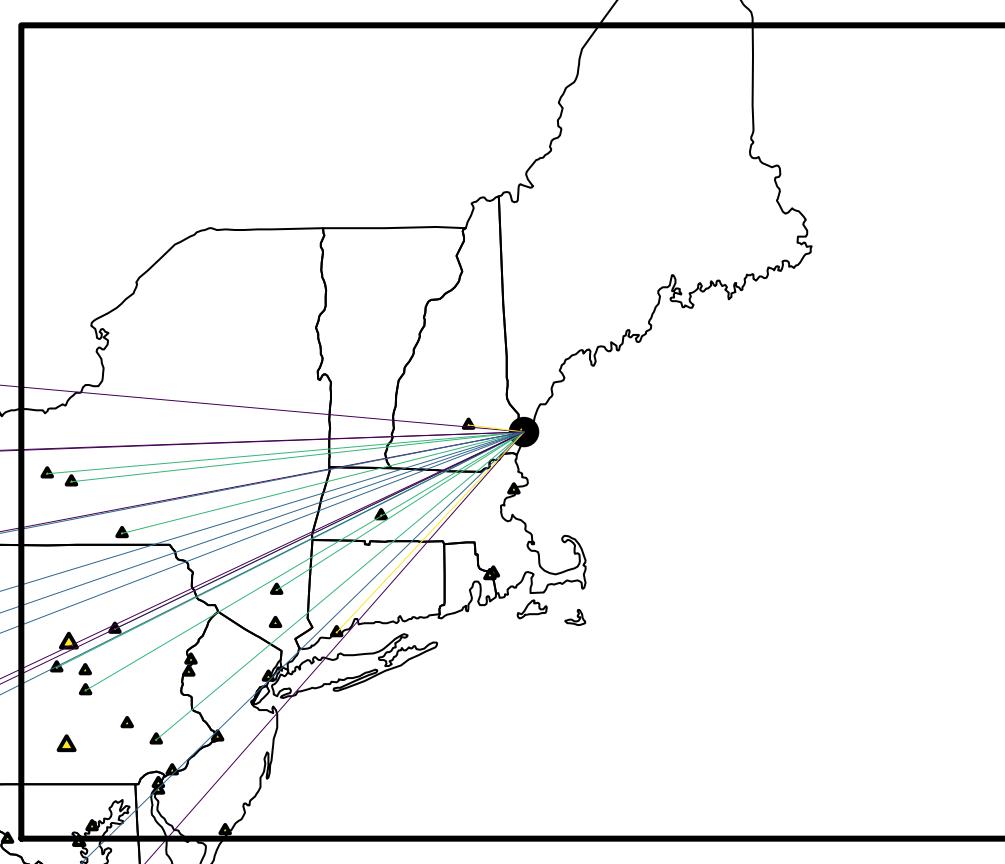
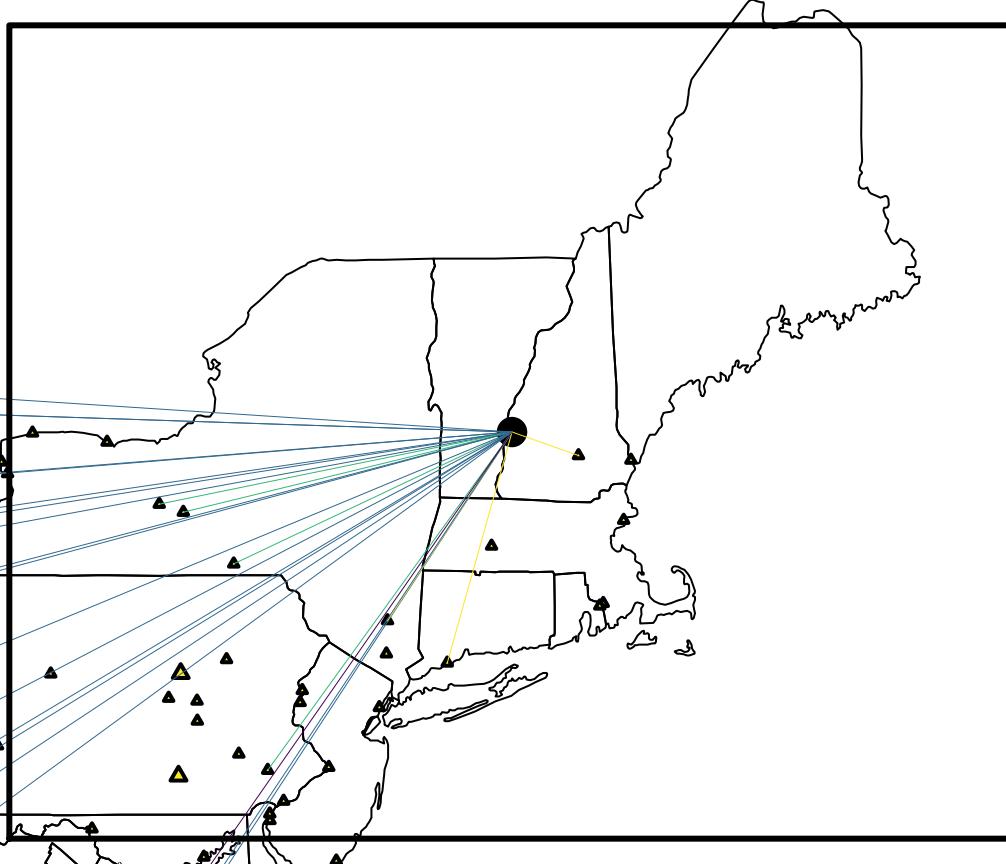
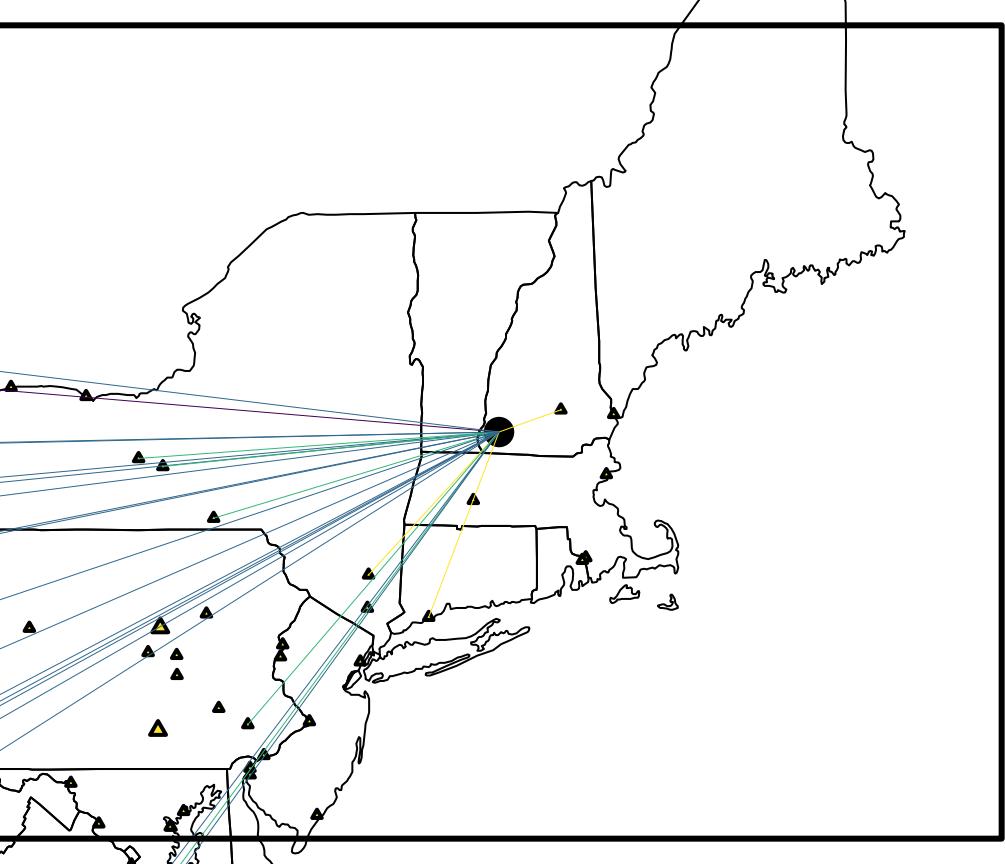
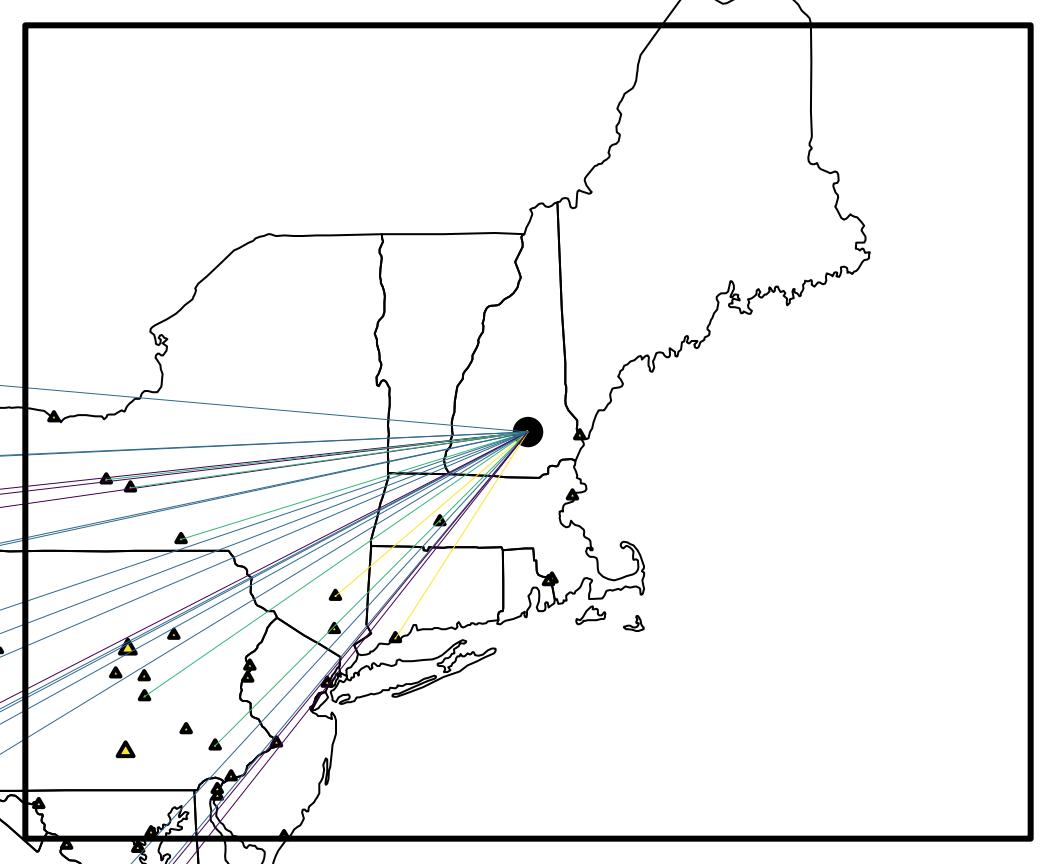
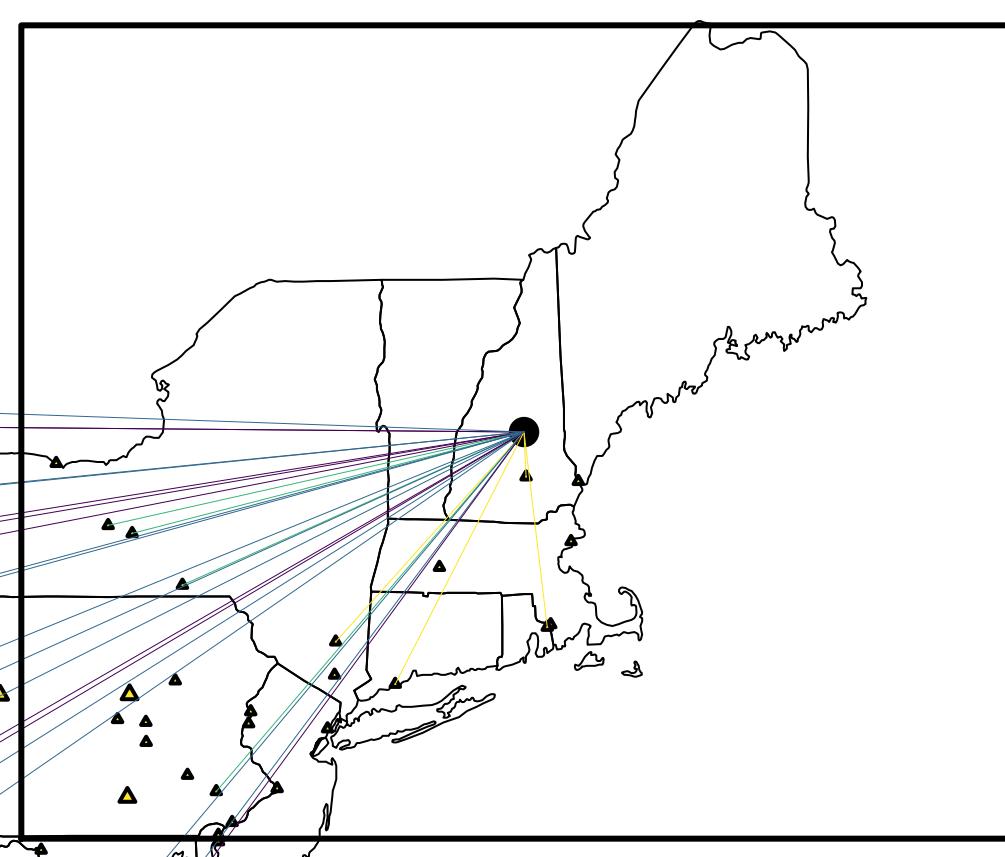
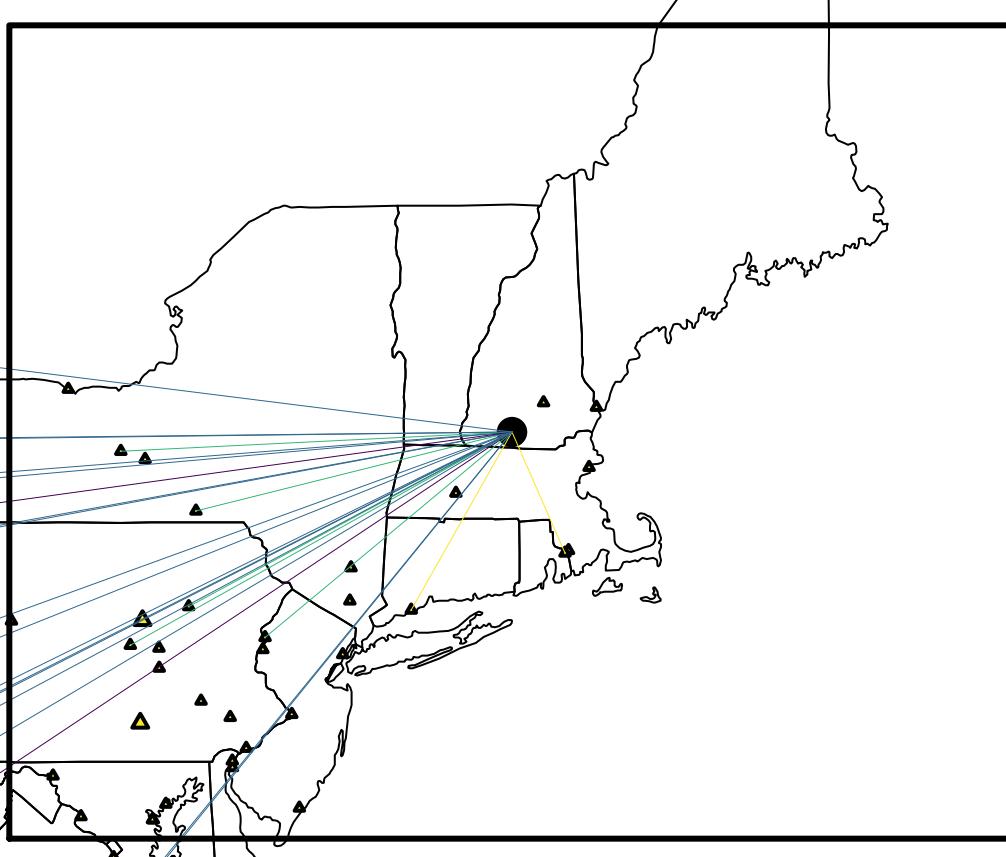
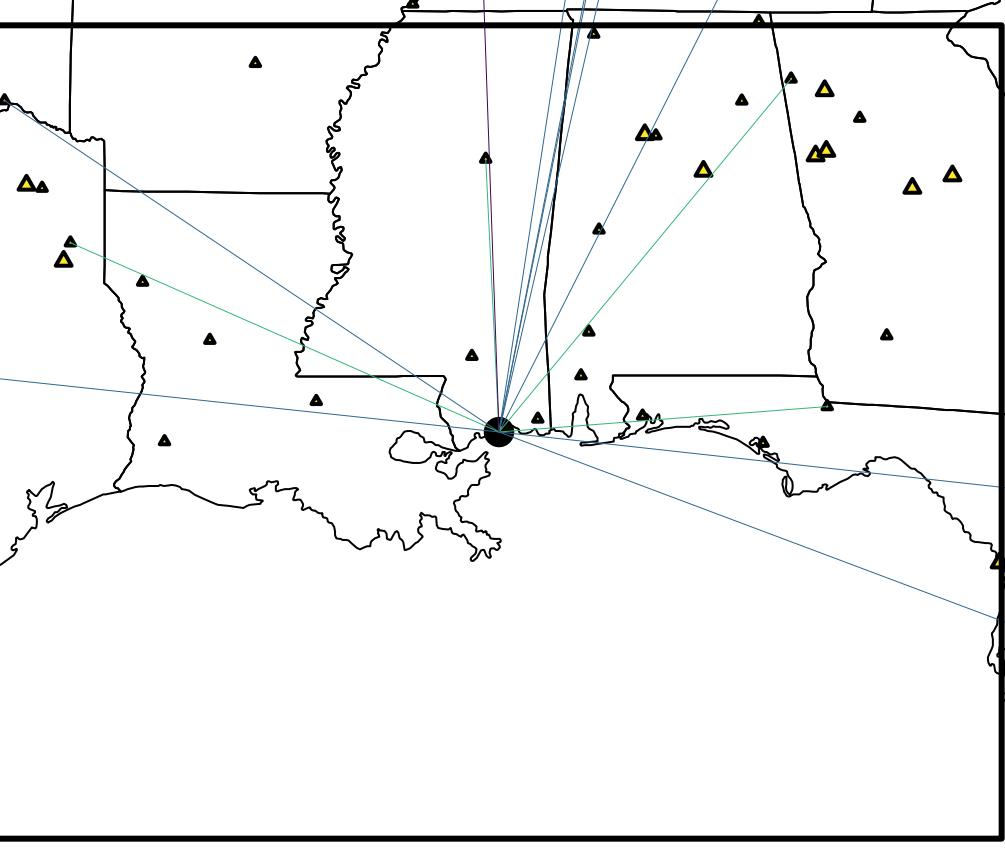
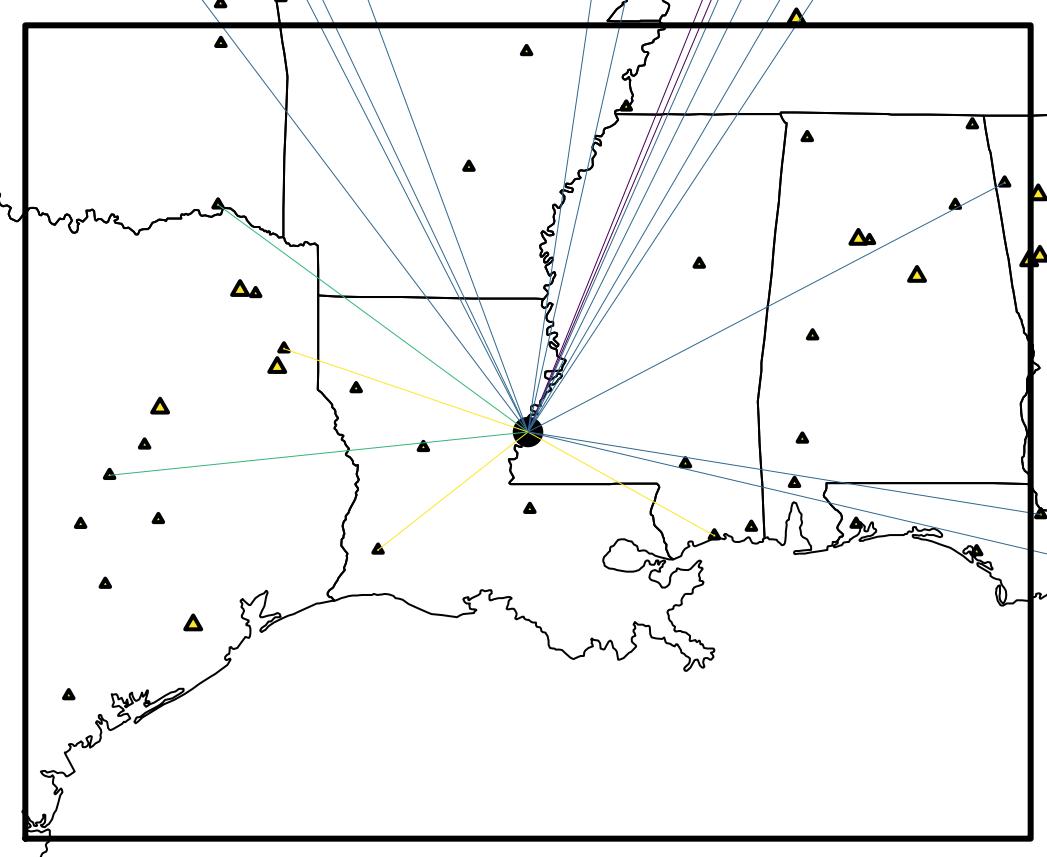


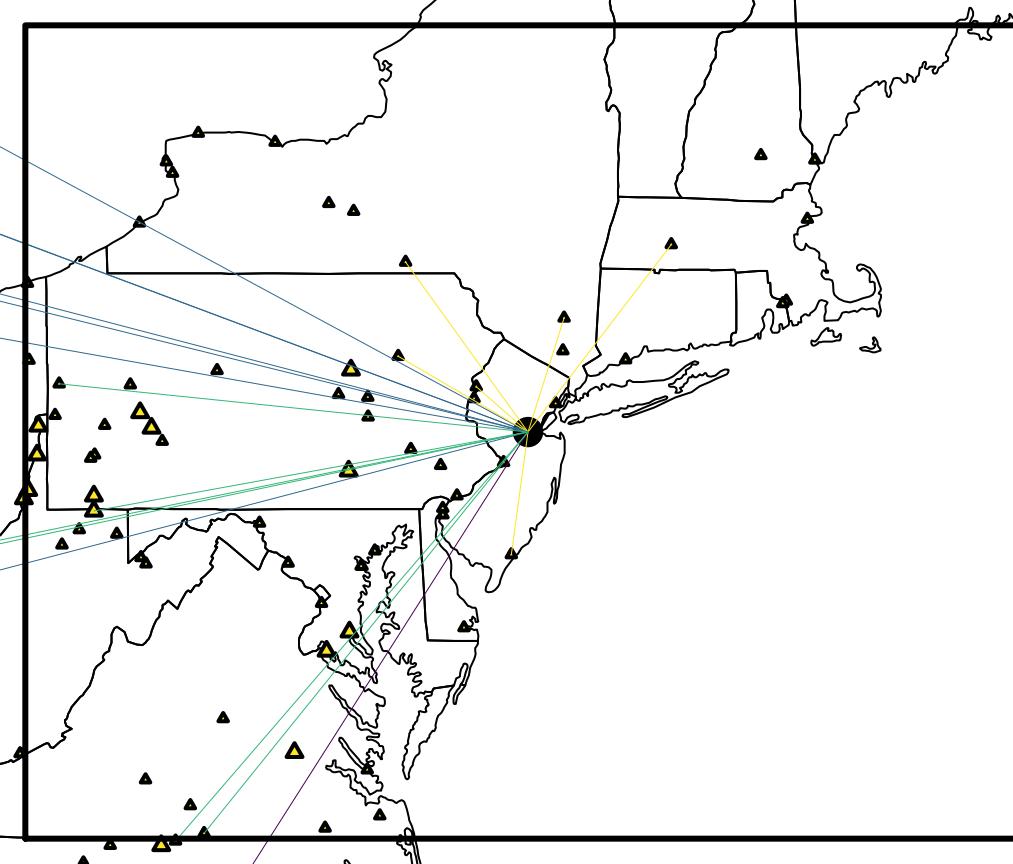
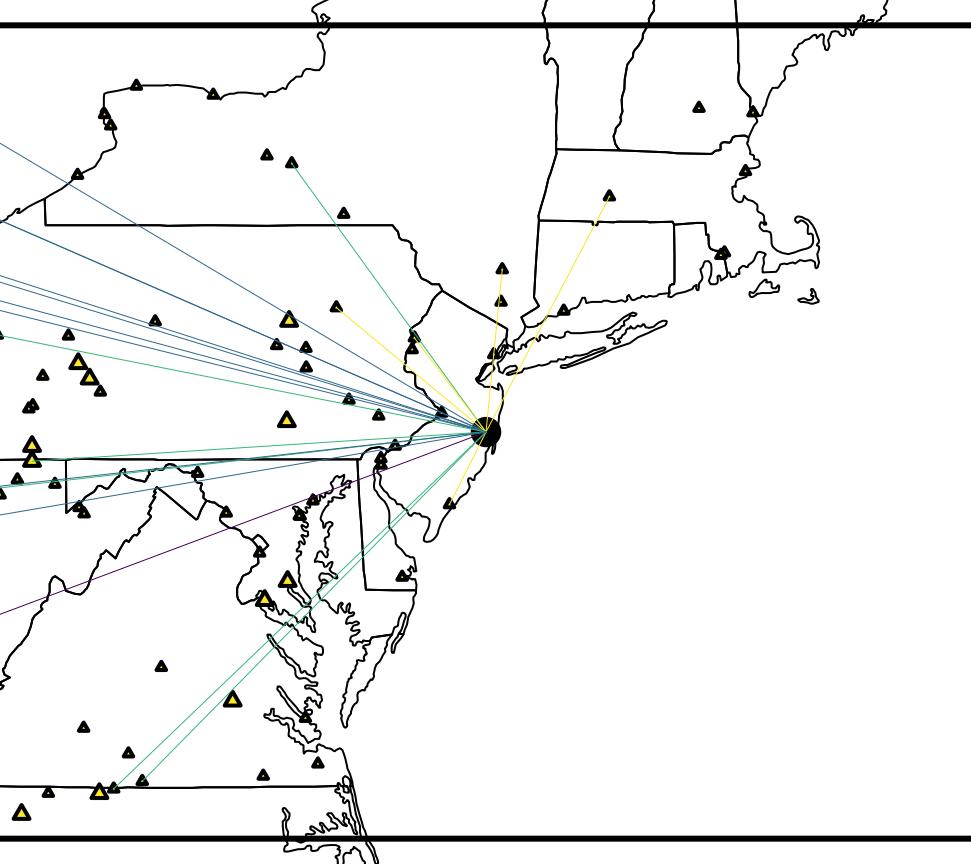
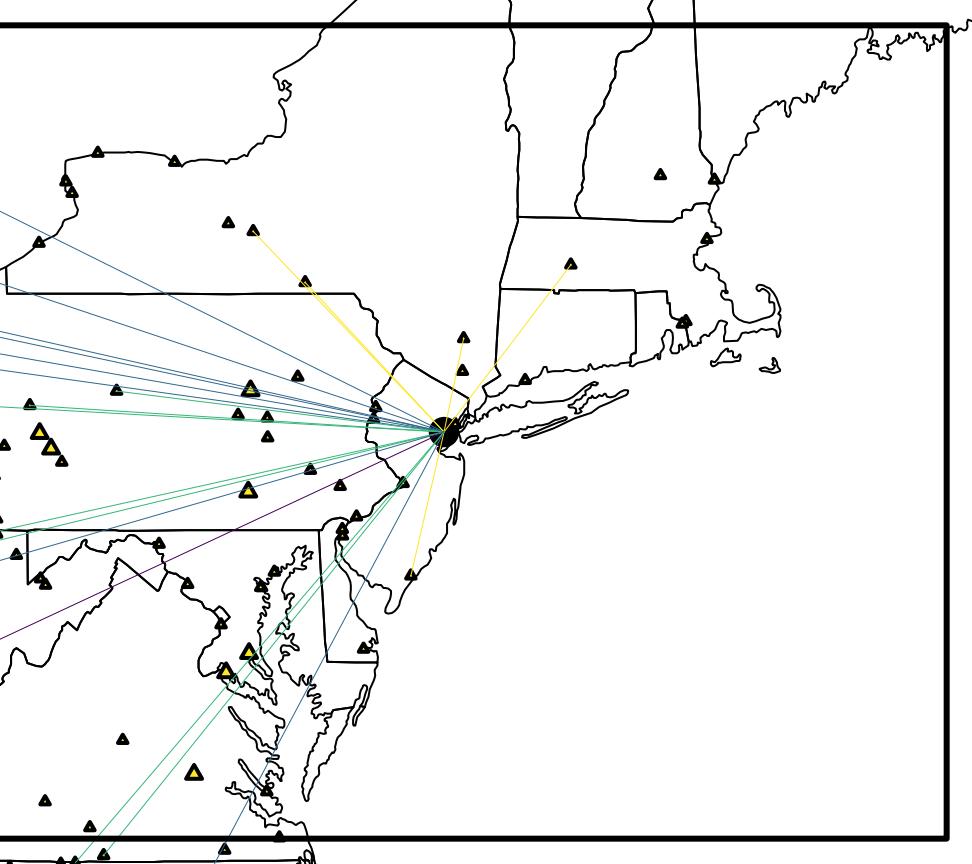
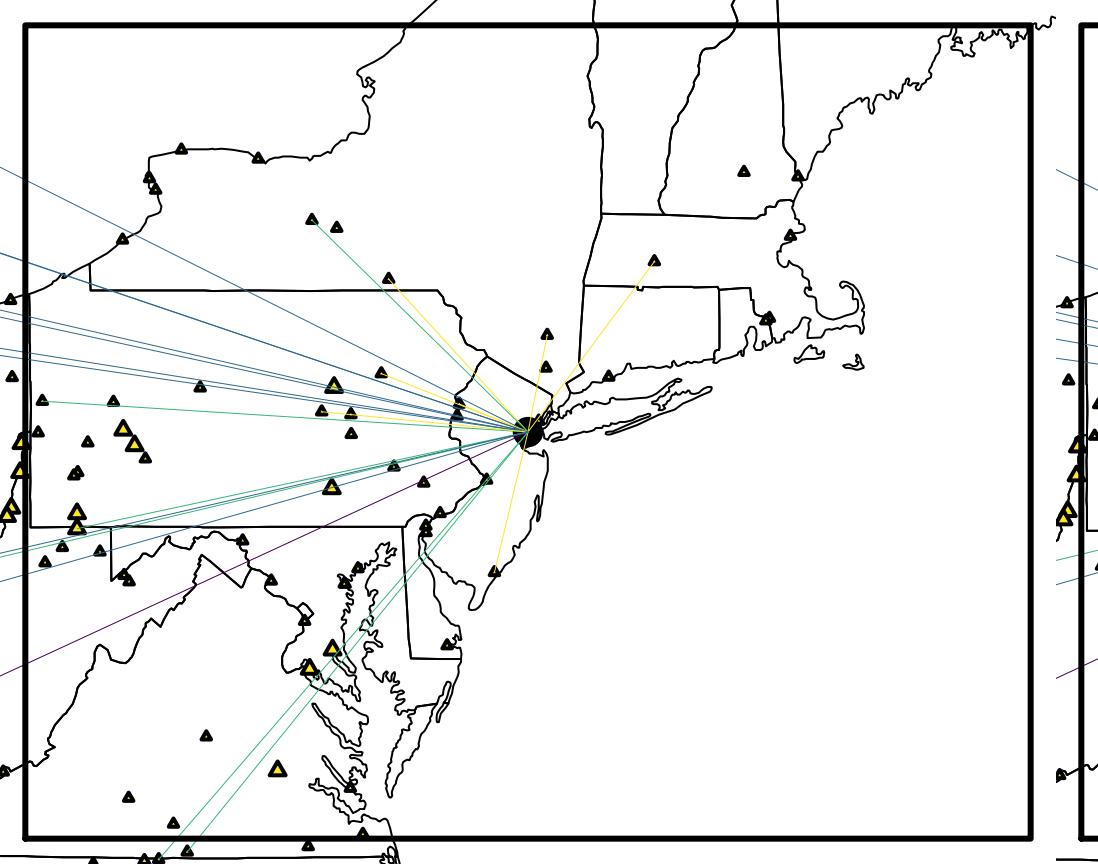
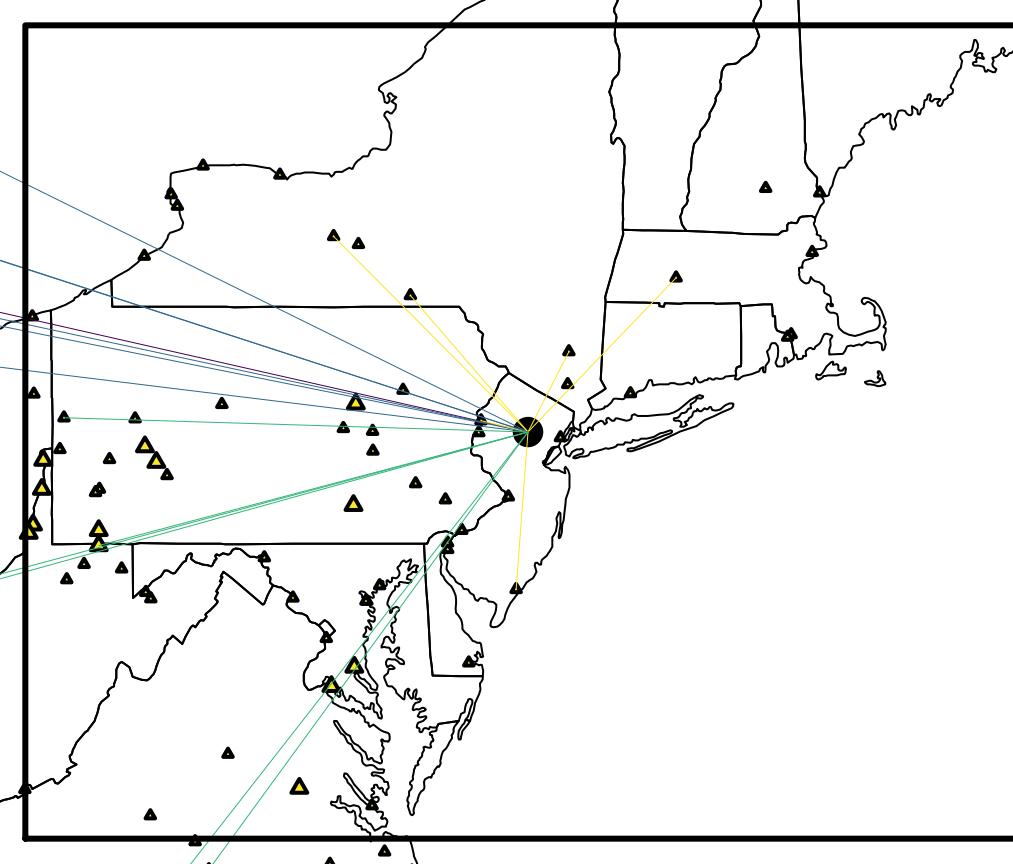
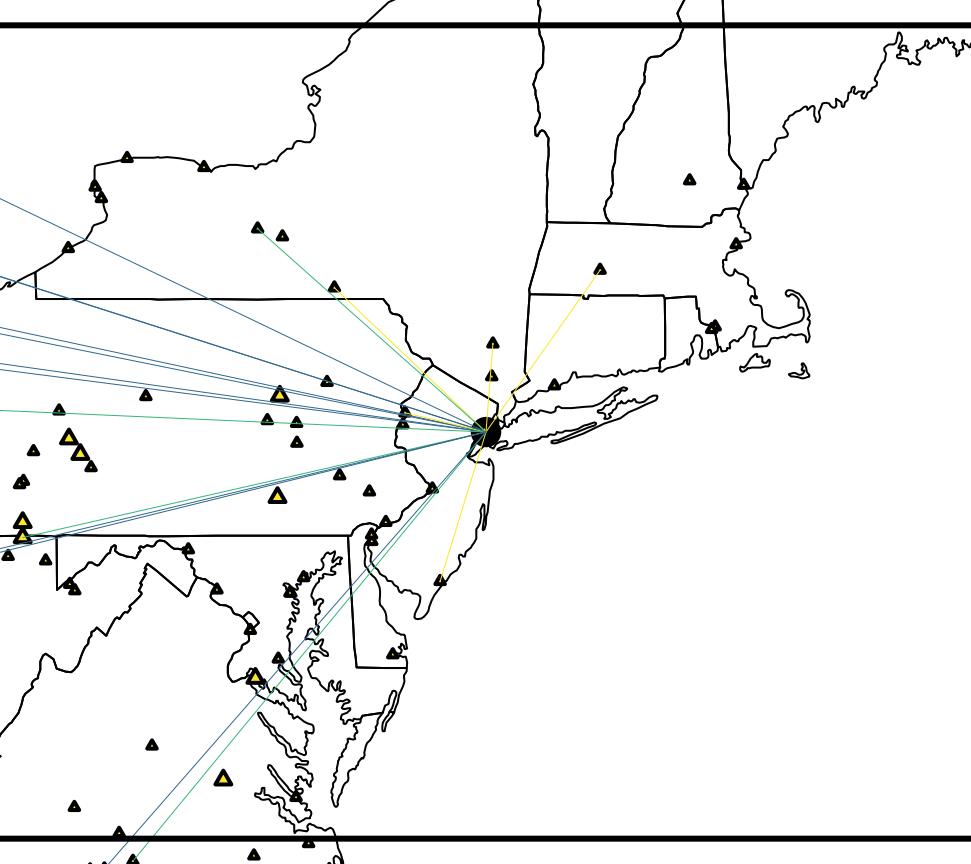
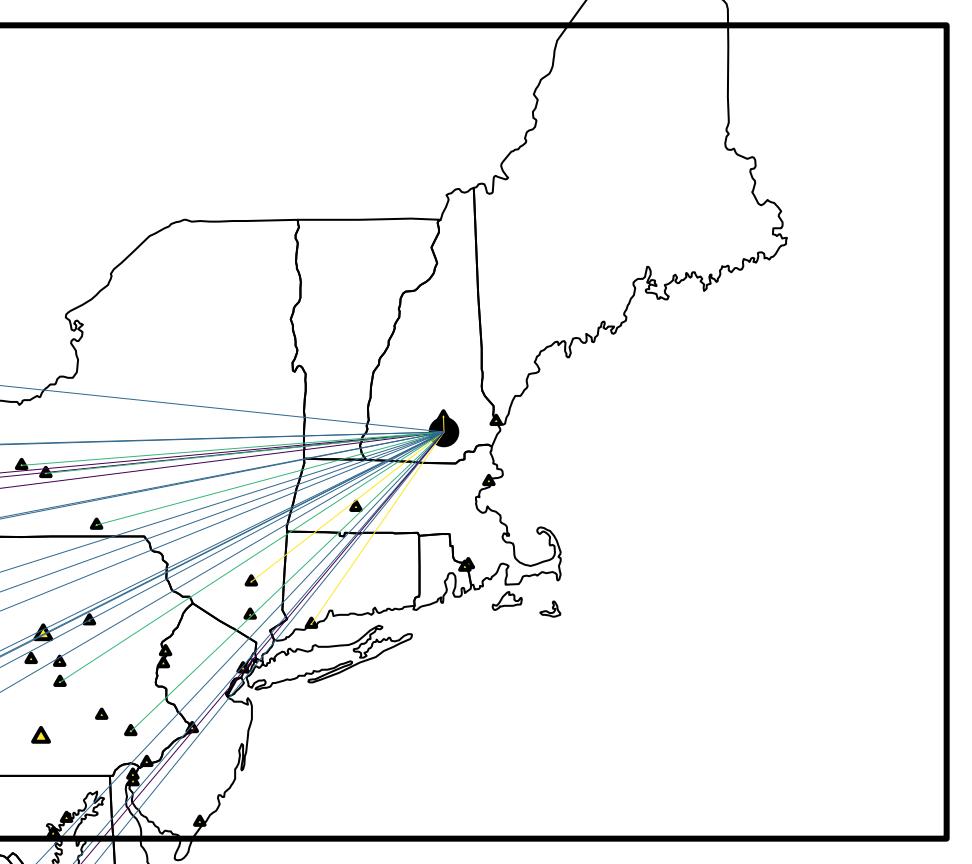
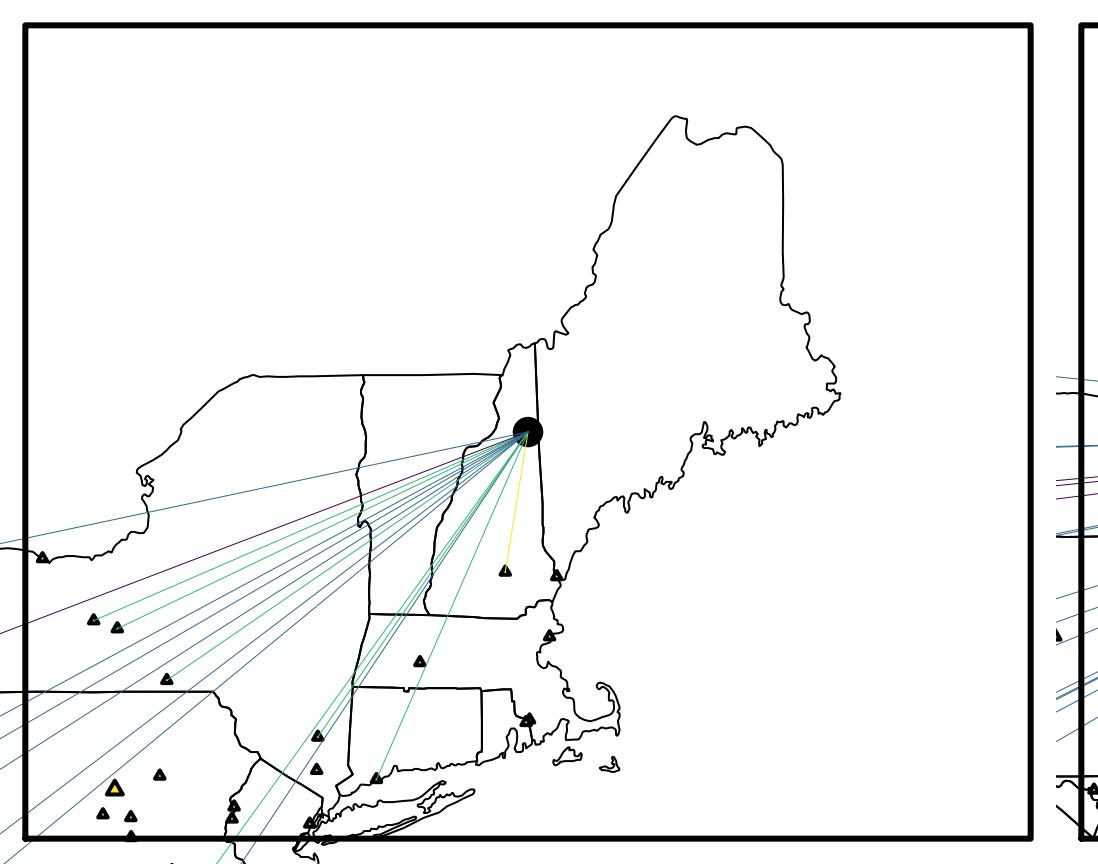


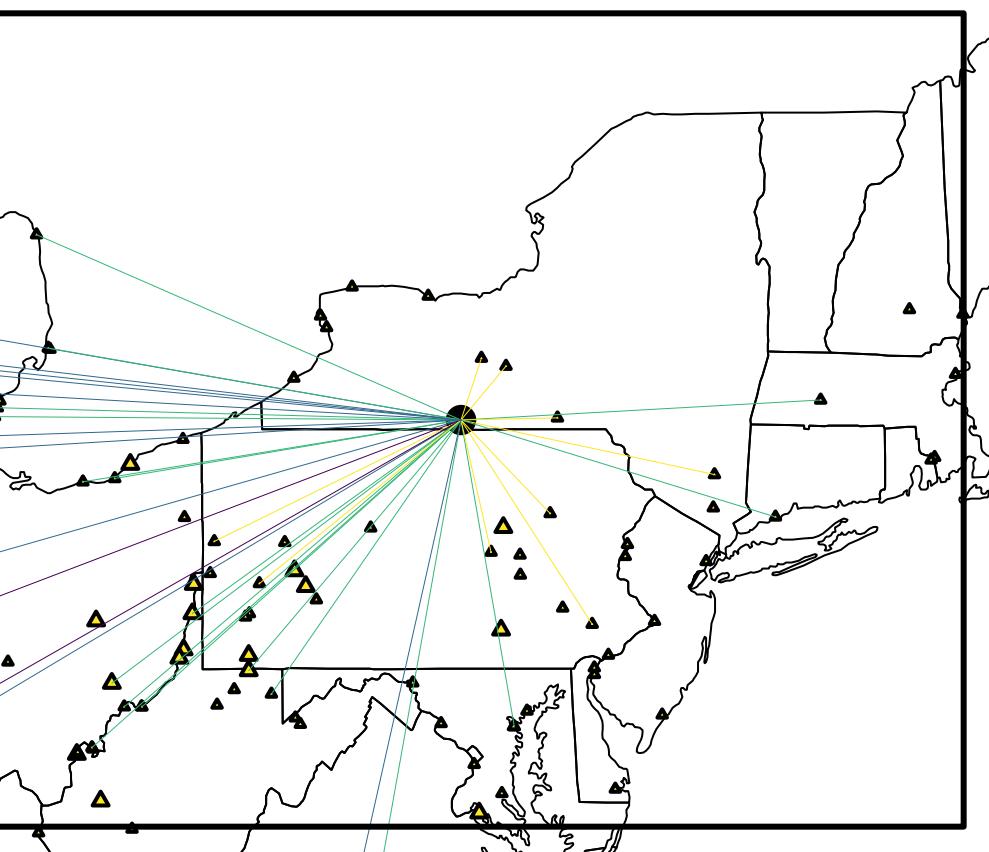
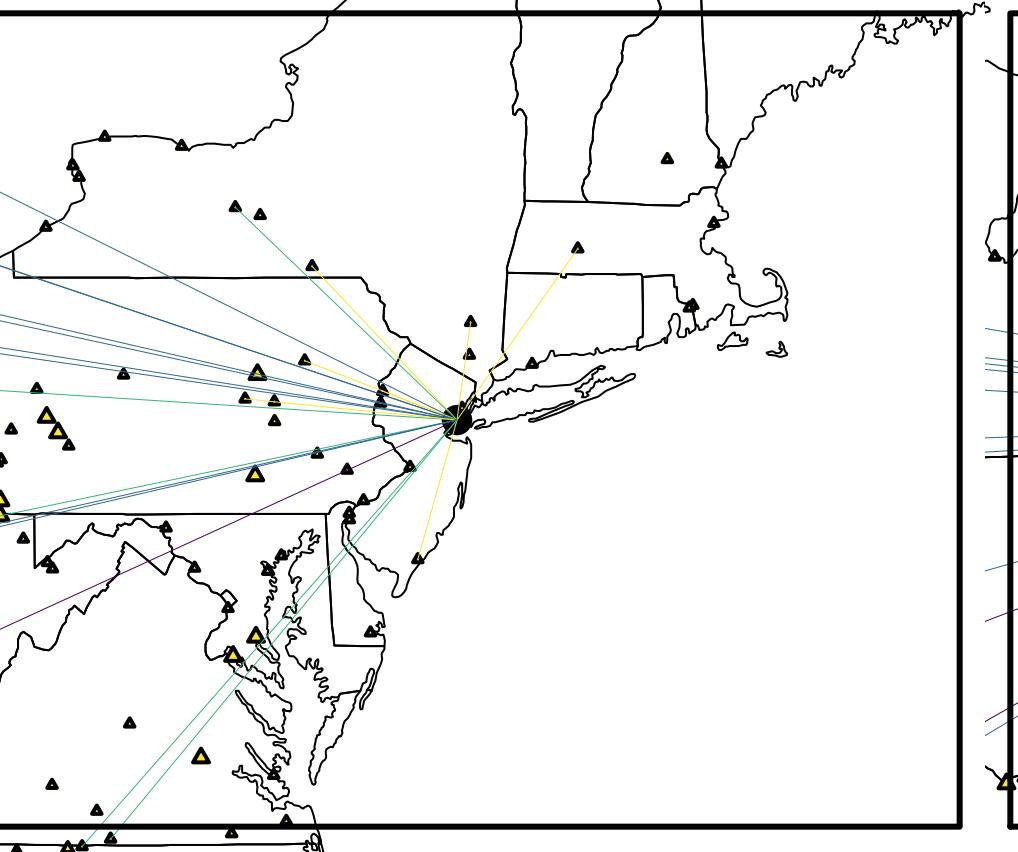
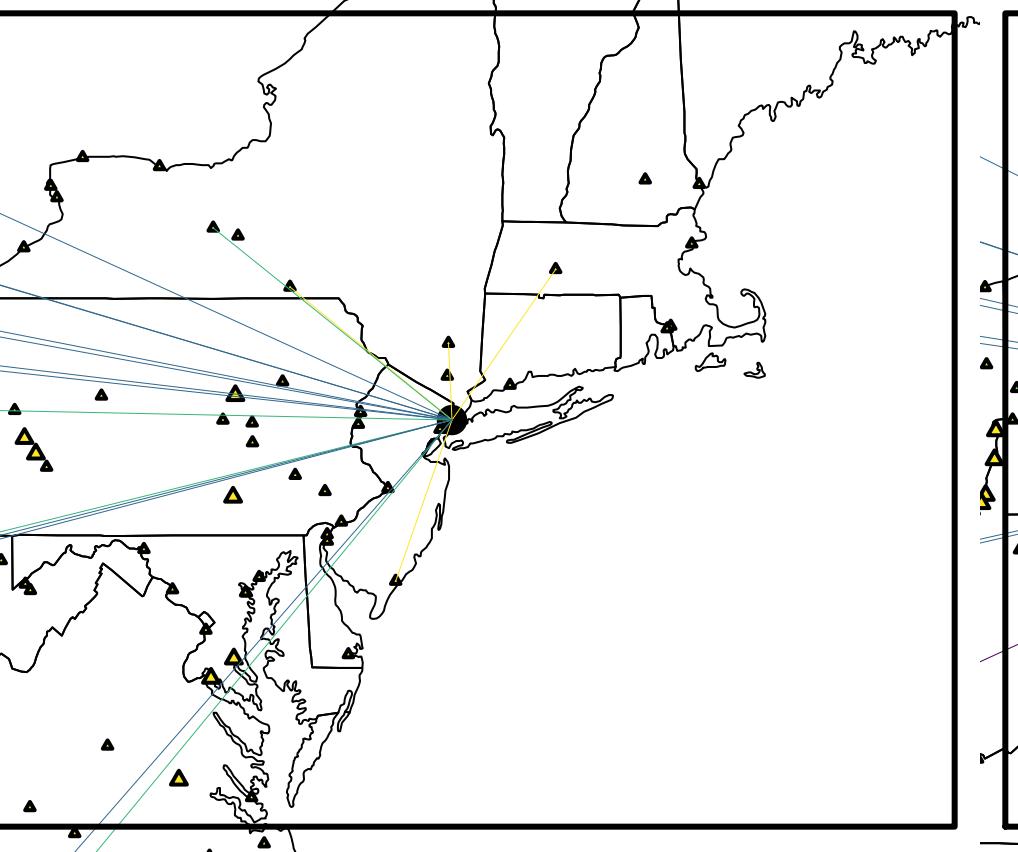
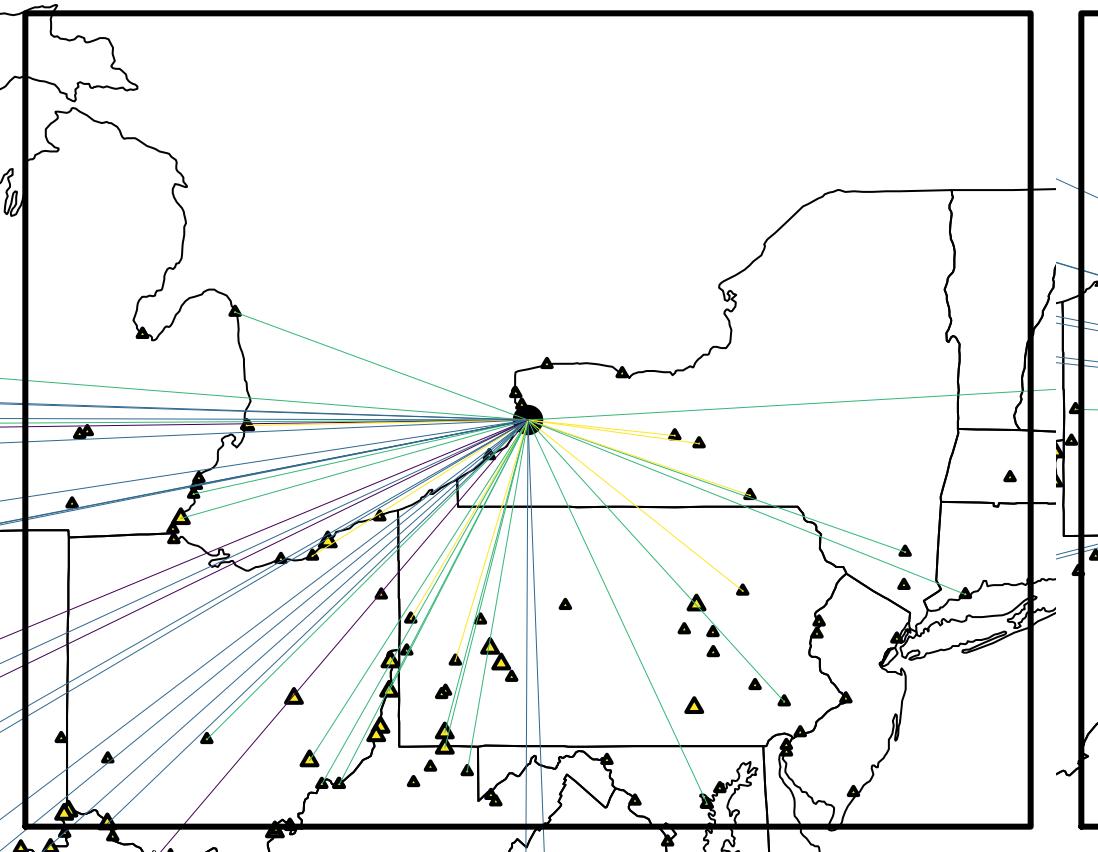
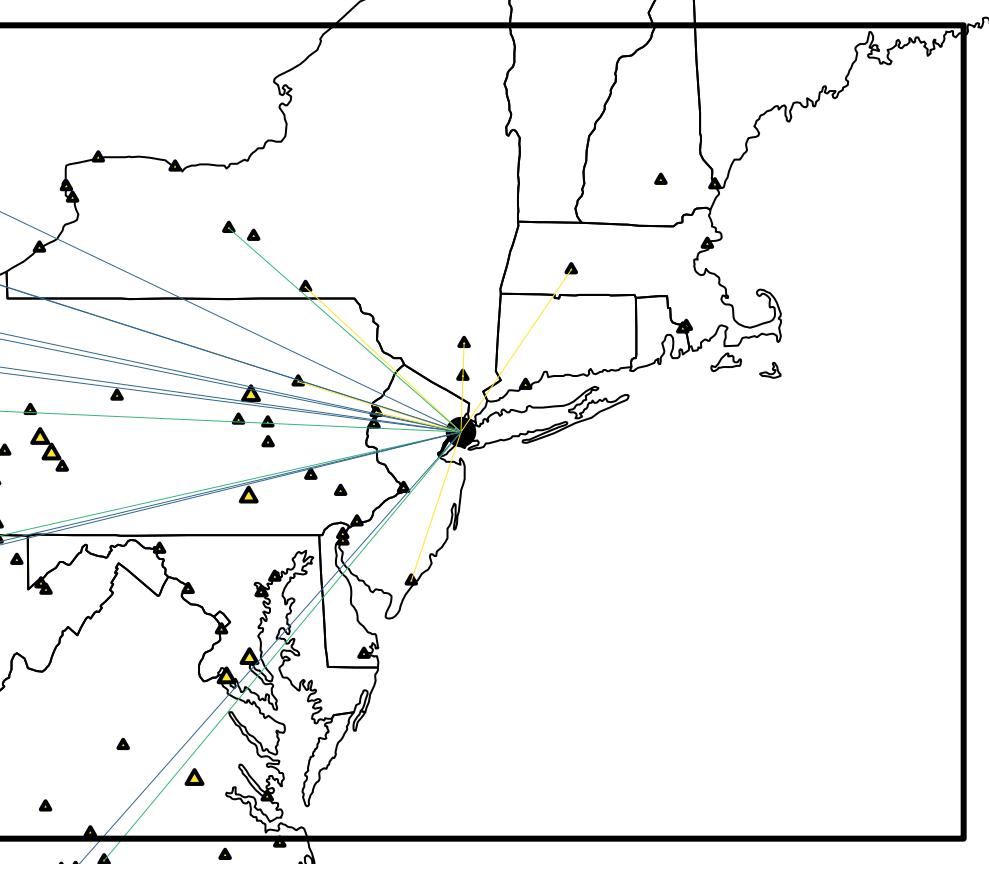
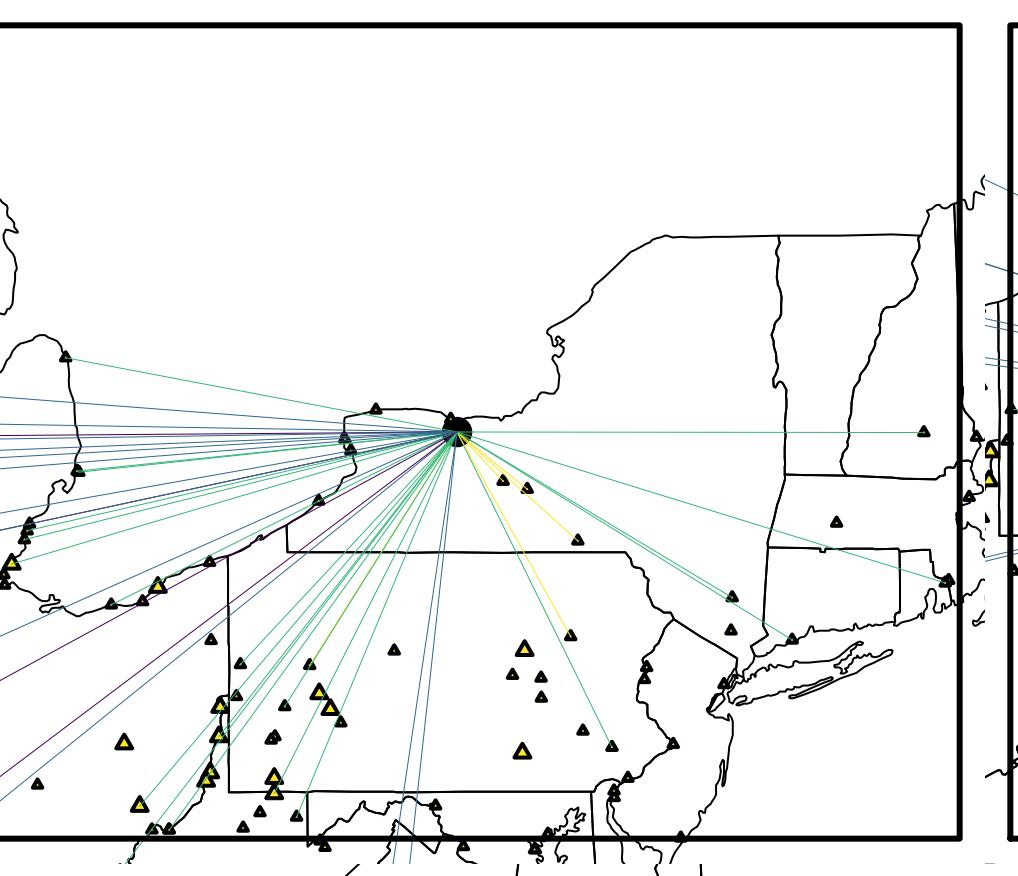
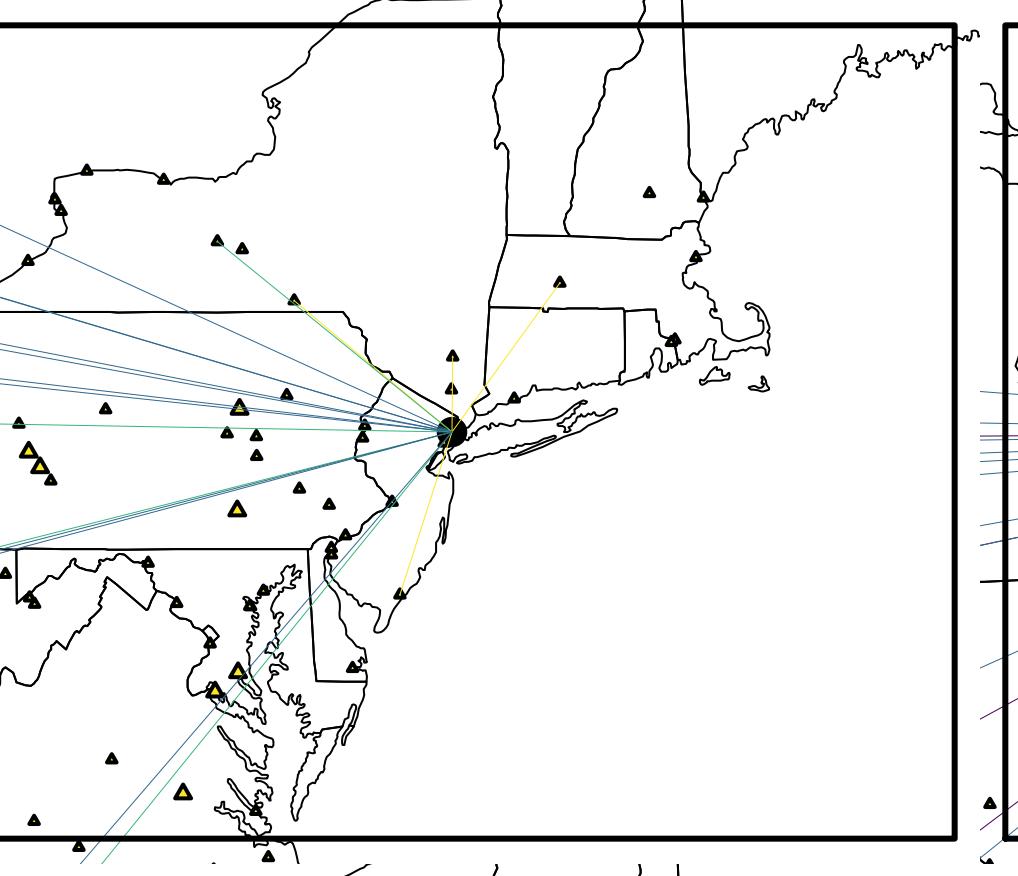
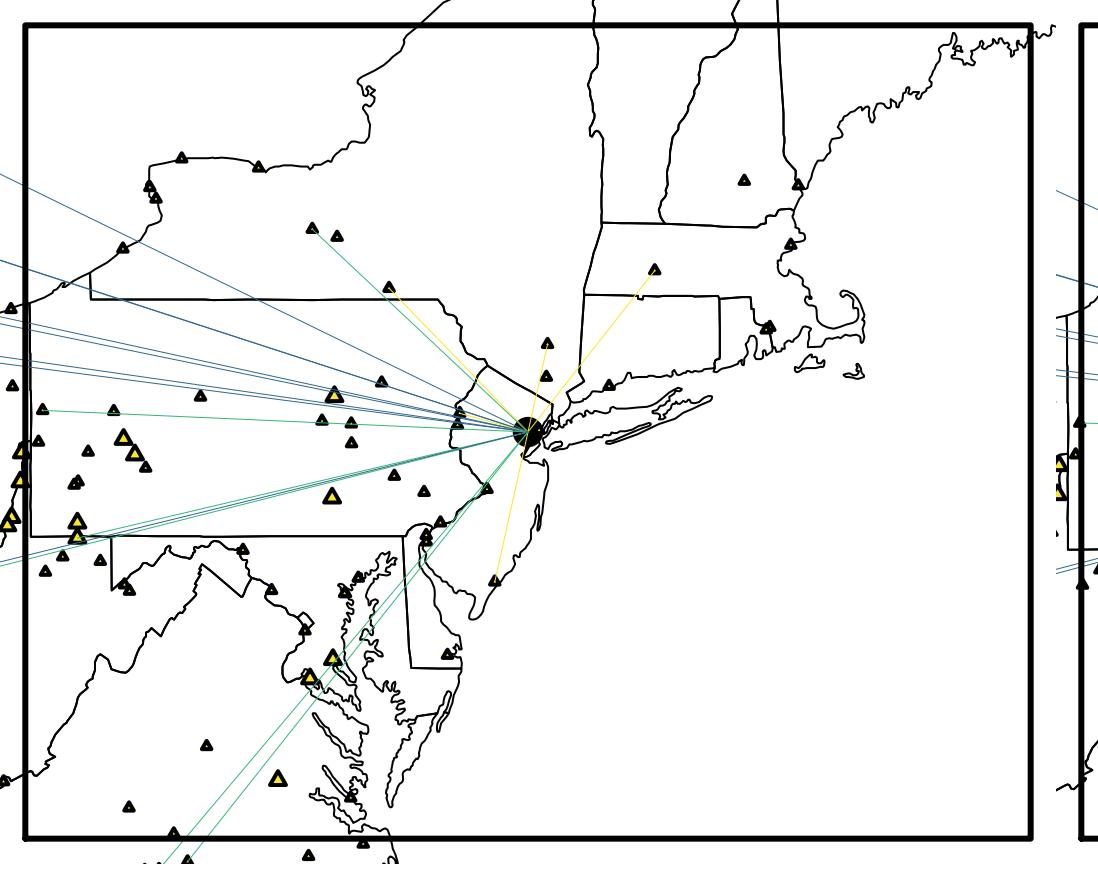


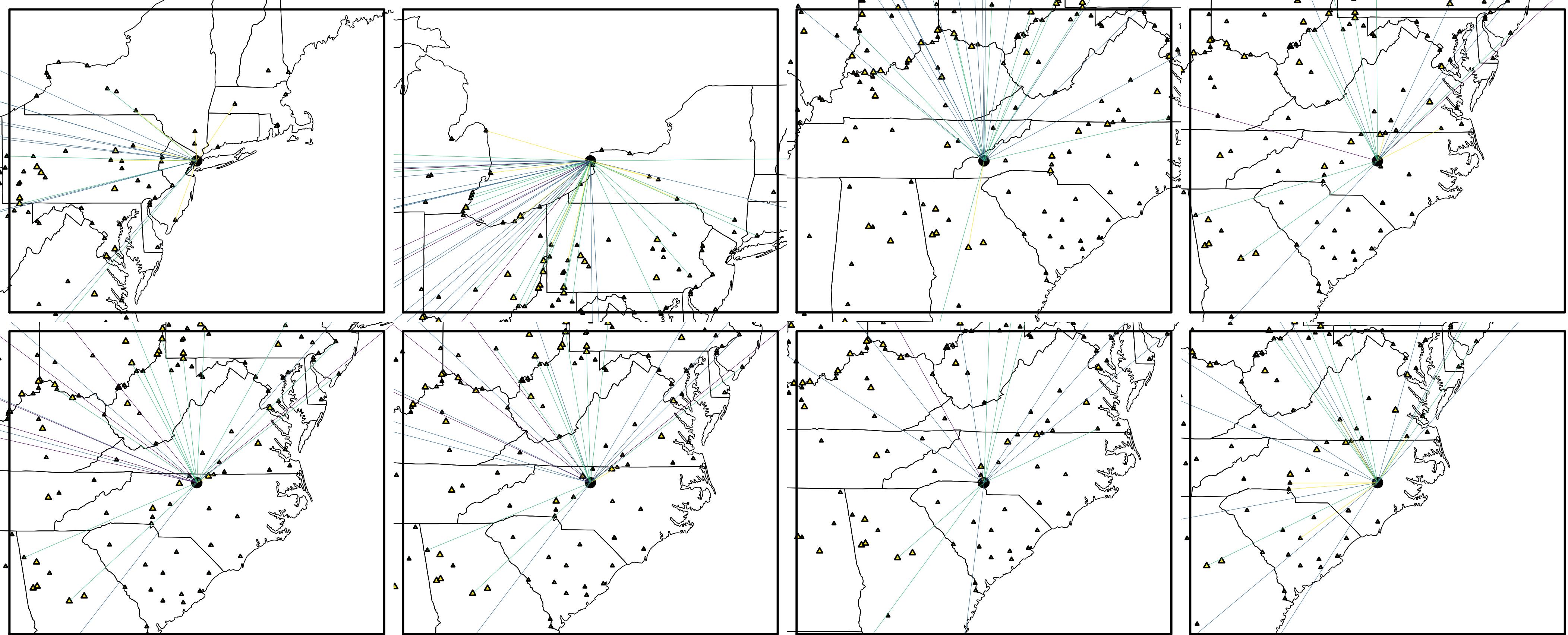


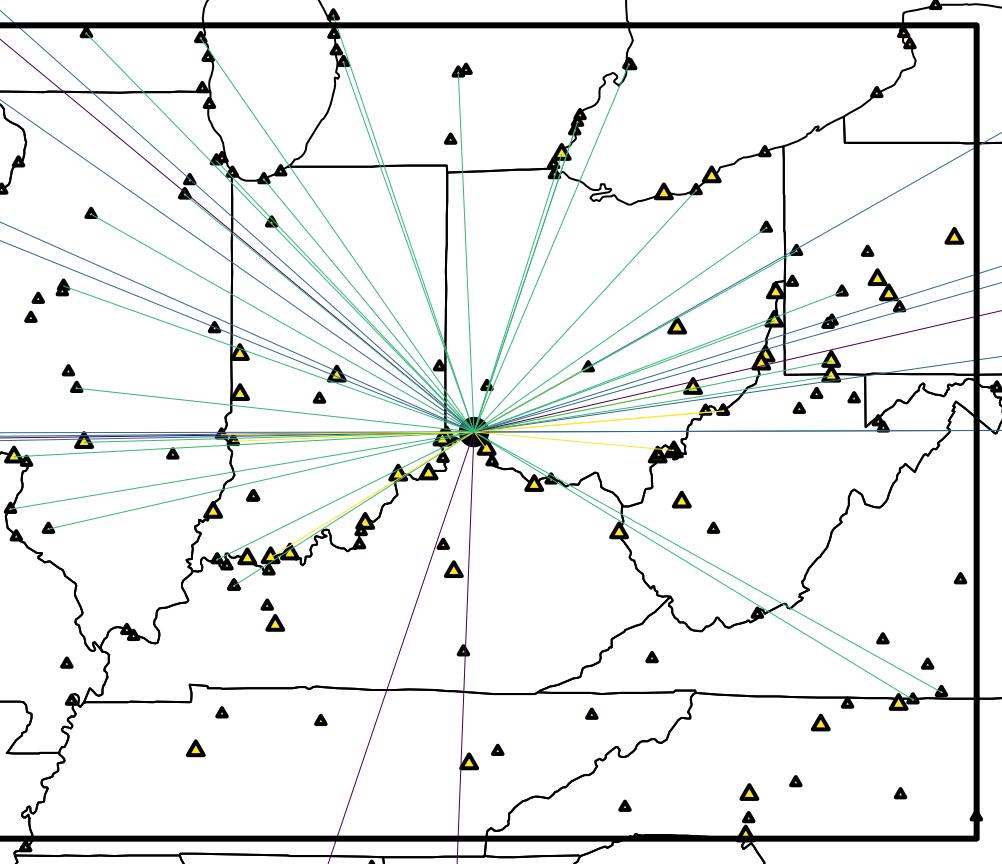
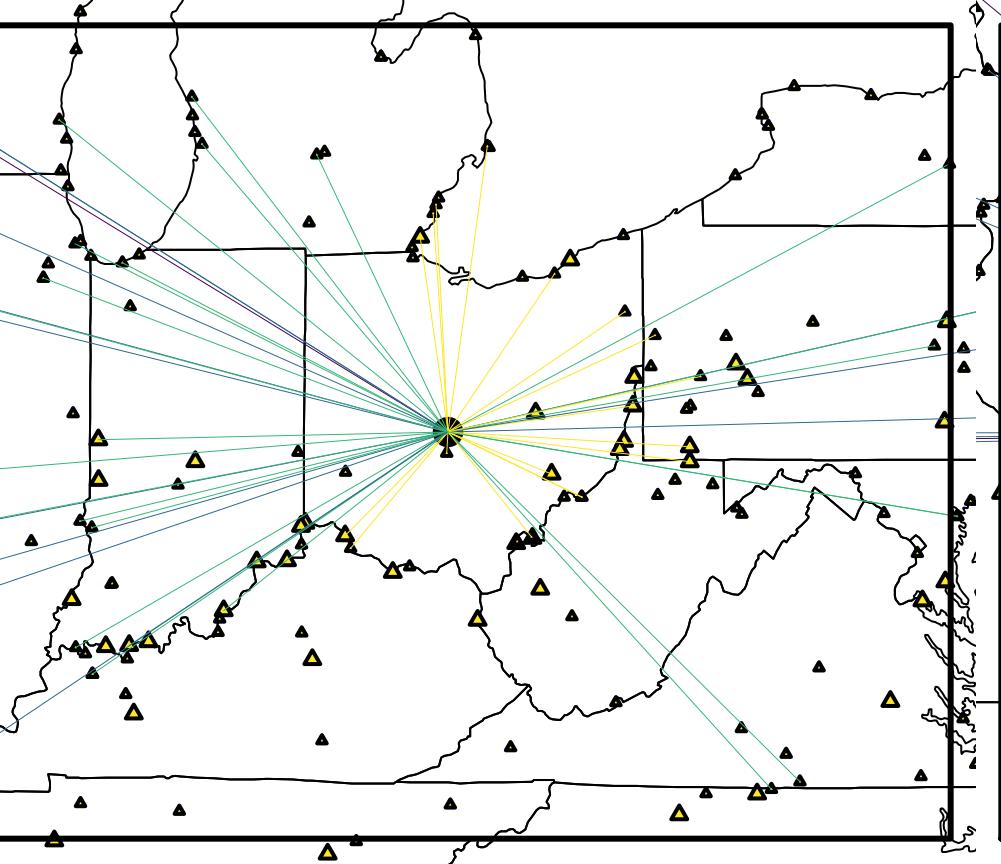
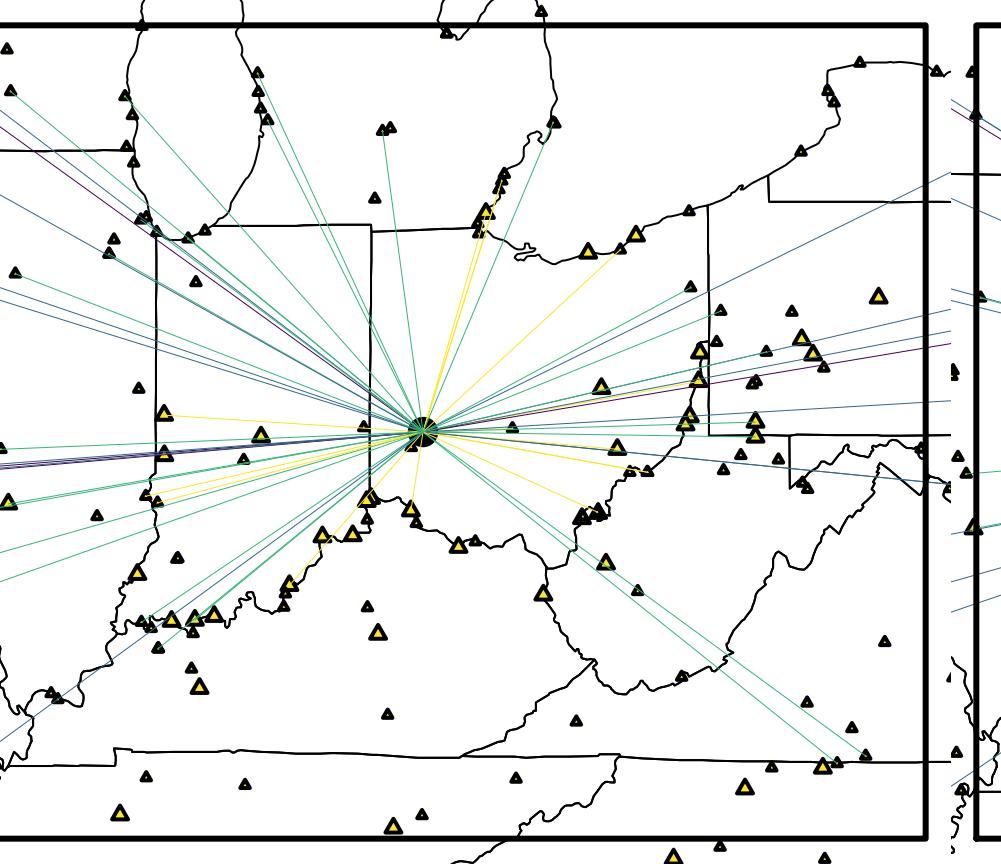
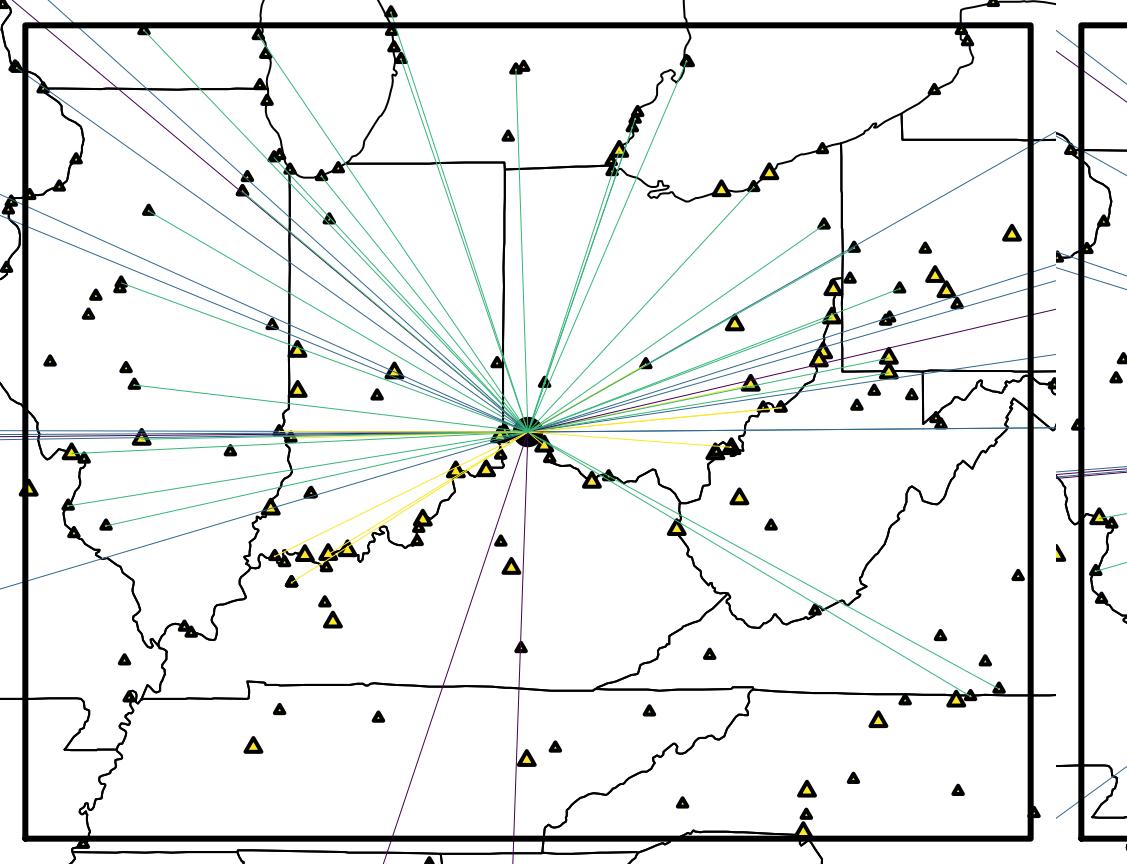
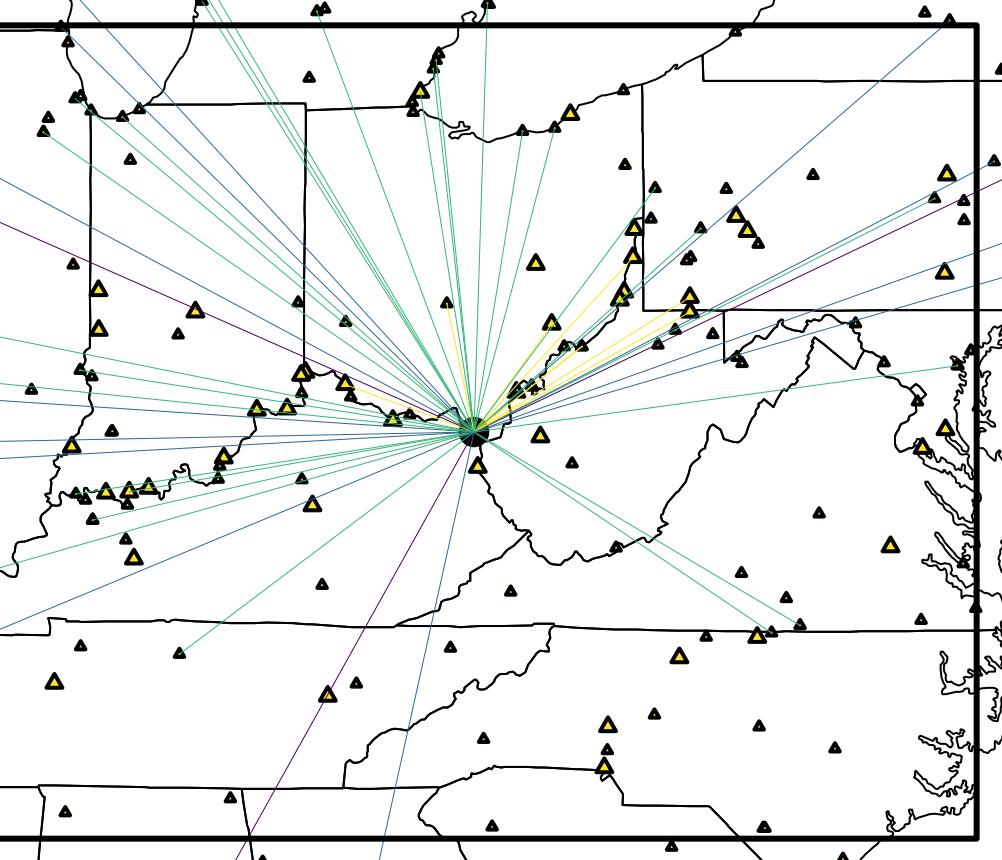
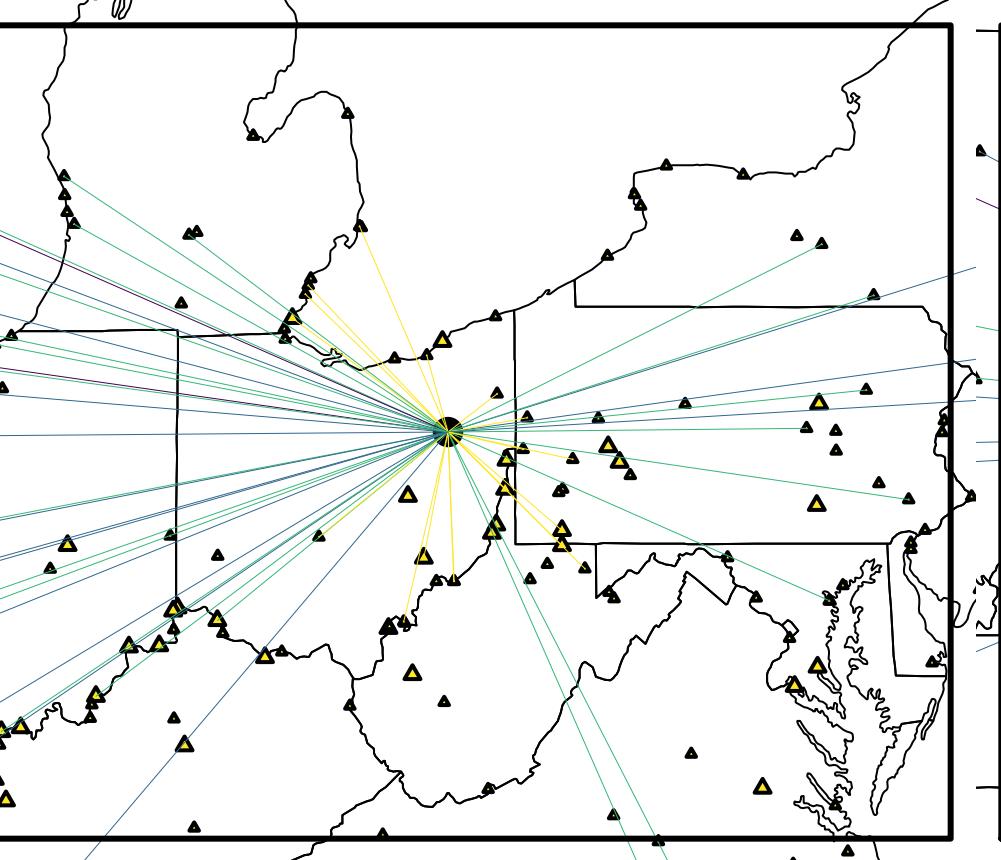
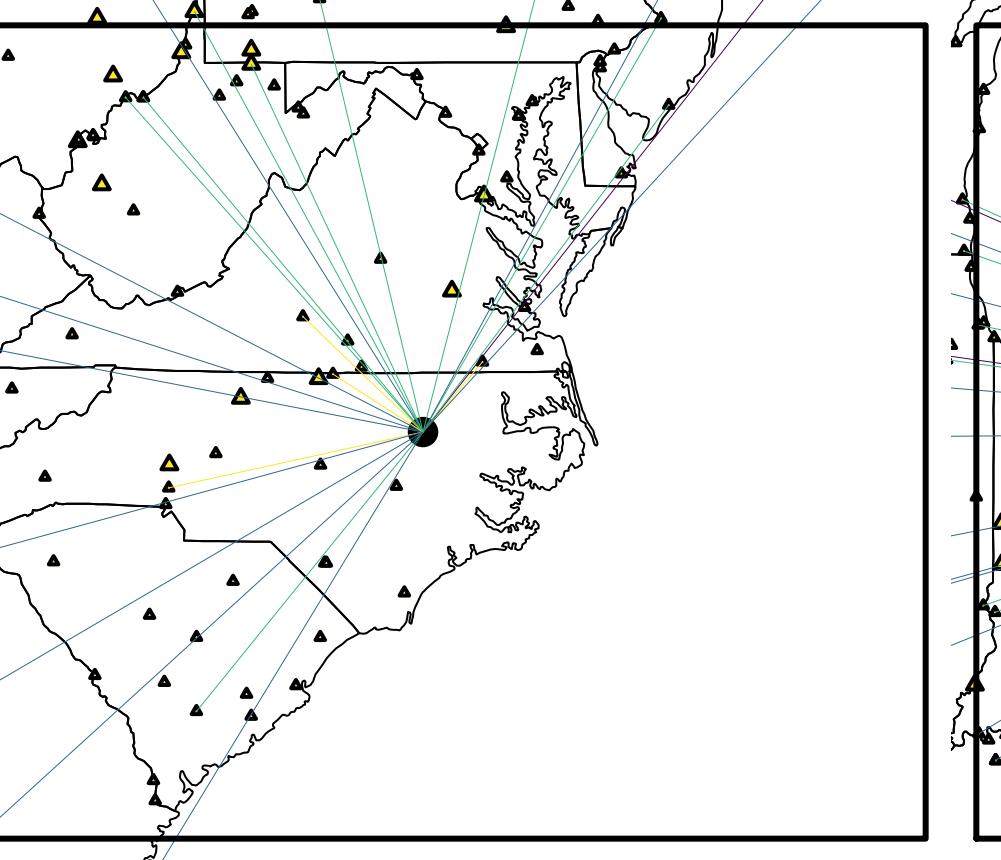
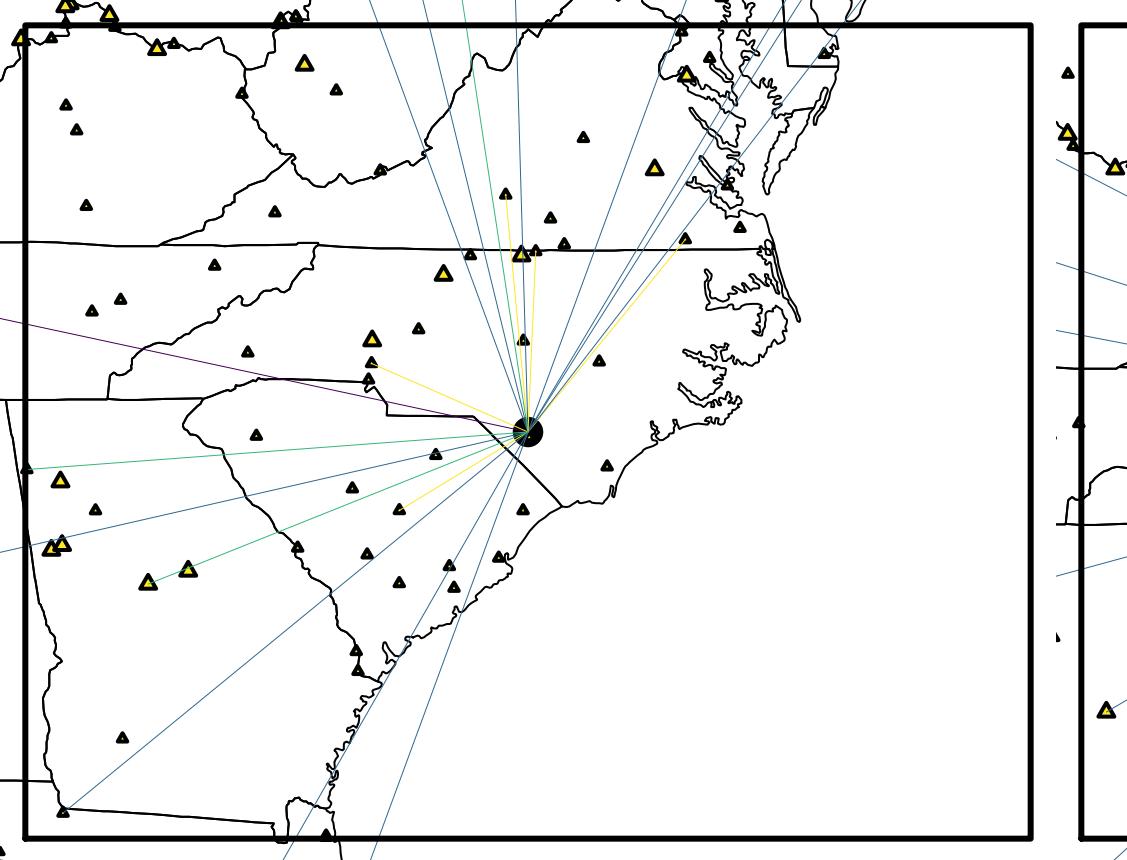


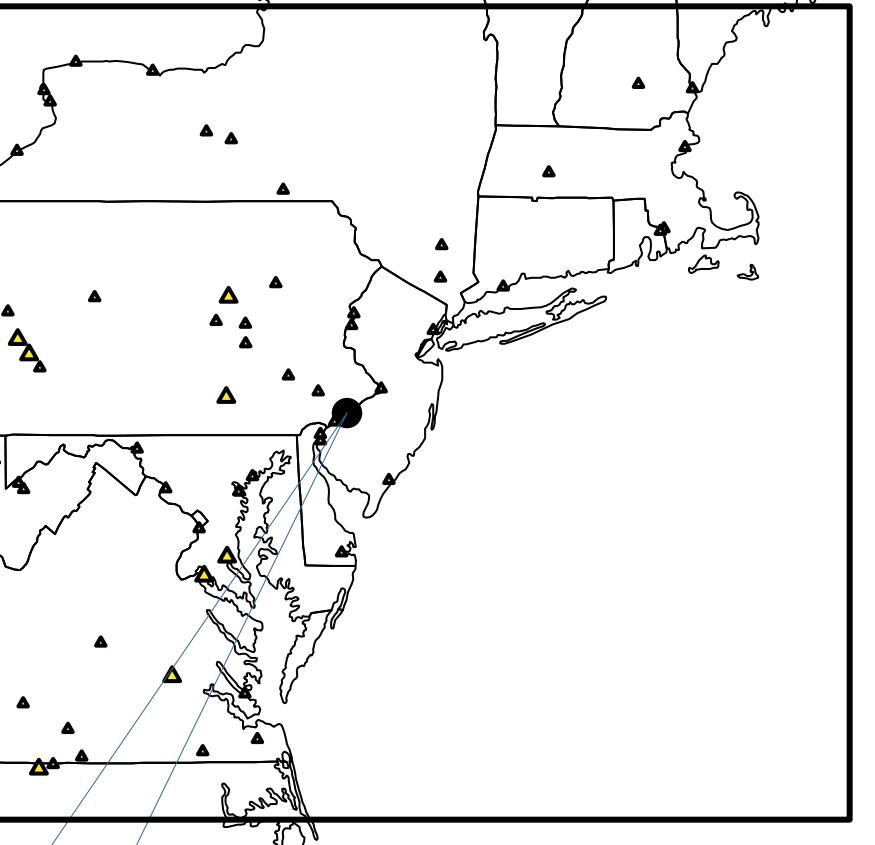
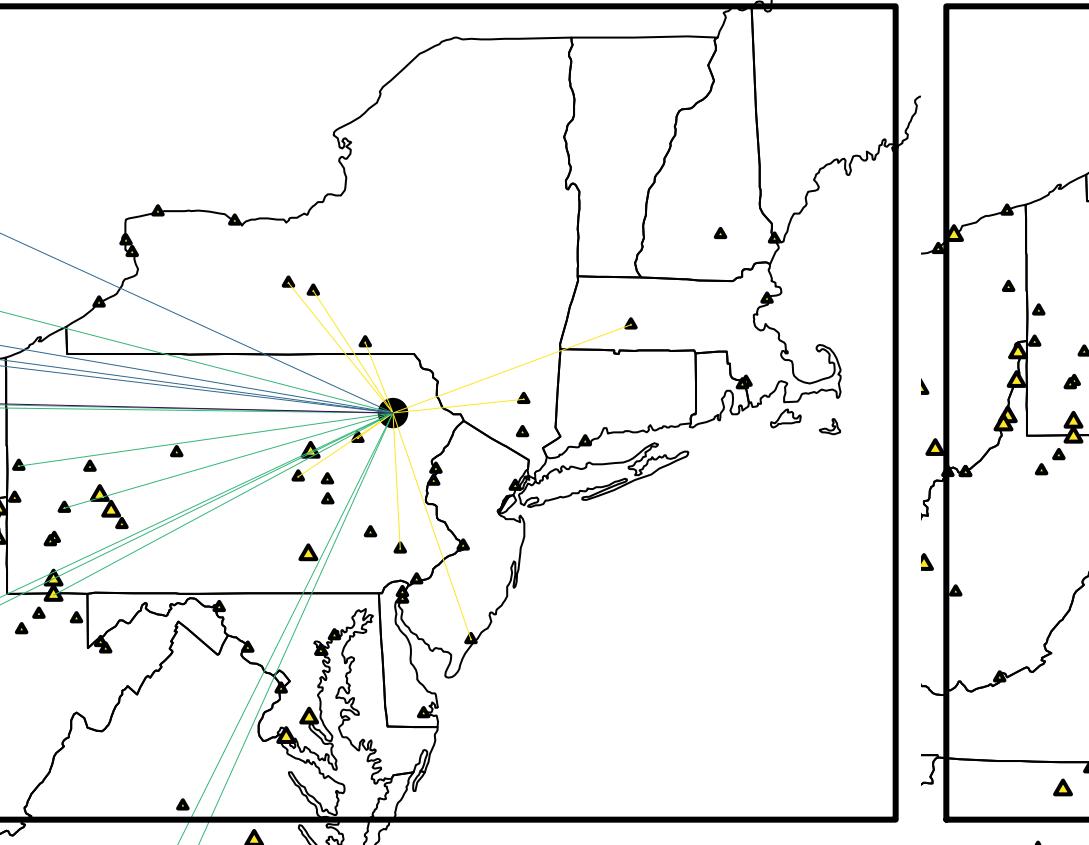
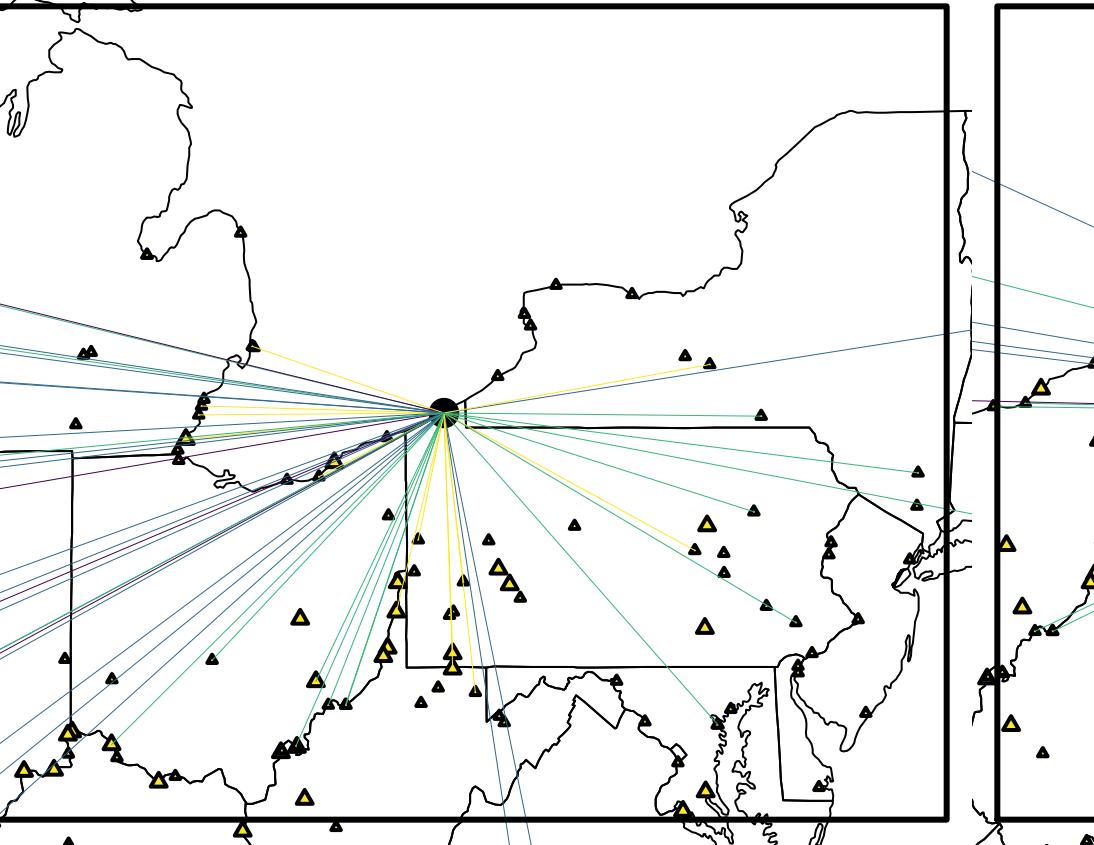
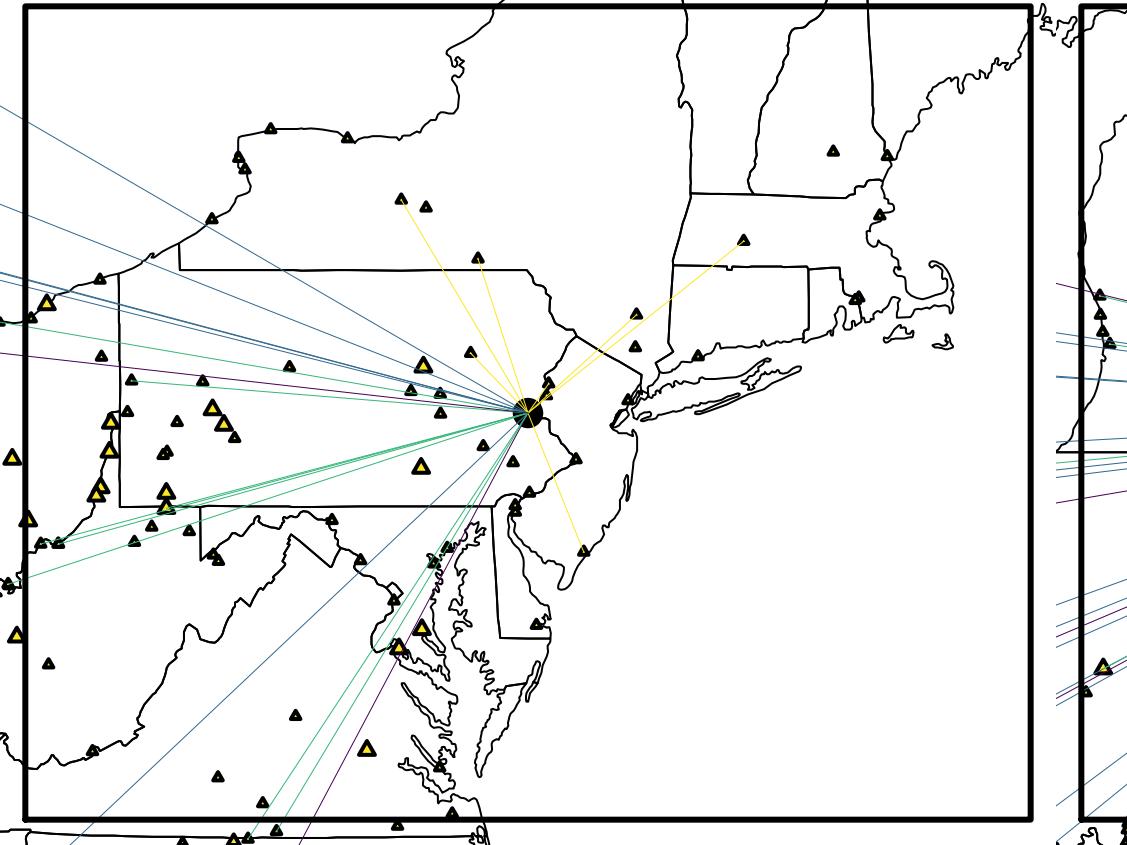
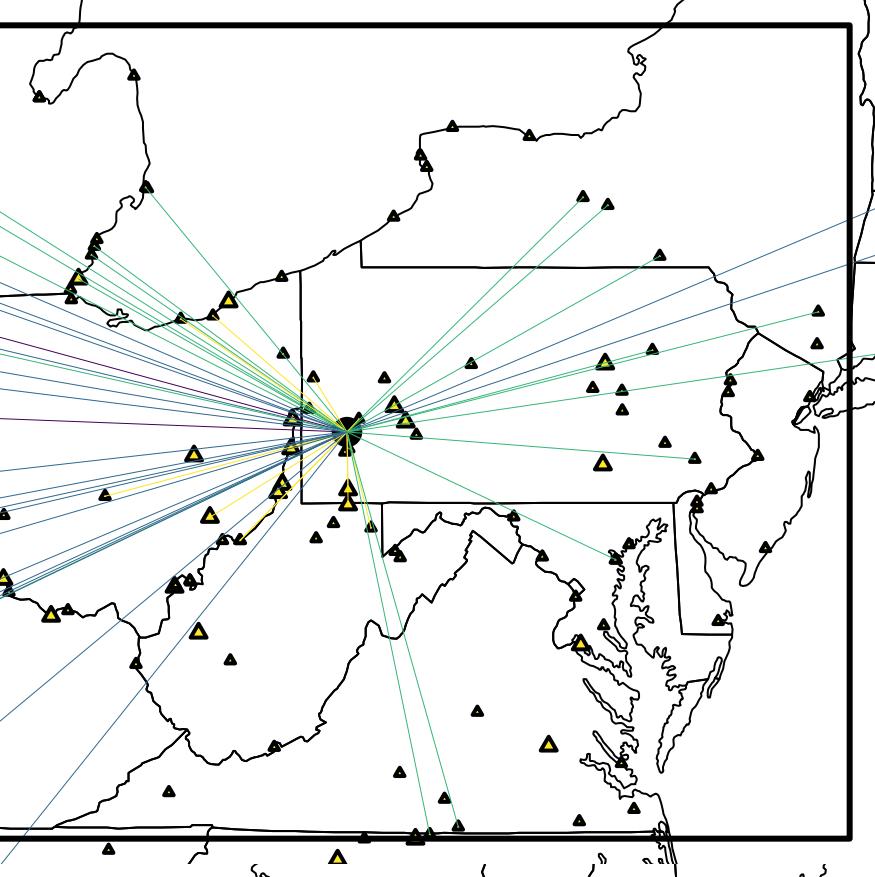
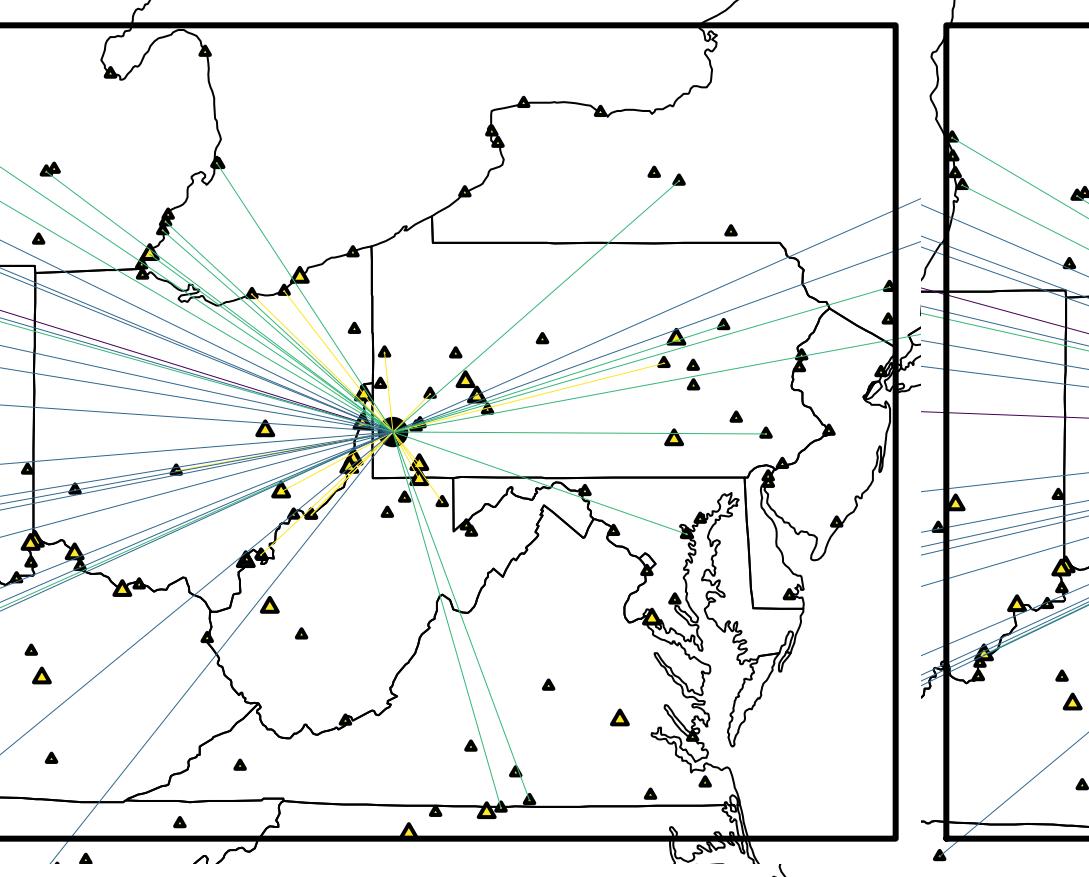
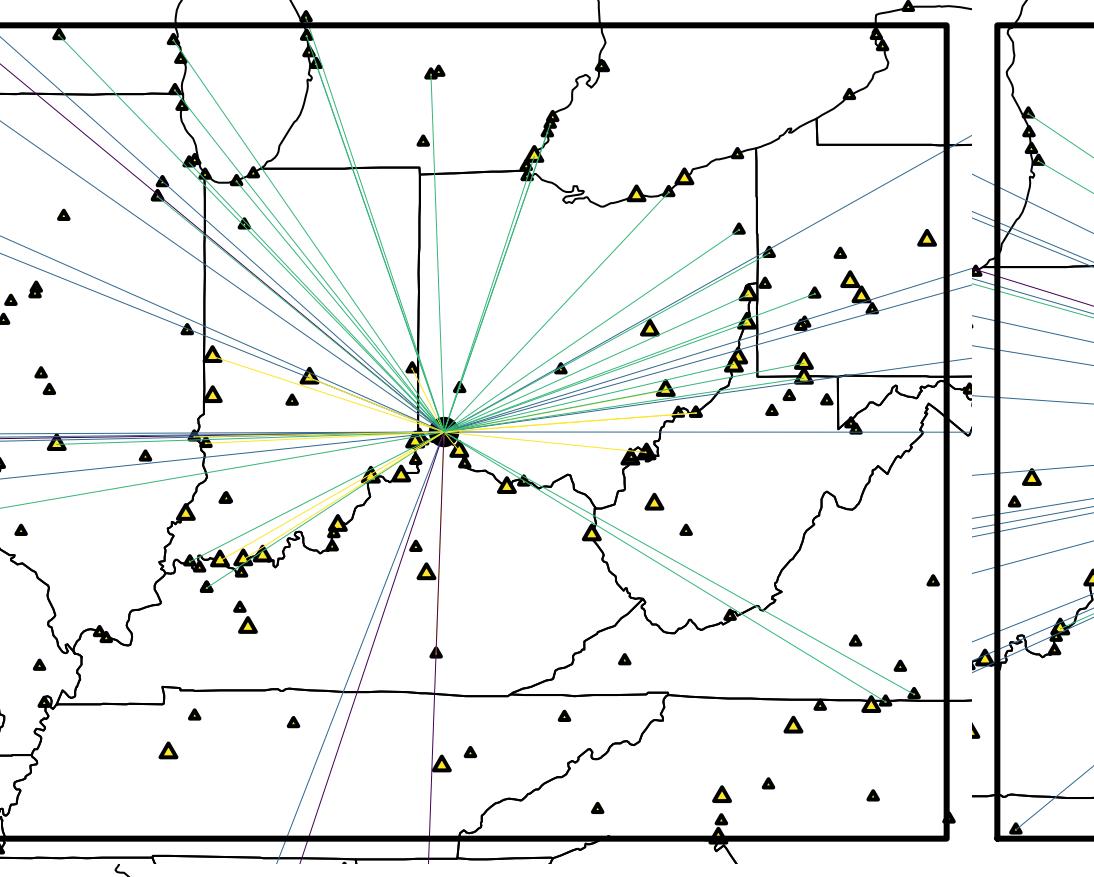
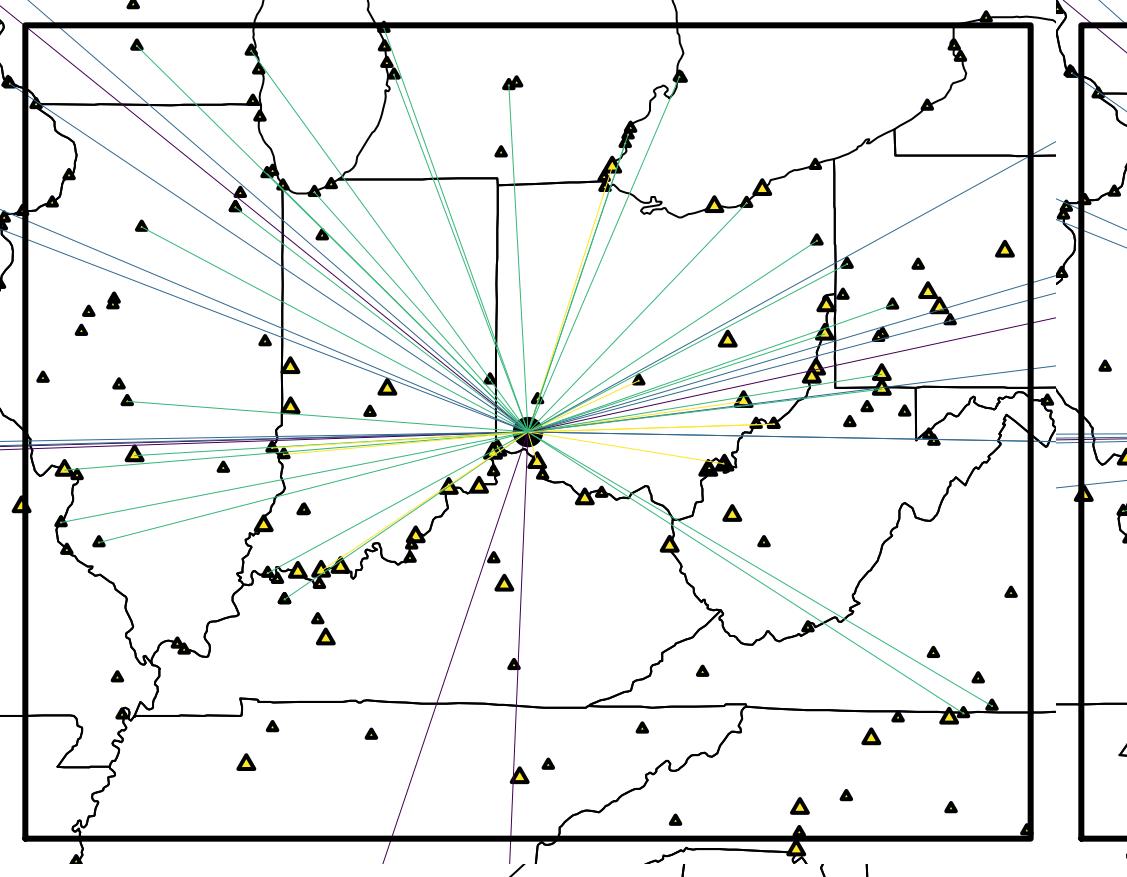


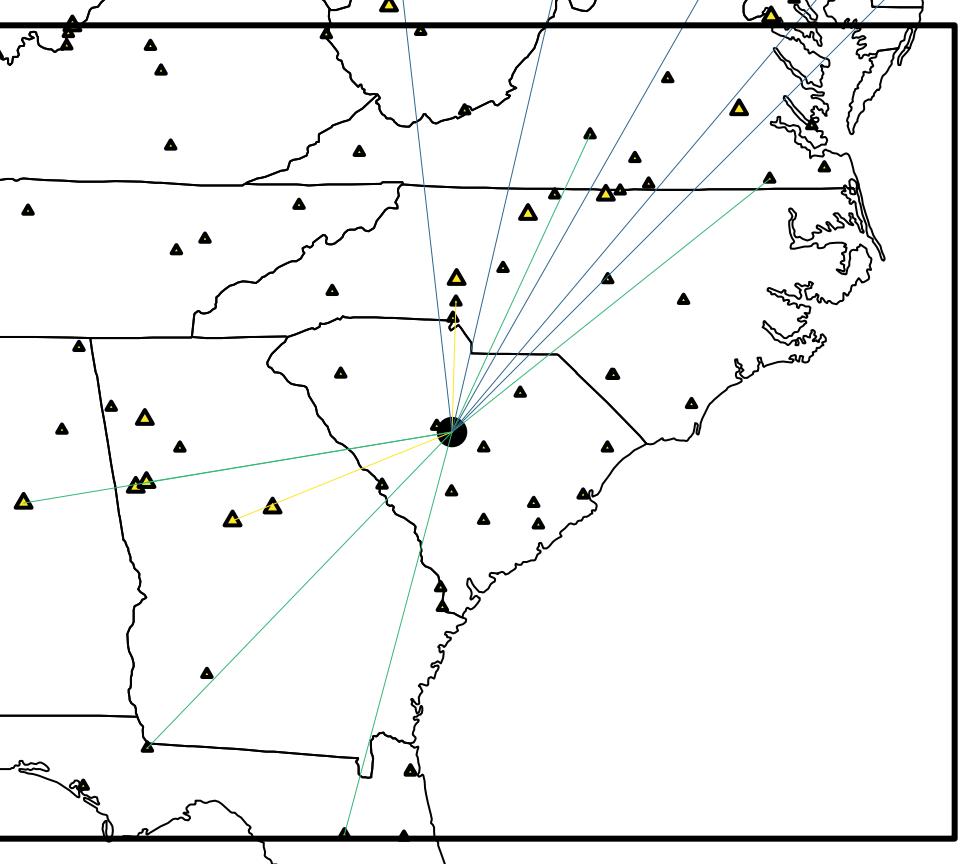
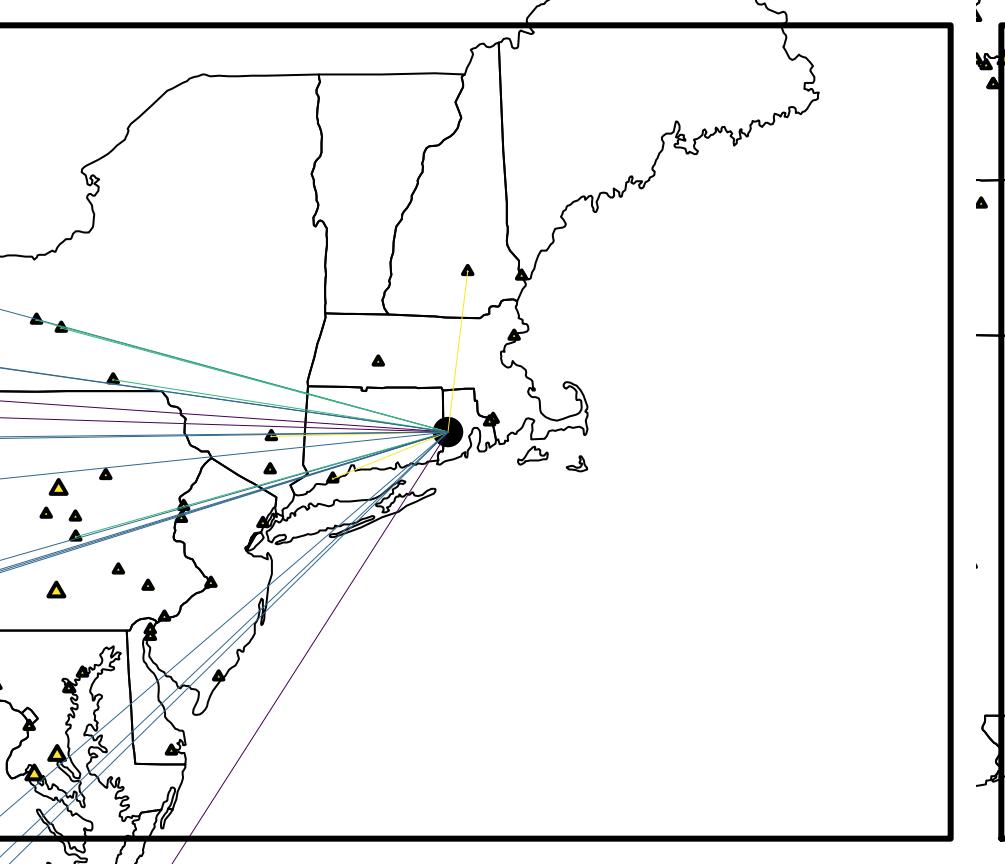
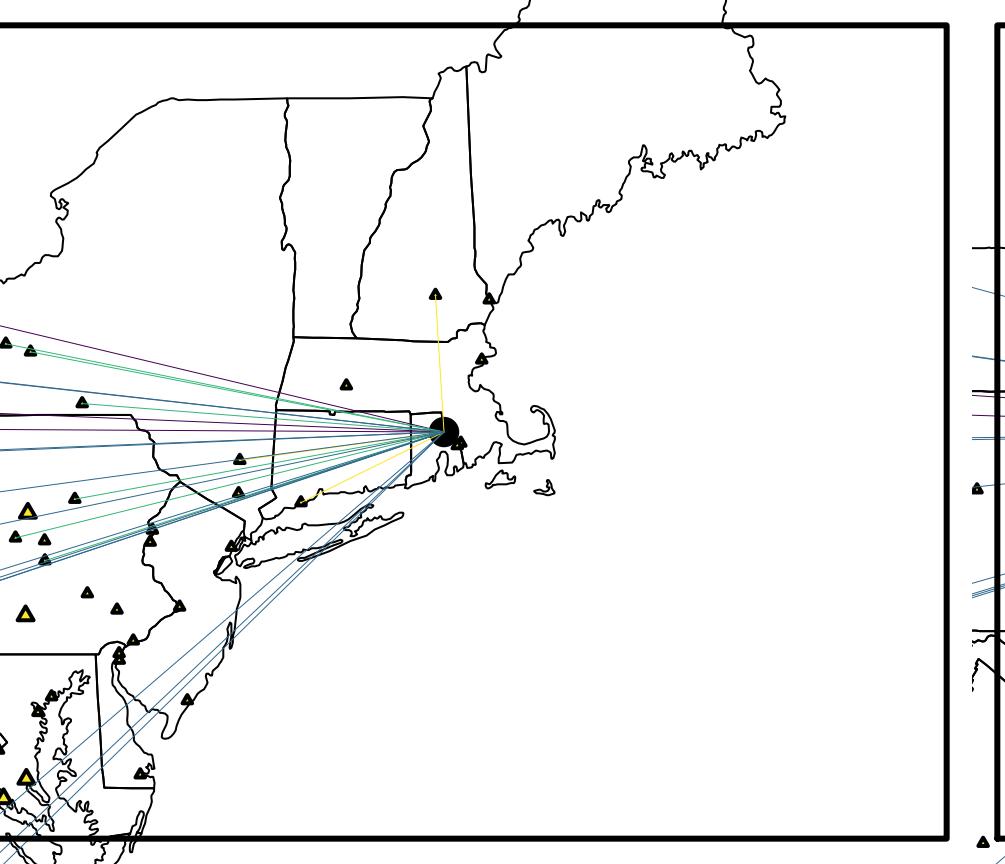
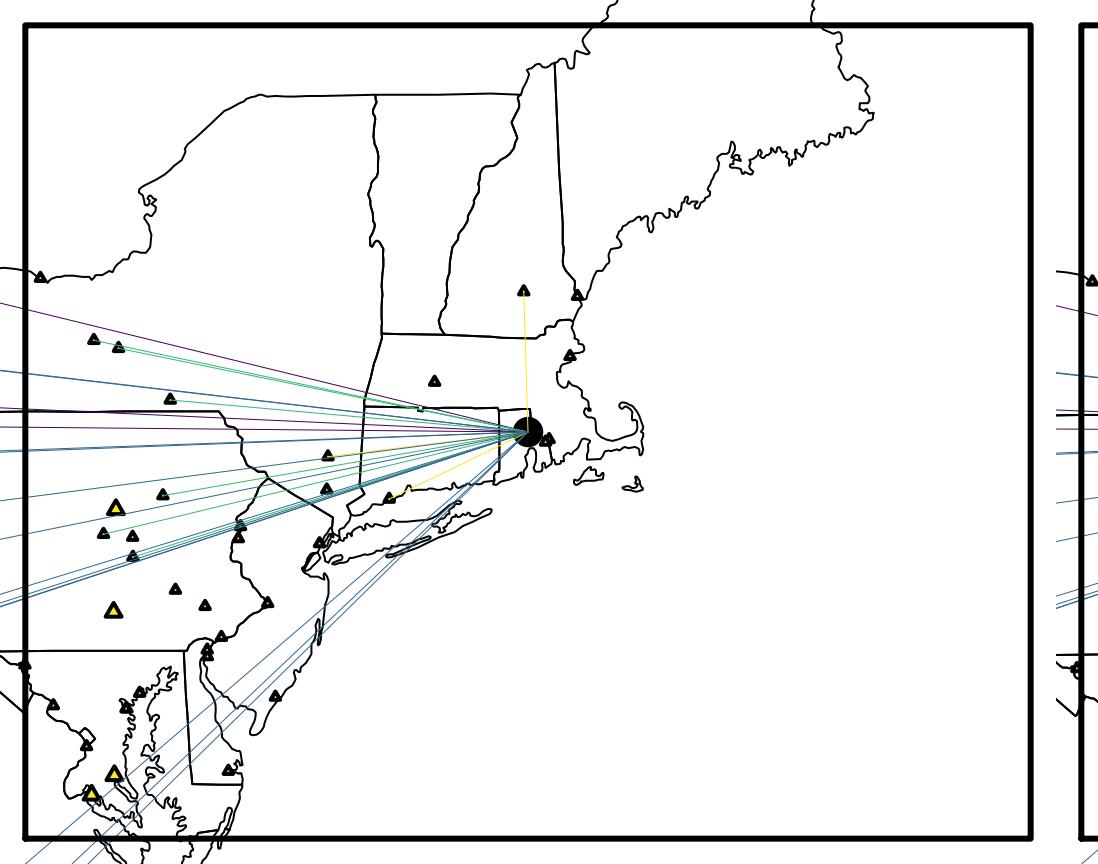
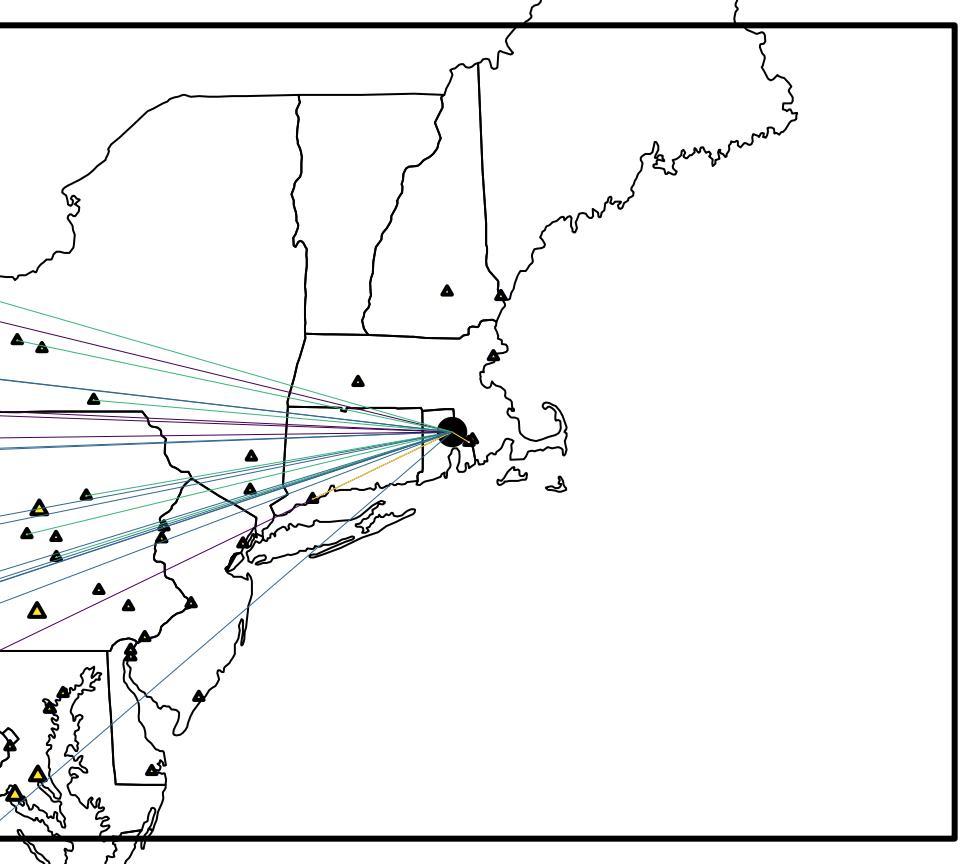
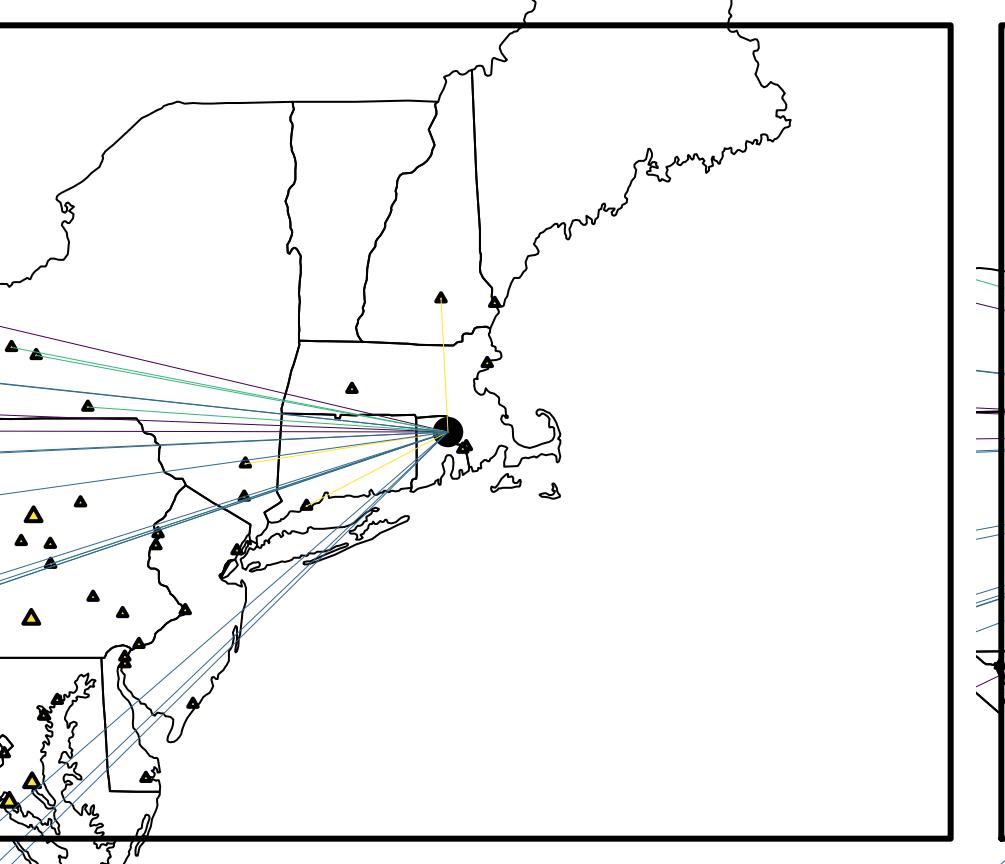
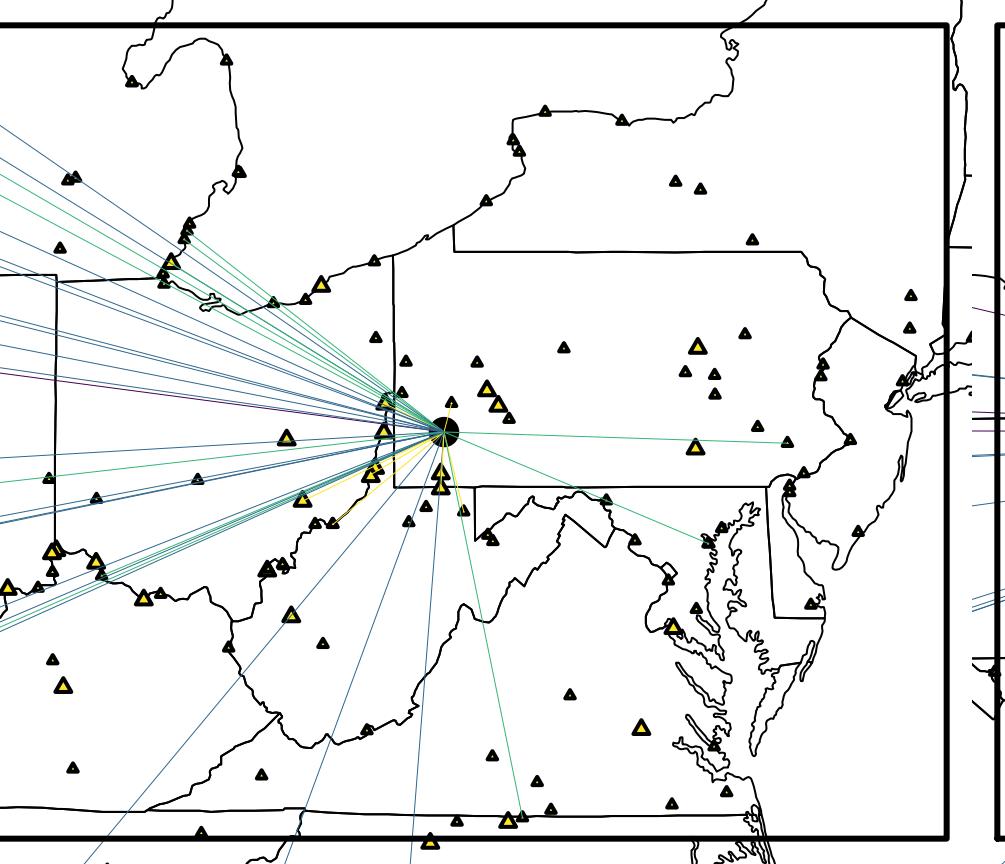
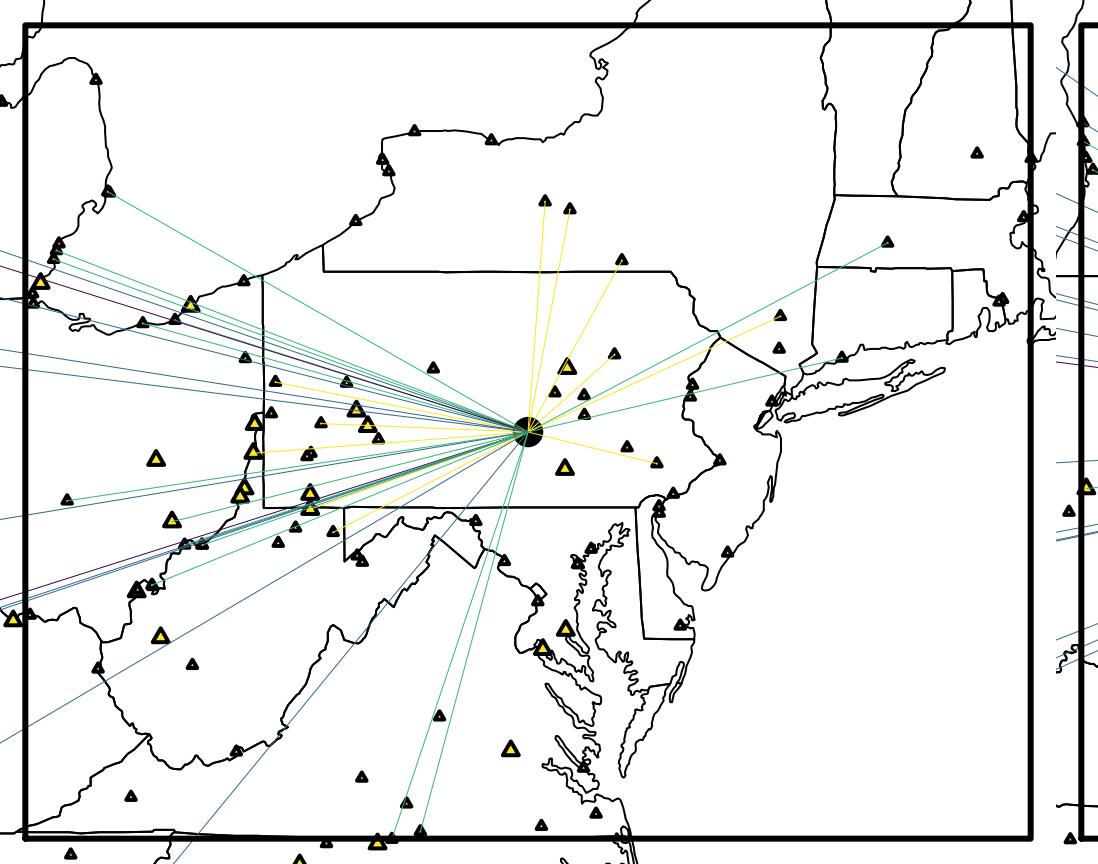


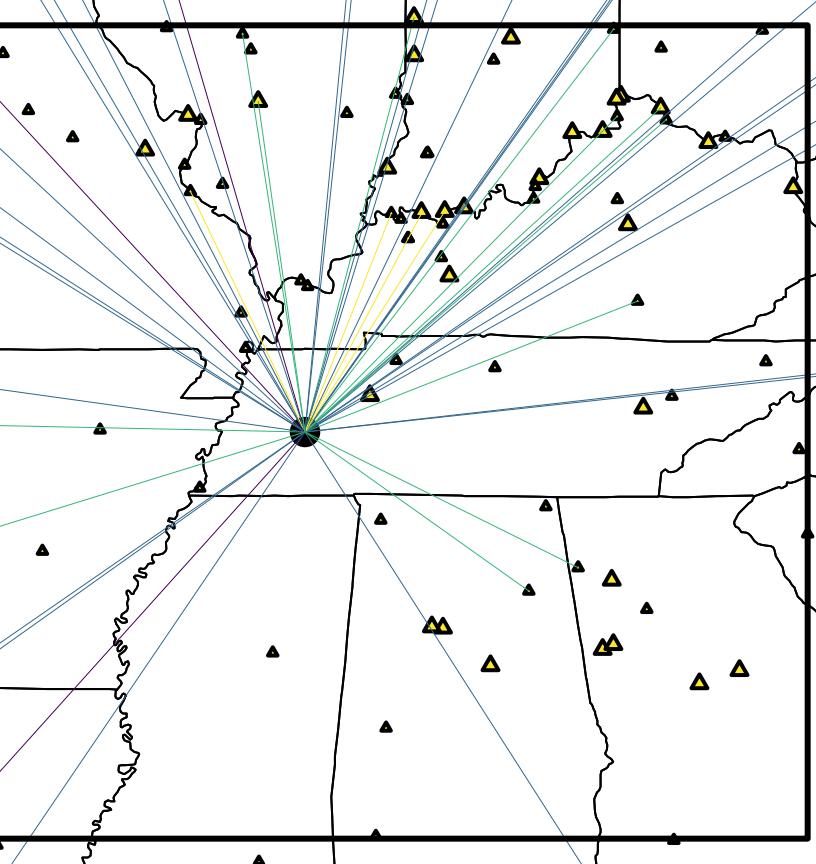
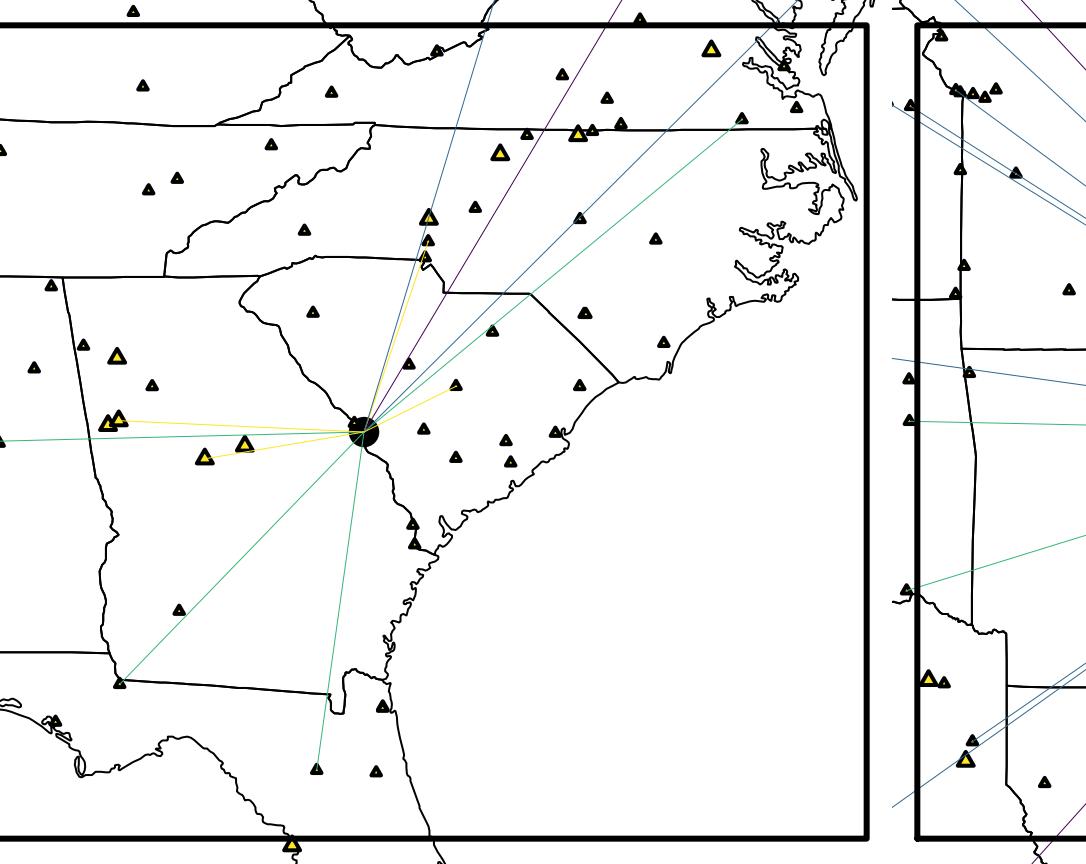
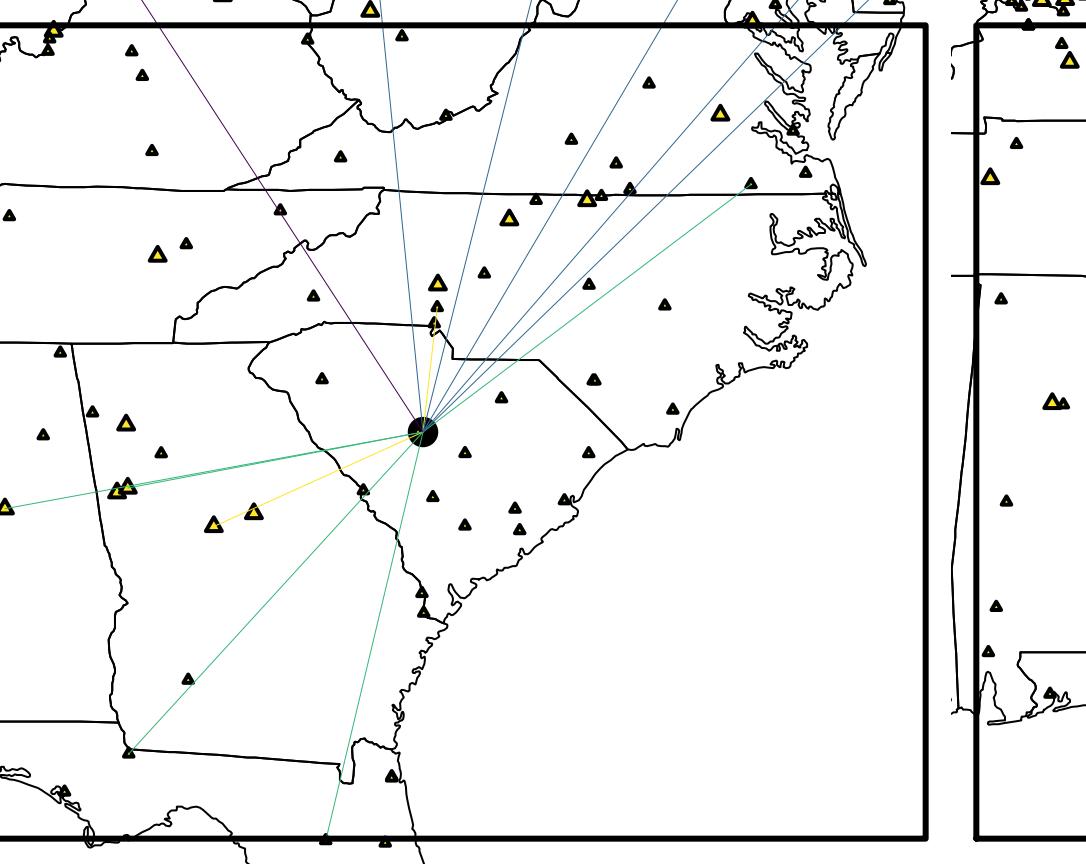
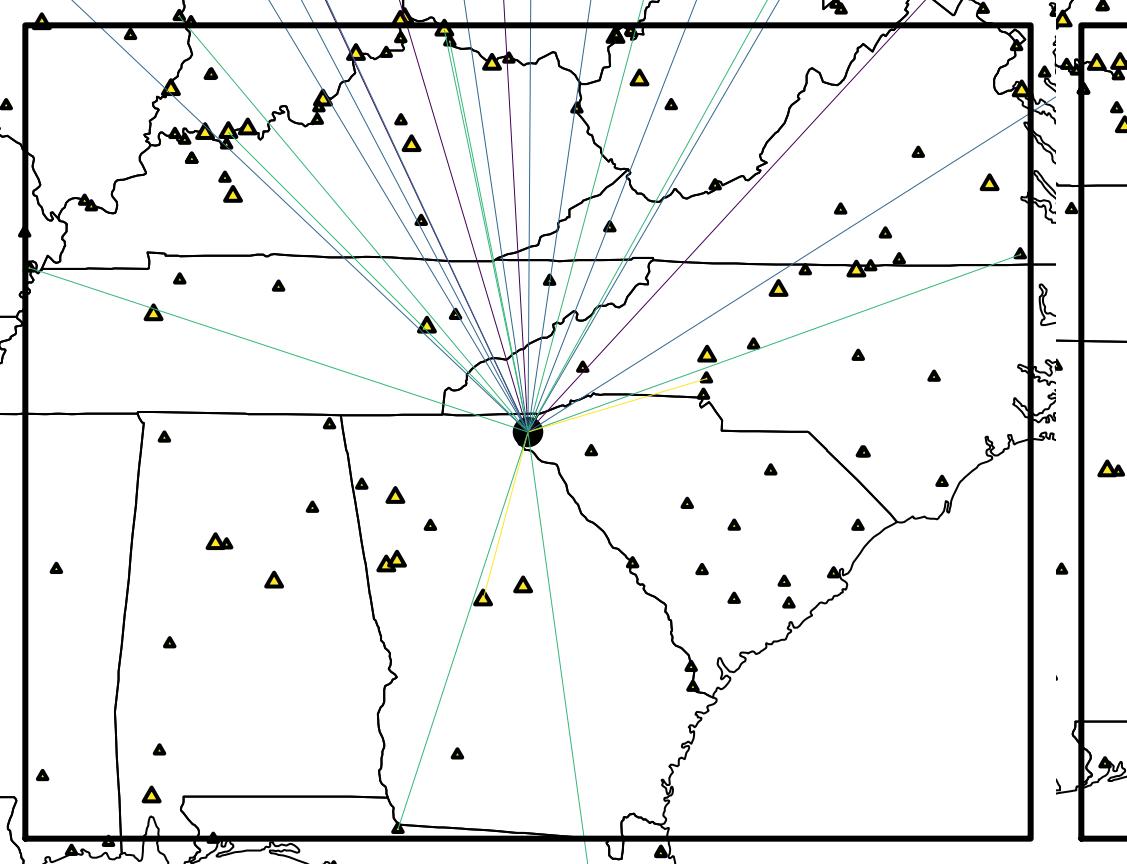
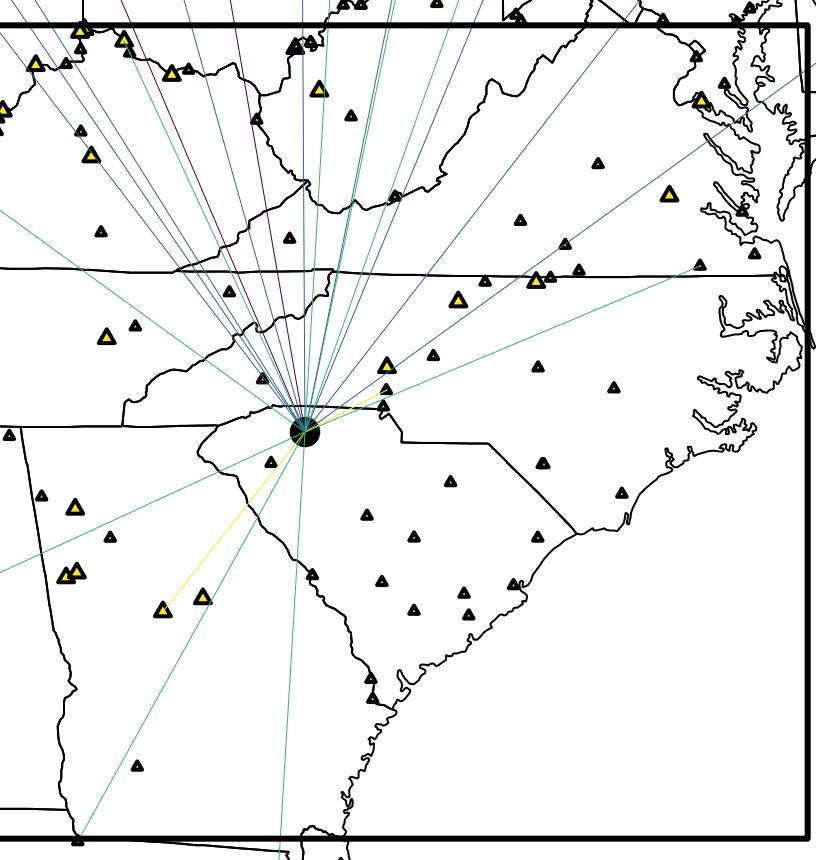
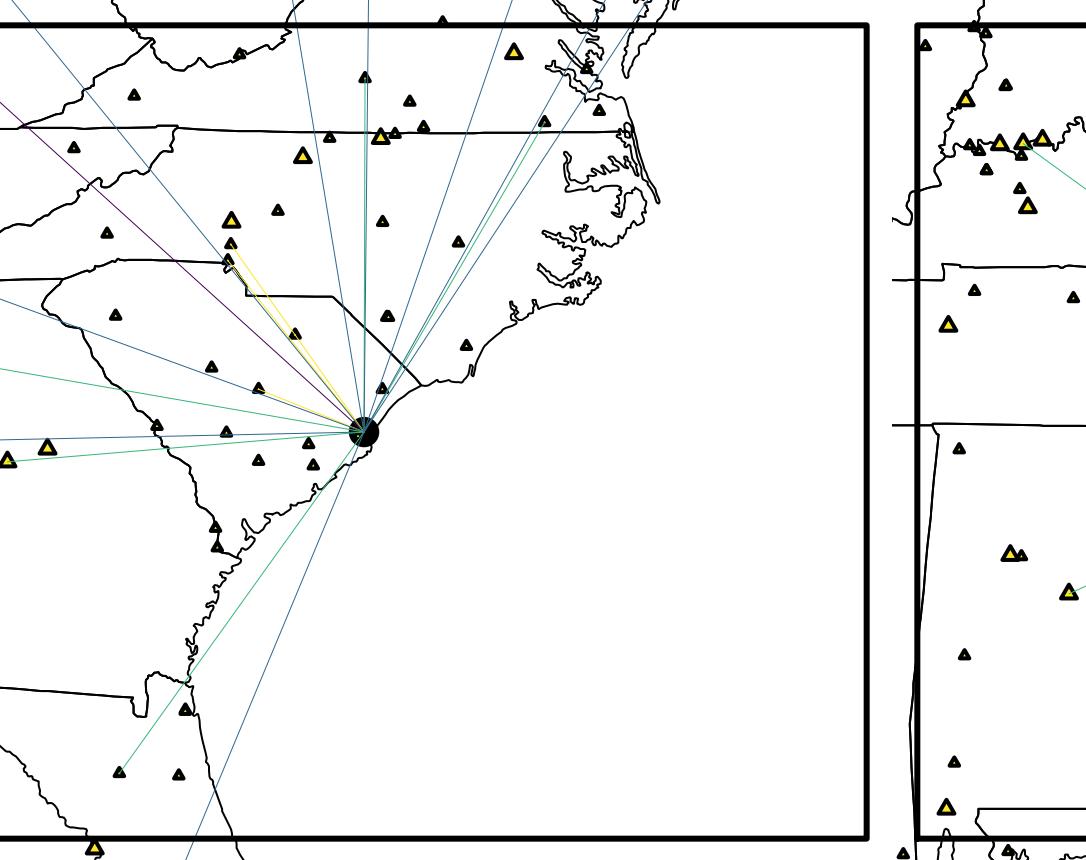
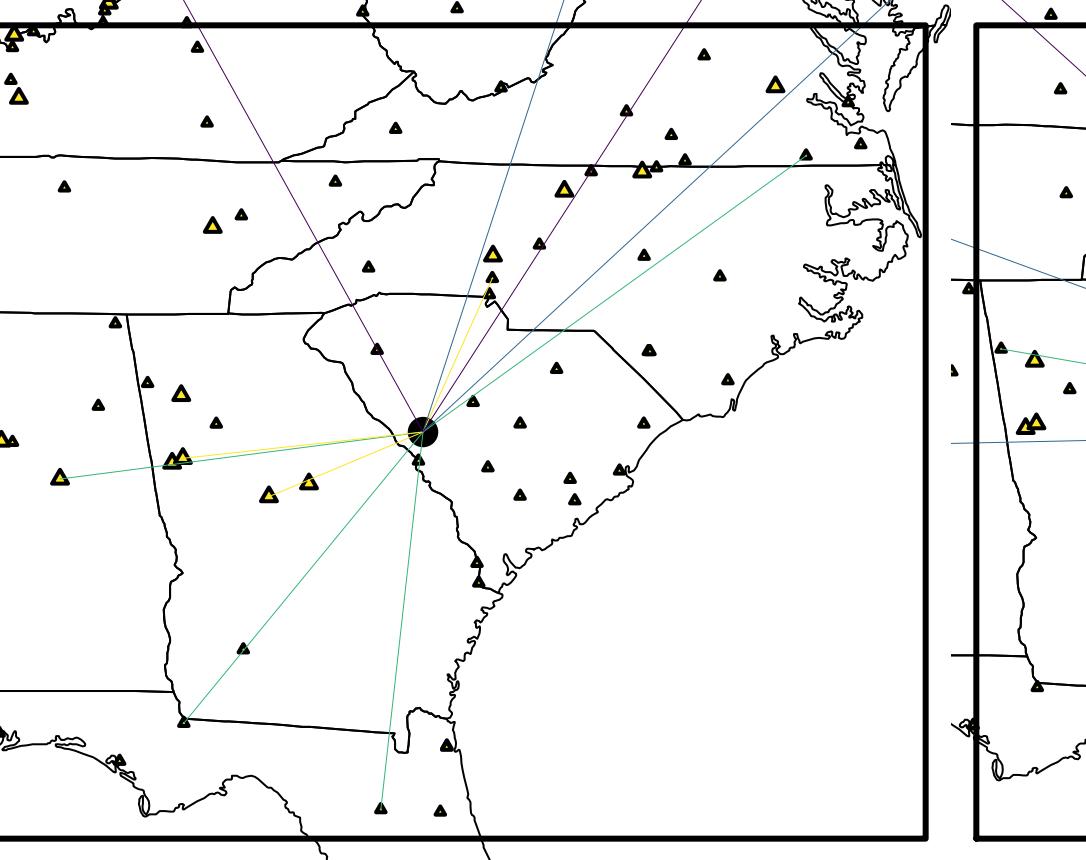
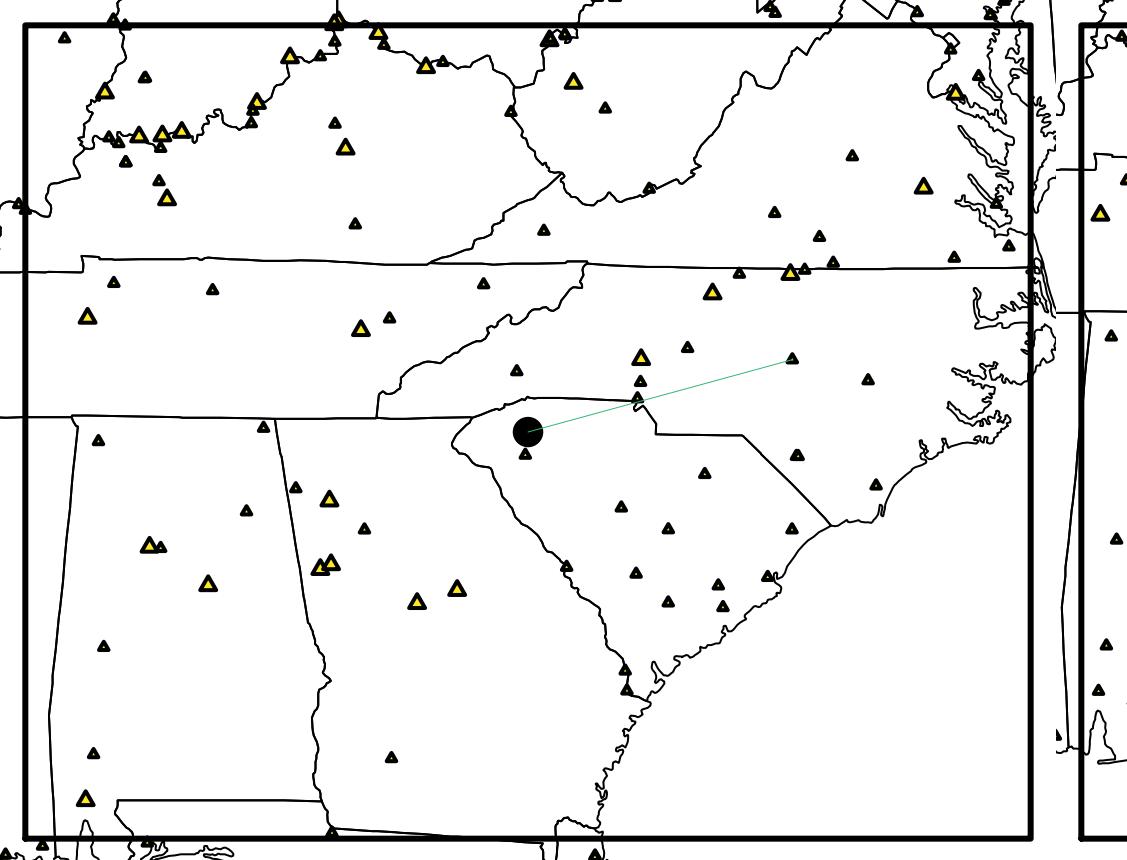


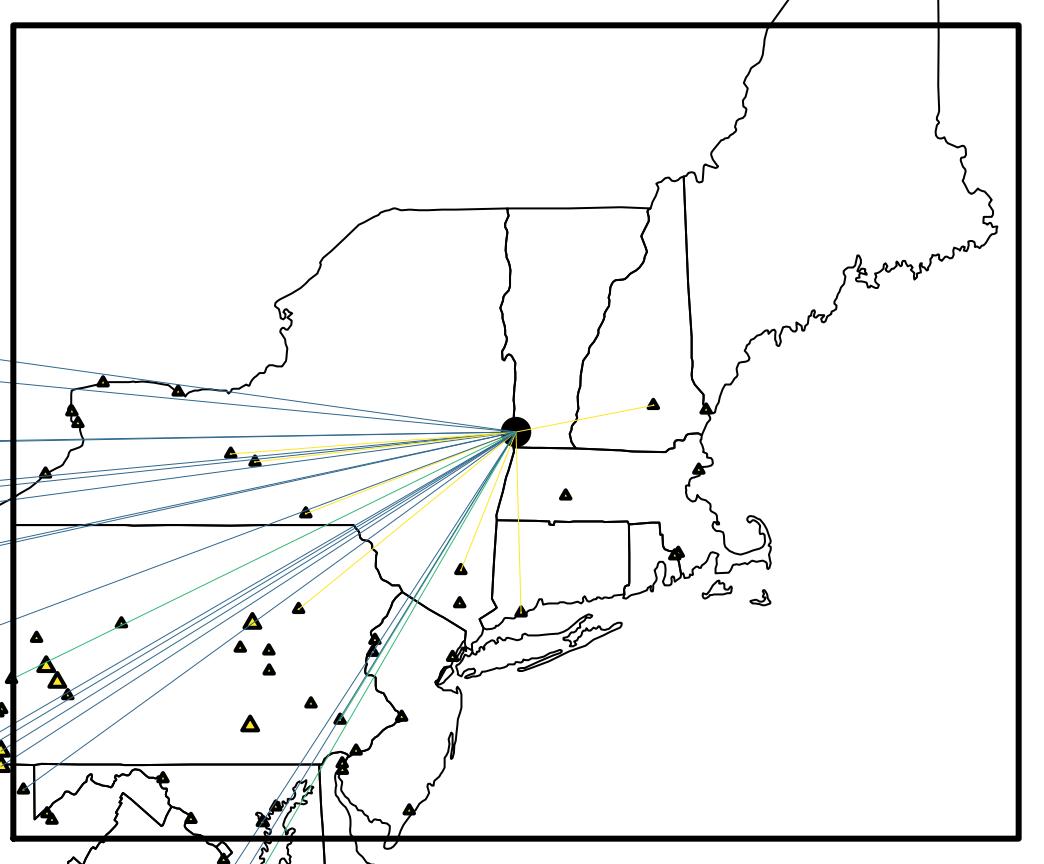
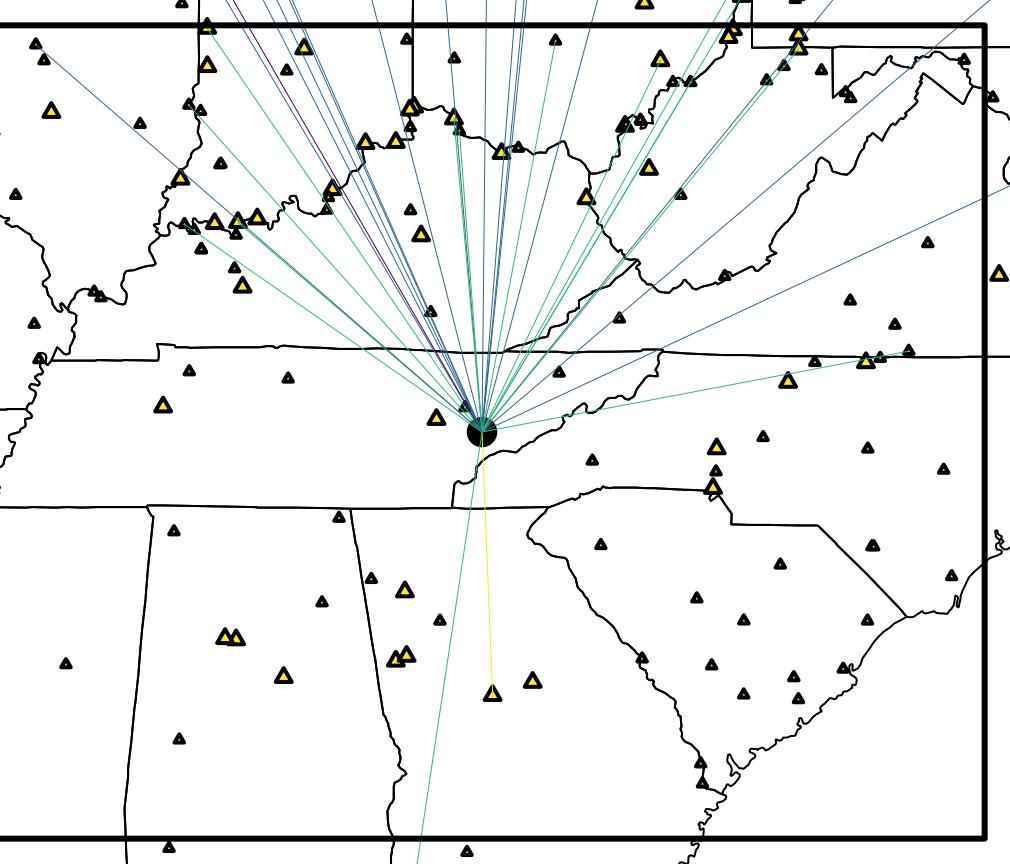
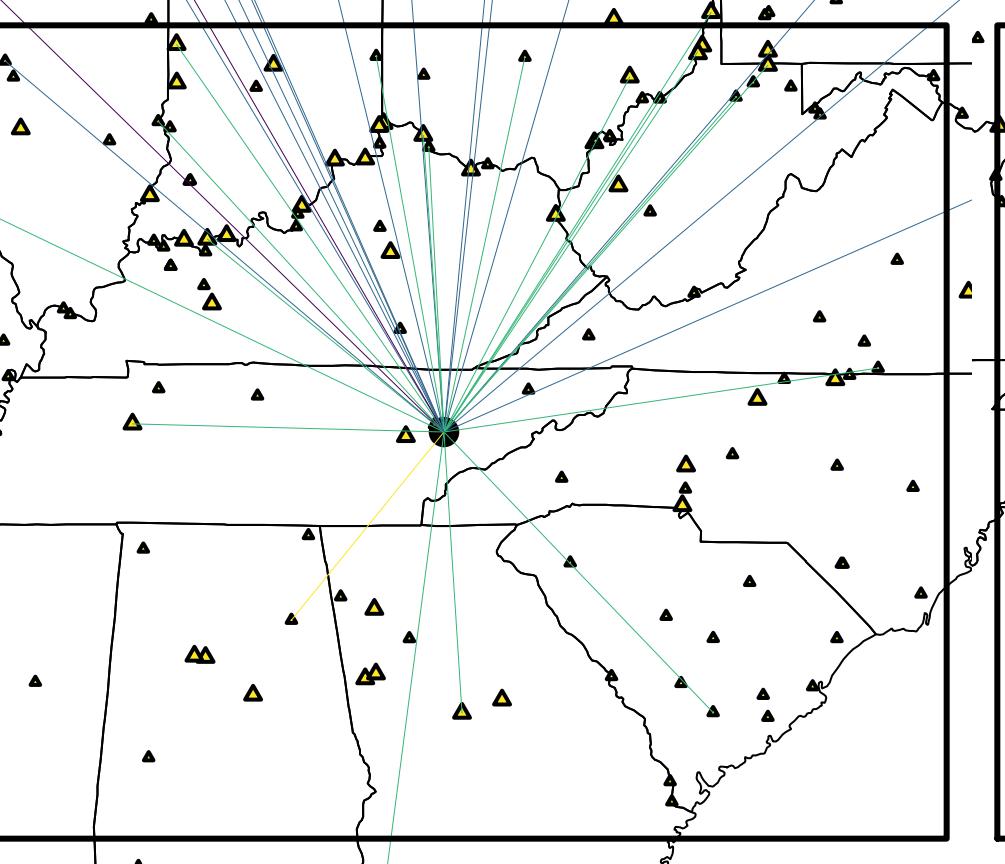
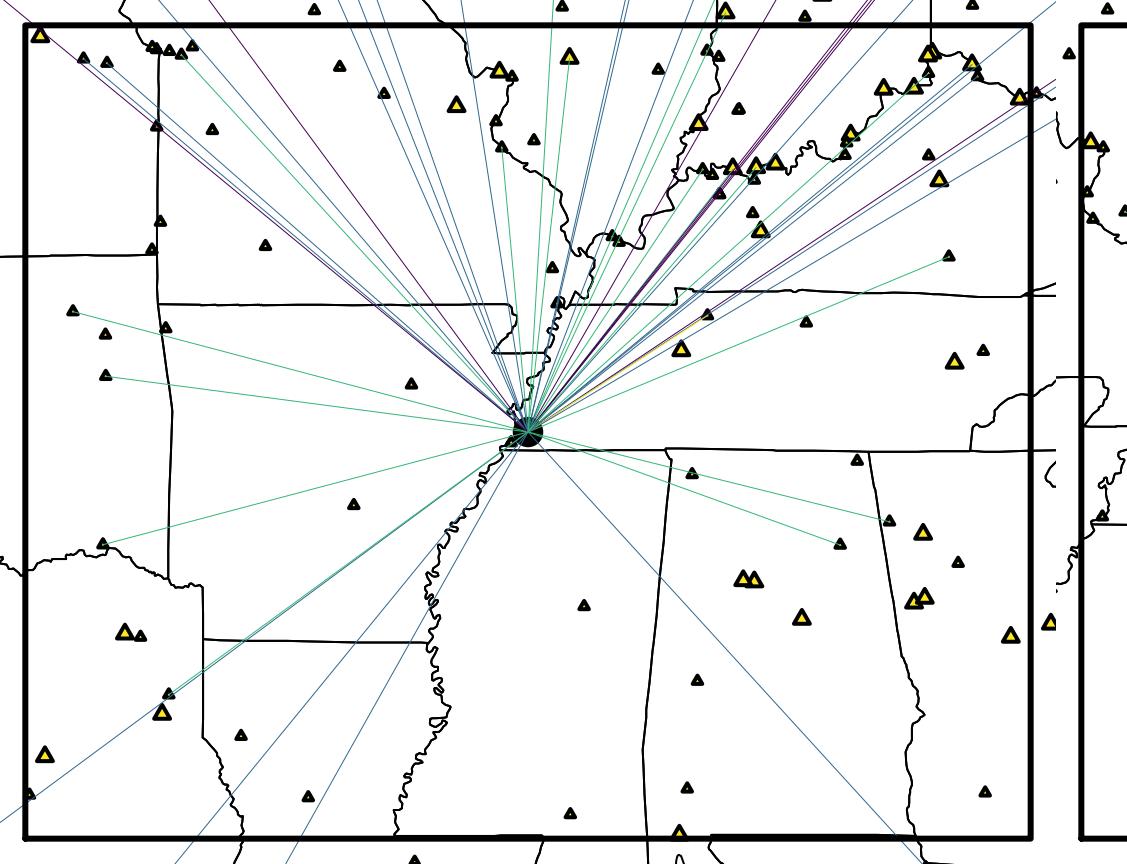
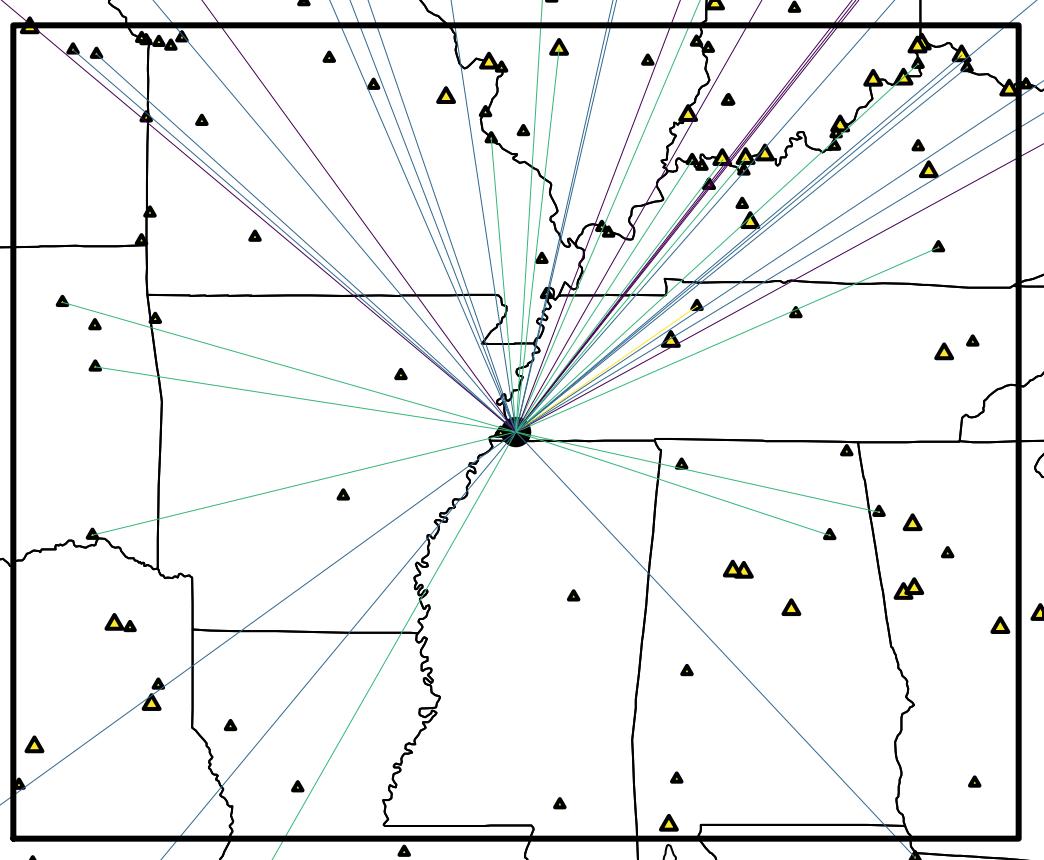
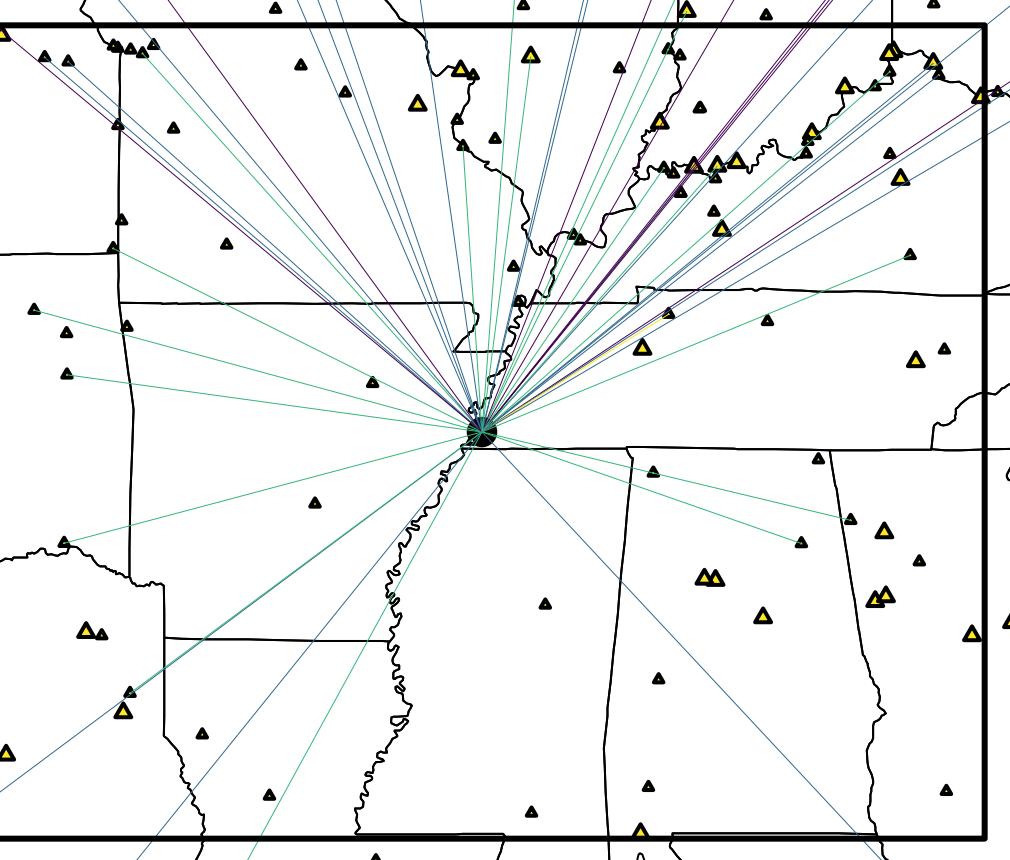
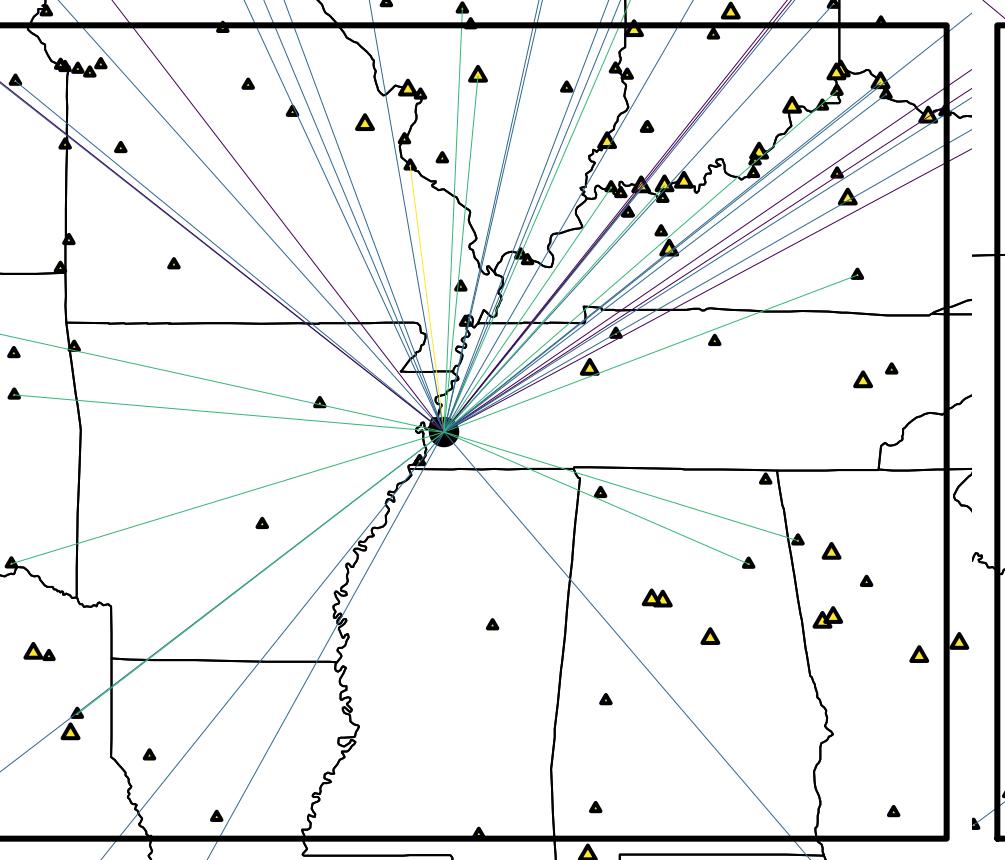
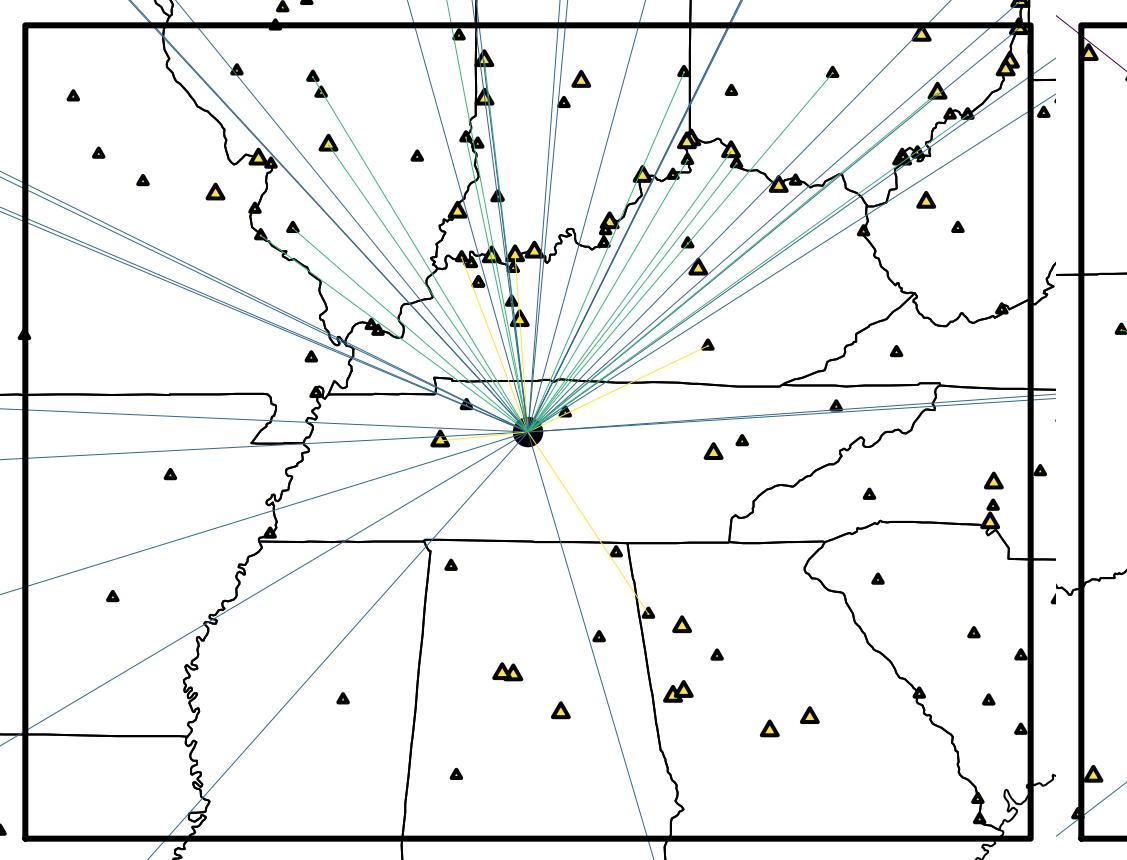


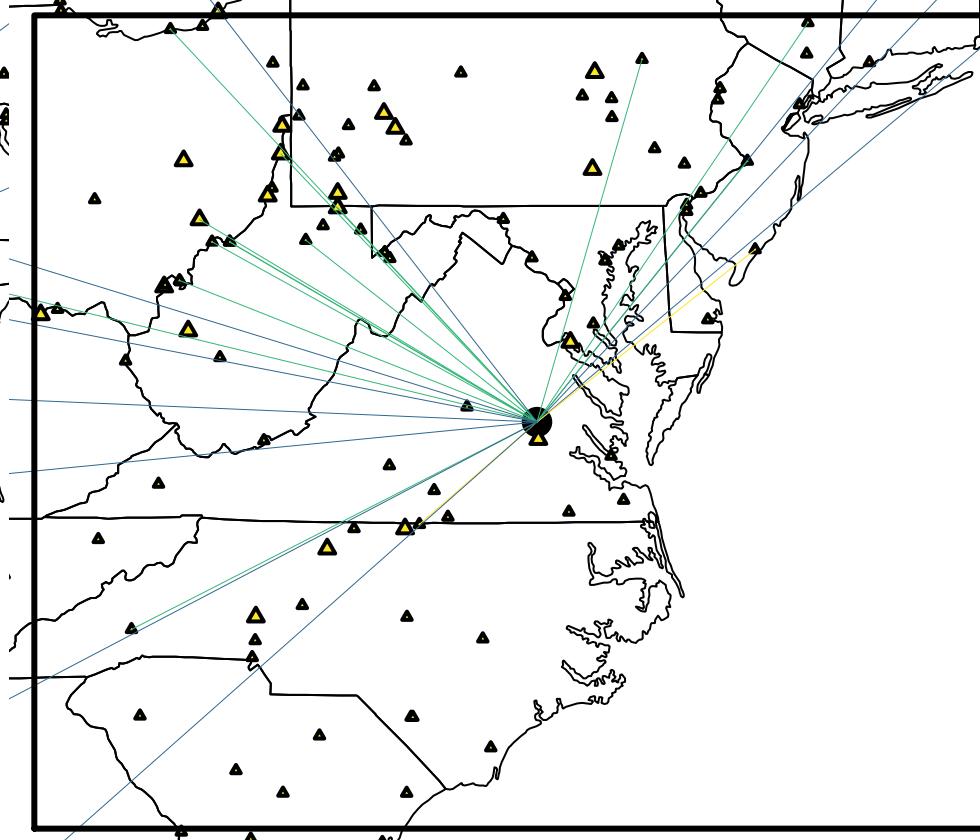
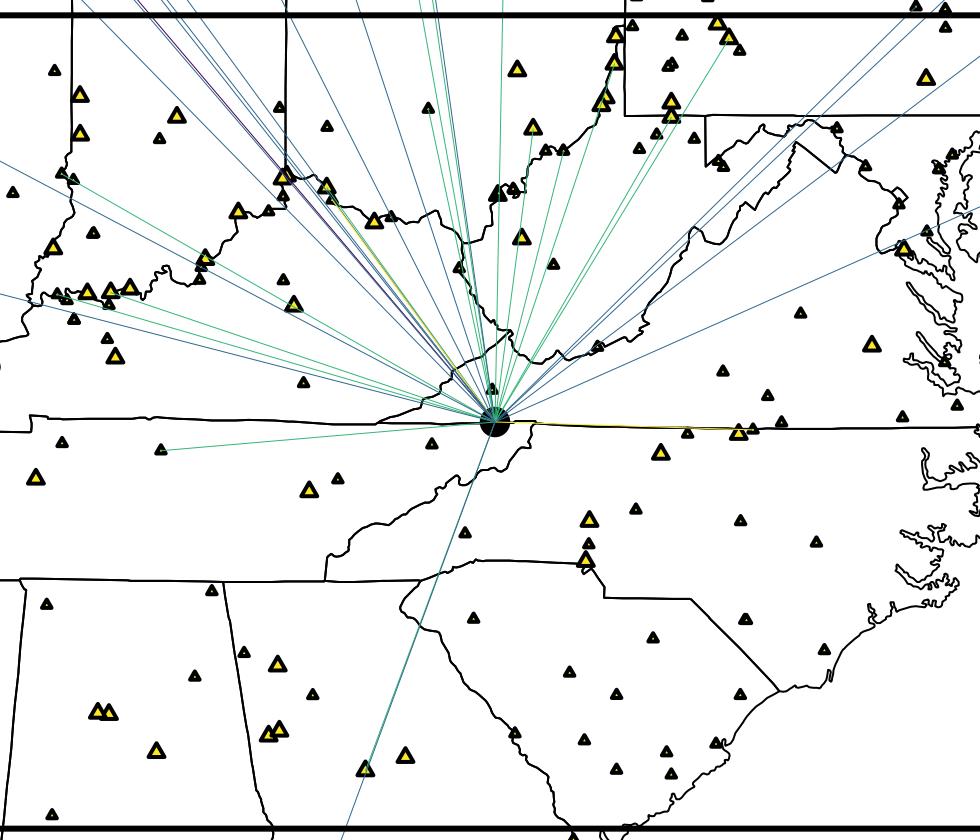
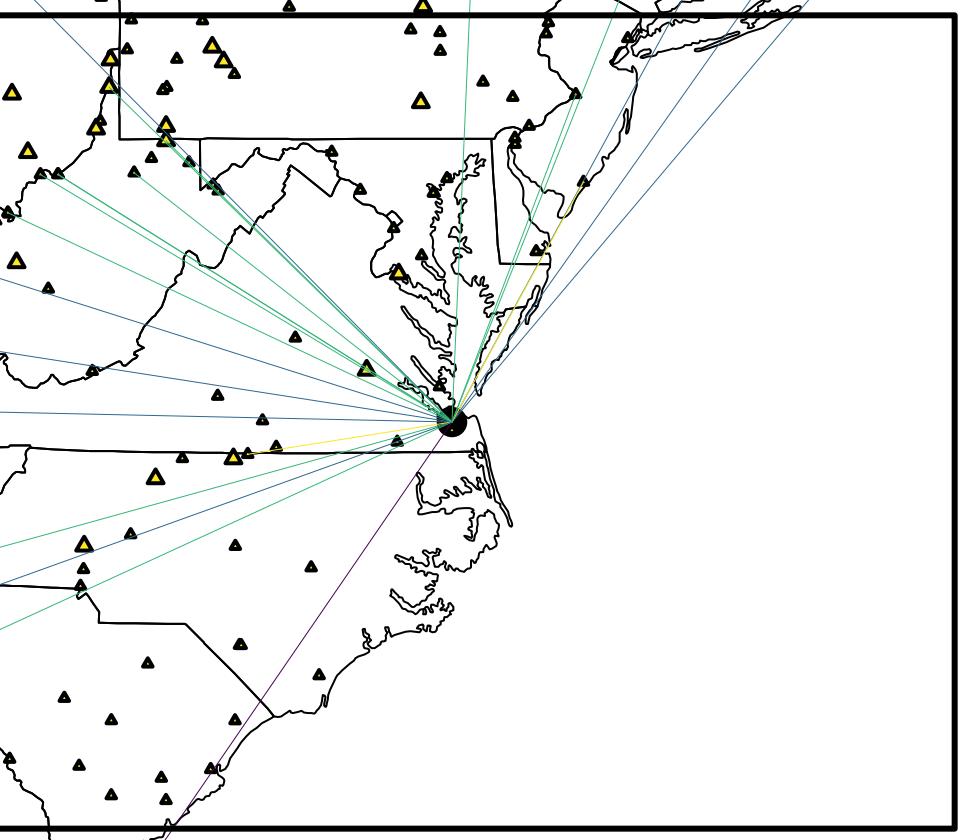
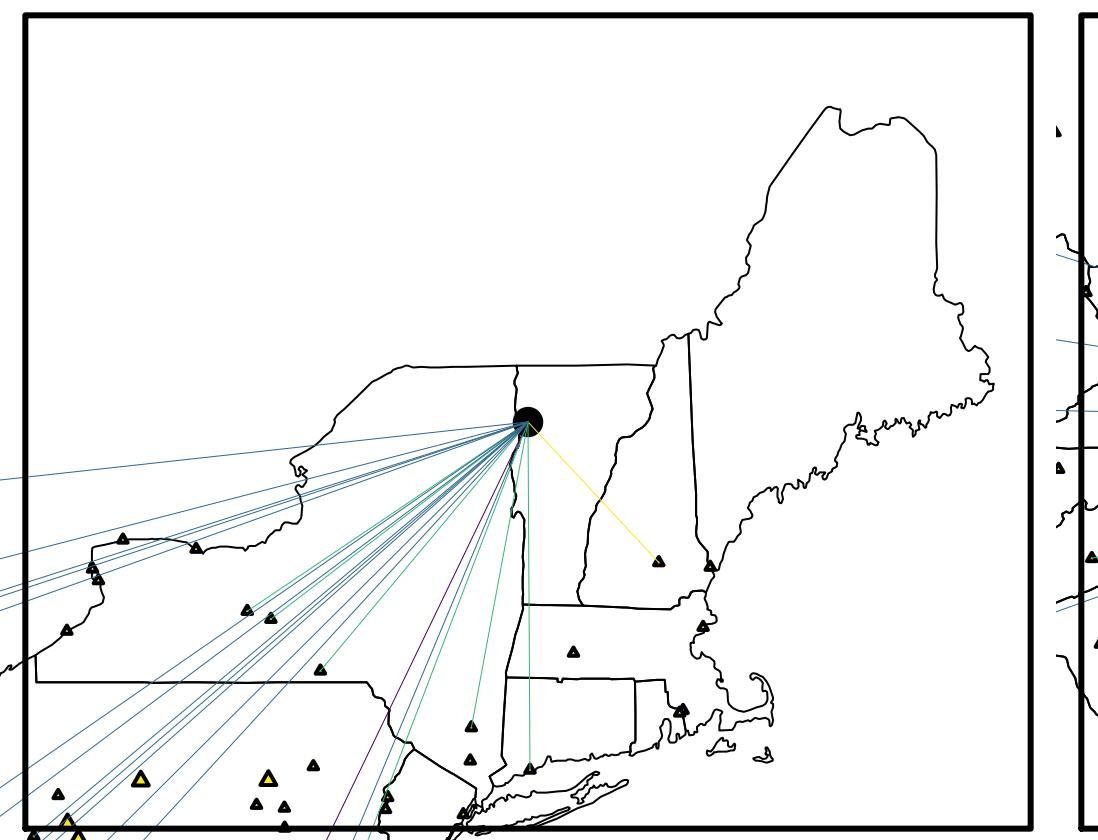
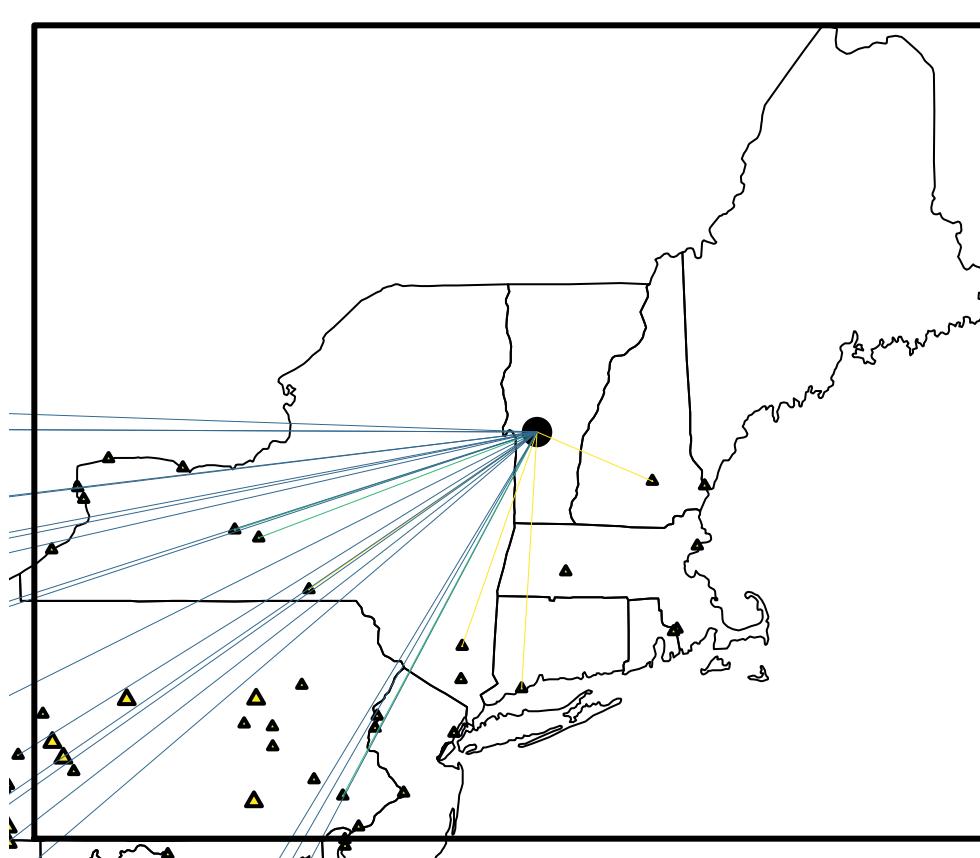
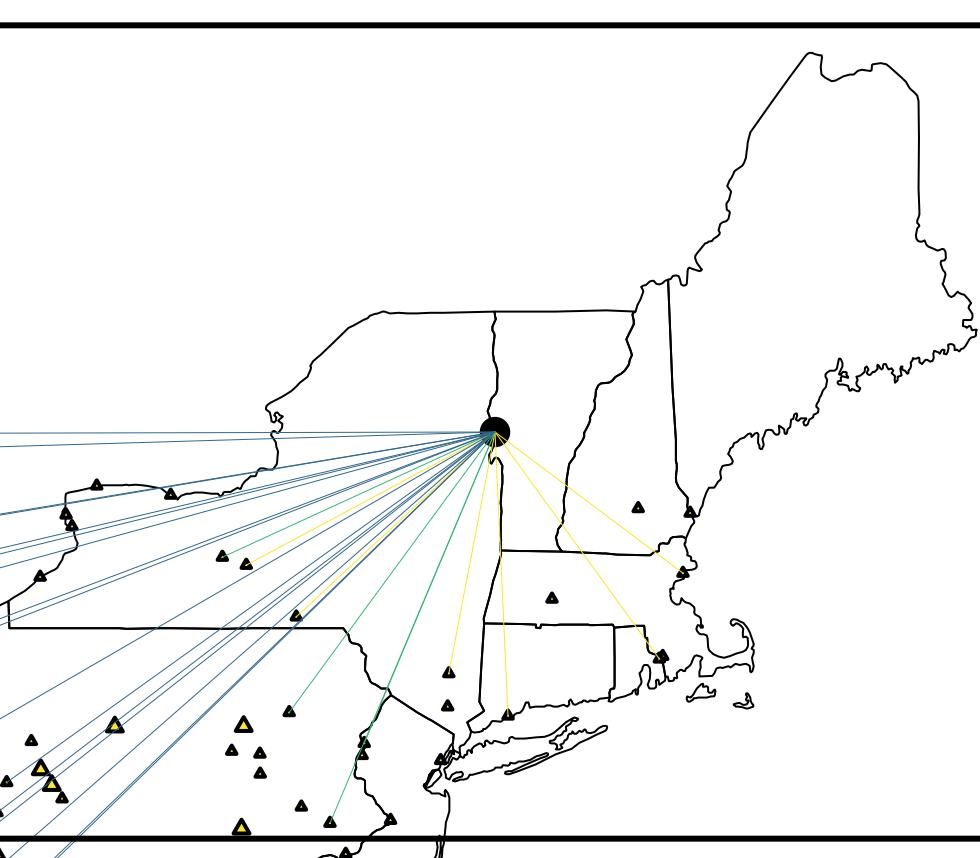
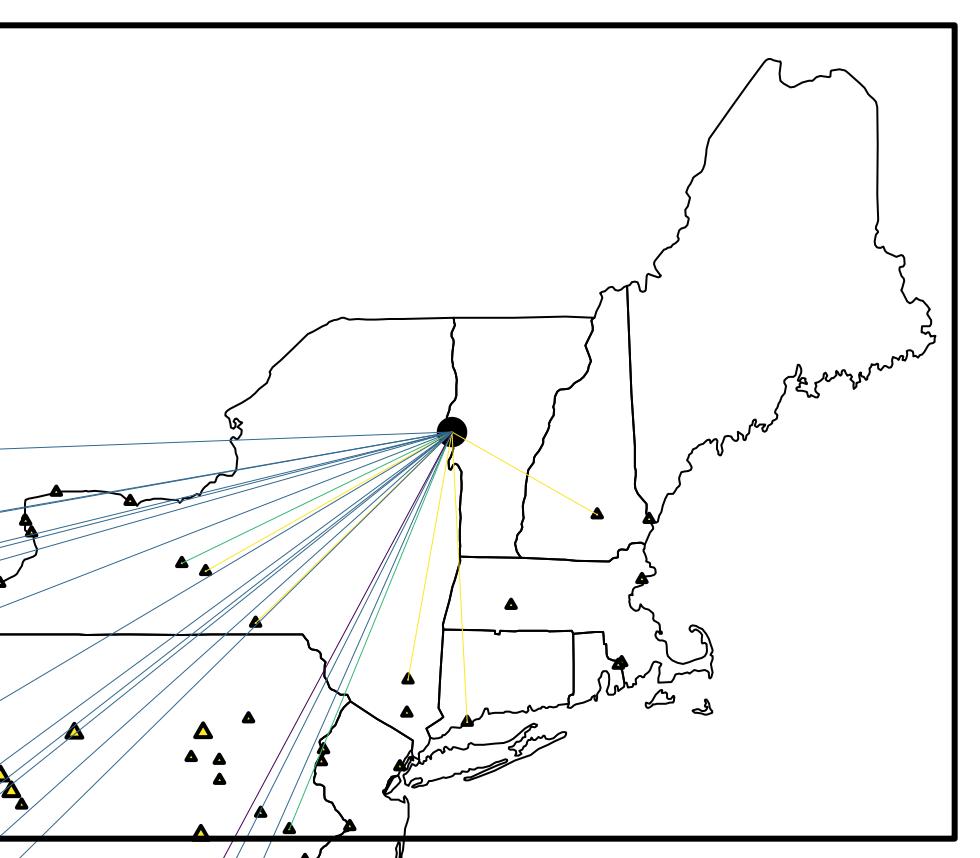
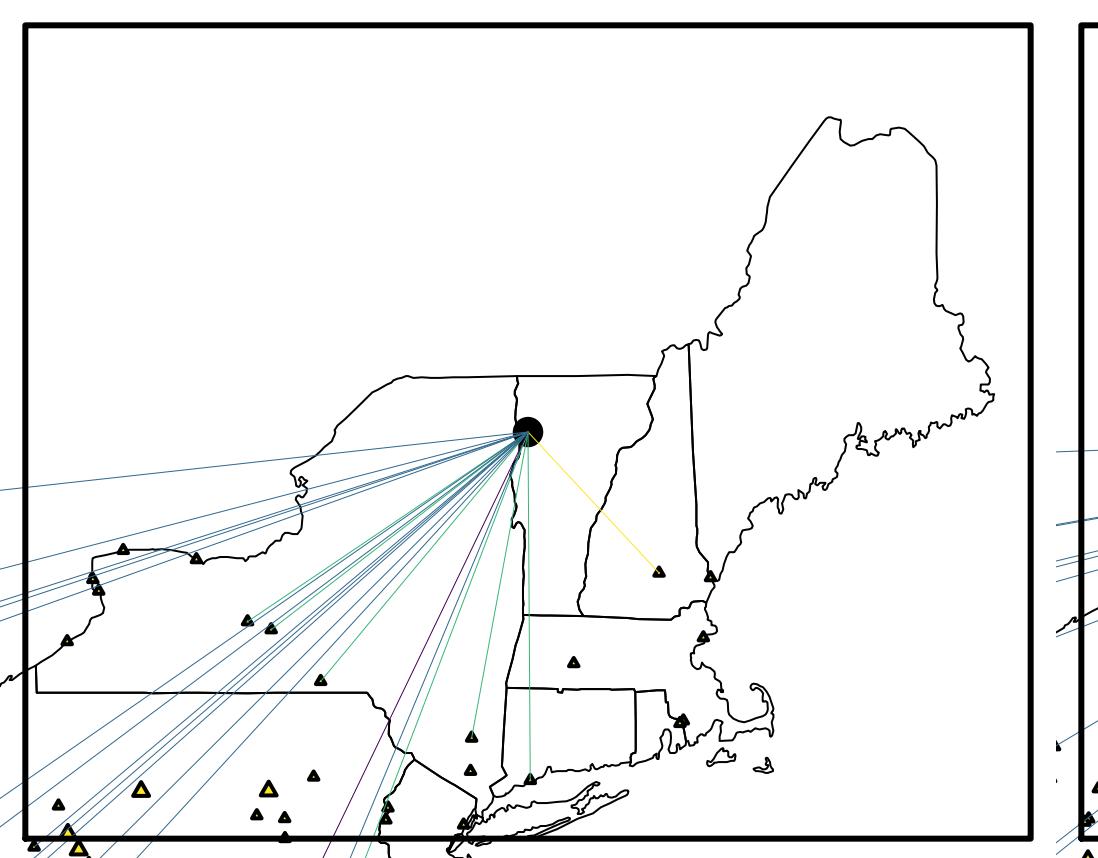


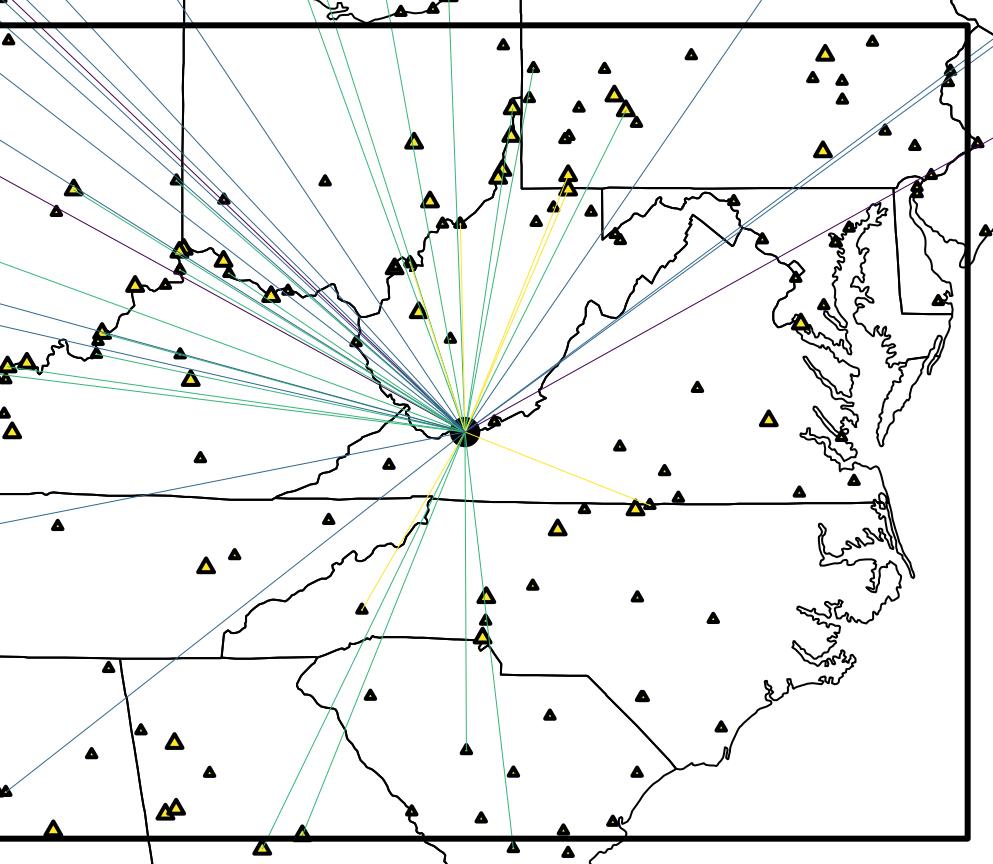
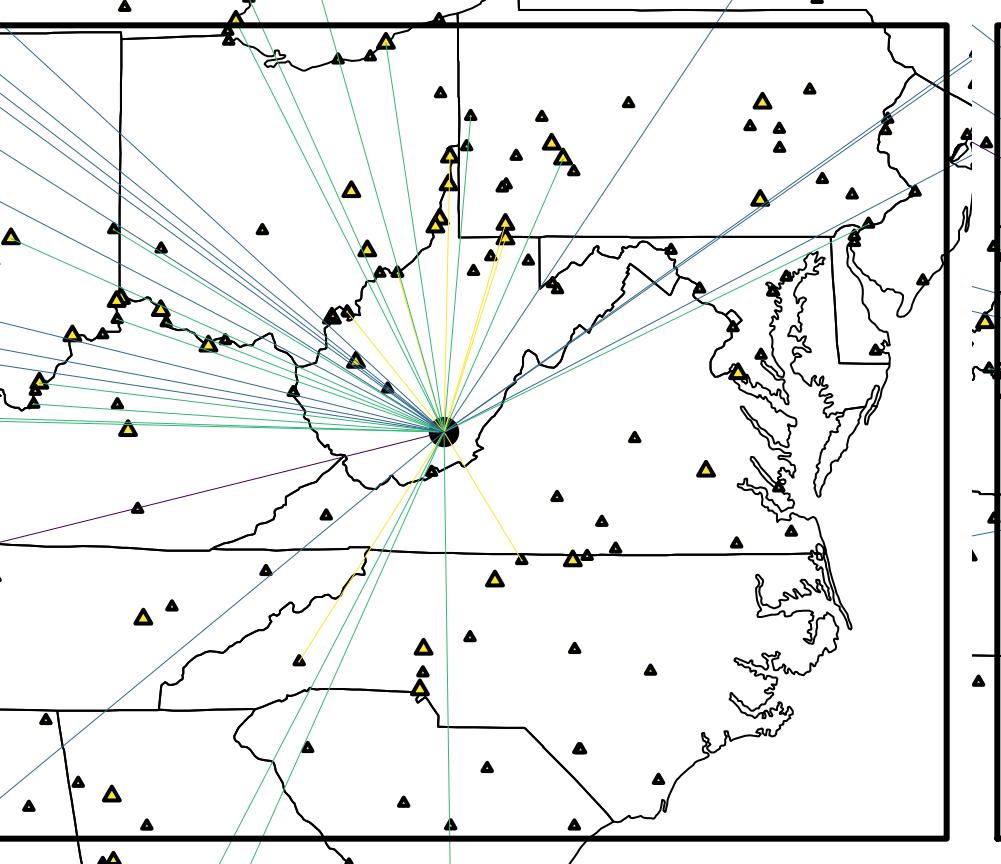
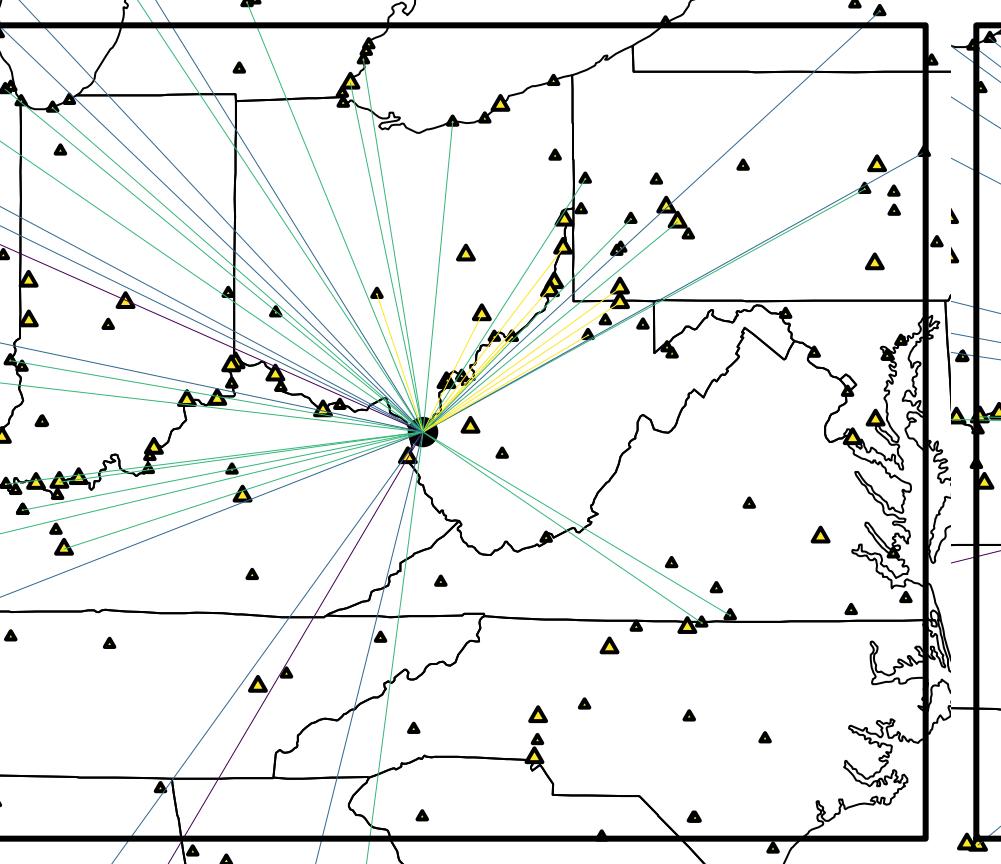
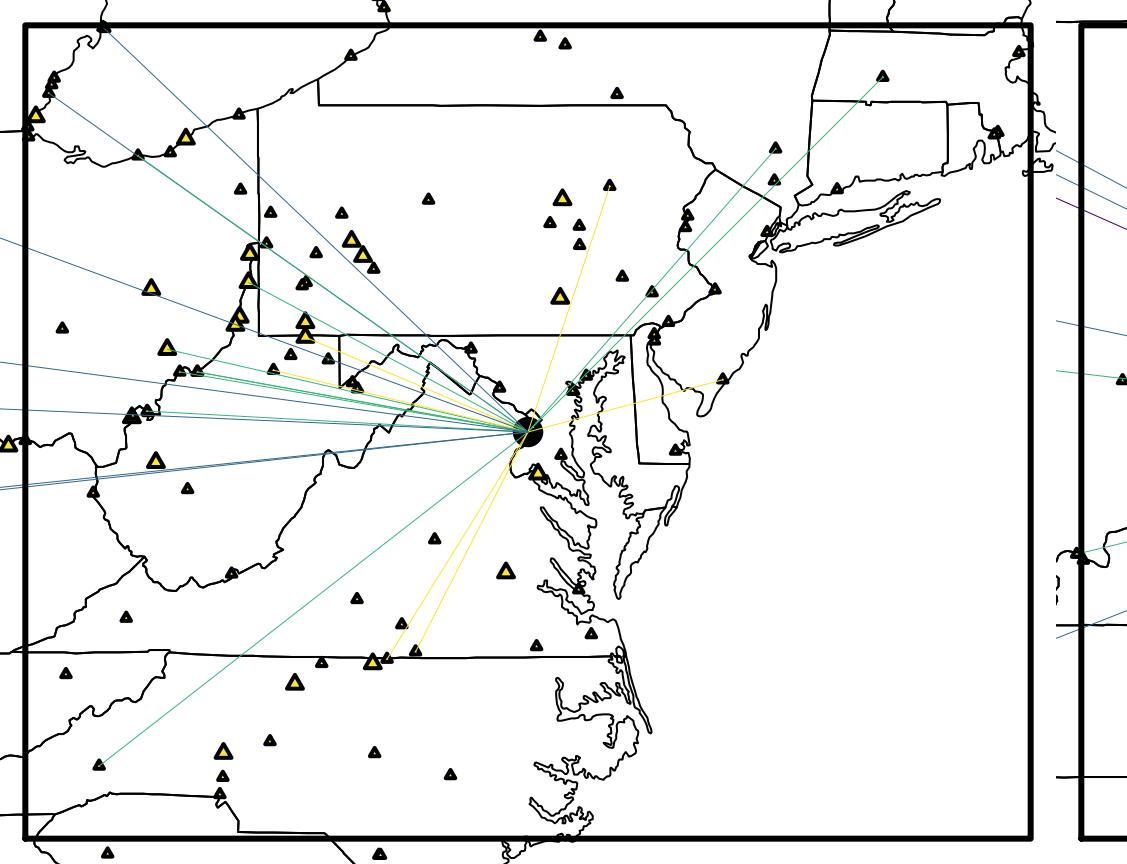
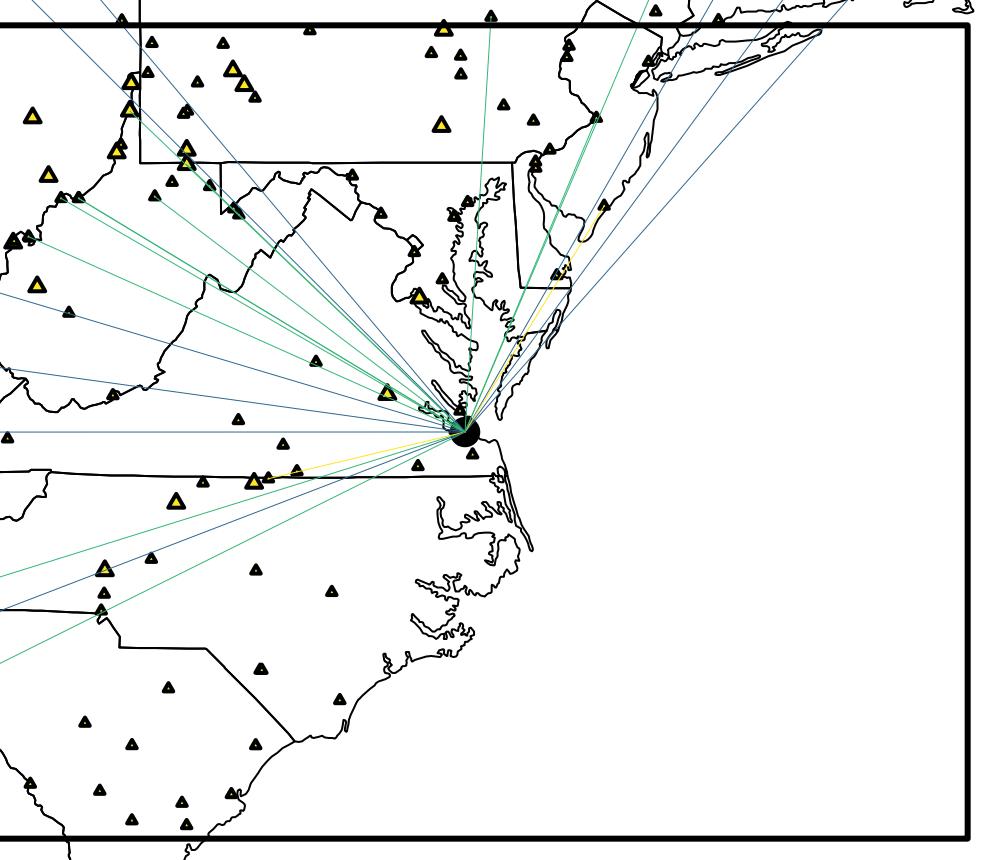
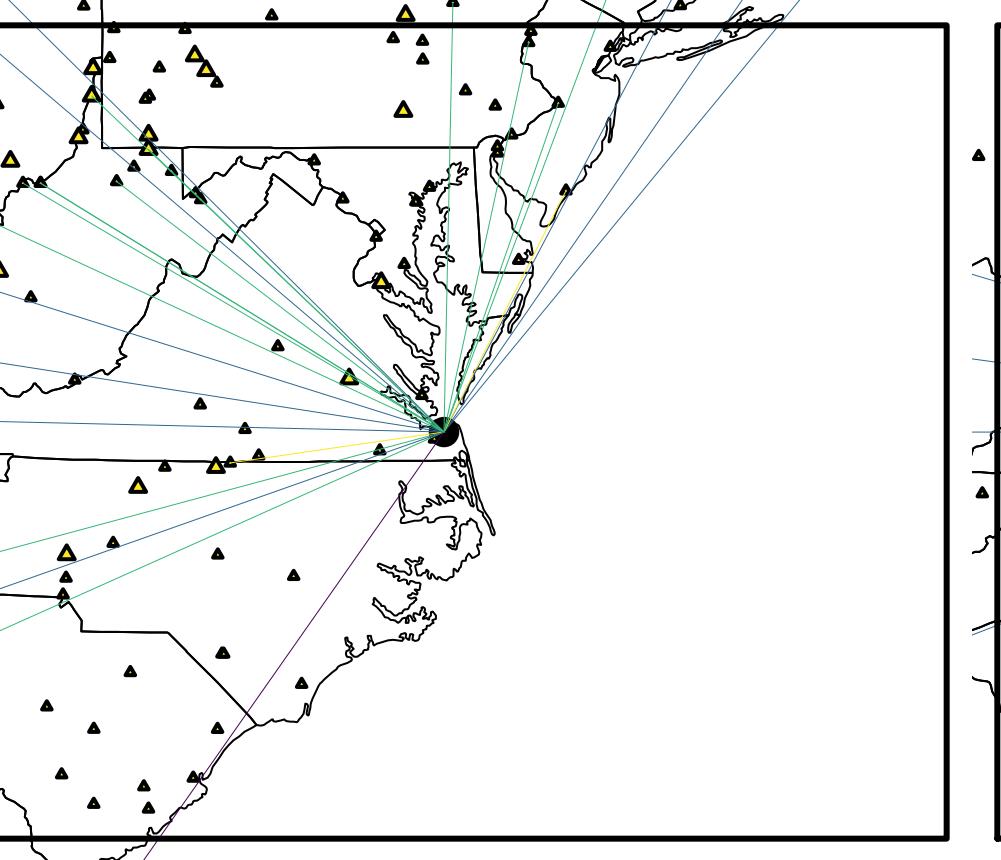
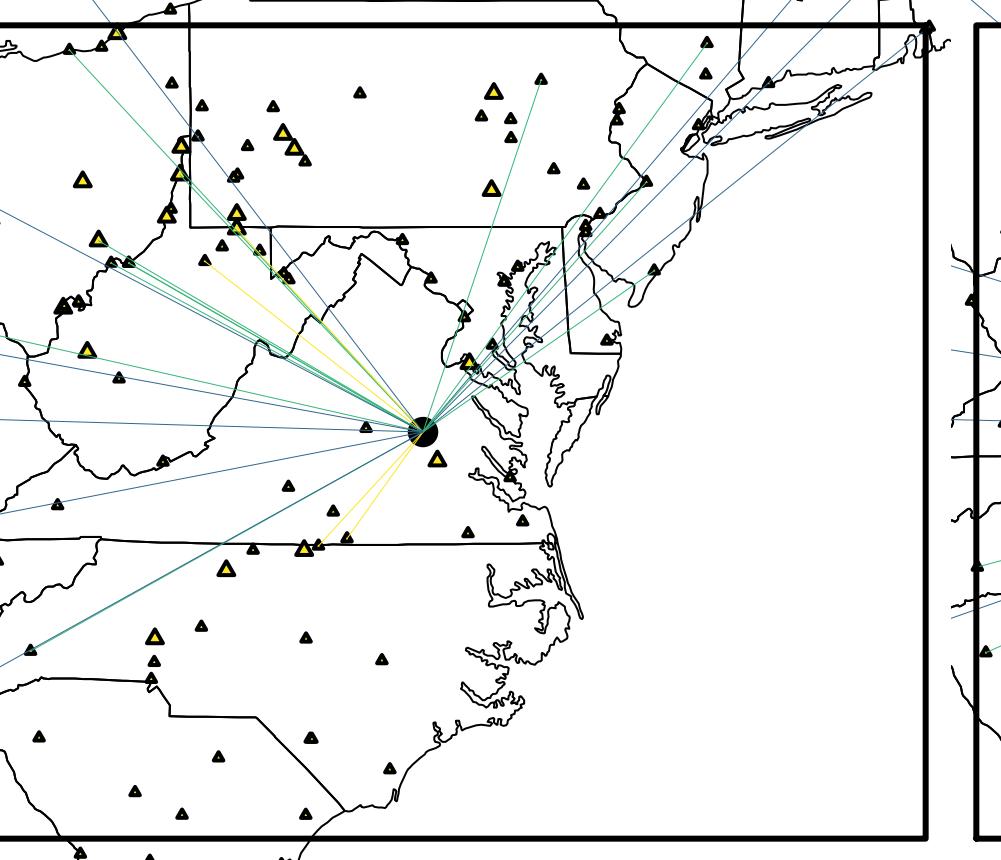
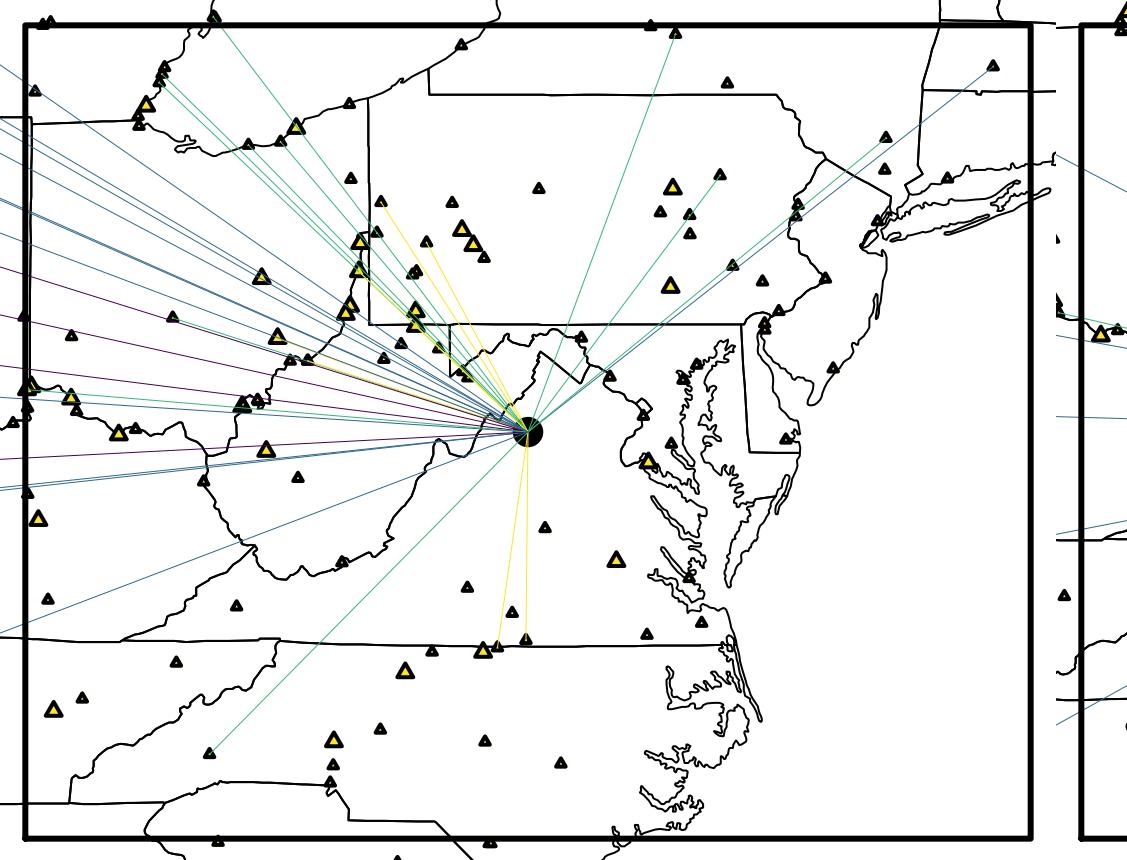


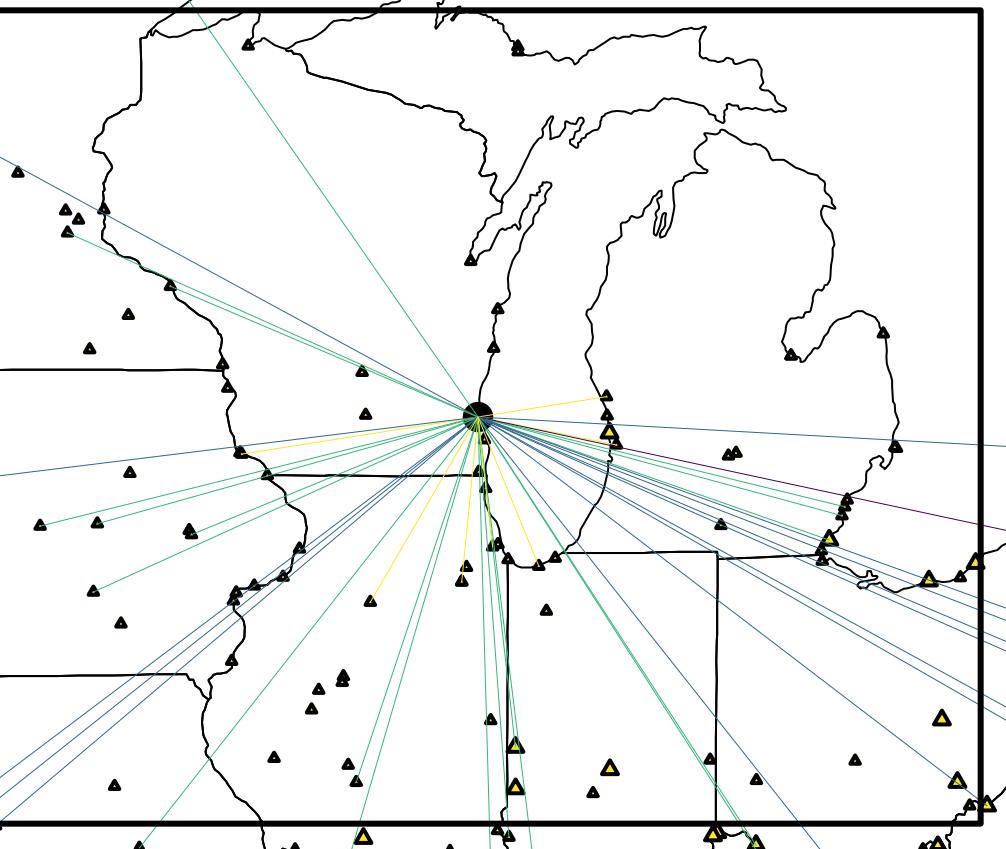
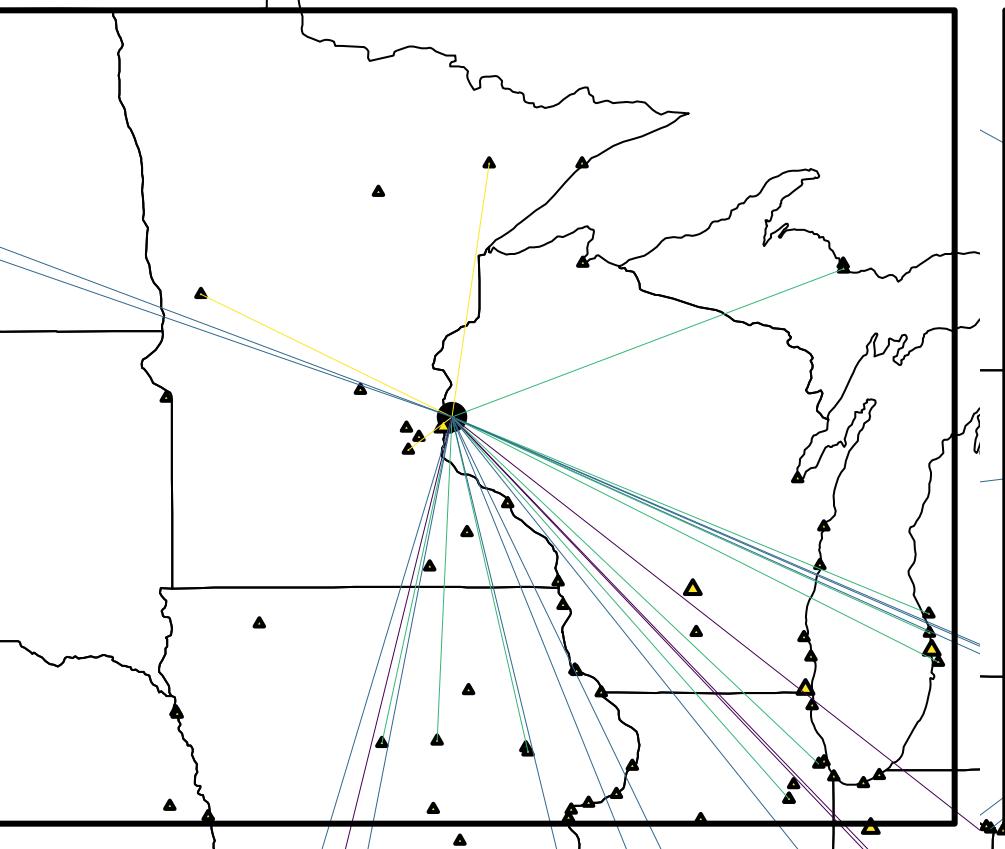
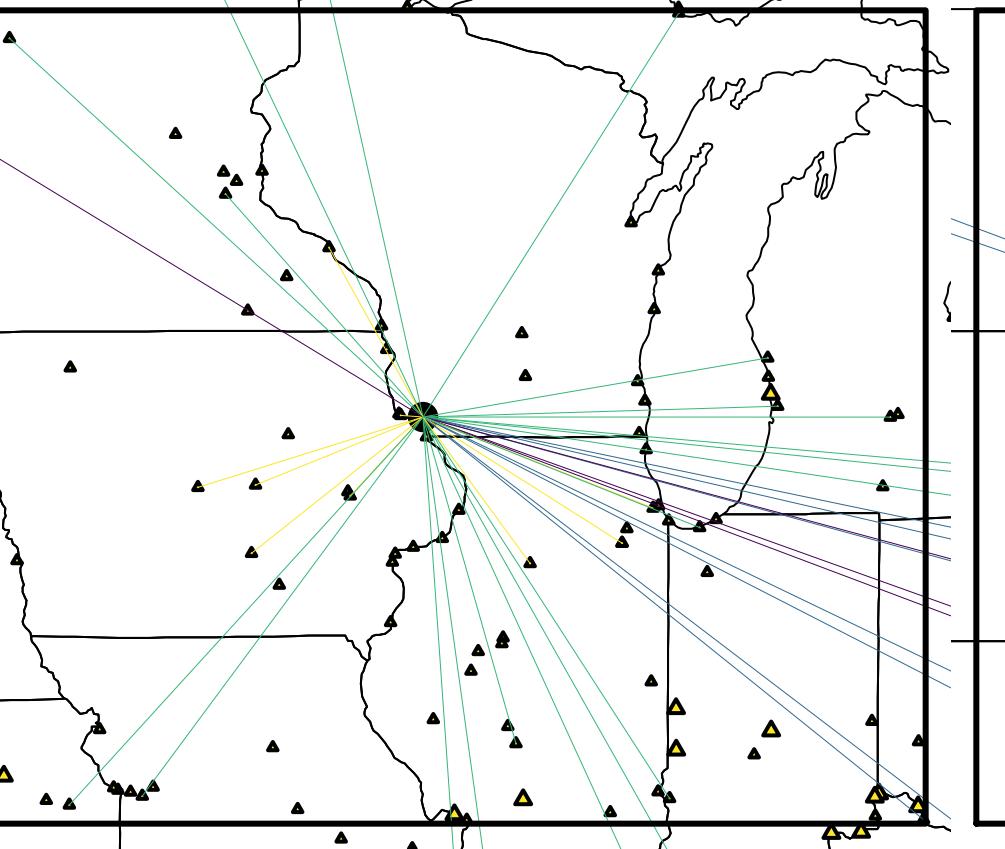
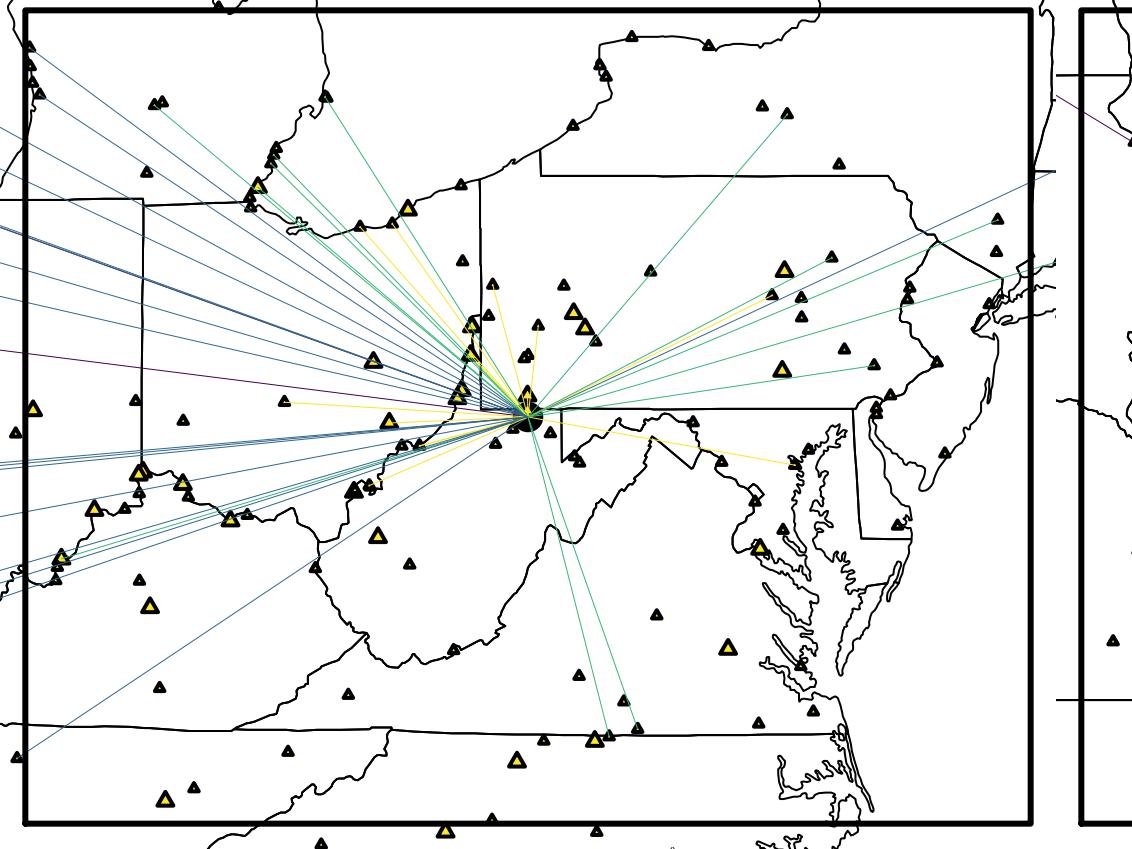
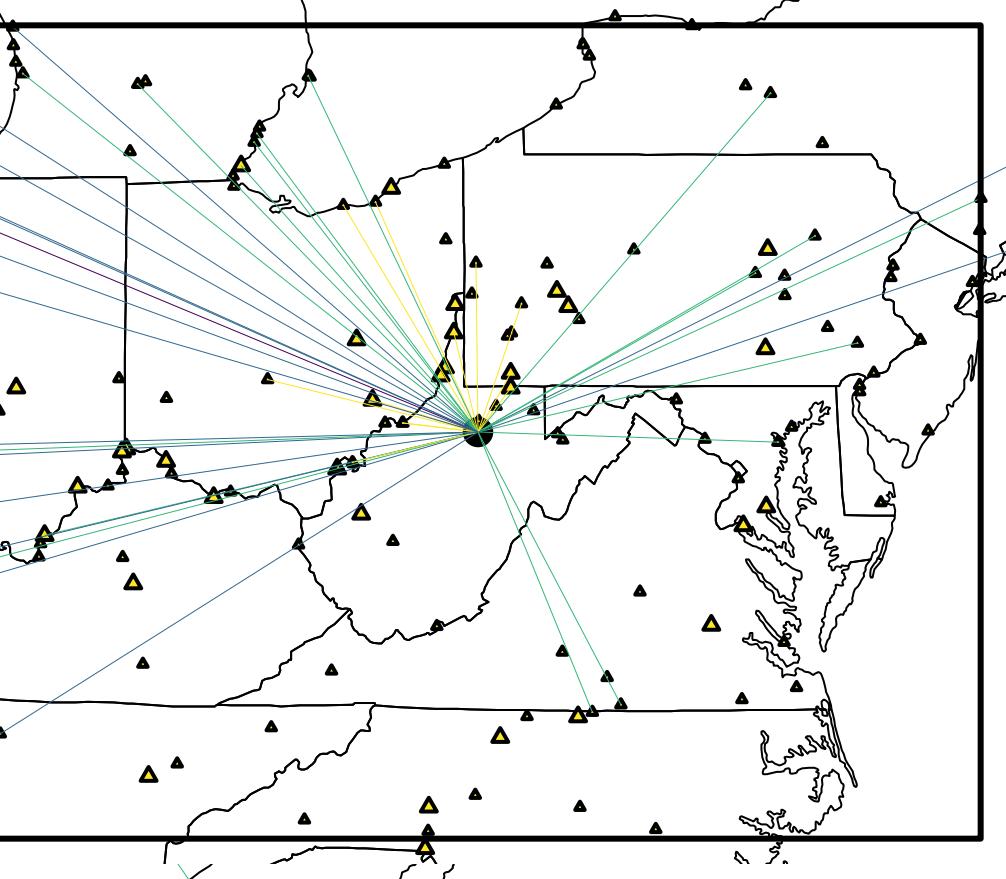
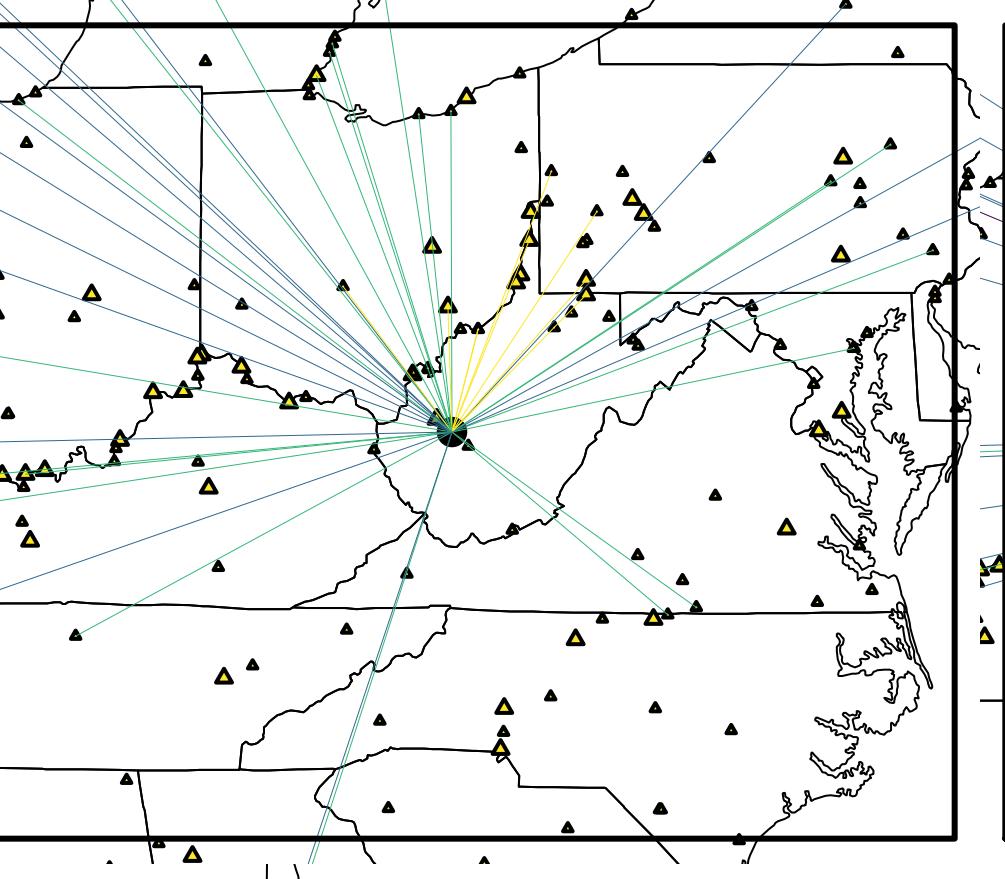
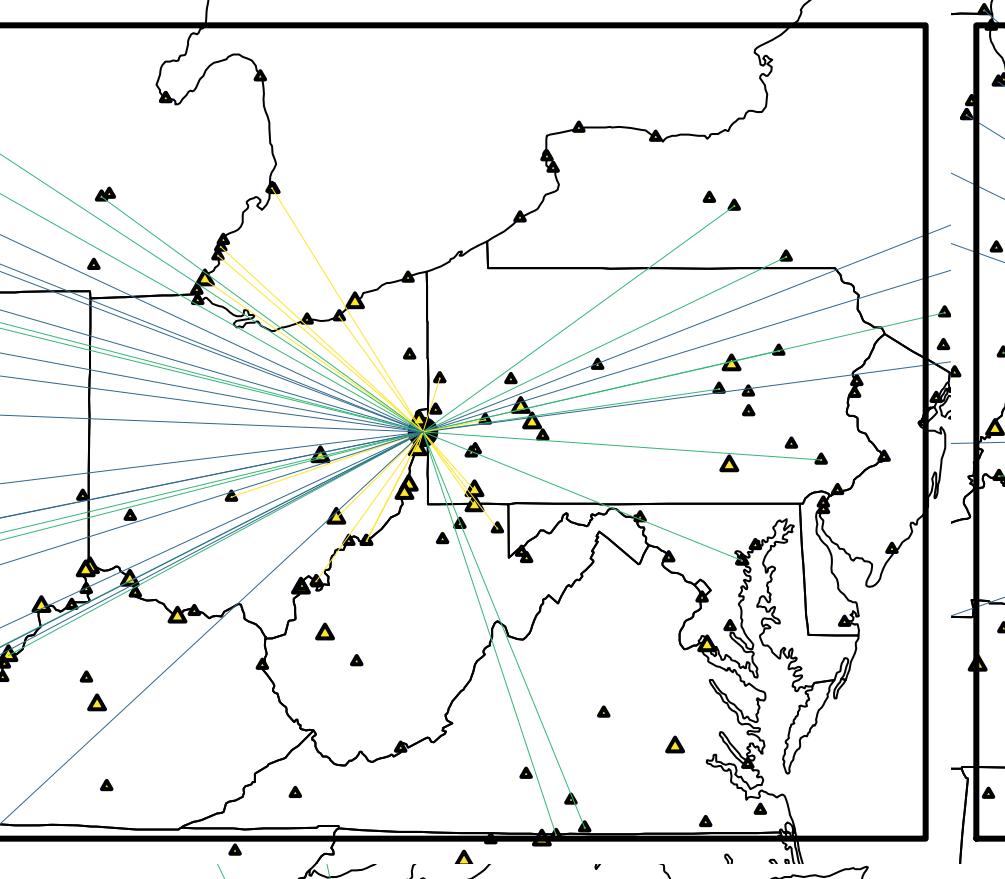
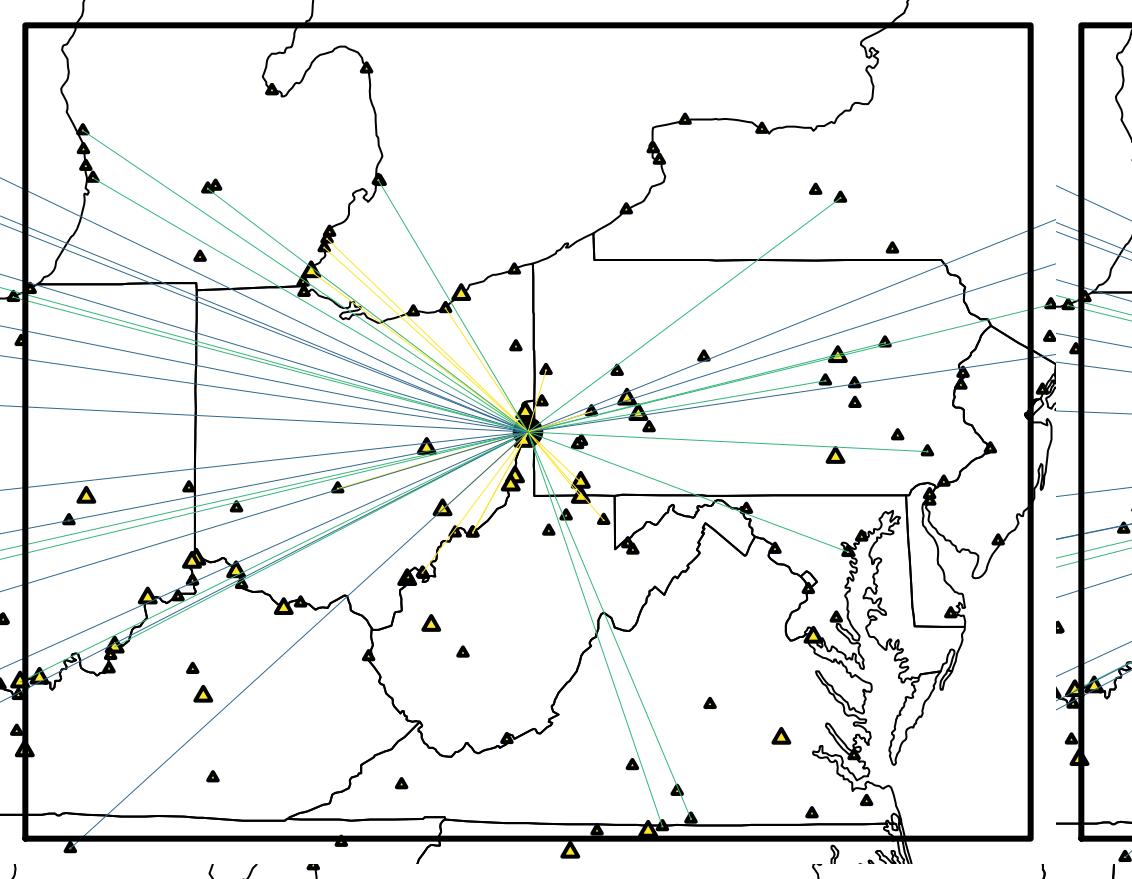


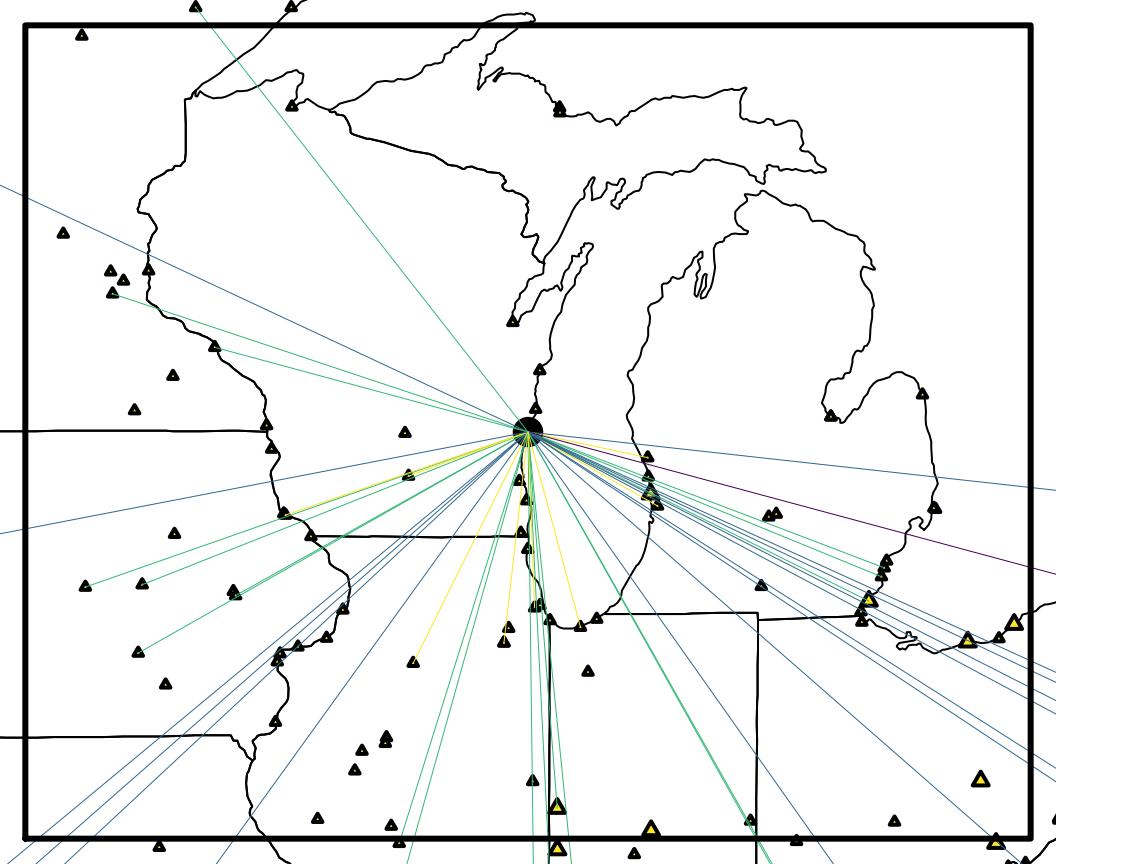
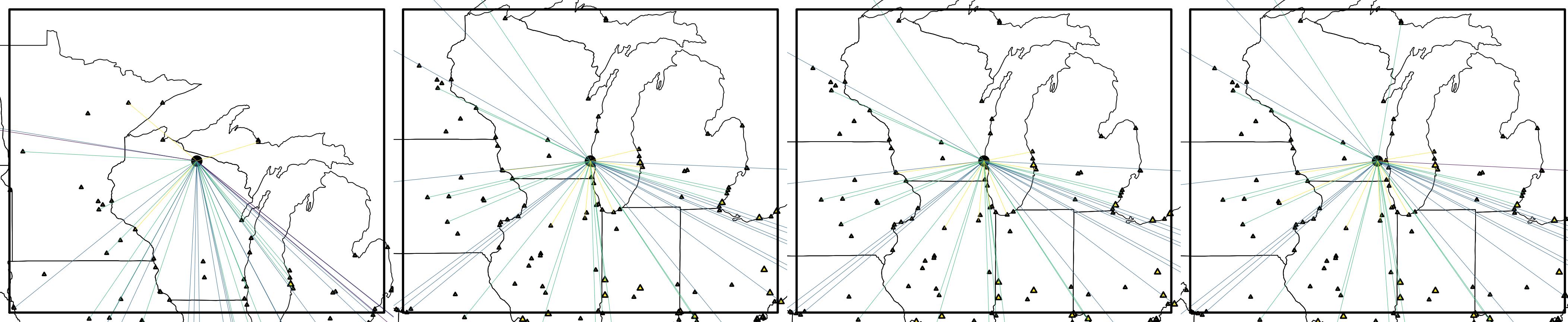




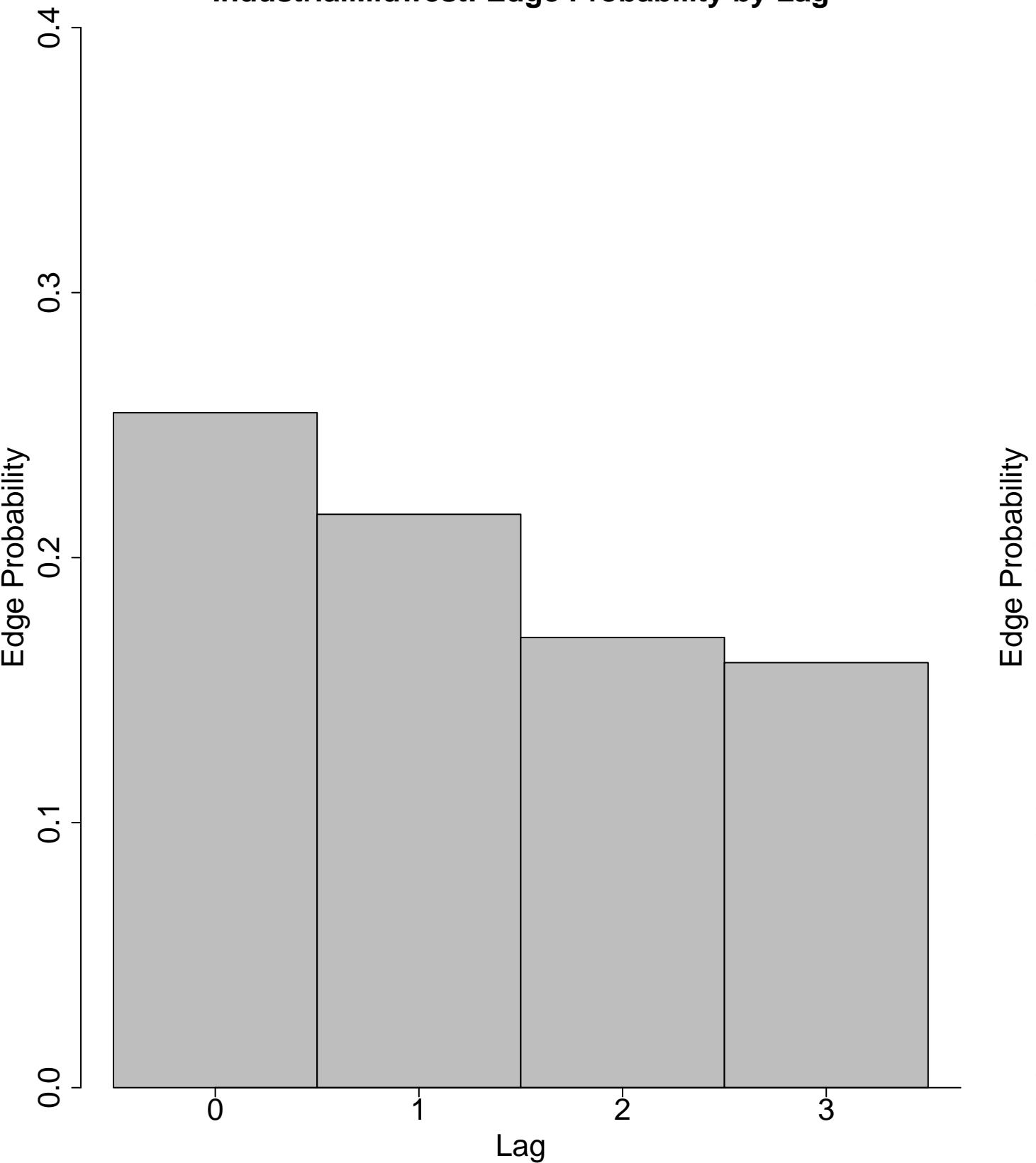




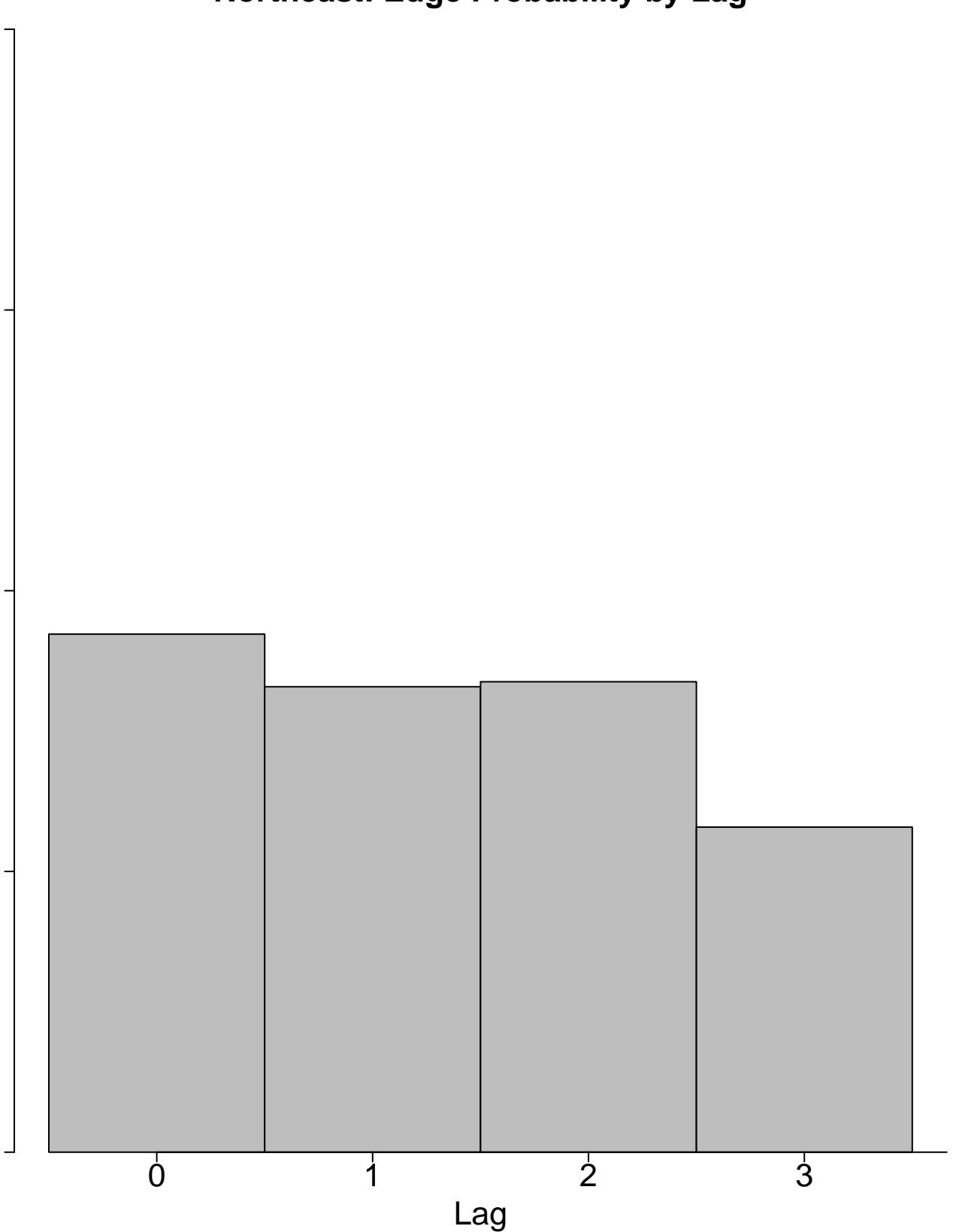




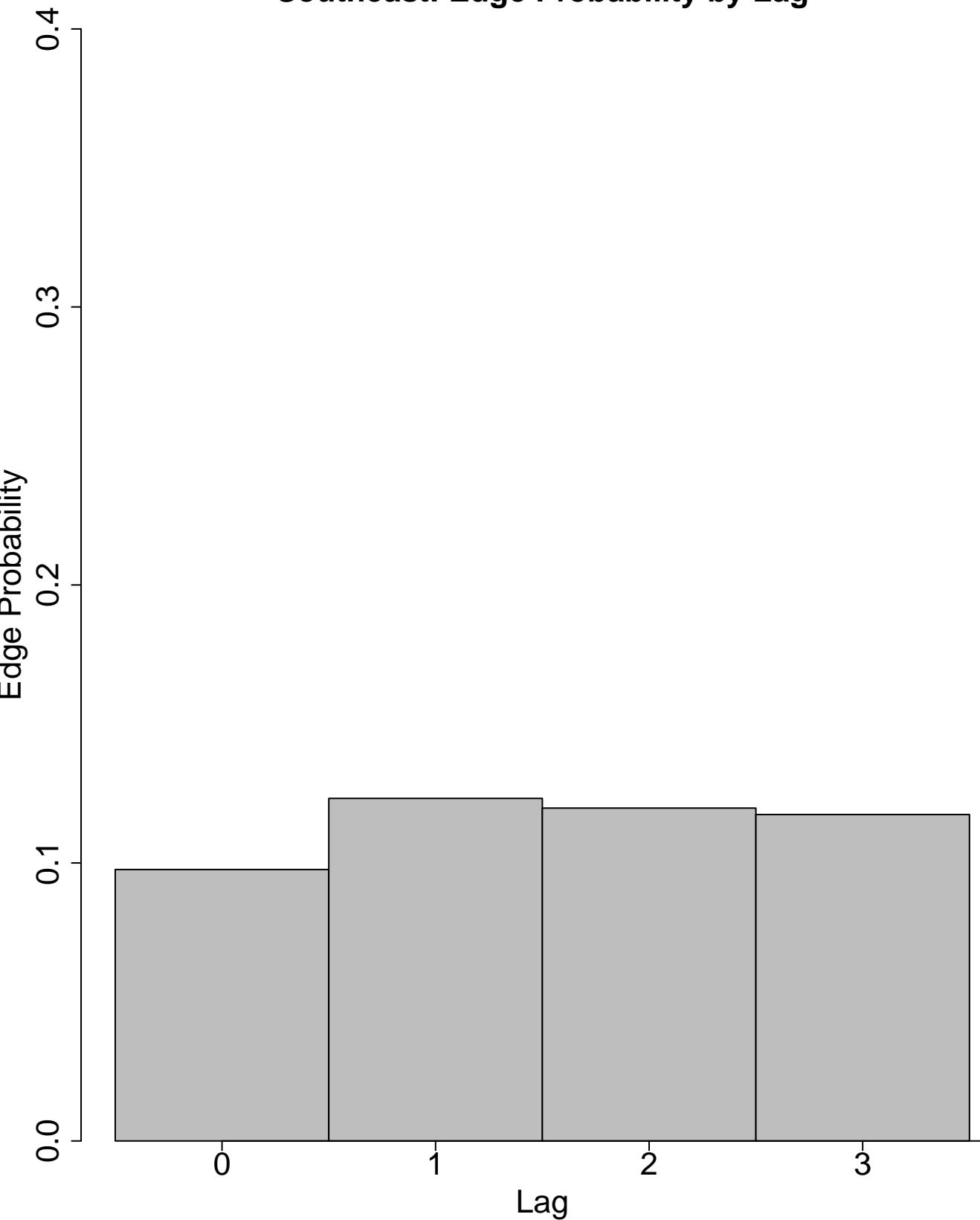
IndustrialMidwest: Edge Probability by Lag



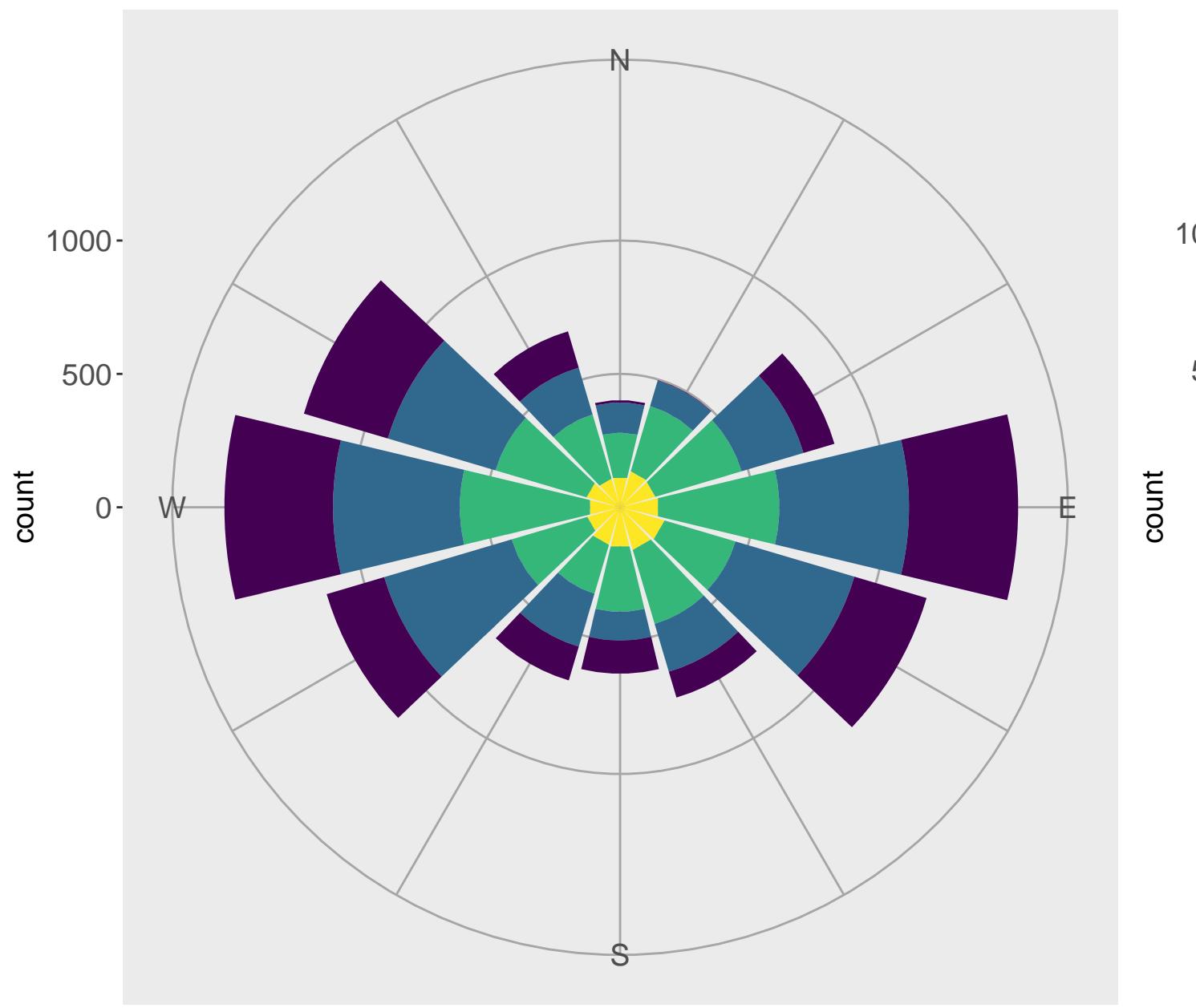
Northeast: Edge Probability by Lag



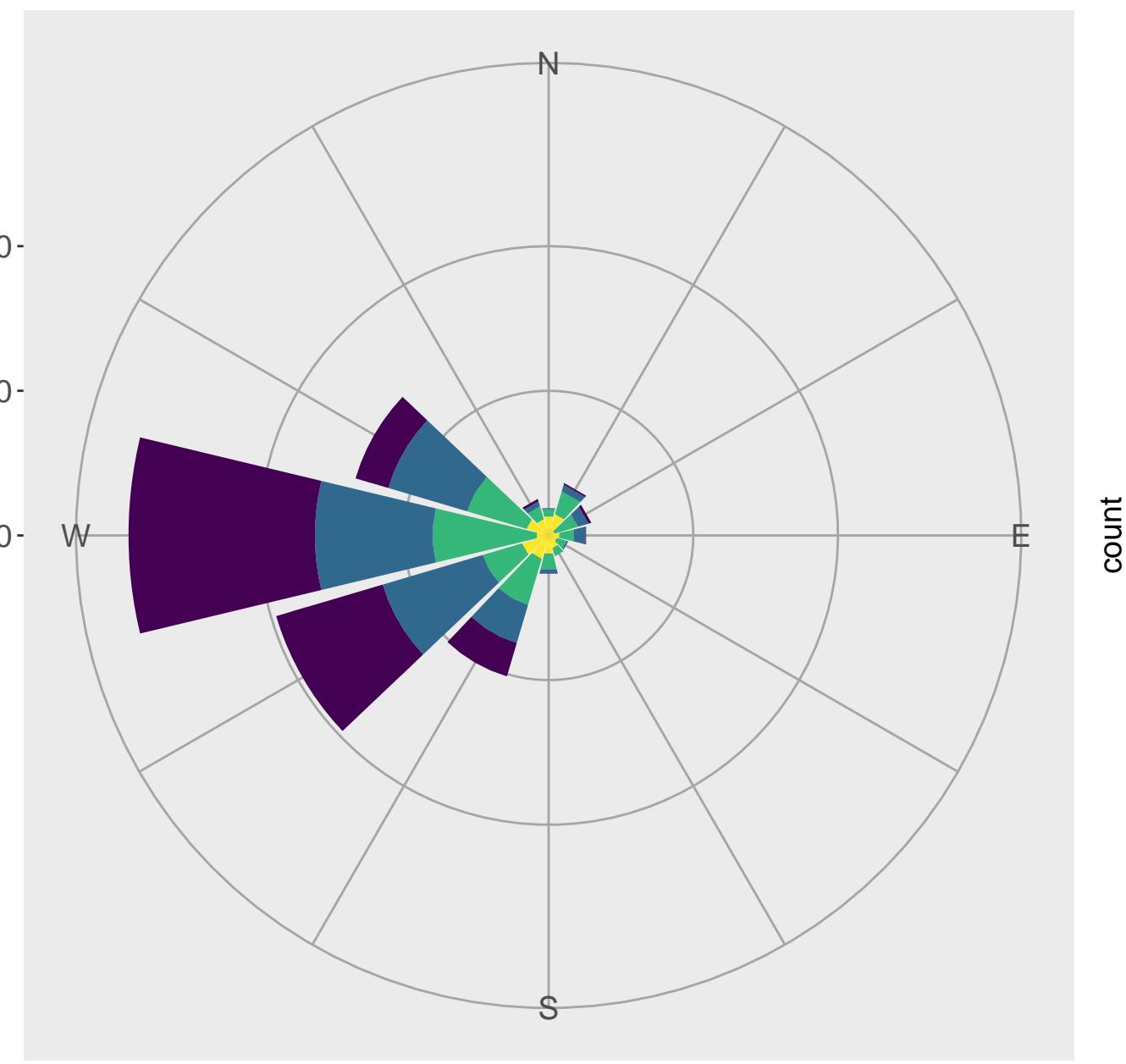
Southeast: Edge Probability by Lag



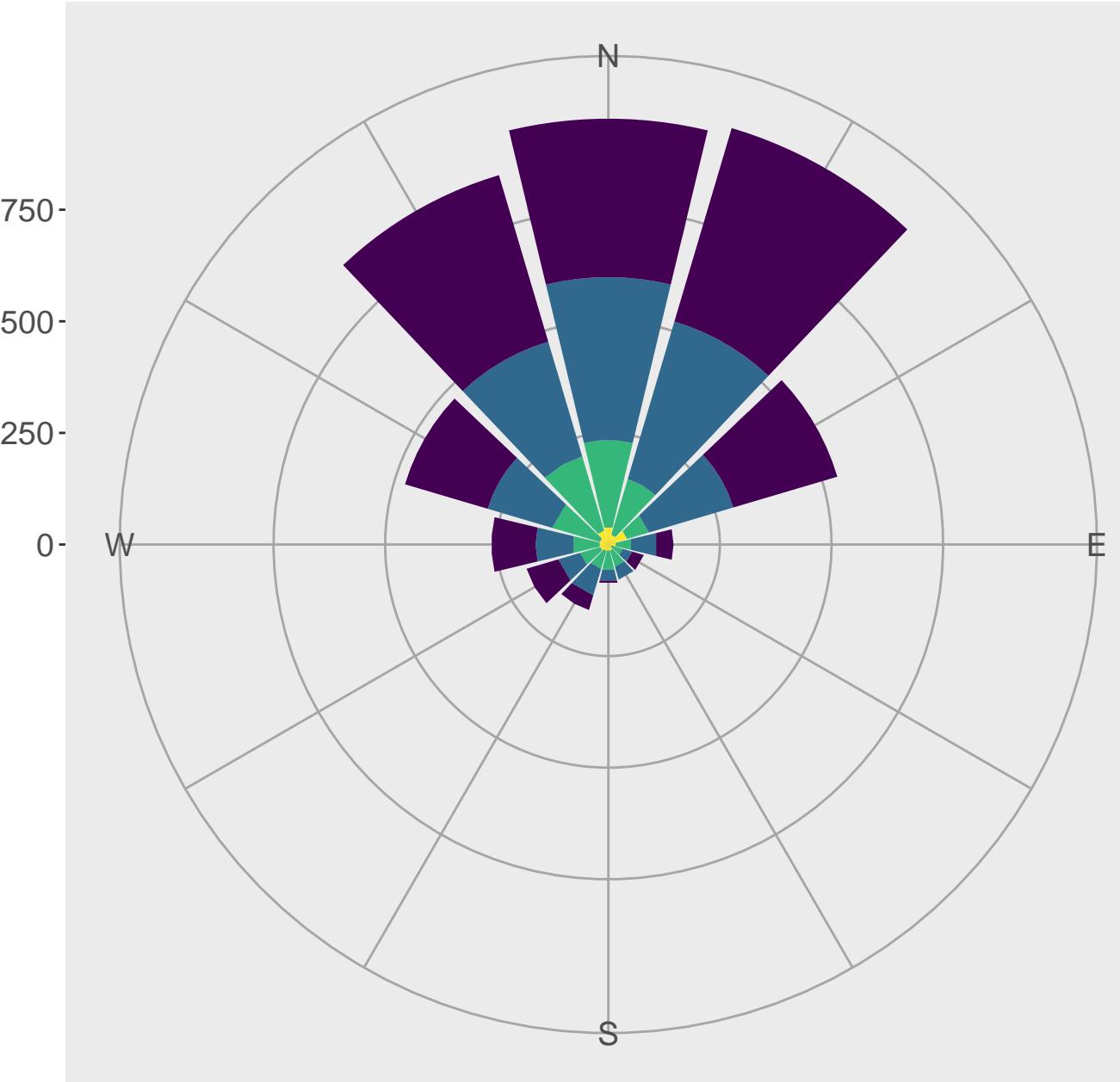
Edge counts by distance/direction to source
Industrial Midwest receptors



Edge counts by distance/direction to source
Northeast receptors



Edge counts by distance/direction to source
Southeast receptors

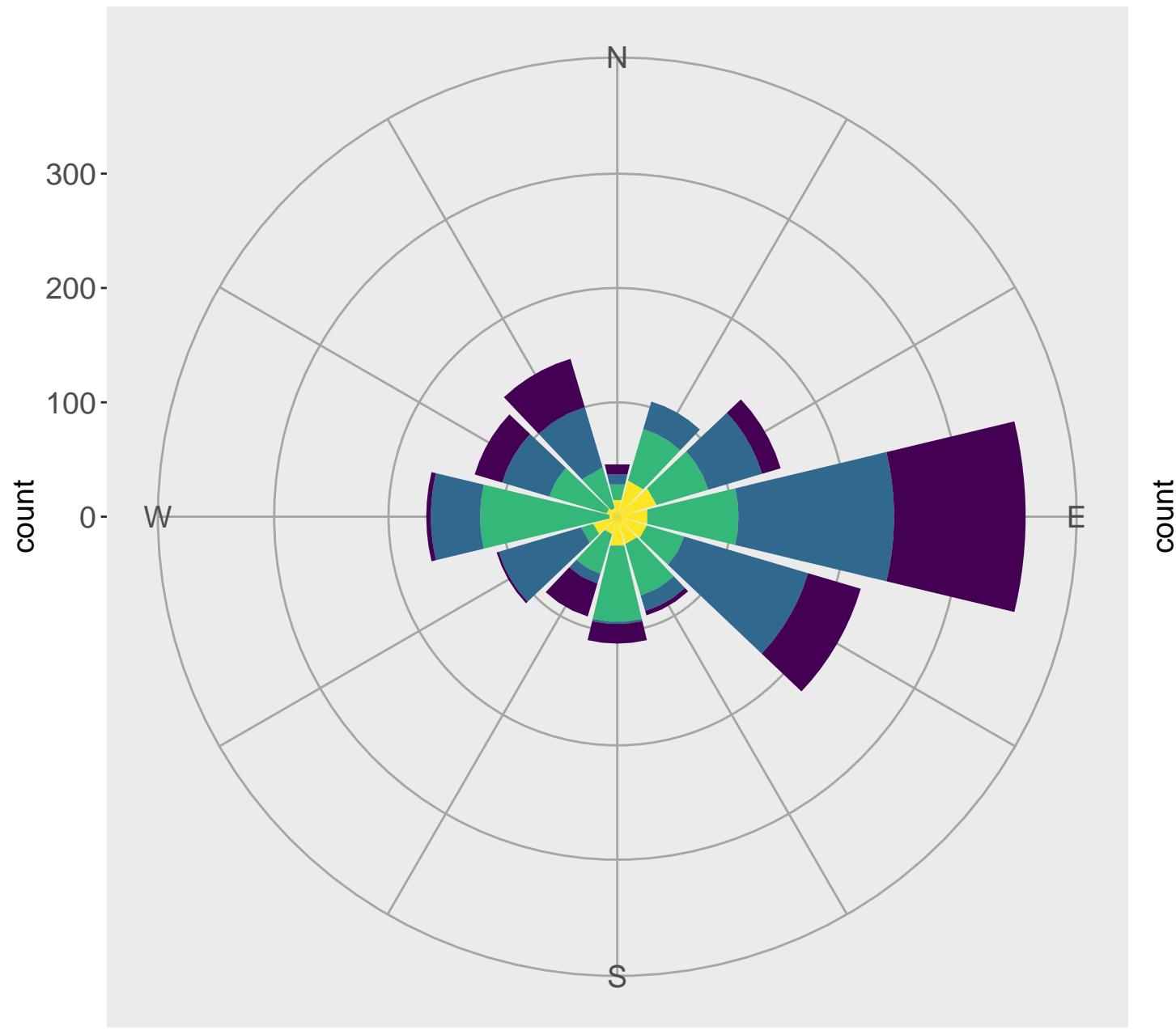


Distance to Source (km) █ 750–1000 █ 500–750 █ 250–500 █ 0–250

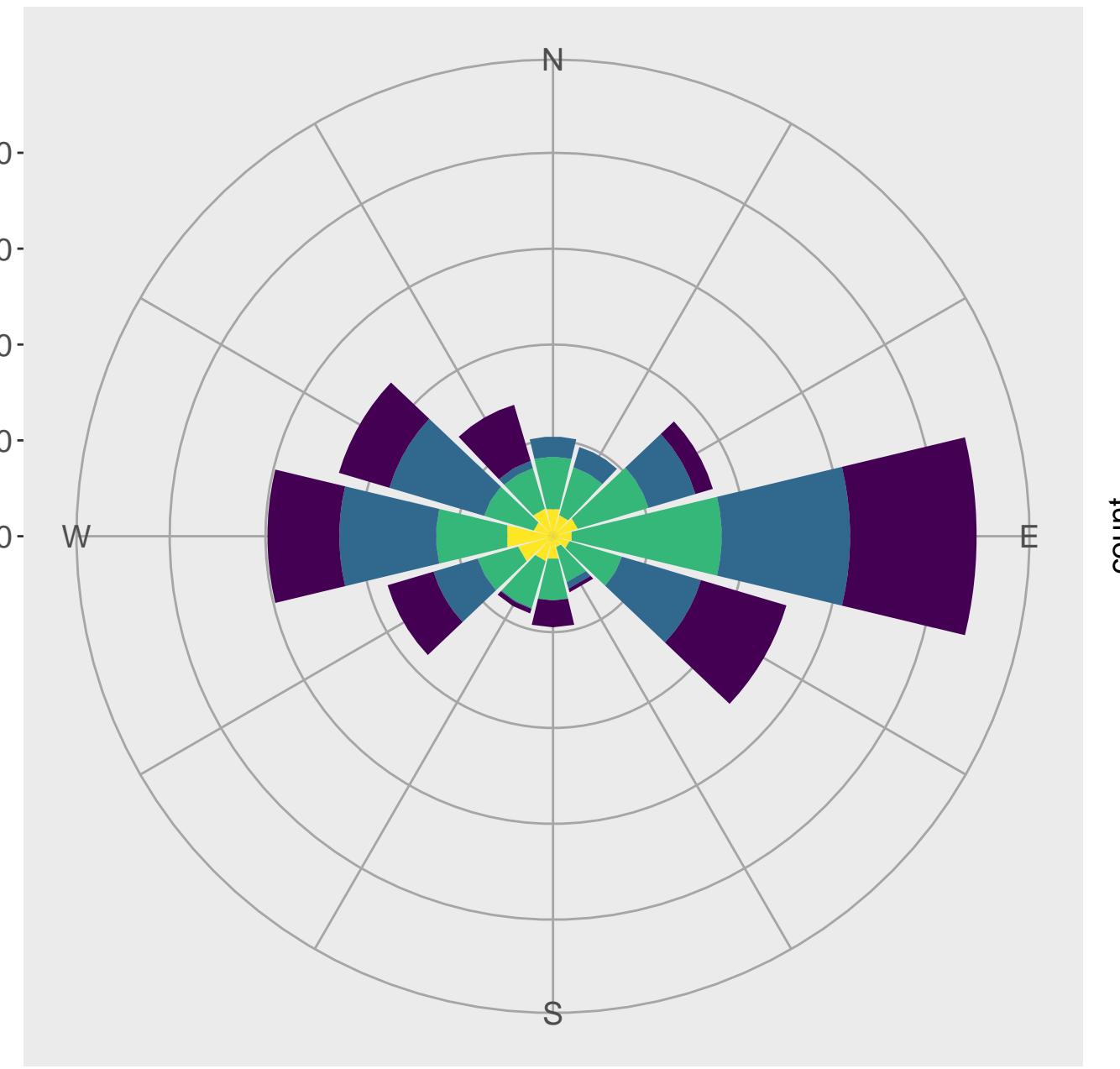
Distance to Source (km) █ 750–1000 █ 500–750 █ 250–500 █ 0–250

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

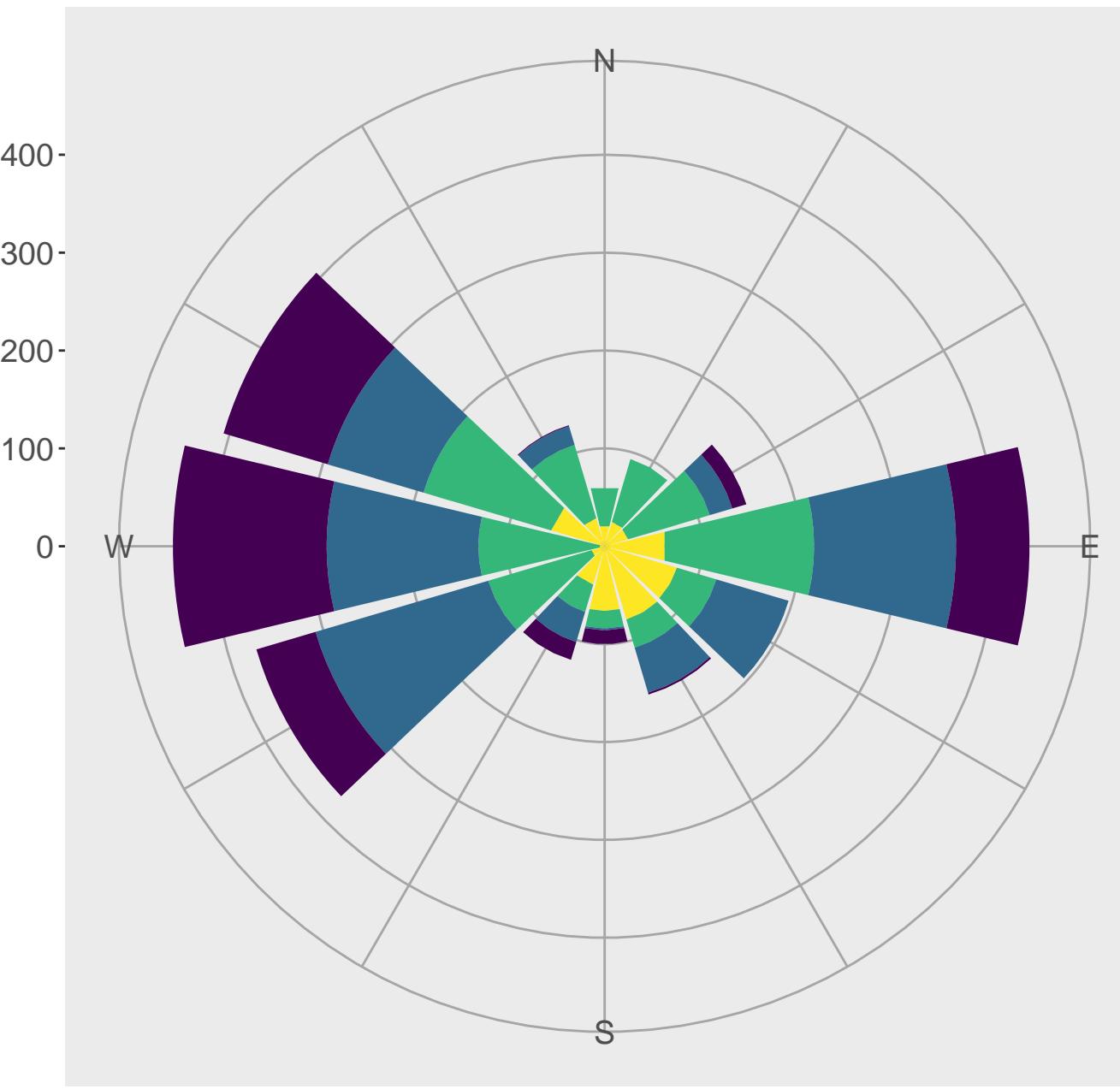
Edge counts by distance/direction to source
Illinois receptors



Edge counts by distance/direction to source
Indiana receptors



Edge counts by distance/direction to source
Ohio receptors

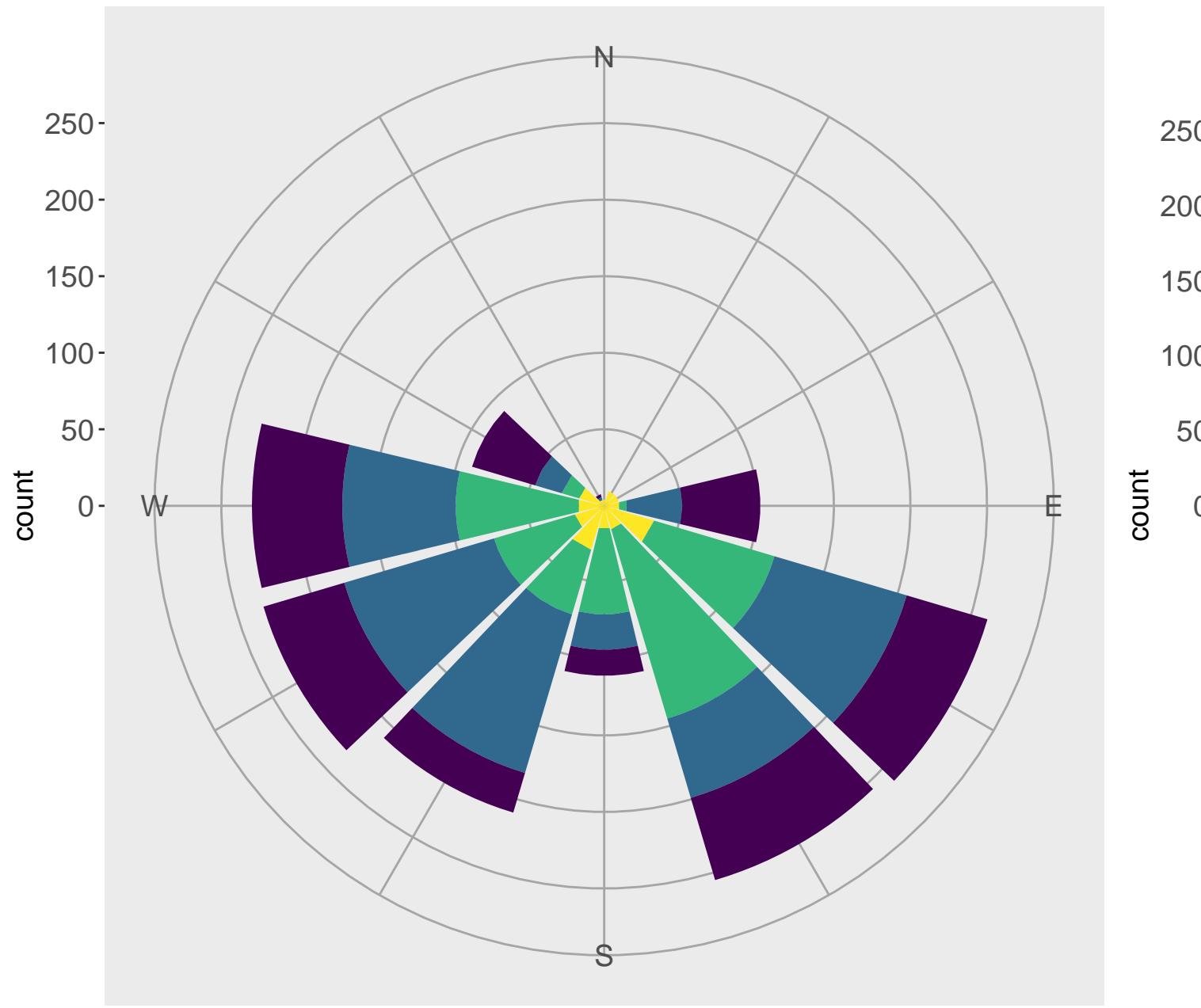


Distance to Source (km) 750–1000 500–750 250–500 0–250

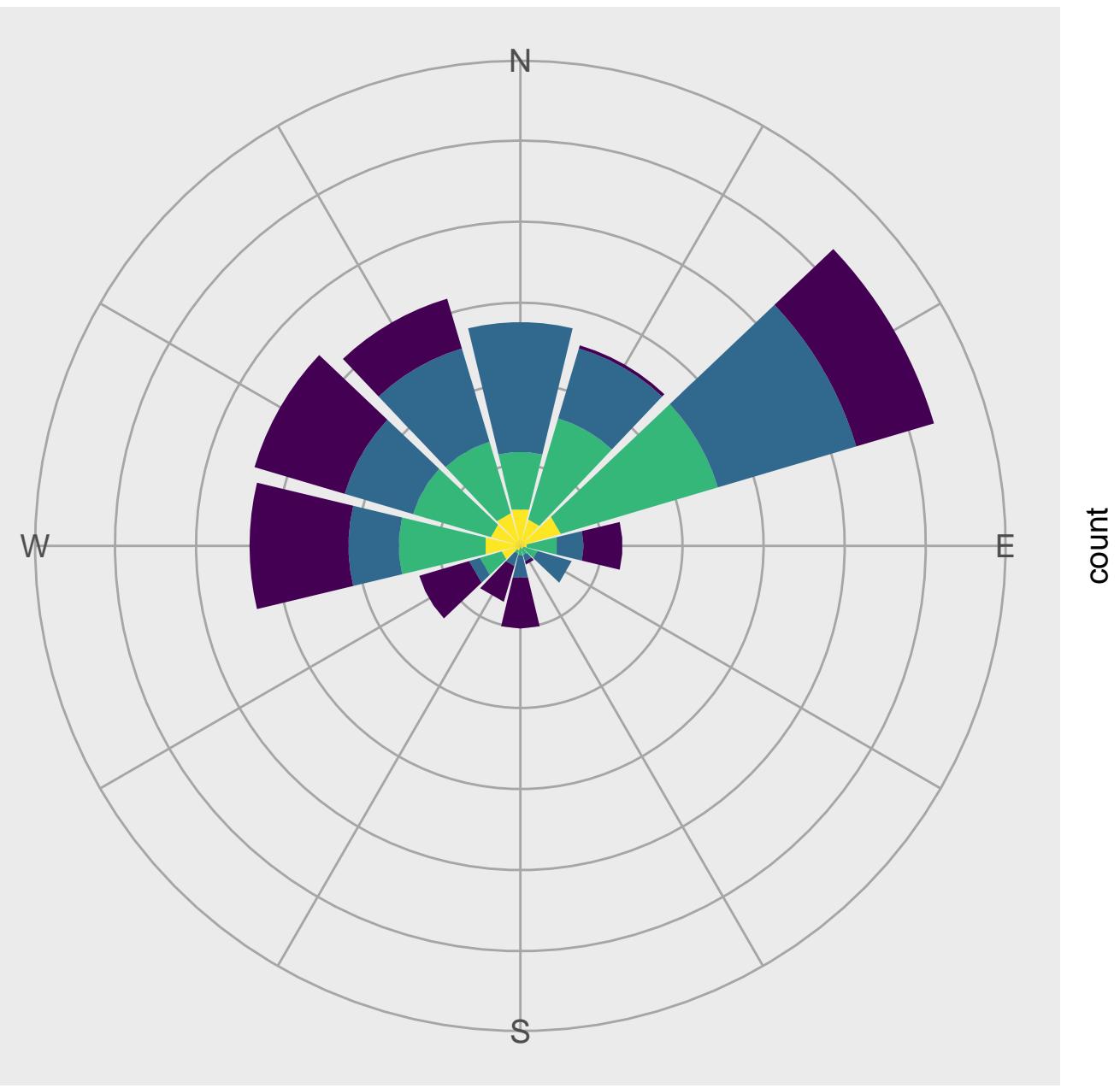
Distance to Source (km) 750–1000 500–750 250–500 0–250

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

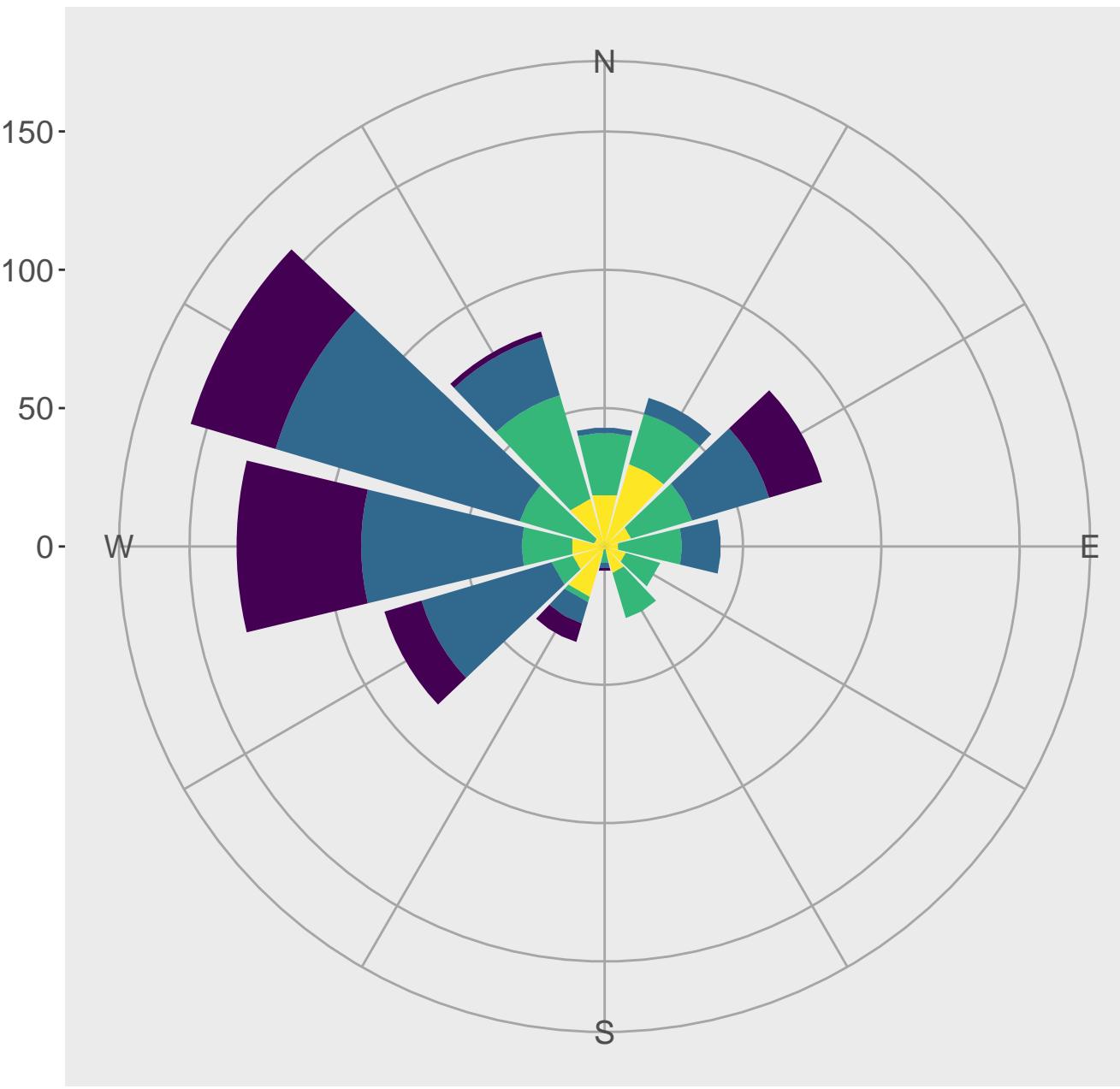
Edge counts by distance/direction to source
Michigan receptors



Edge counts by distance/direction to source
Kentucky receptors



Edge counts by distance/direction to source
West Virginia receptors

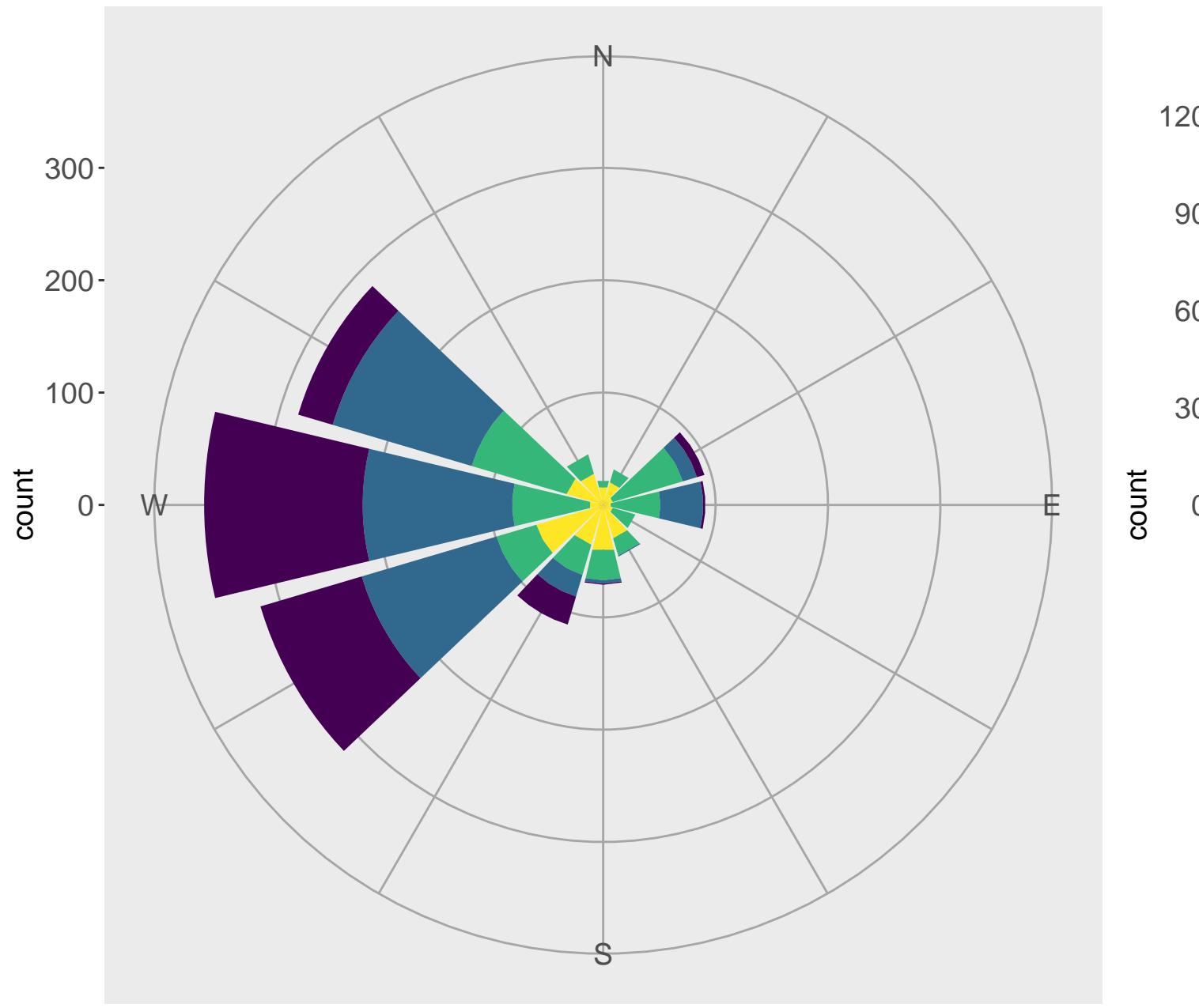


Distance to Source (km) 750-1000 500-750 250-500 0-250

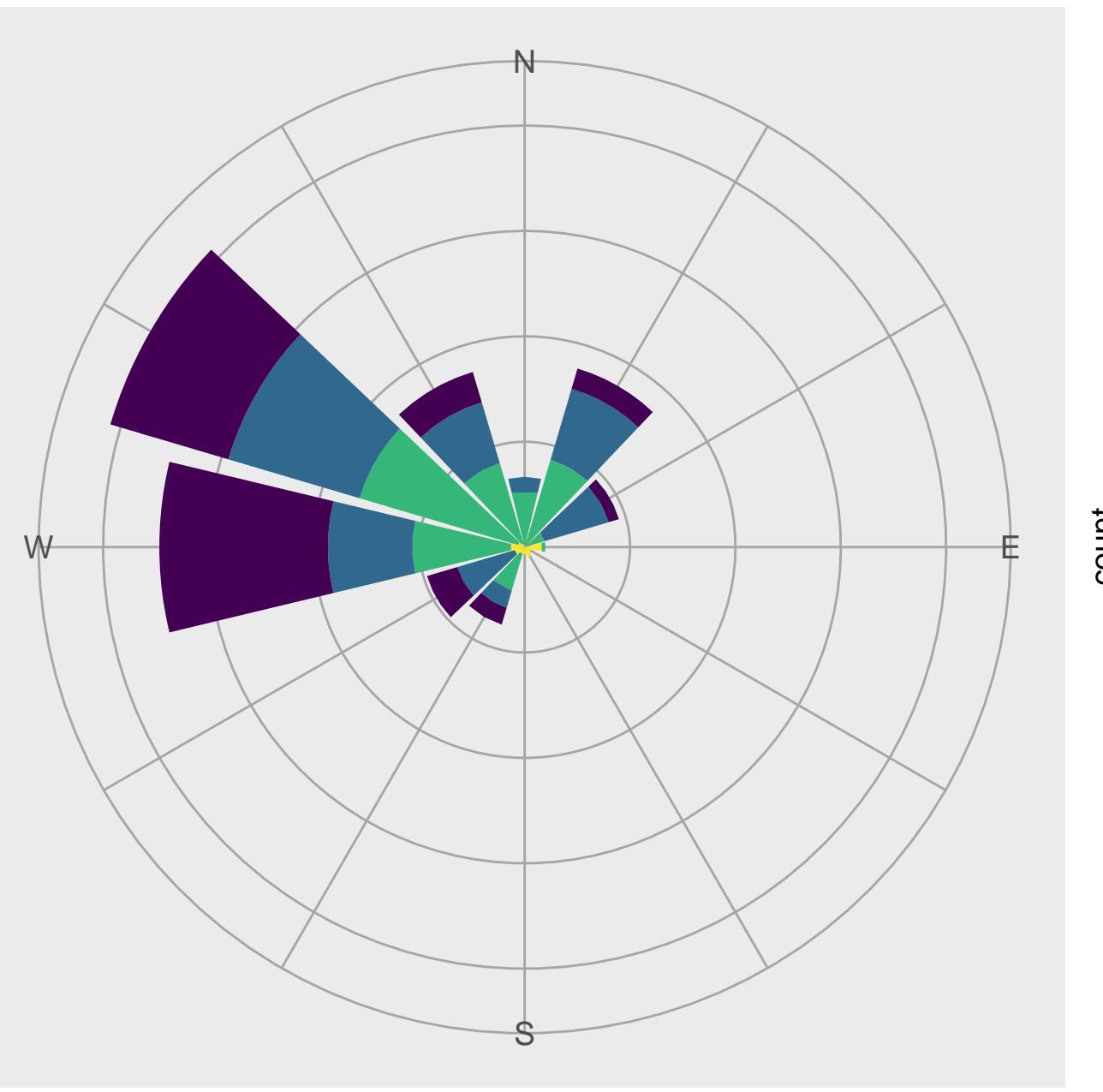
Distance to Source (km) 750-1000 500-750 250-500 0-250

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

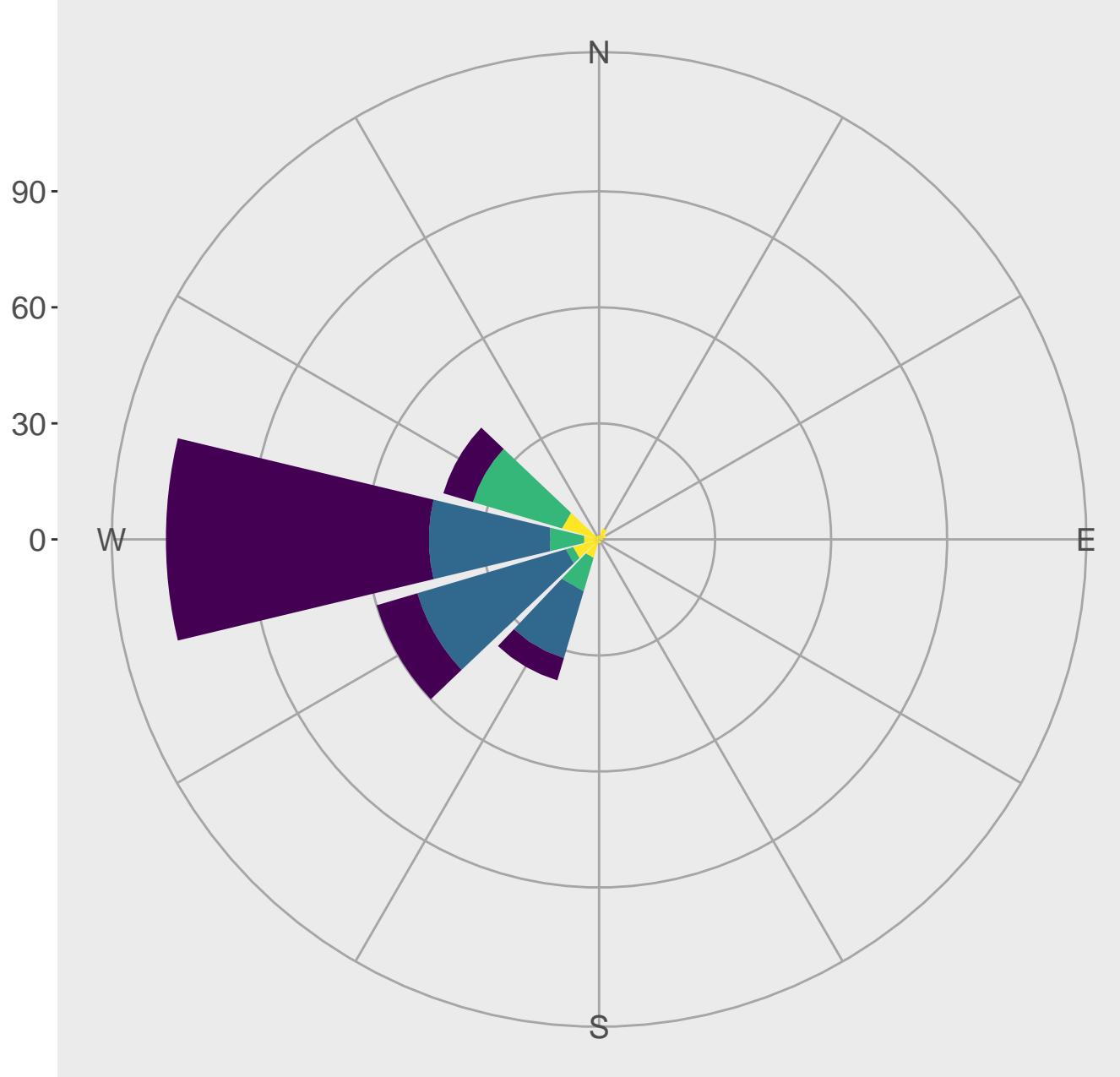
Edge counts by distance/direction to source
Pennsylvania receptors



Edge counts by distance/direction to source
Virginia receptors



Edge counts by distance/direction to source
Connecticut receptors

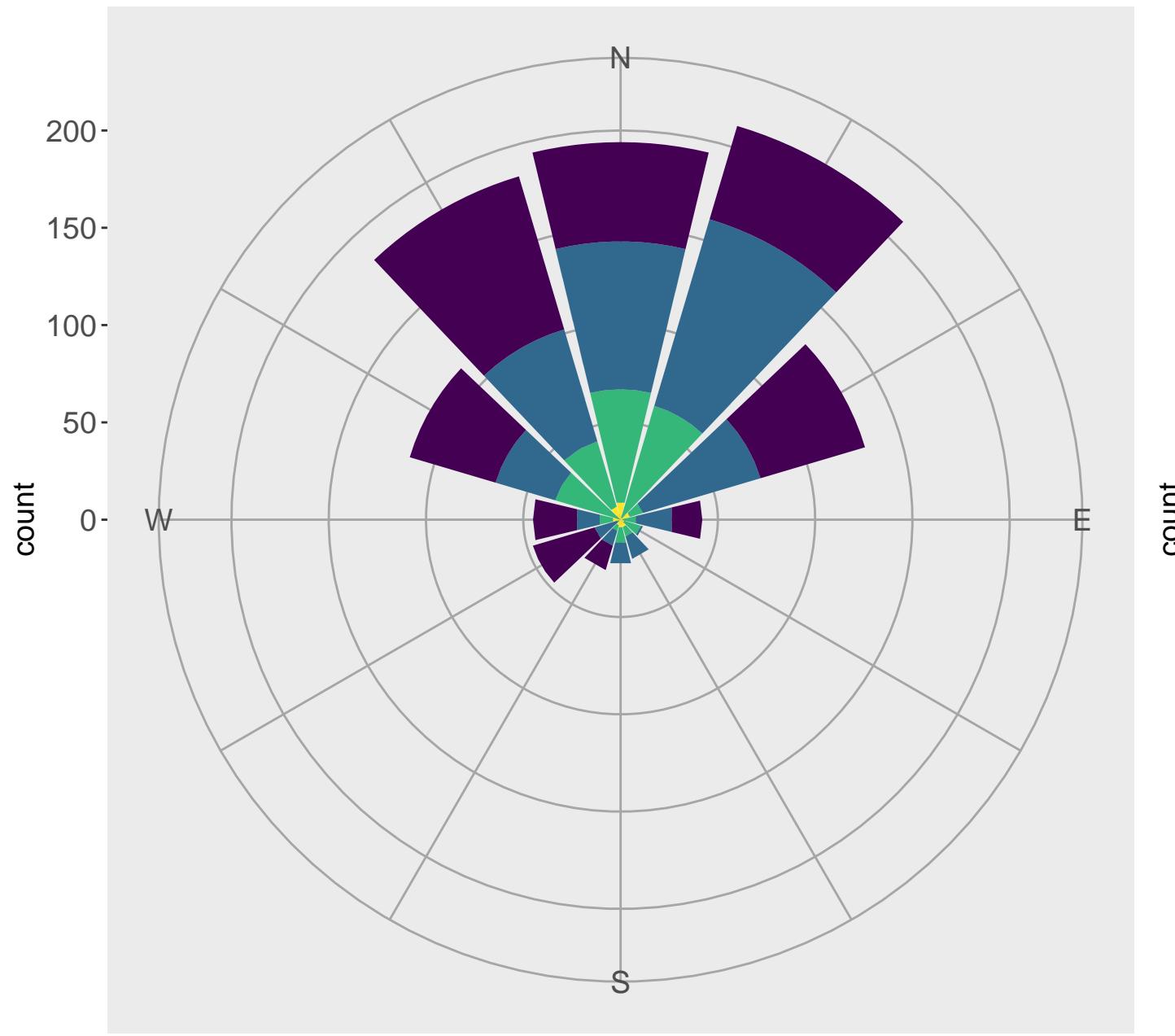


Distance to Source (km) 750–1000 500–750 250–500 0–250

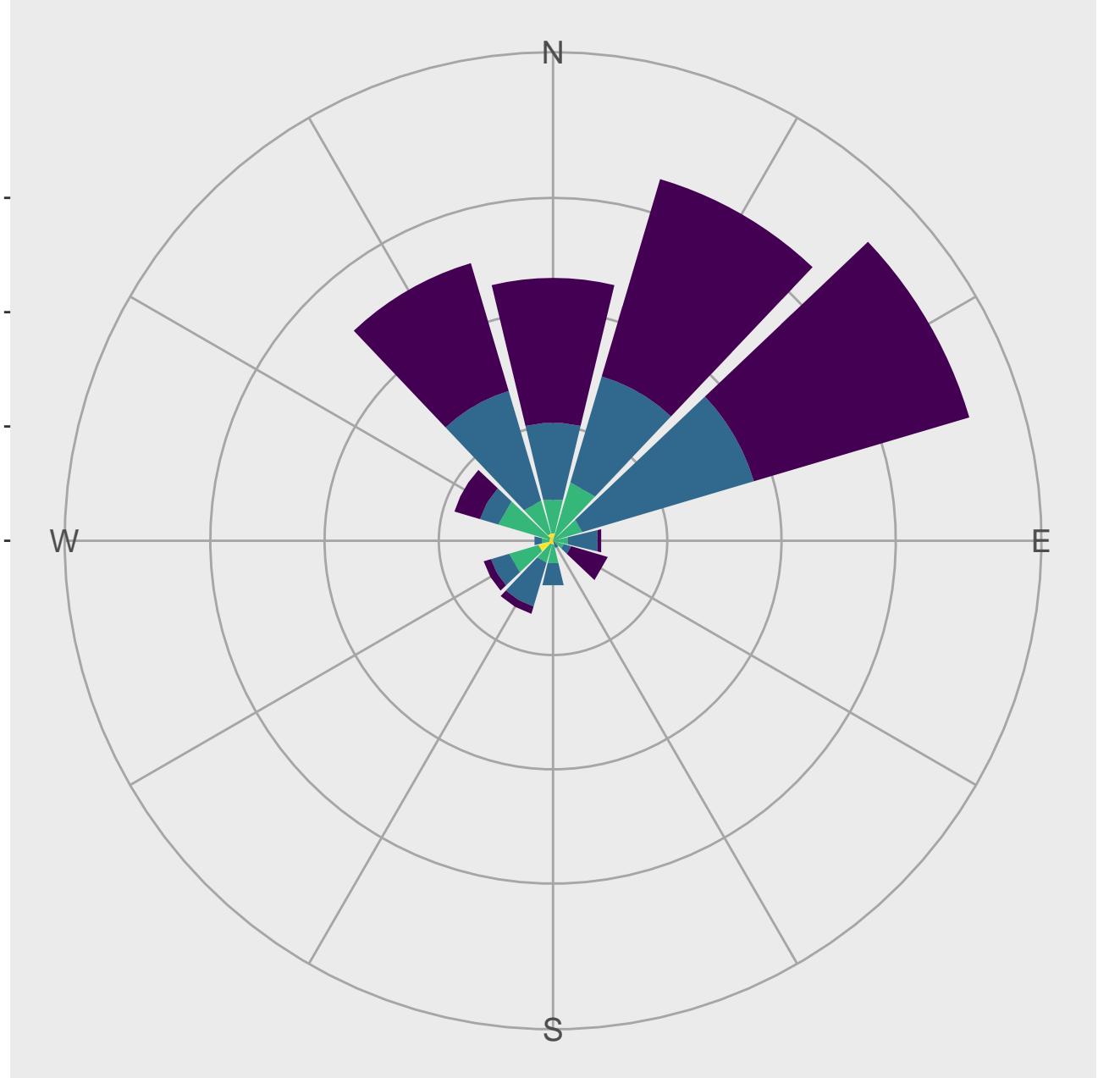
Distance to Source (km) 750–1000 500–750 250–500 0–250

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

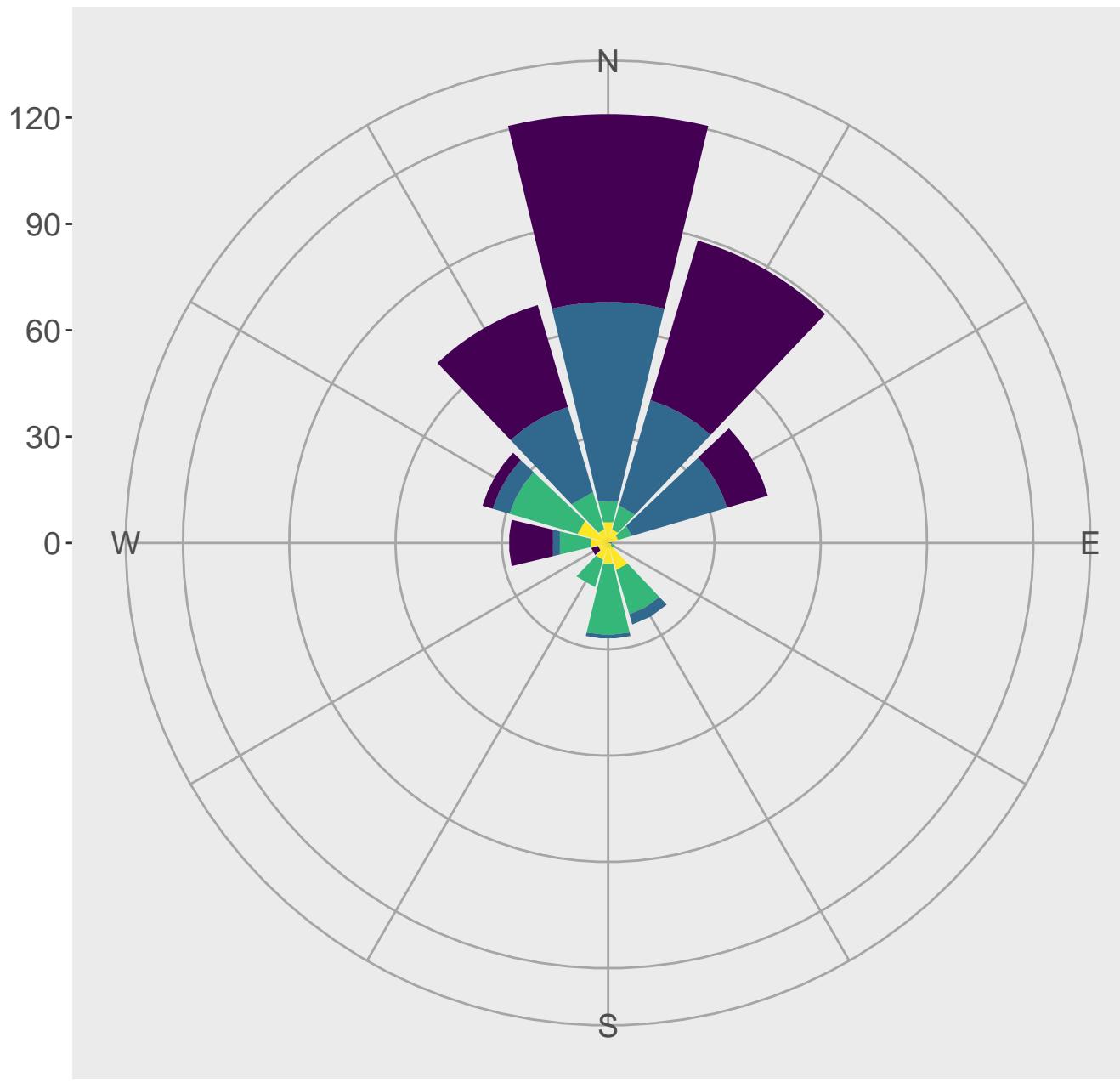
Edge counts by distance/direction to source
Tennessee receptors



Edge counts by distance/direction to source
Arkansas receptors



Edge counts by distance/direction to source
Georgia receptors

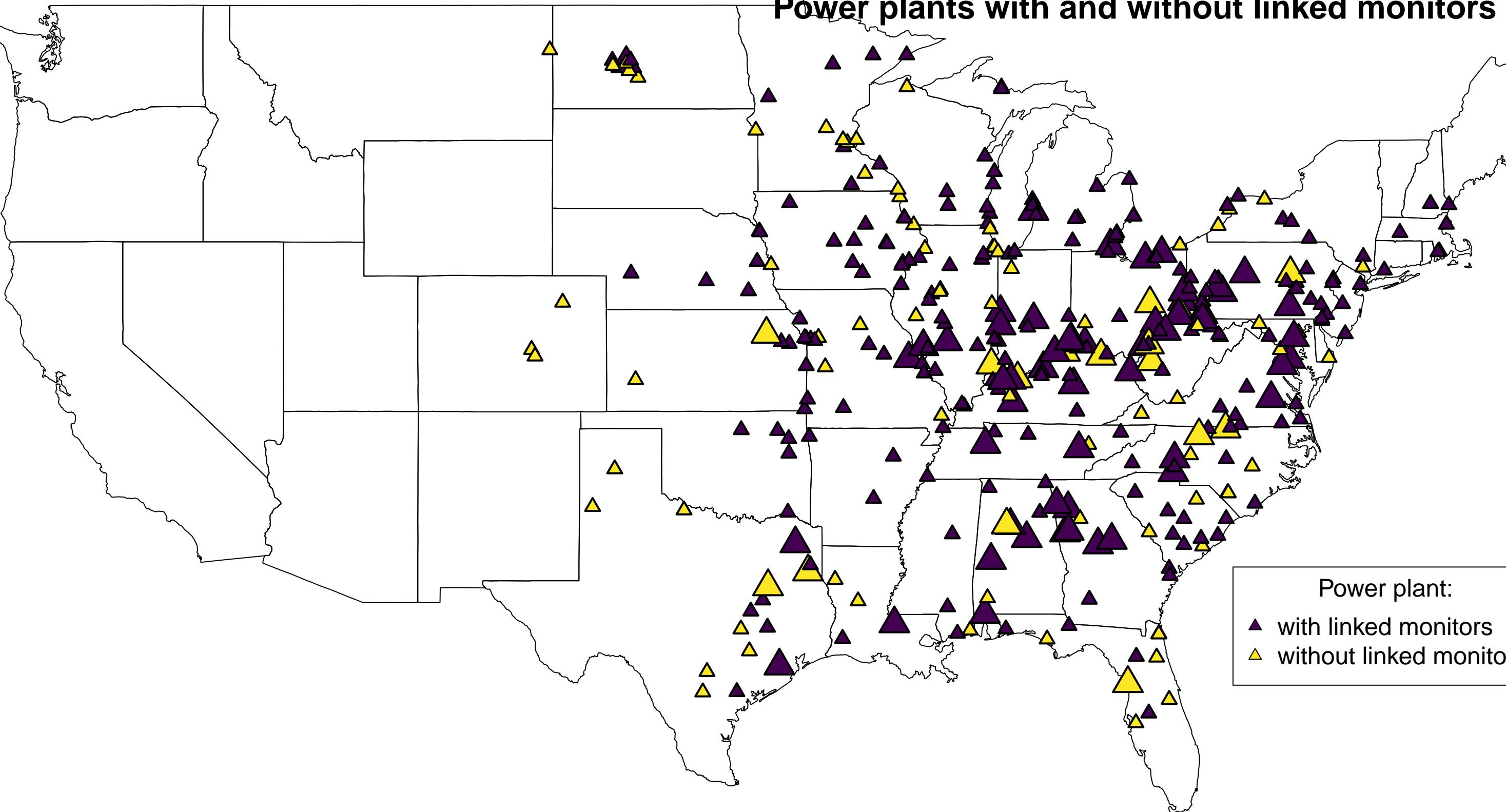


Distance to Source (km) 750–1000 500–750 250–500 0–250

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

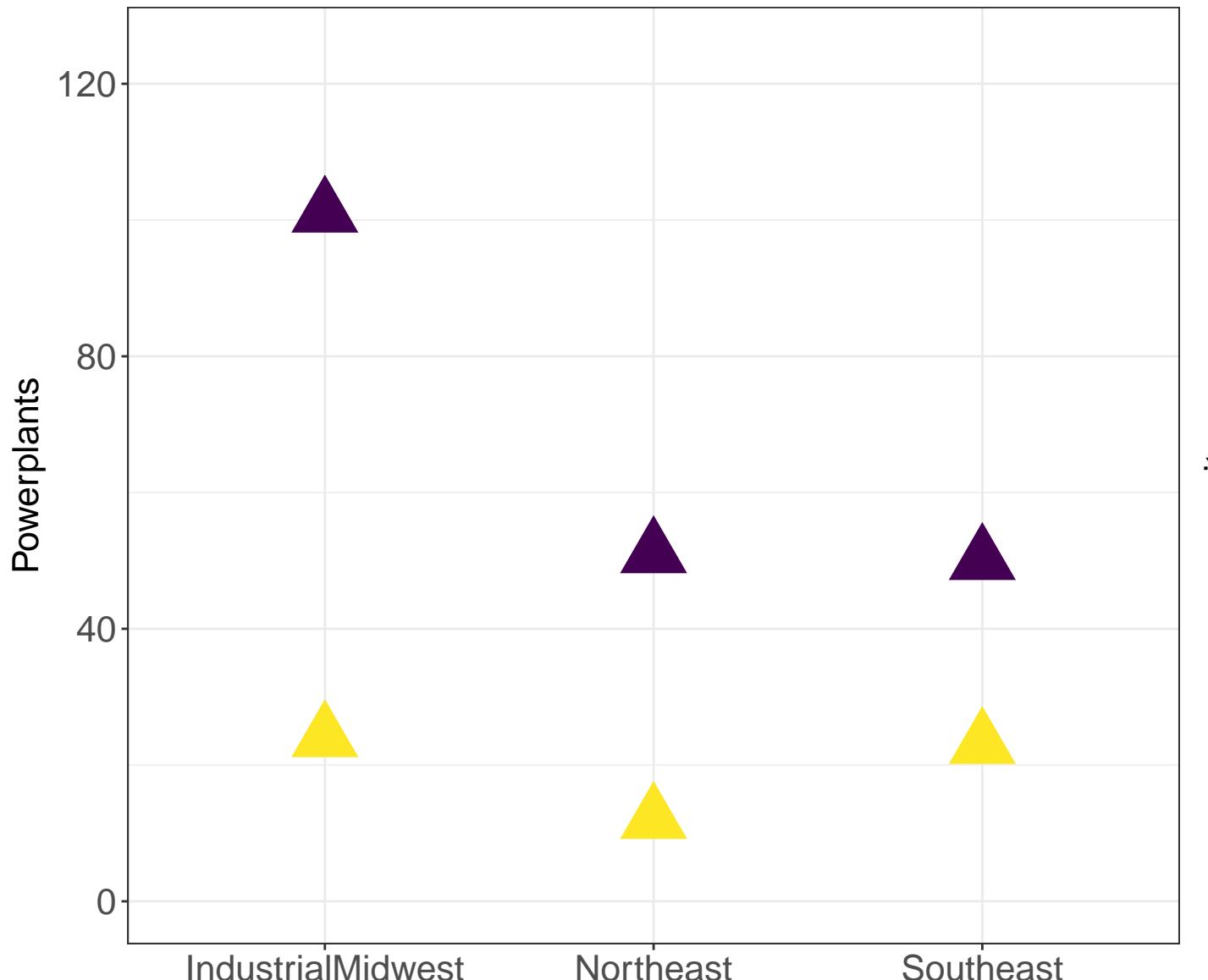
Distance to Source (km) 750–1000 500–750 250–500 0–250

Power plants with and without linked monitors

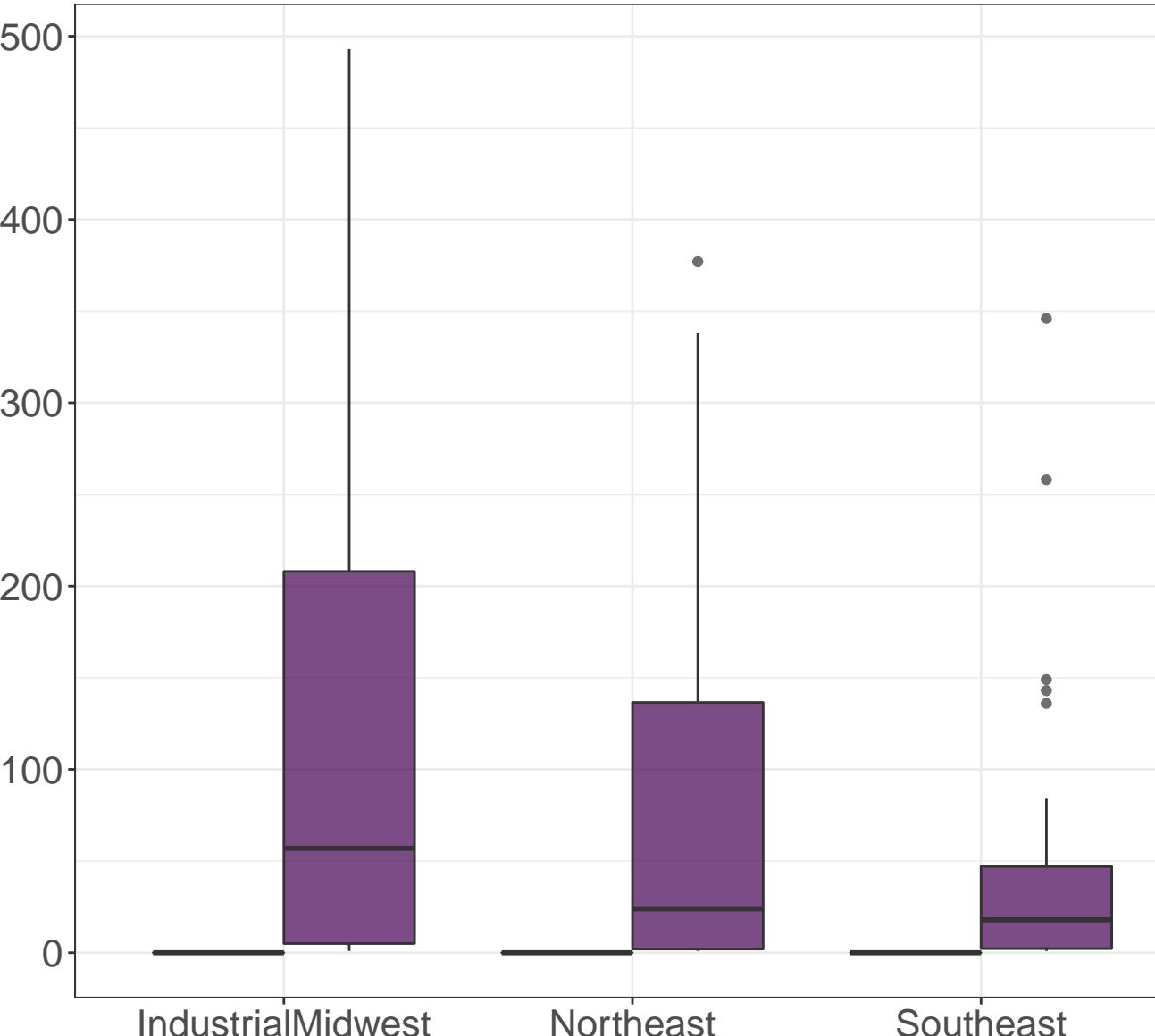


Why do some power plants have linked monitors and others do not?

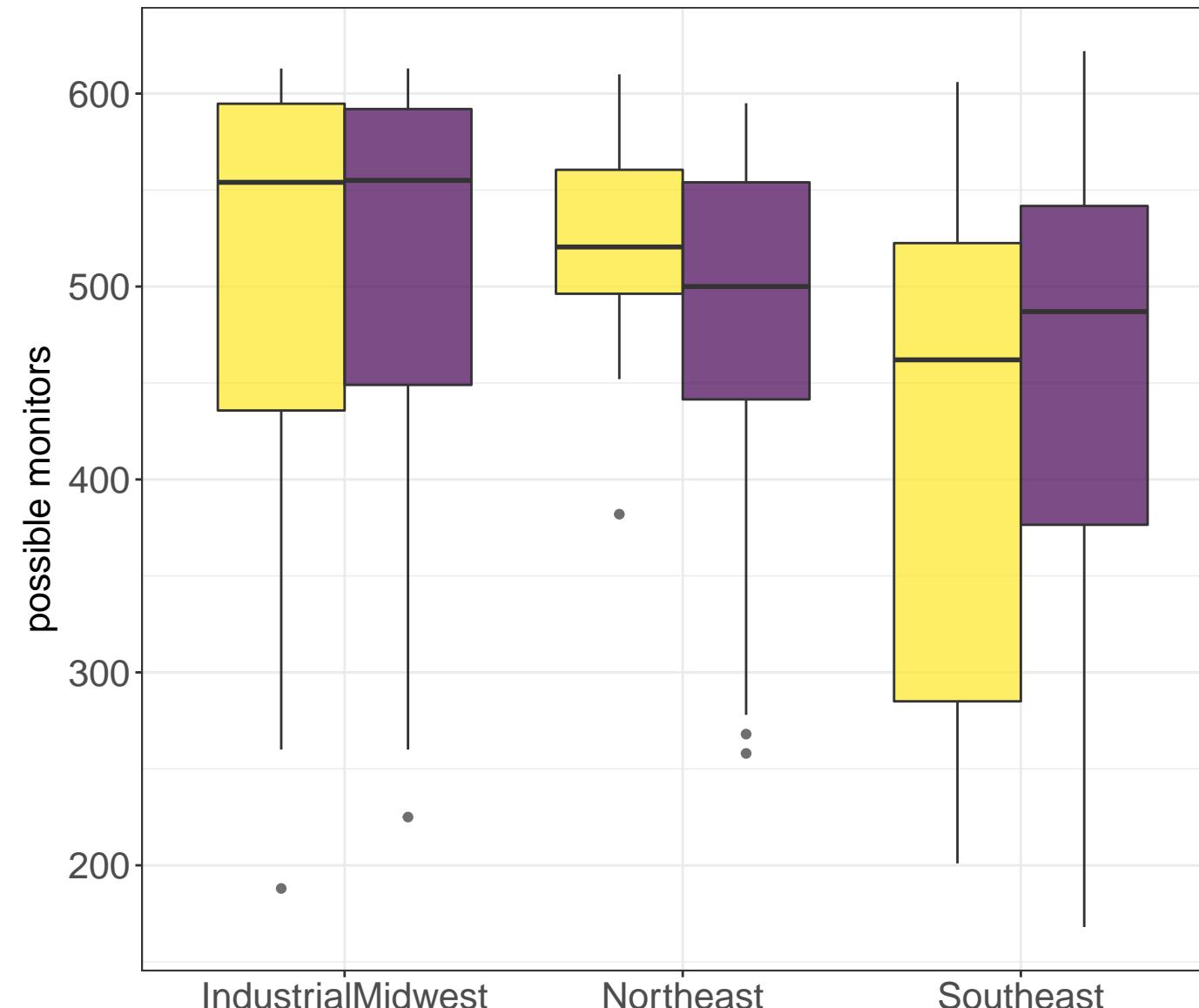
Number of powerplants



Number of linked monitors



Number of possible linked monitors



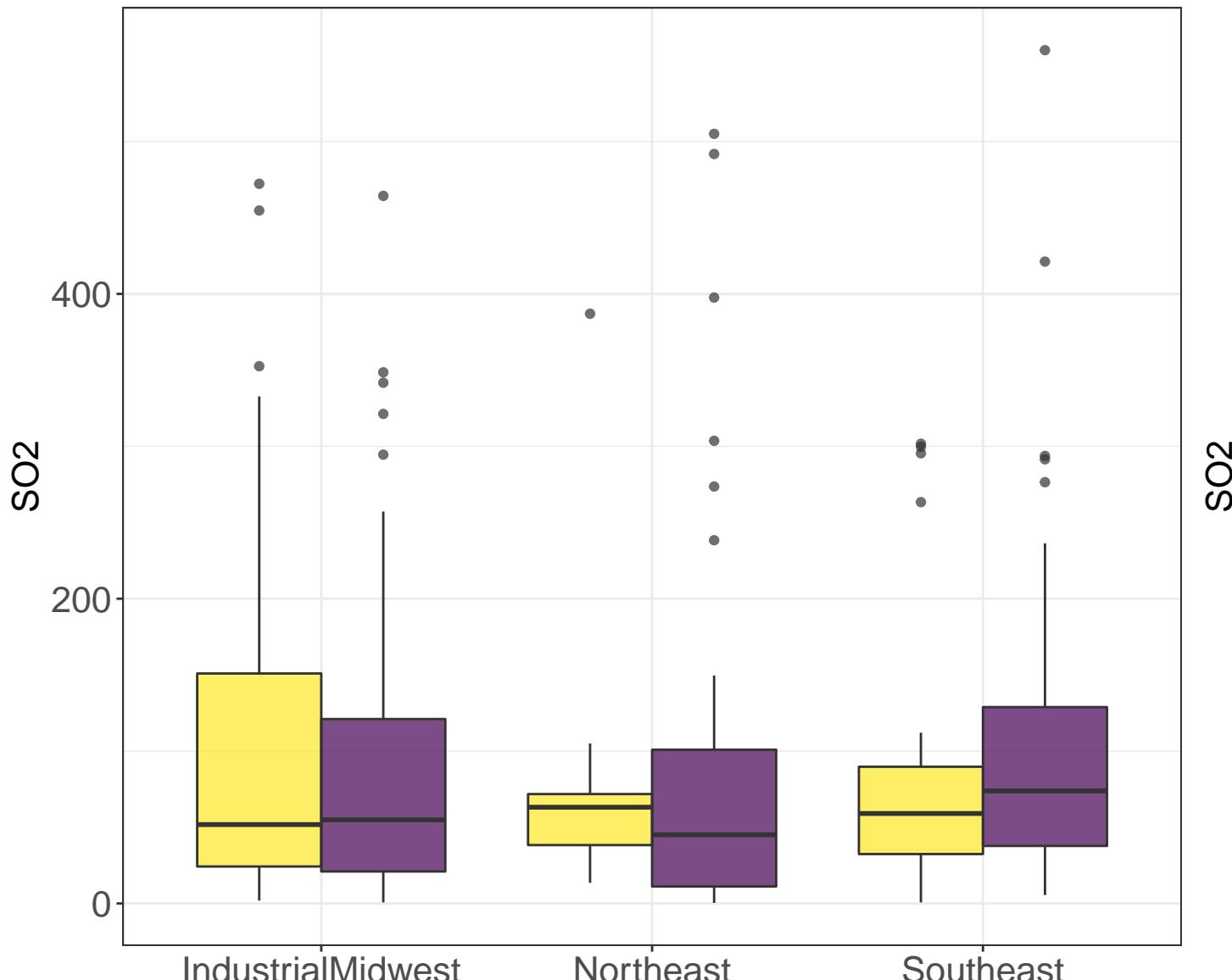
Powerplants: without edges



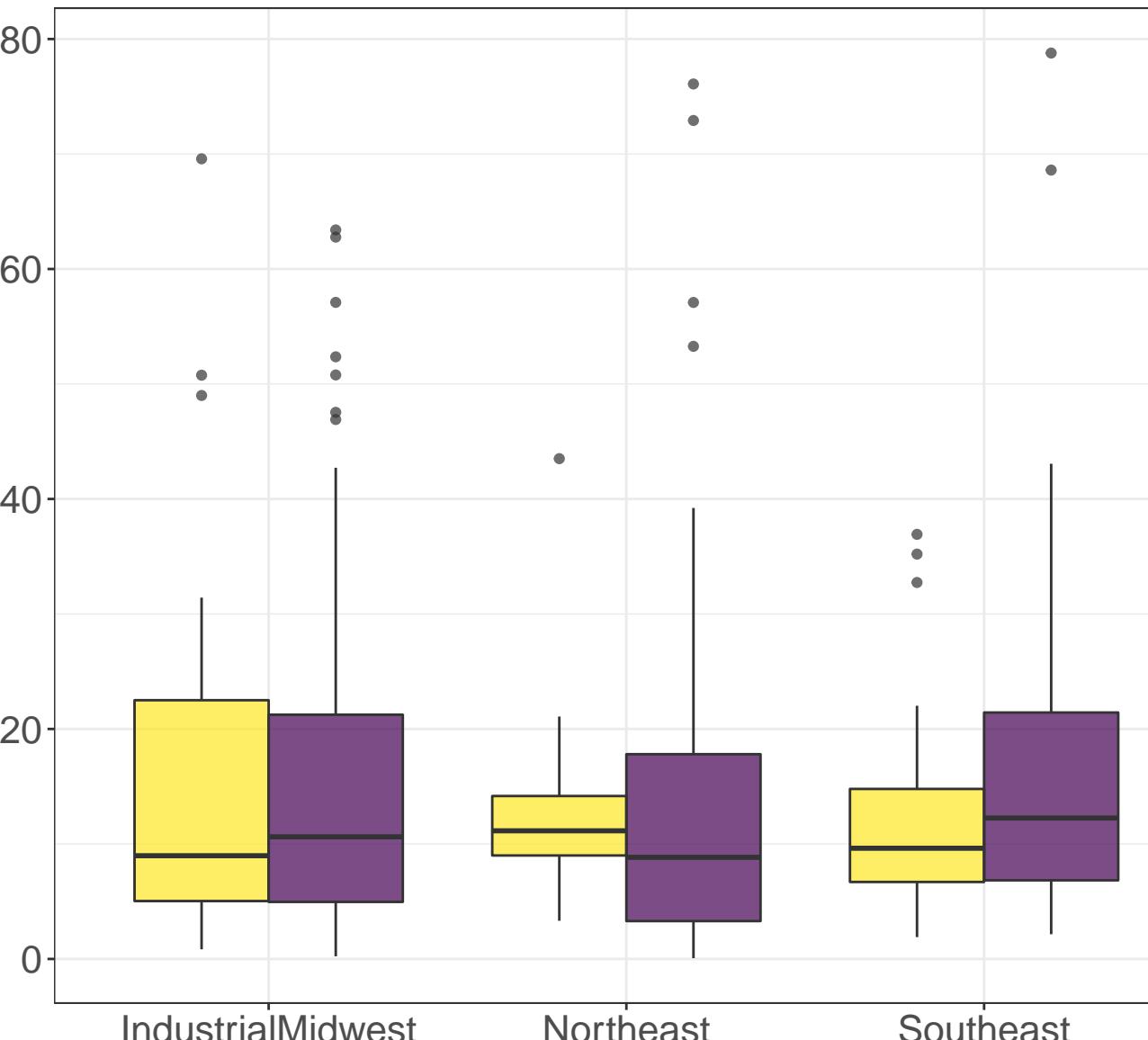
with edges

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

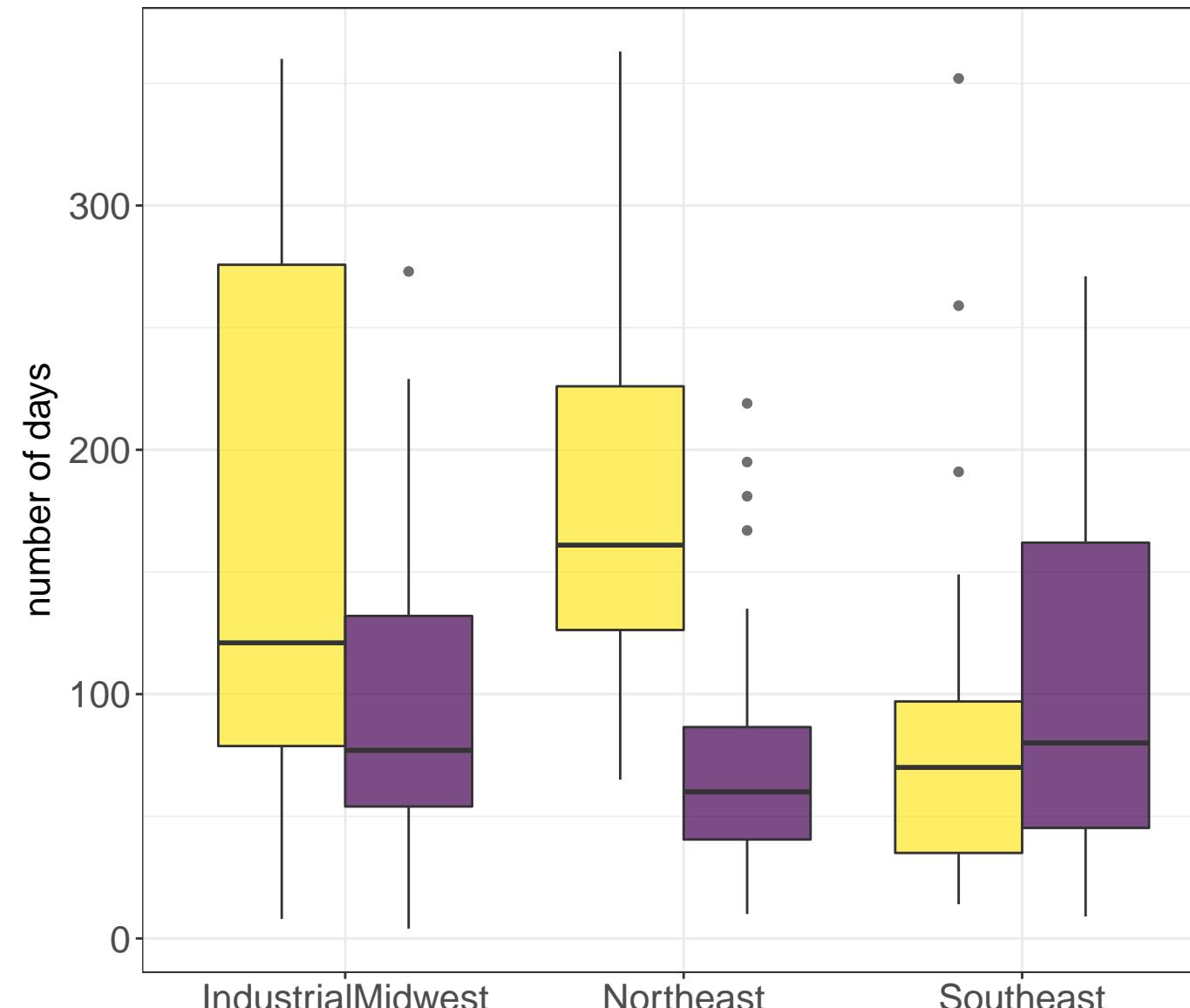
Average daily emissions



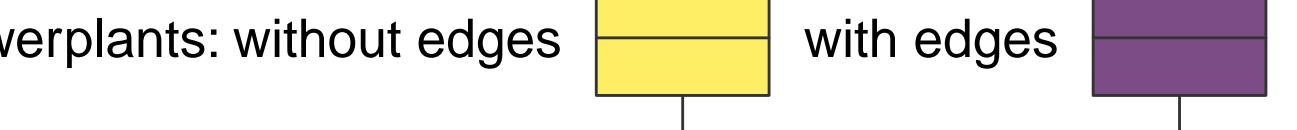
Standard deviation in daily emissions



Number of days with missing emissions data



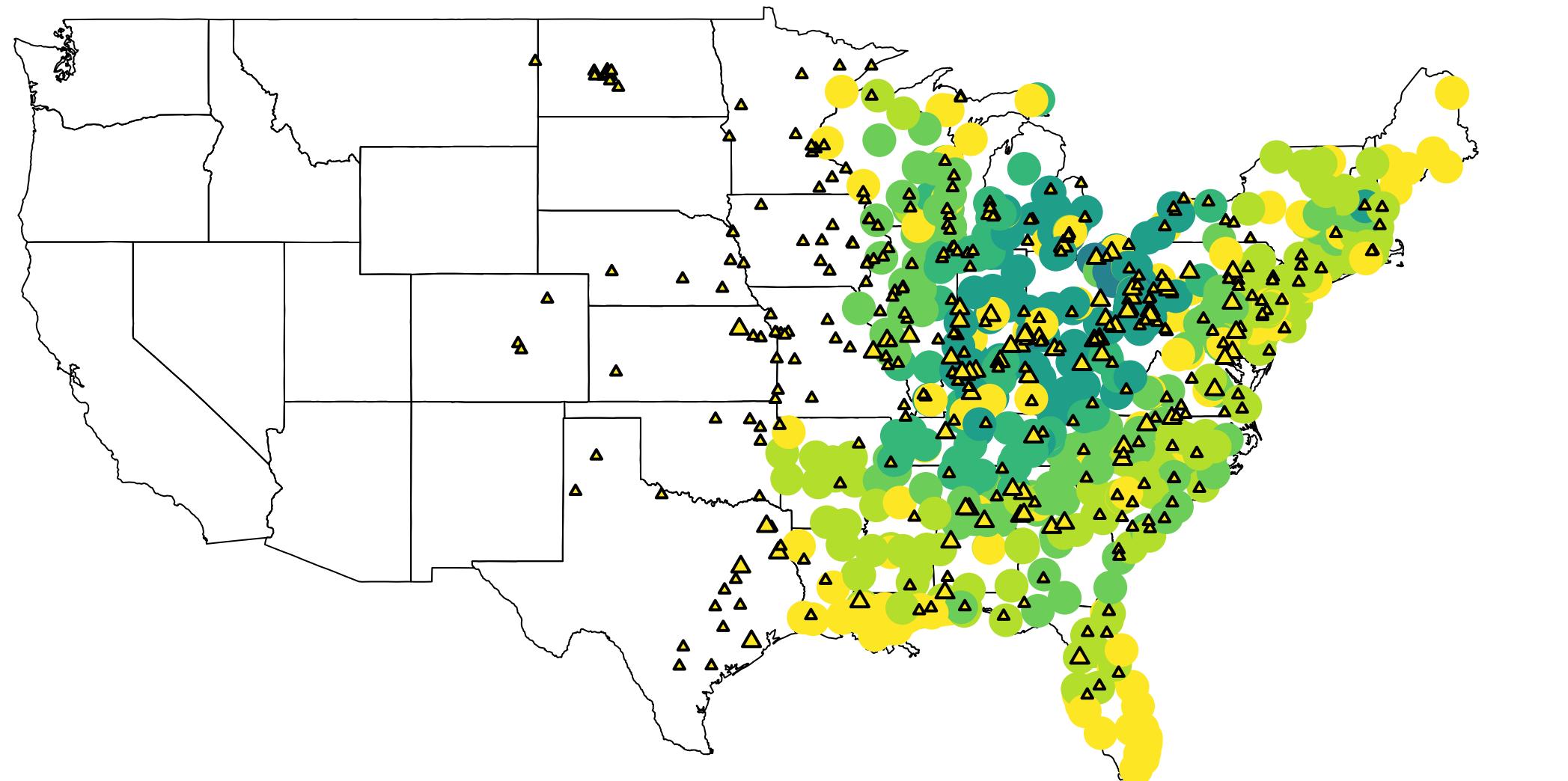
Powerplants: without edges



with edges

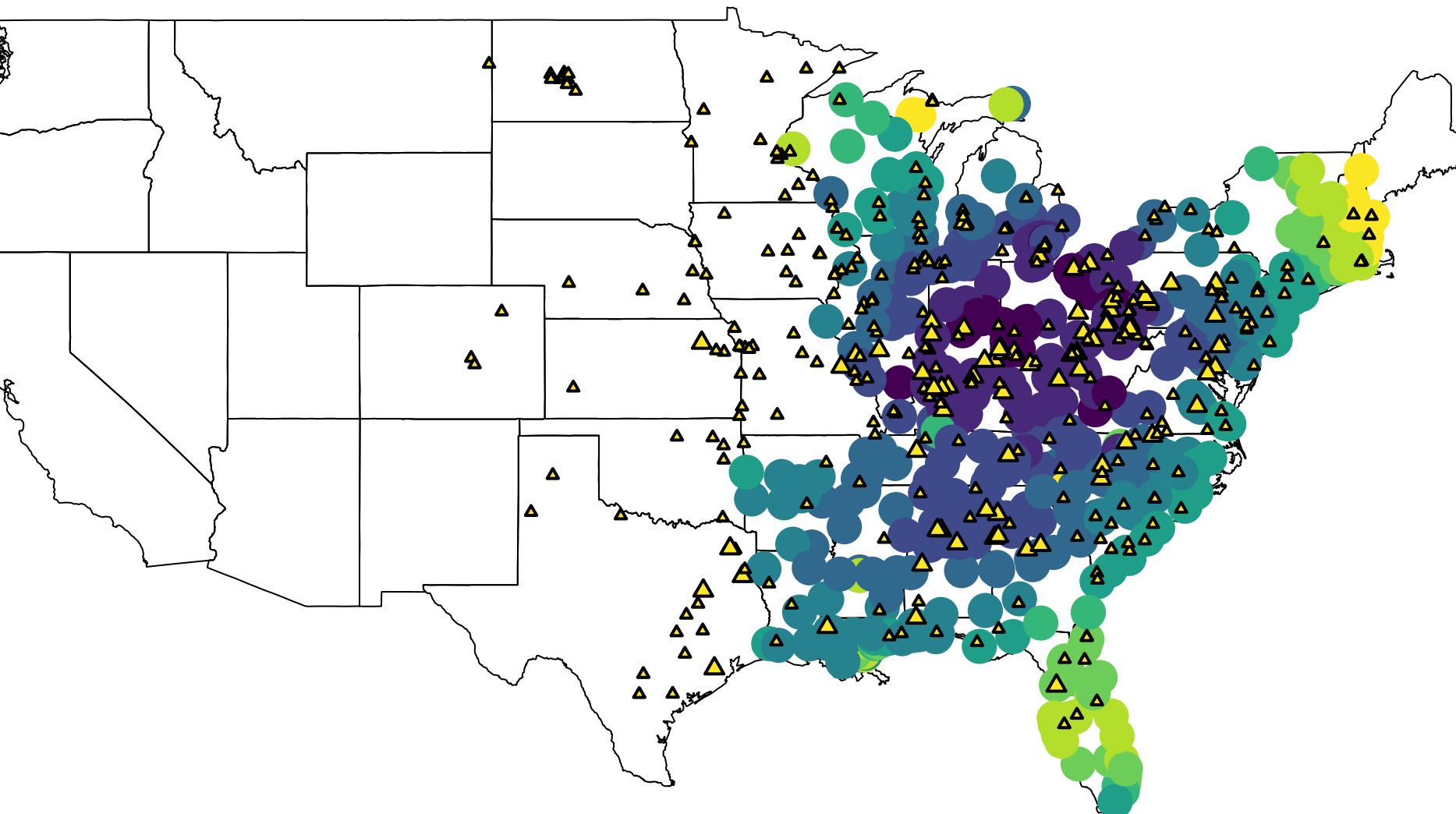
Monitor exposure:

sum of avgemissions*(1/log(distance)), year32knots_distLag 2005

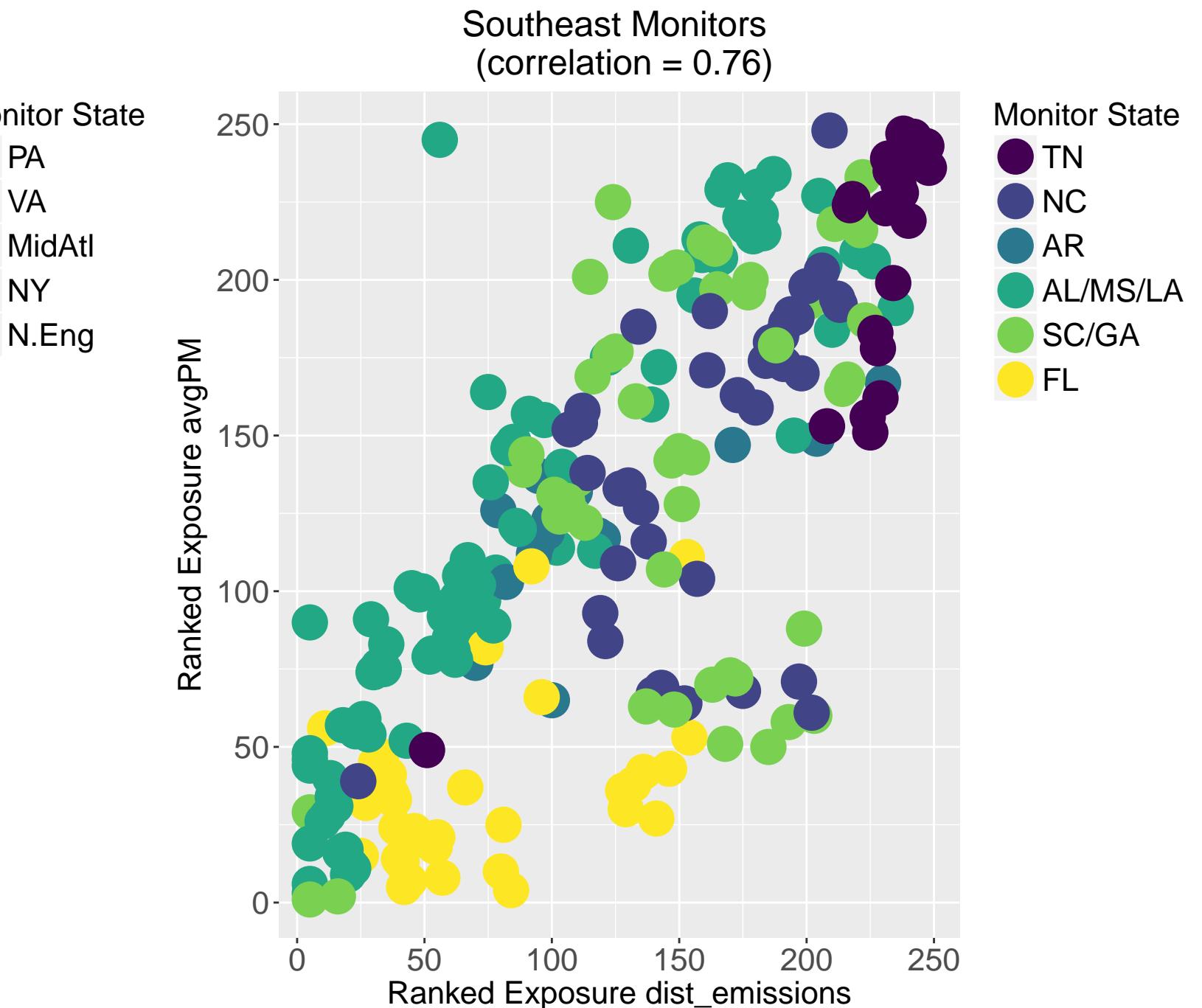
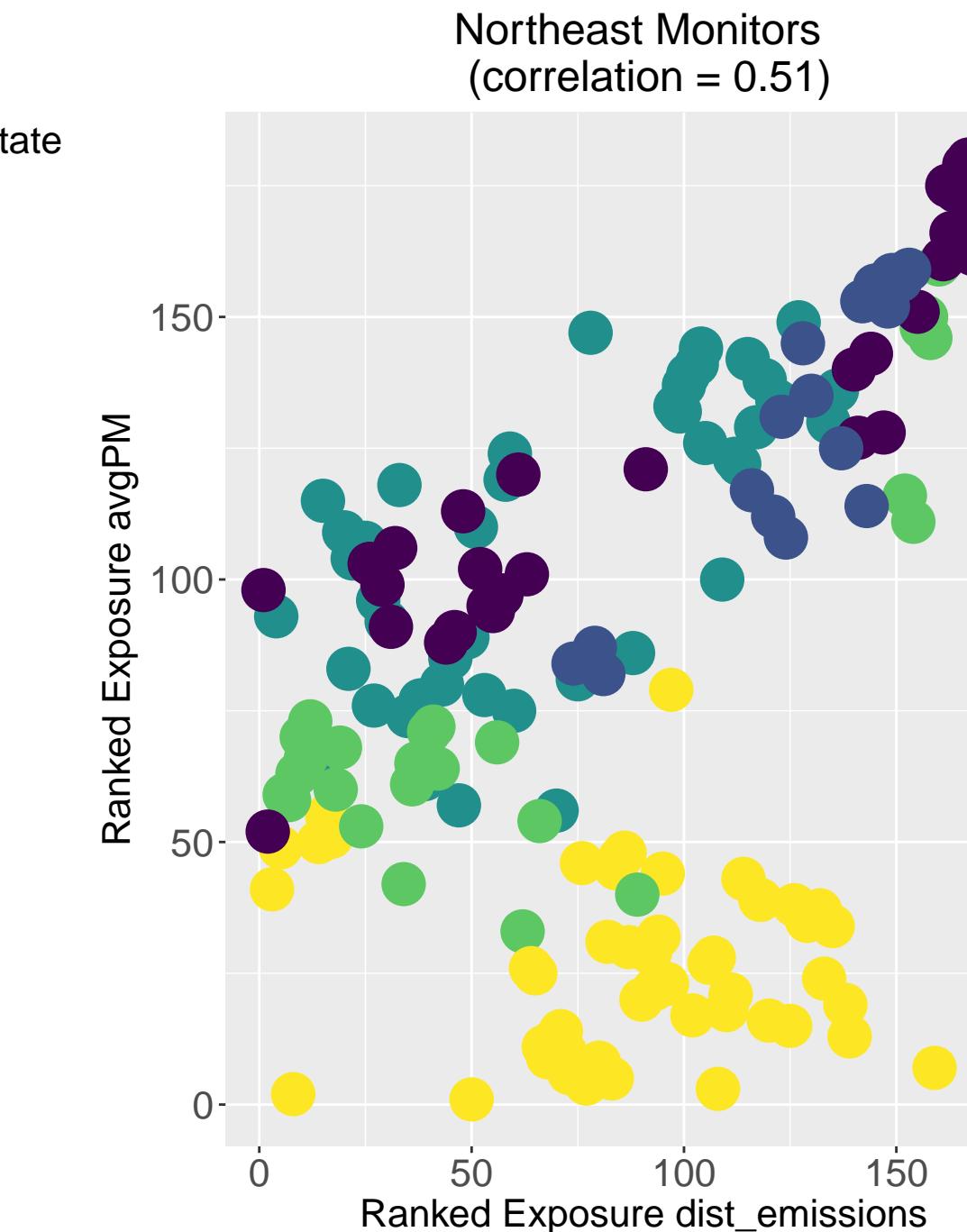
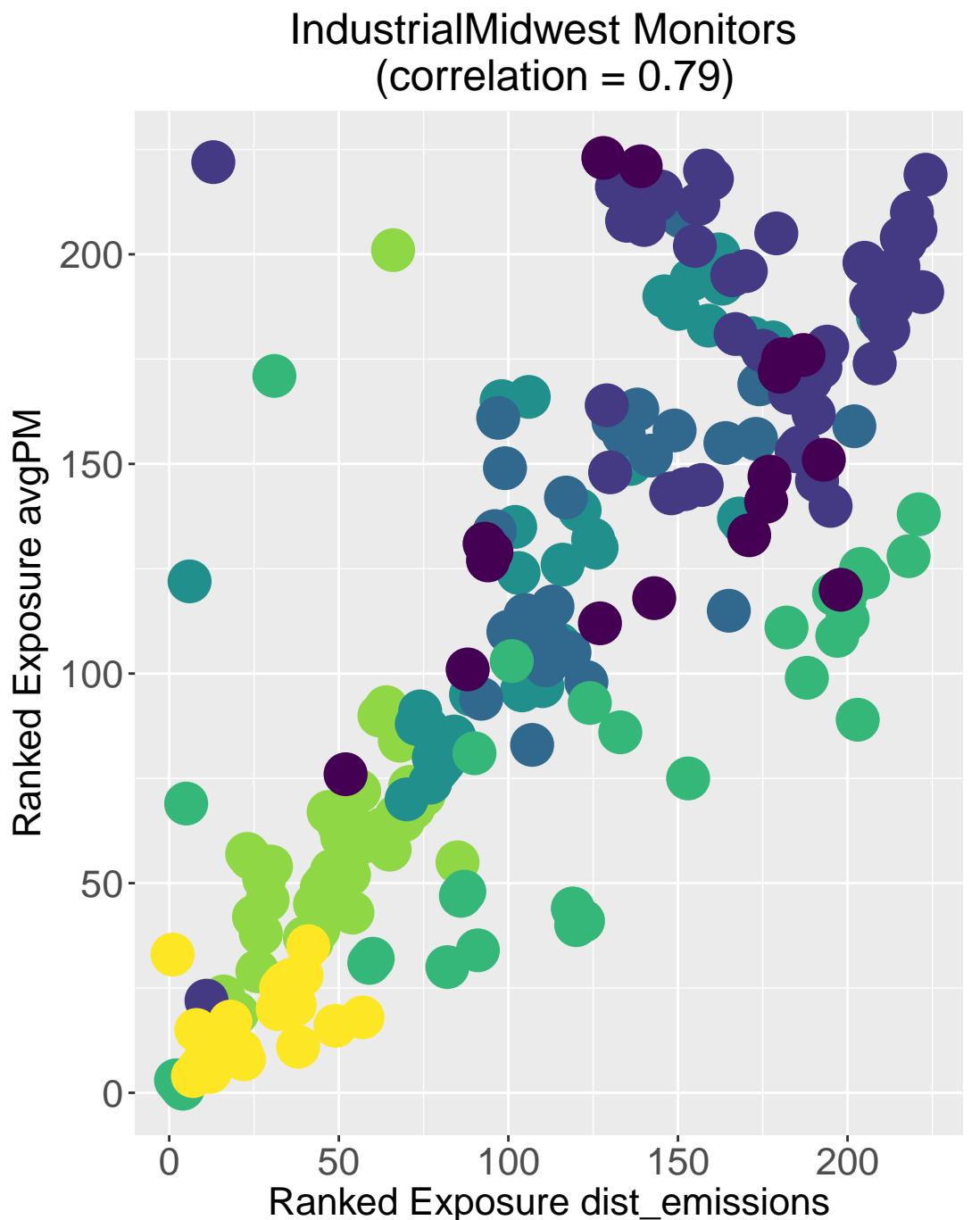


Monitor exposure:

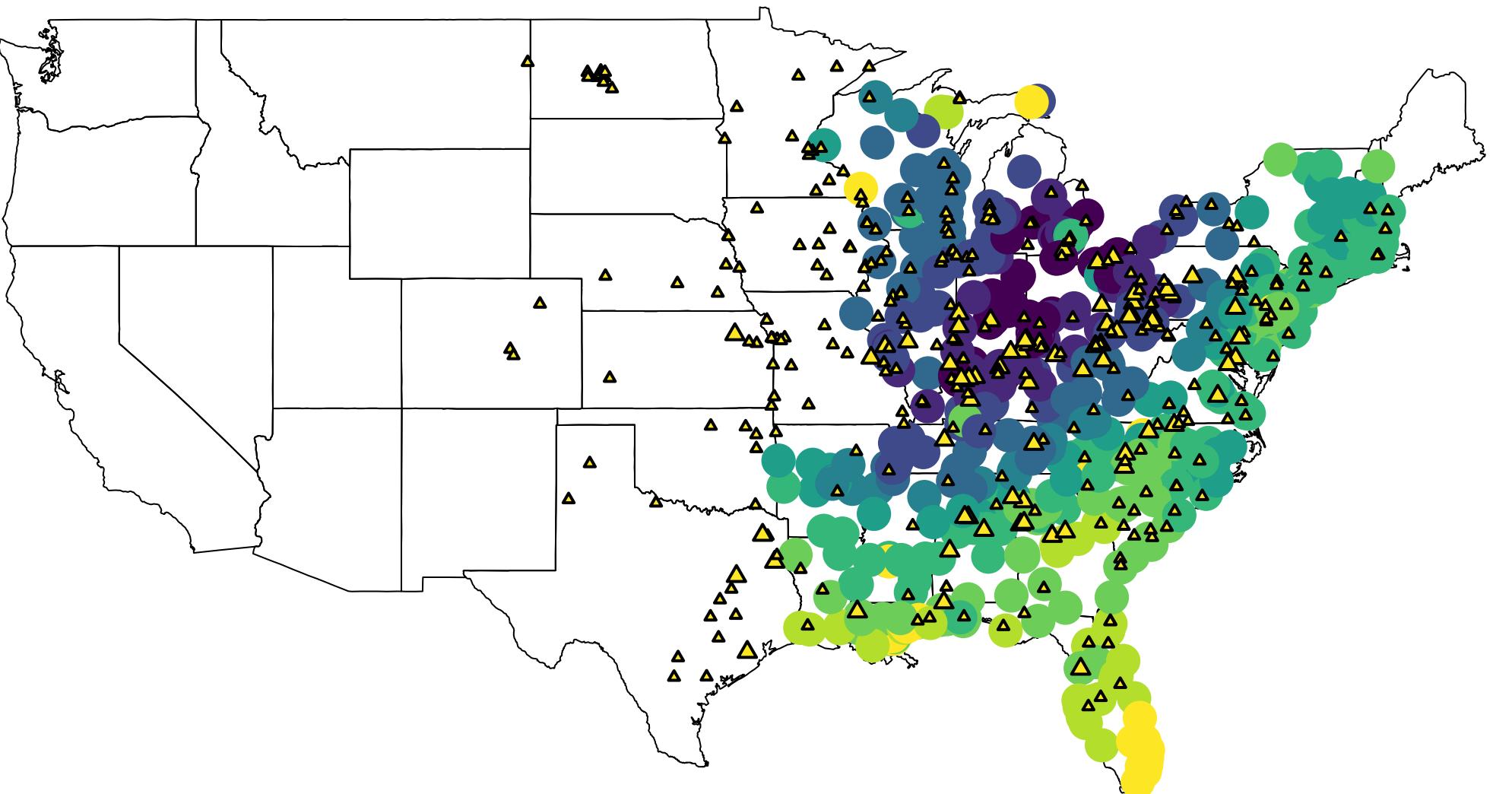
avgPM, decomposed75 year32knots_distLag 2005



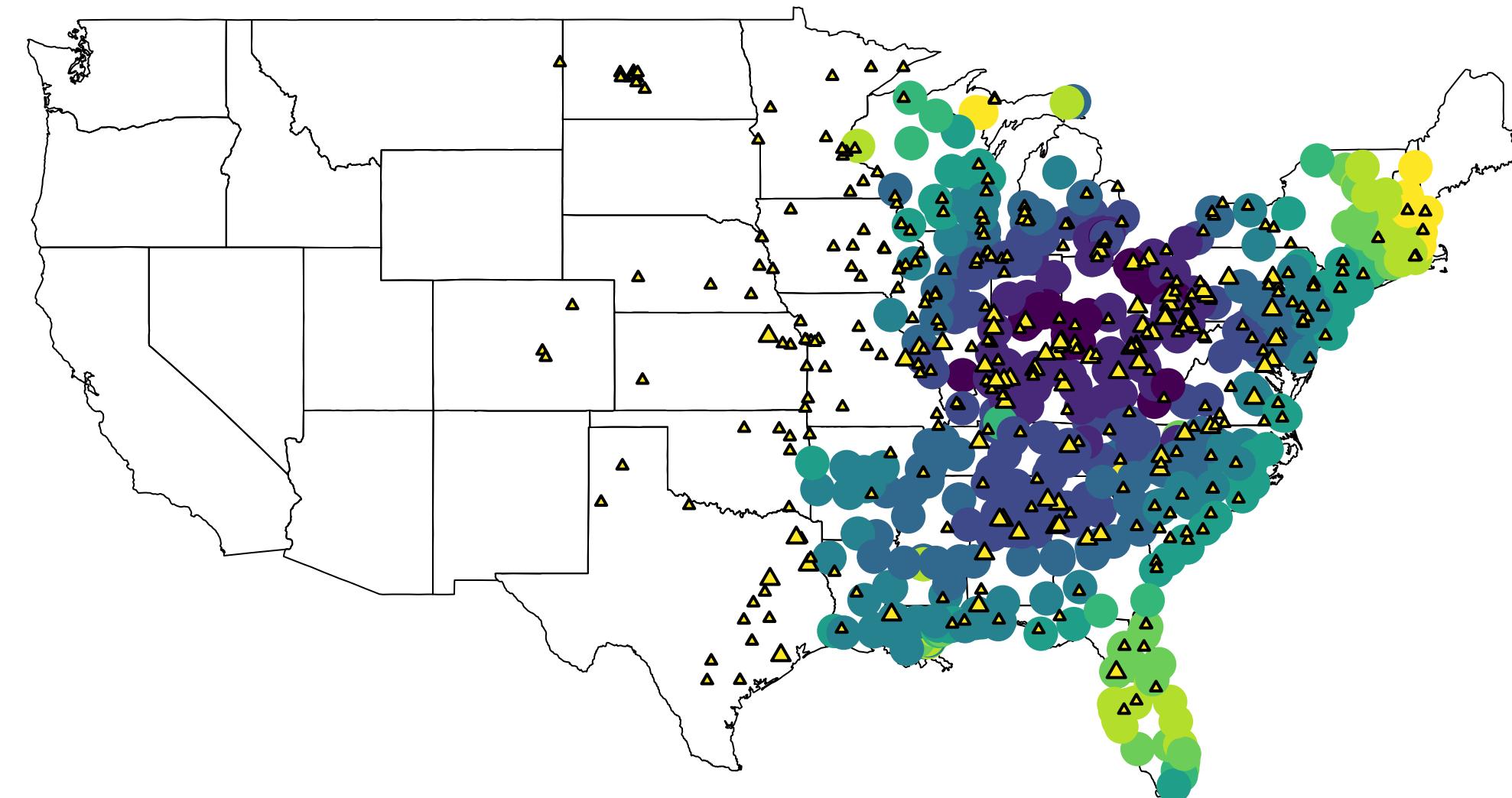
Comparison of coal emissions exposure (sum of $(1/\log(\text{distance})) * \text{avgemissions}$ vs. low freq PM)



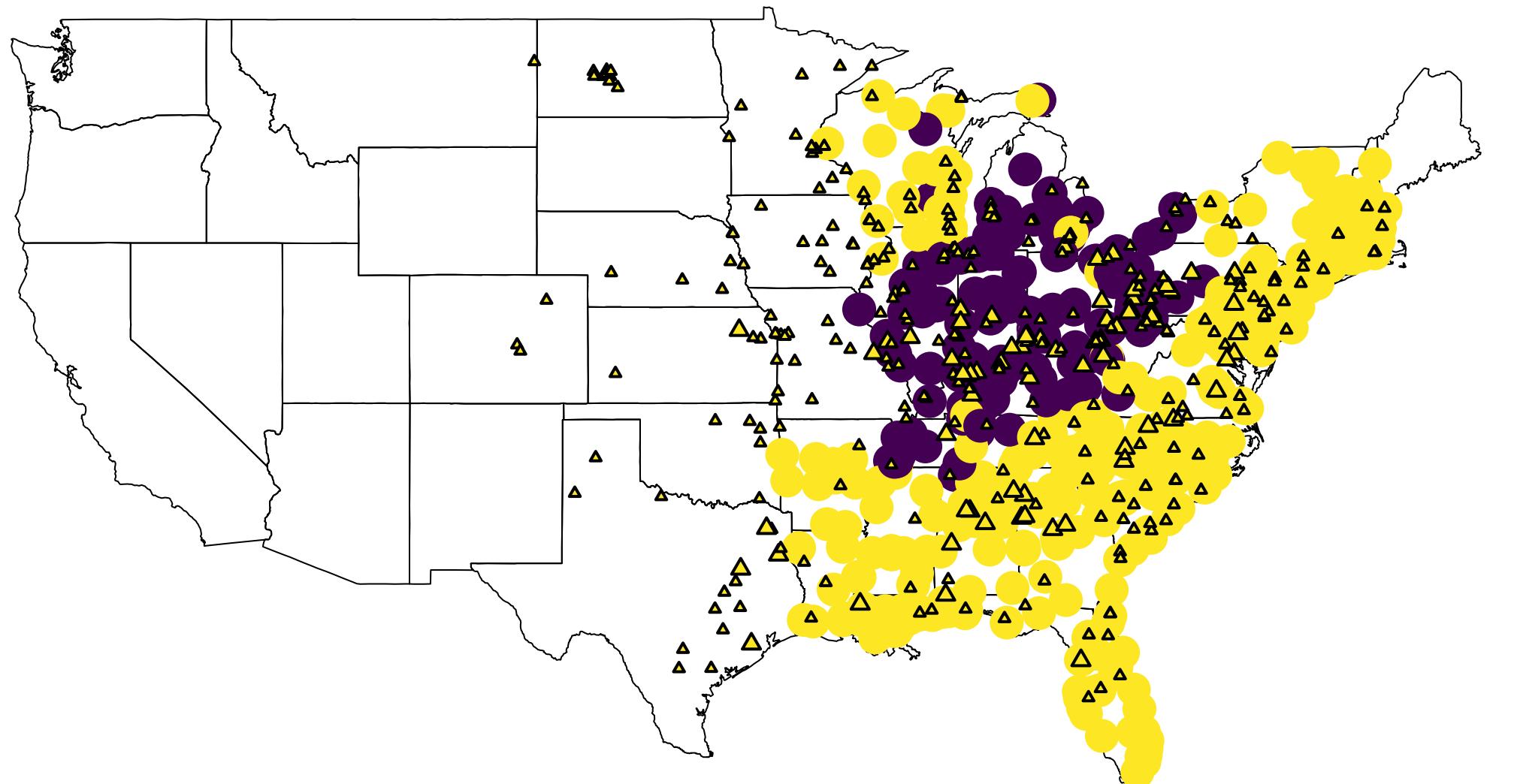
Monitor exposure: num_edges, year32knots_distLag 2005



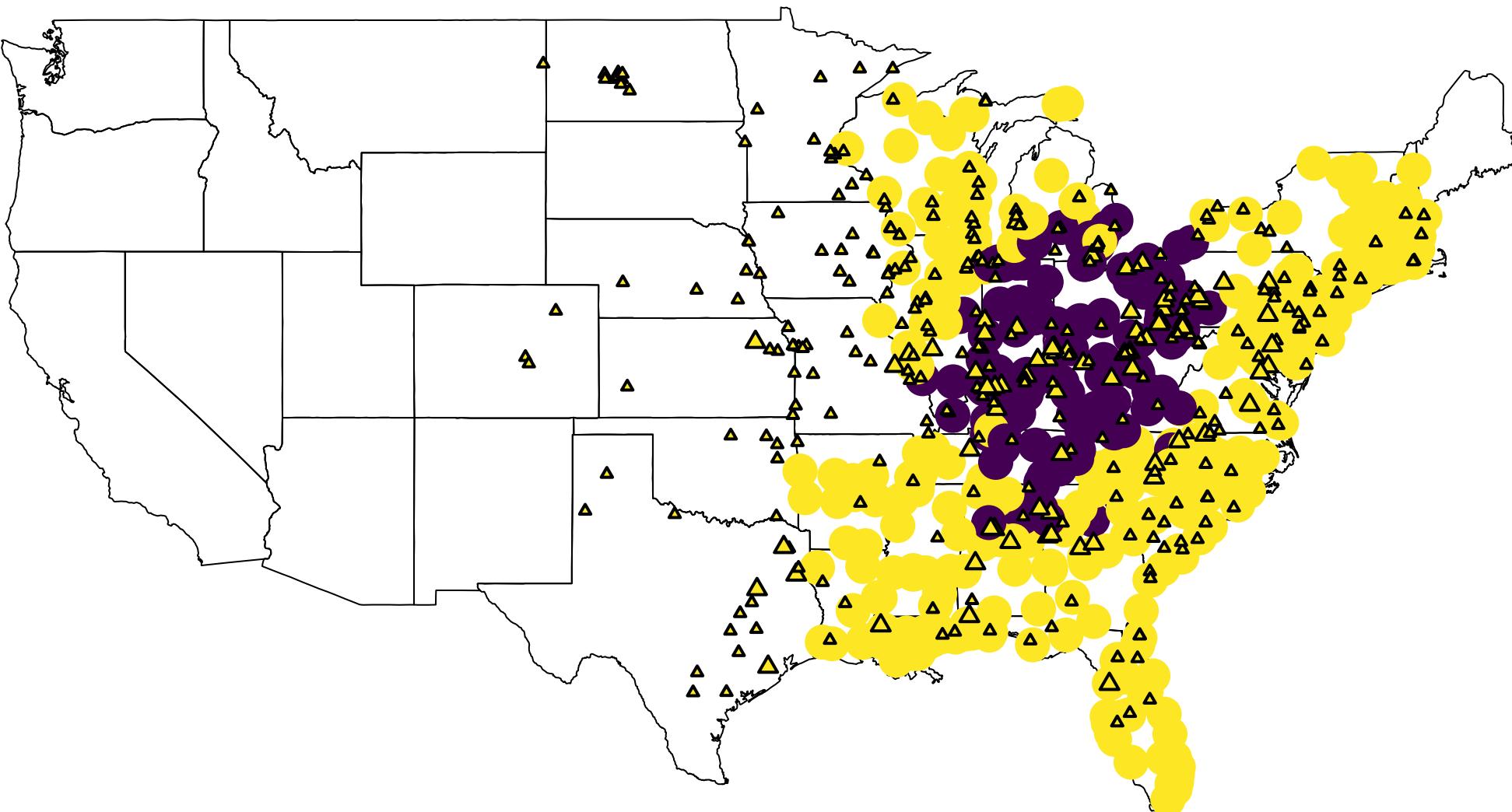
Monitor exposure: avgPM, decomposed75 year32knots_distLag 2005



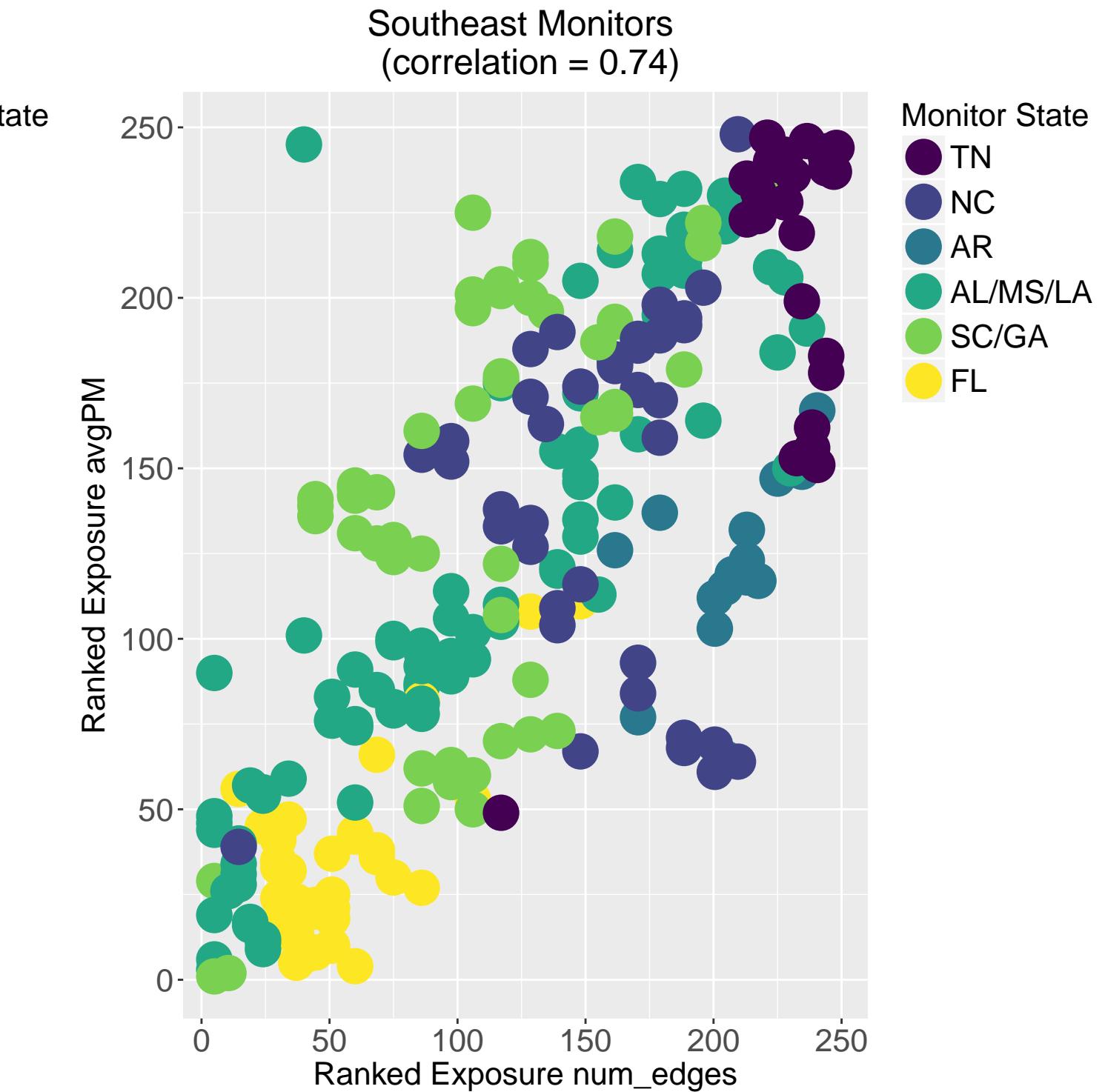
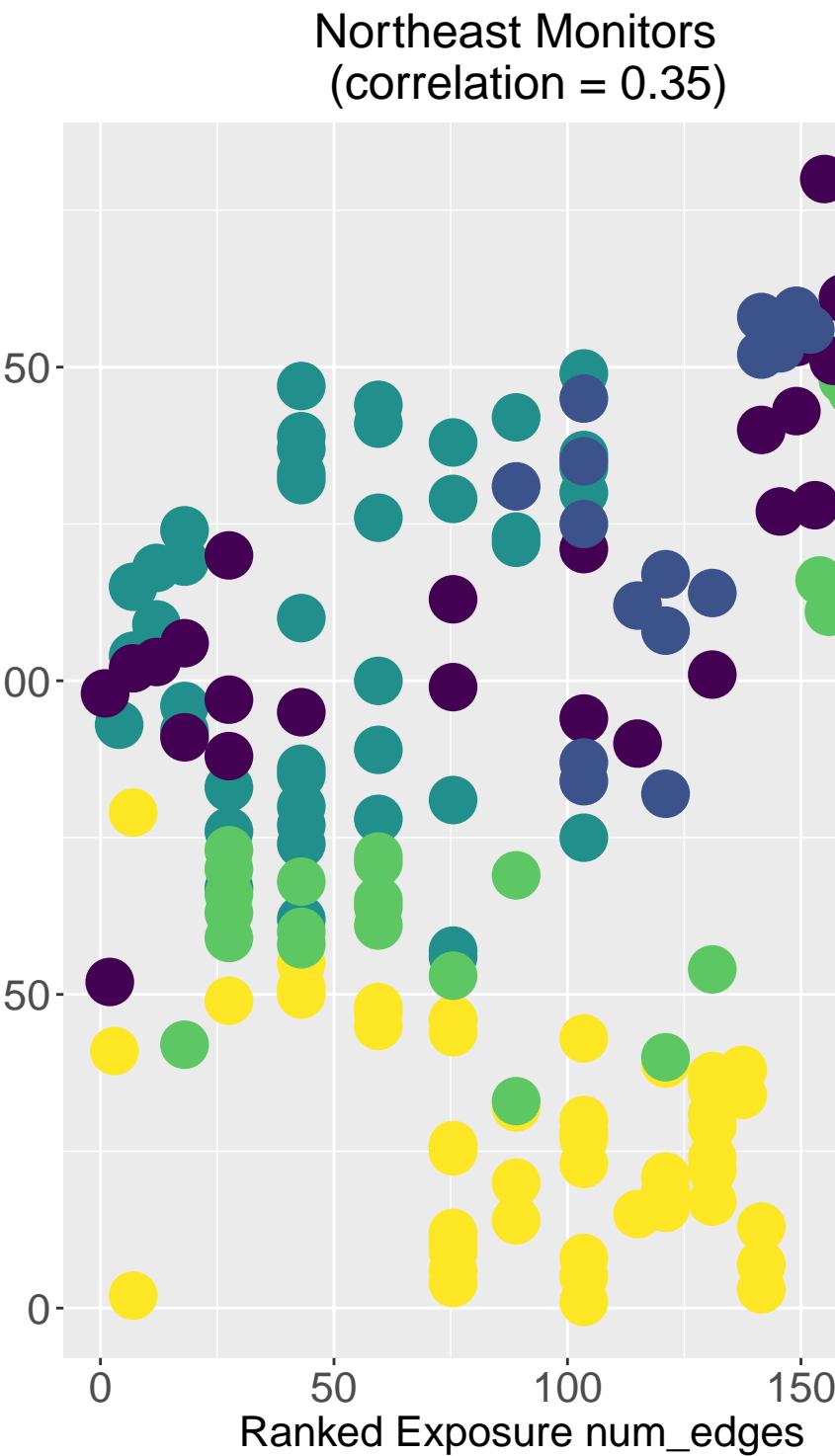
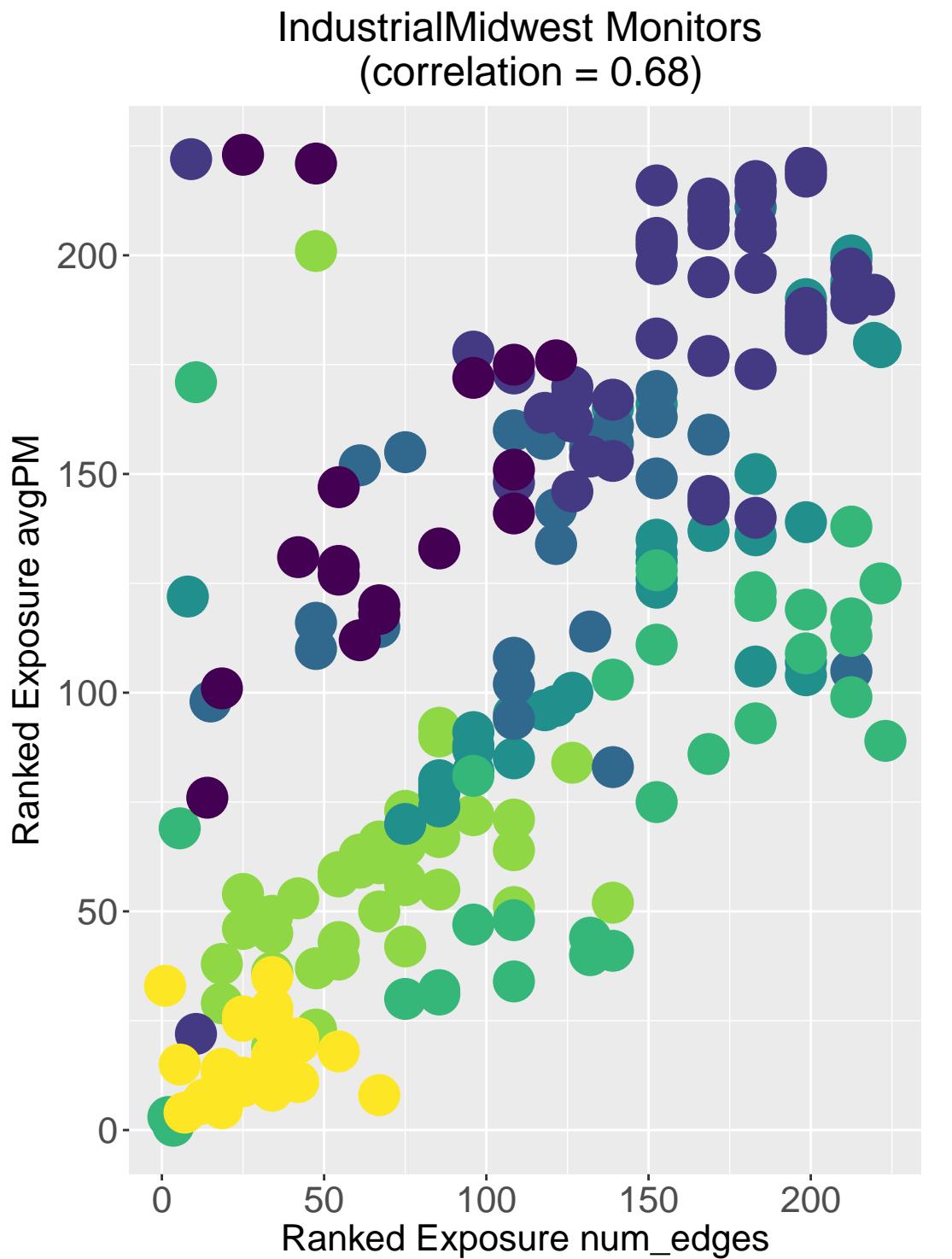
Highest exposed: num_edges, year32knots_distLag 2005



Highest exposed: avgPM, decomposed75 year32knots_distLag 2005

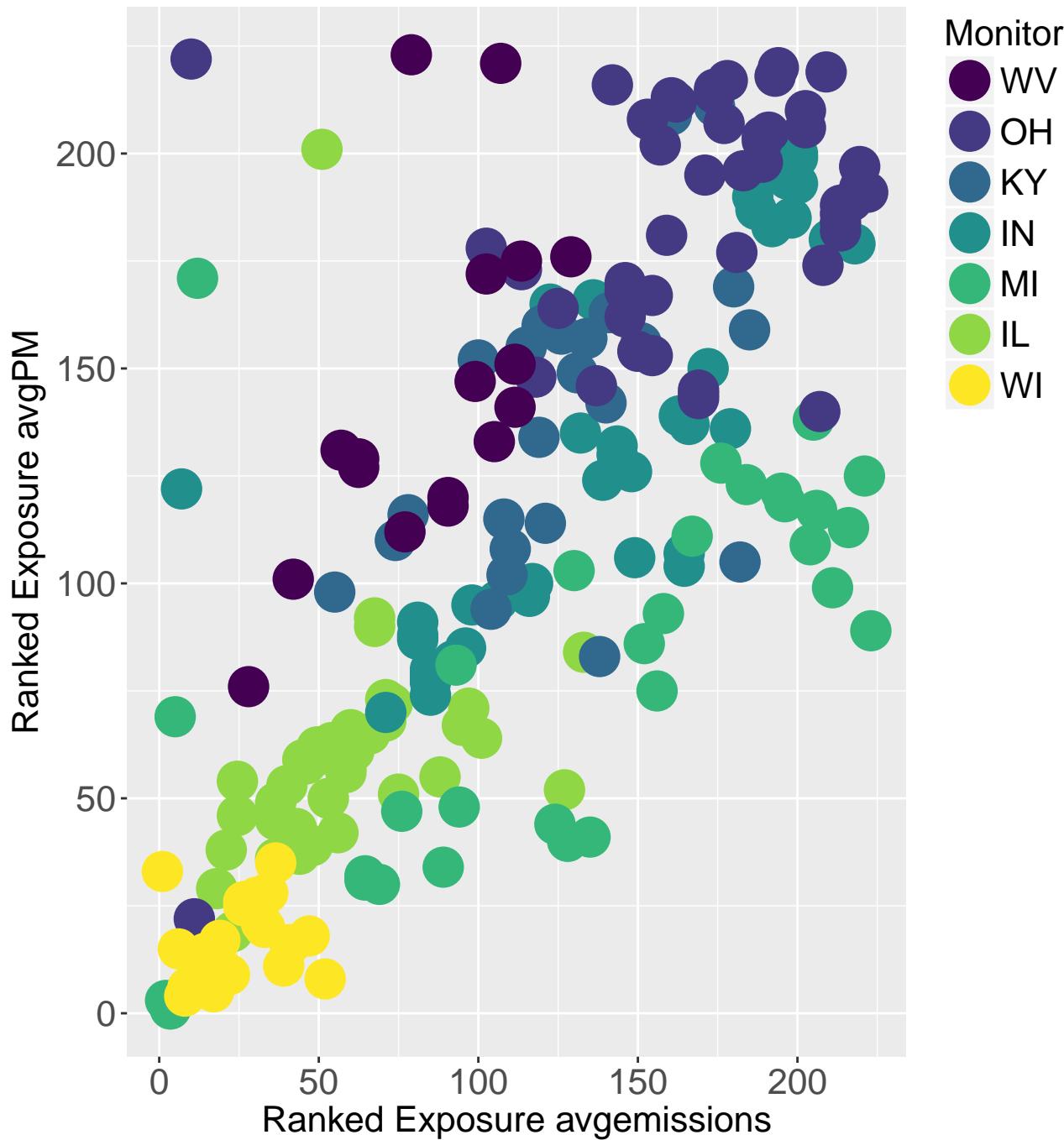


Comparison of coal emissions exposure (num_edges vs. low freq PM)

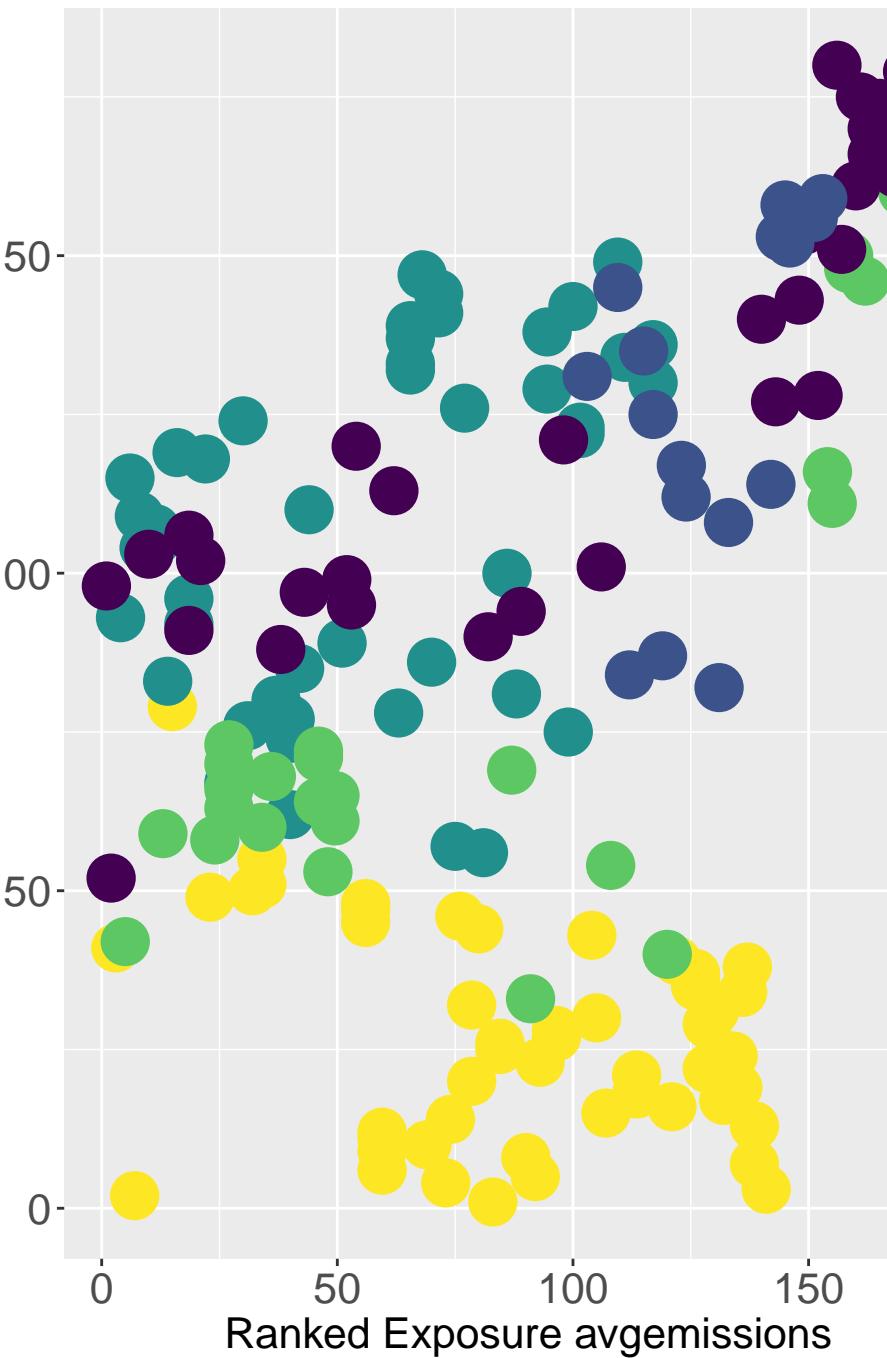


Comparison of coal emissions exposure (avgemissions vs. low freq PM)

Industrial Midwest Monitors
(correlation = 0.76)



Northeast Monitors
(correlation = 0.42)



Southeast Monitors
(correlation = 0.75)

