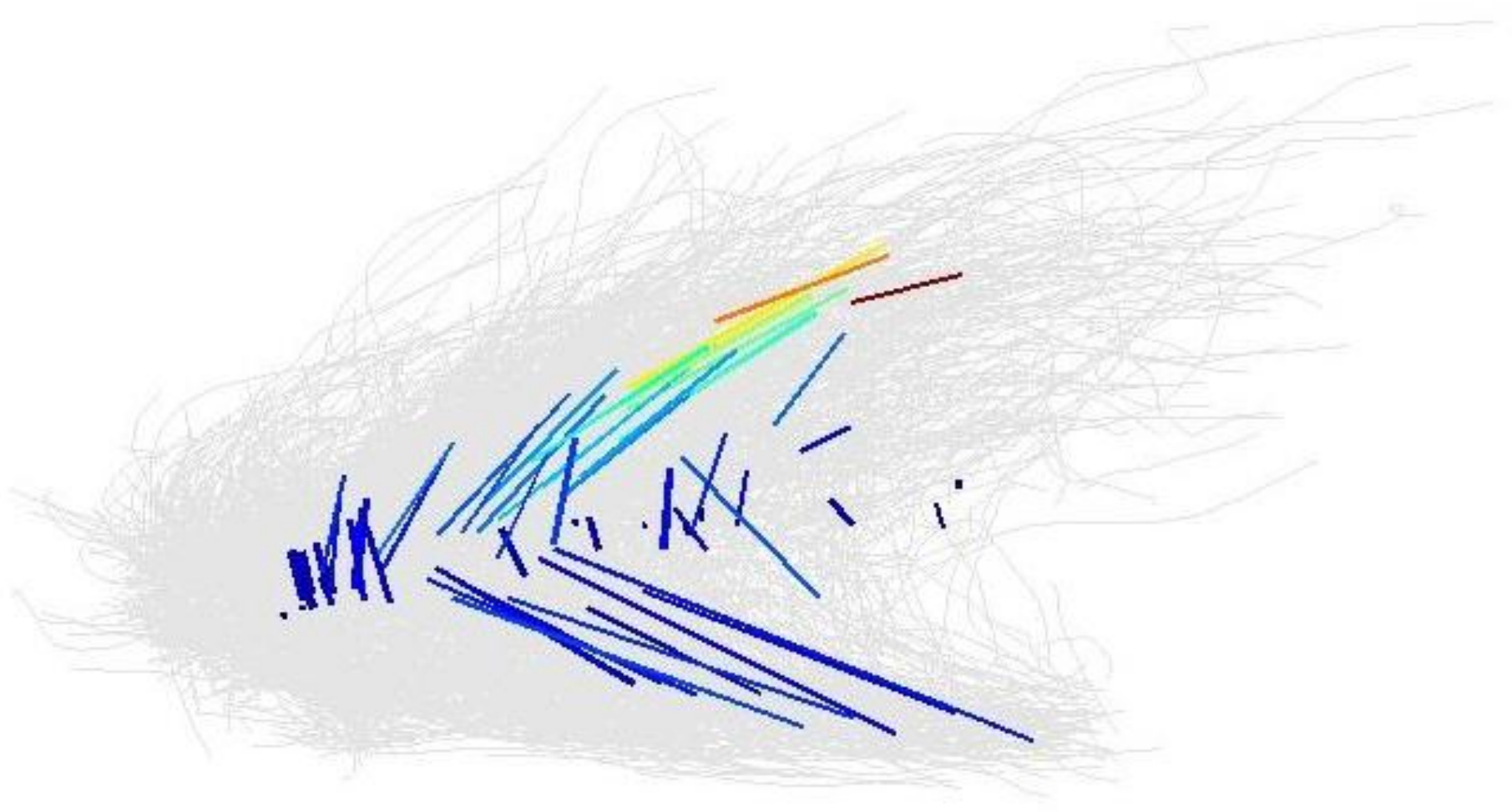
Week 6 Presentation

Steve Mussmann & Alla Petrakova

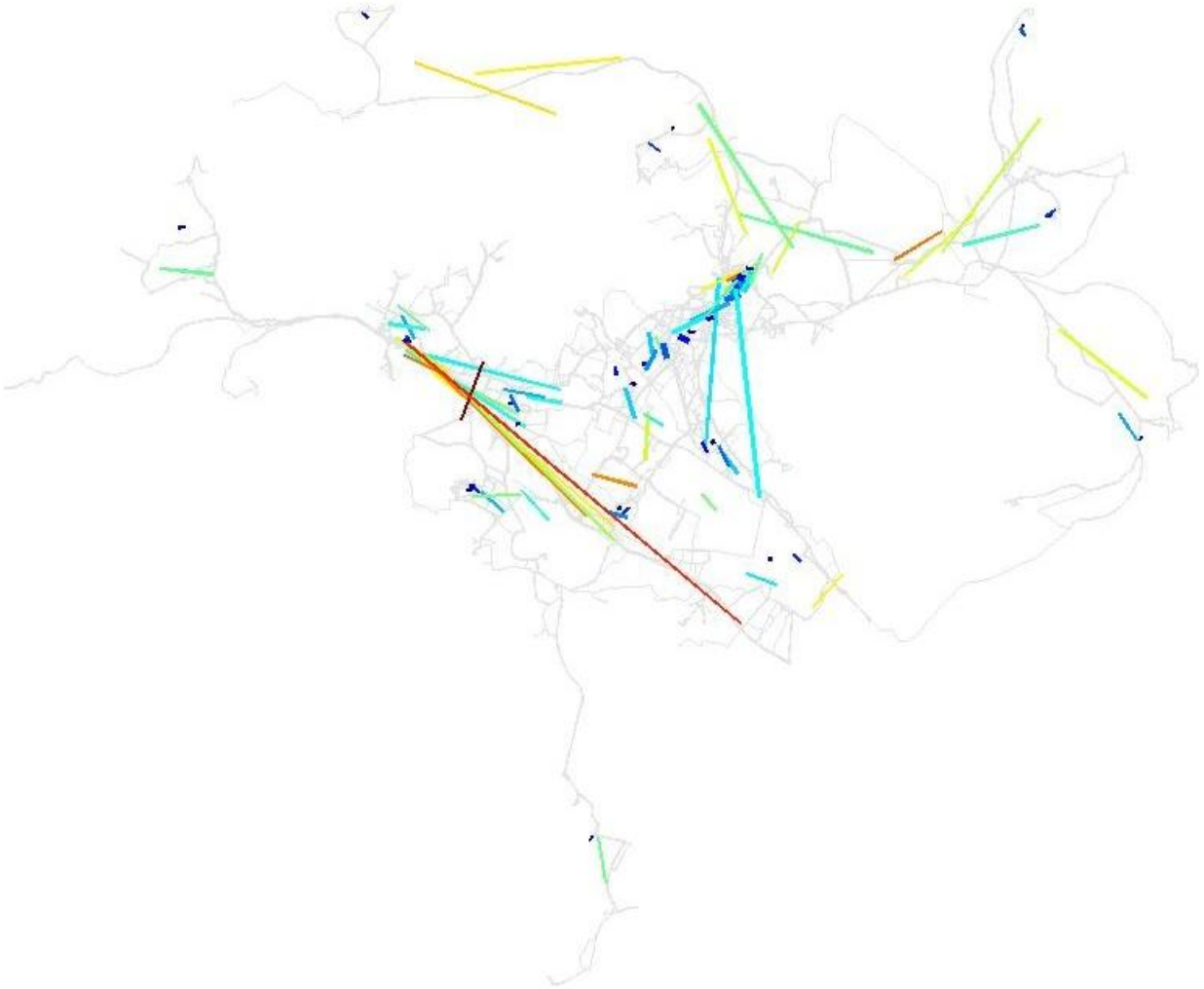
DivCluST

-Full Results on all datasets with meaningful time

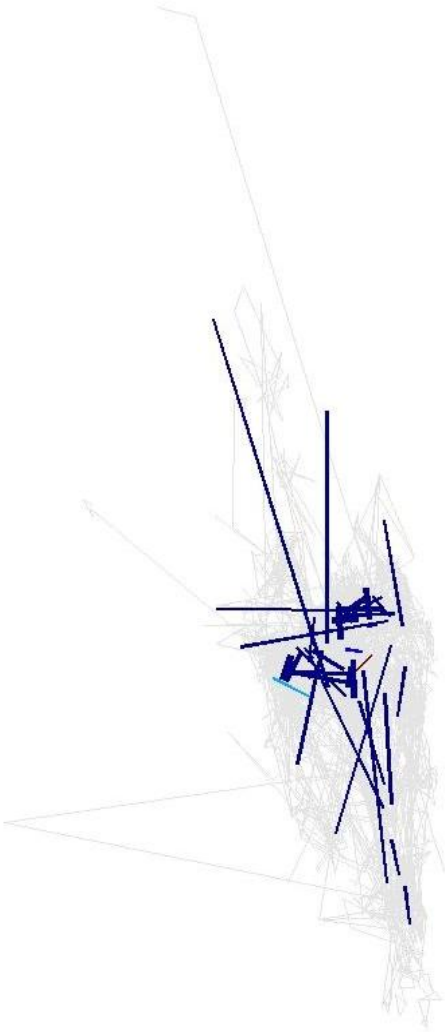
Hurricane



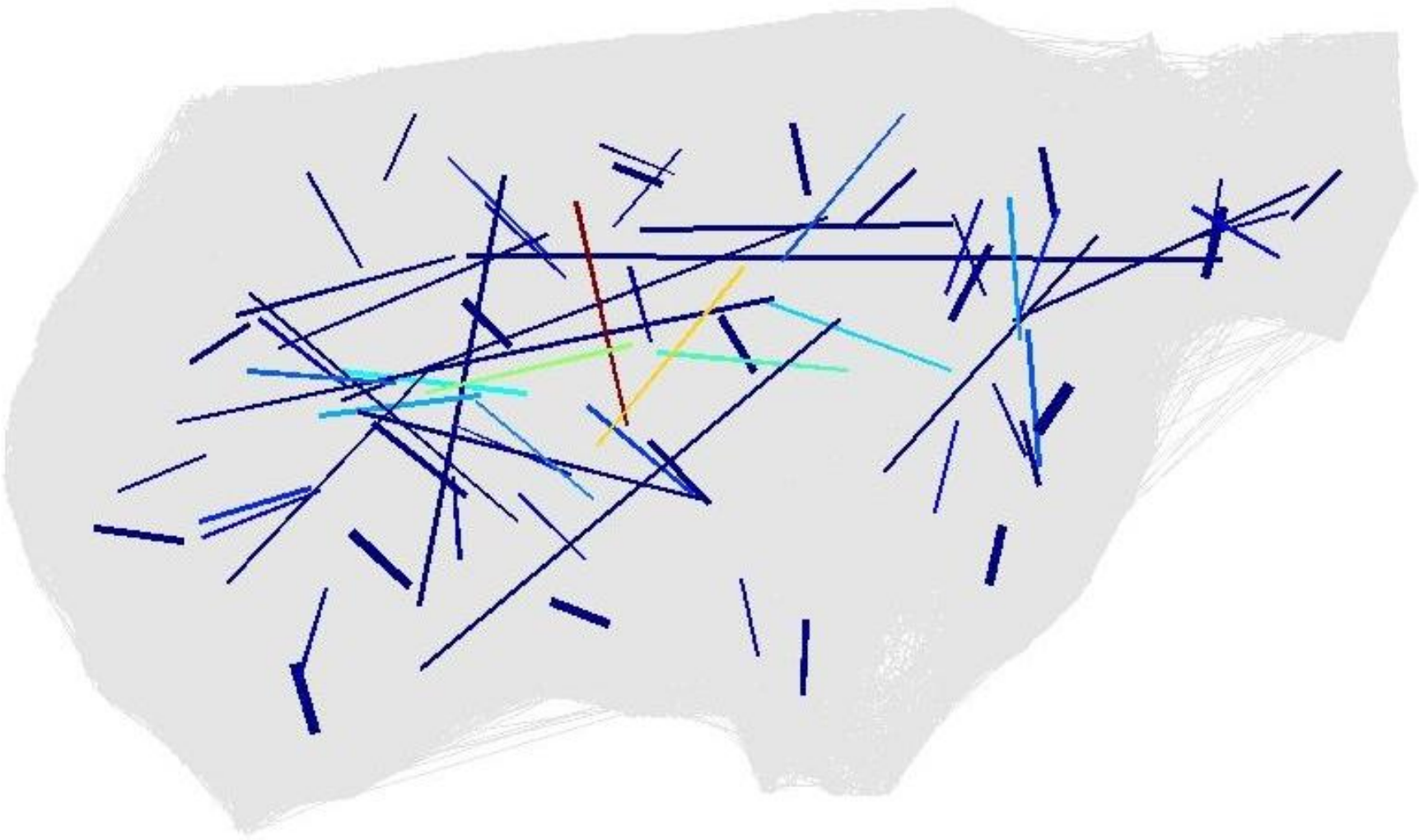
Trucks



Buffalo



Starkey (Deer & Elk)



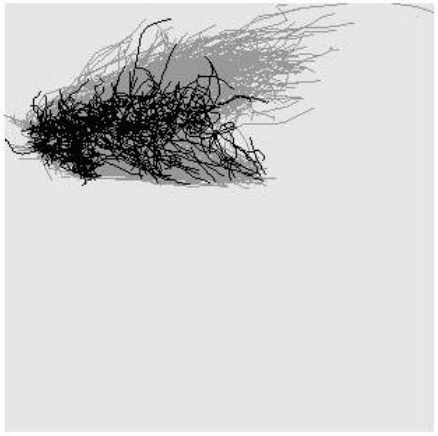
Vector Field K-means

-Iterative Algorithm
-Initialize k-partition of trajectories
-Repeat:
    -Use trajectory directions from each partition to make k vector fields
    -Form k-partition of trajectories by assigning each to a vector field

Hurricane

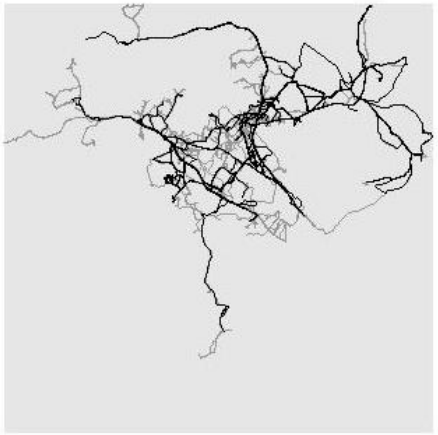


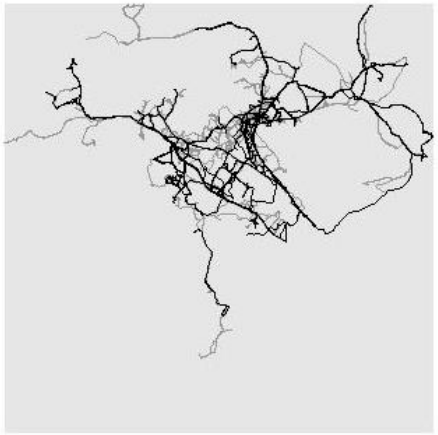


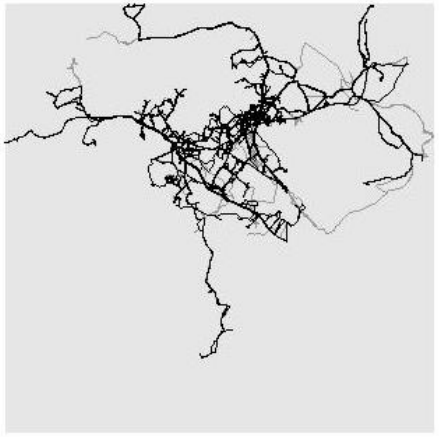




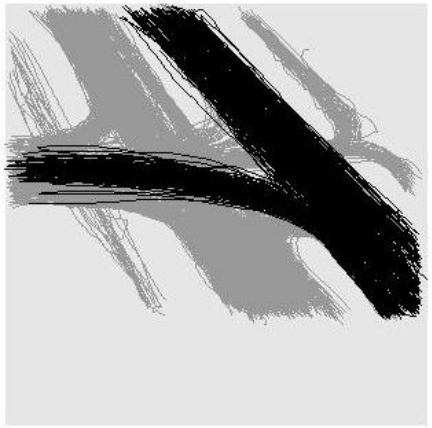
Trucks

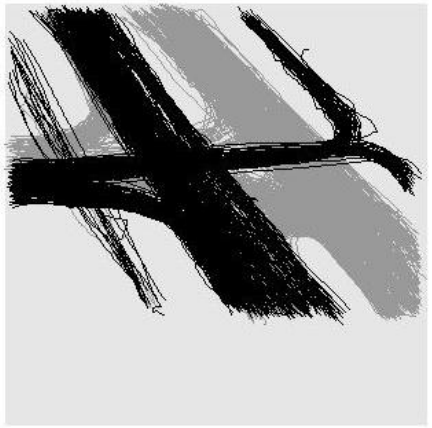


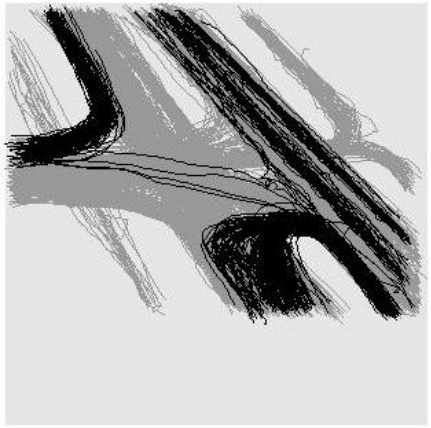


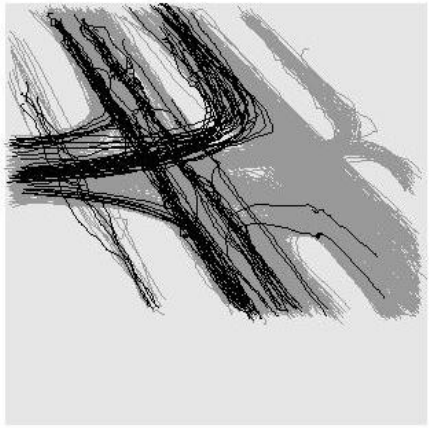


Intersection

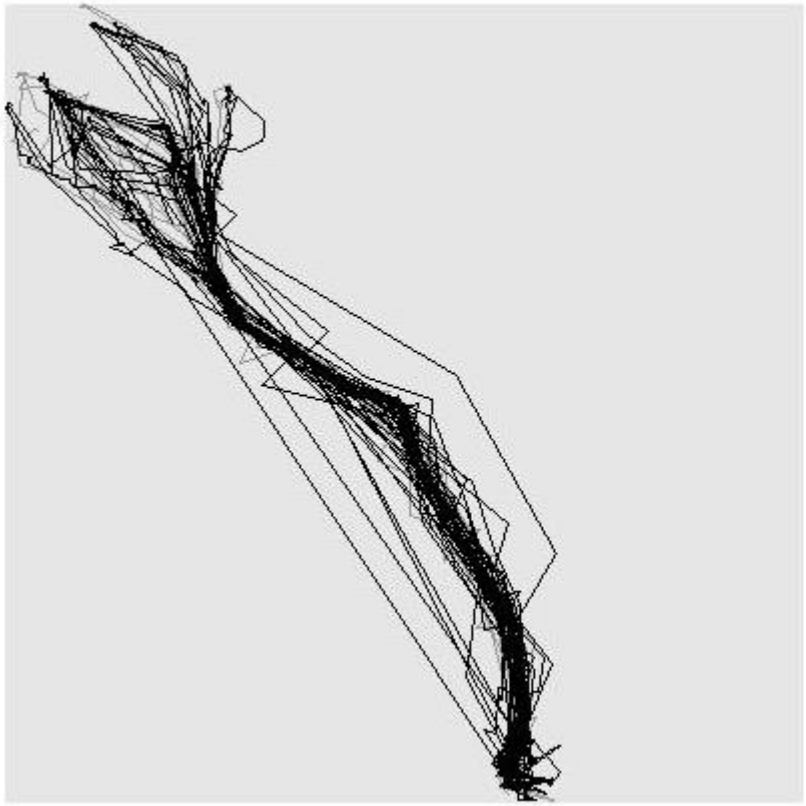


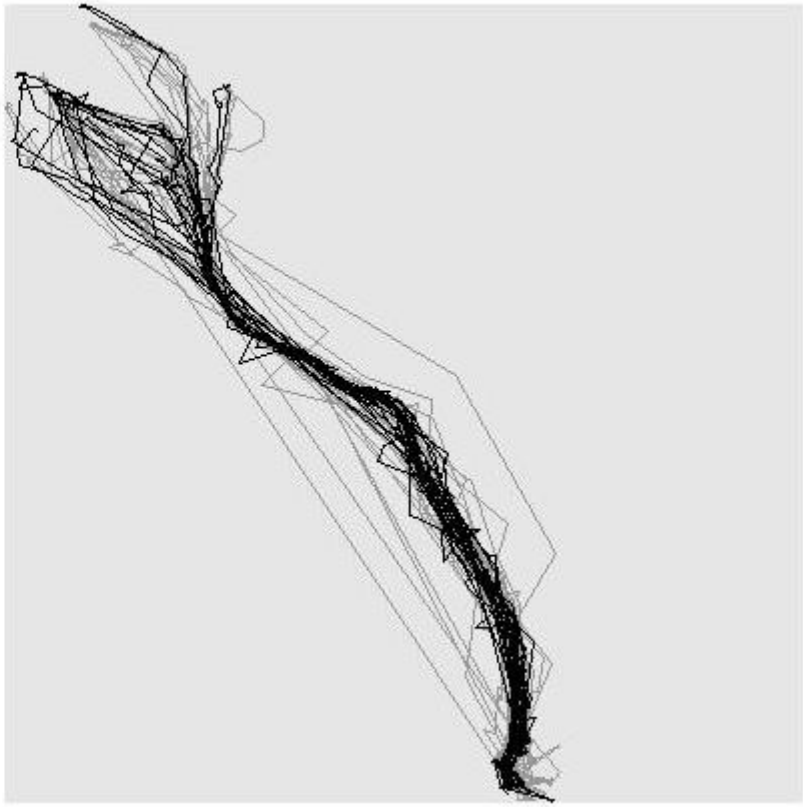




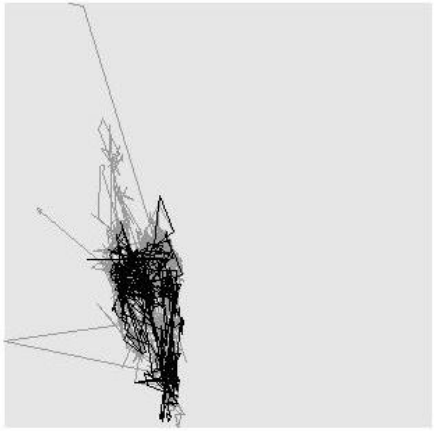


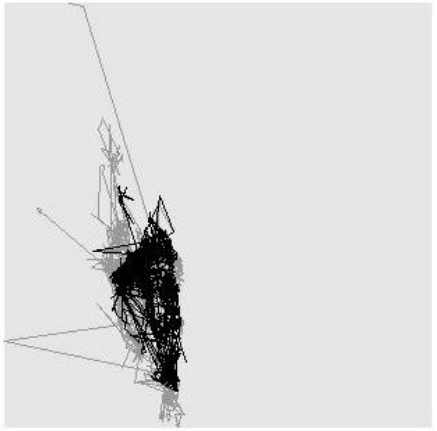
Hawks

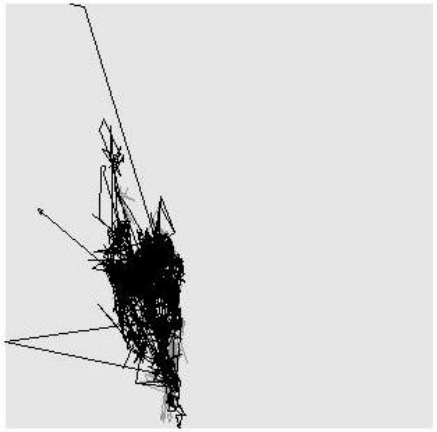




Buffalo

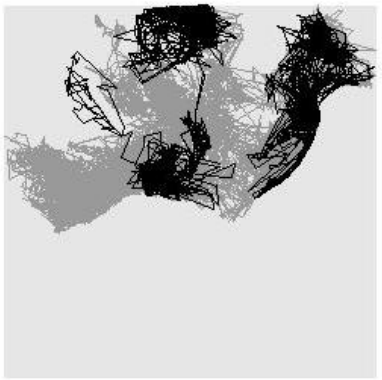


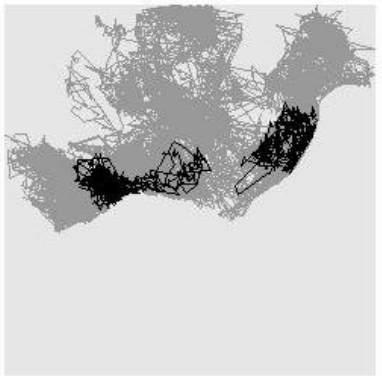


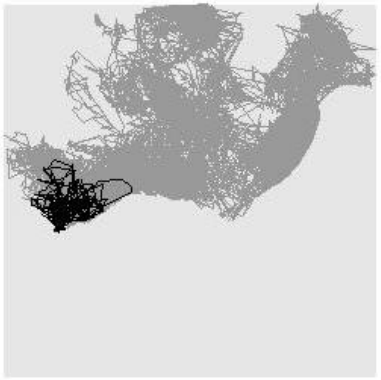


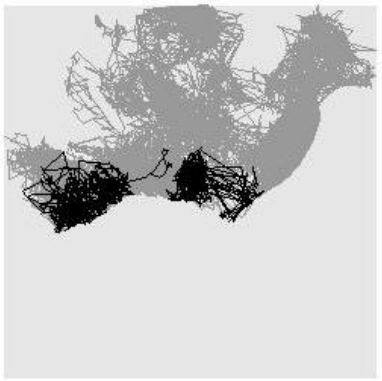
Deer



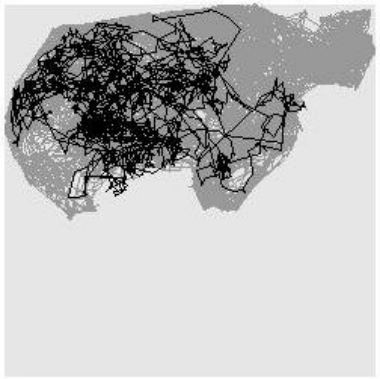


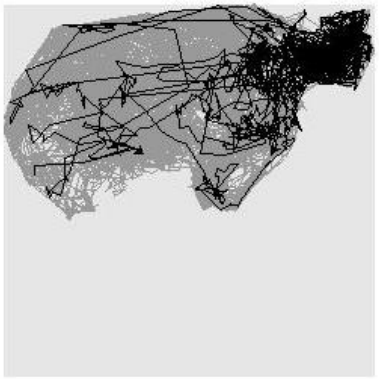


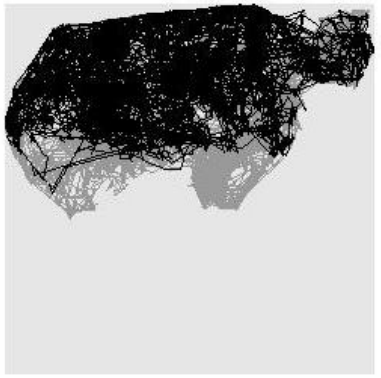


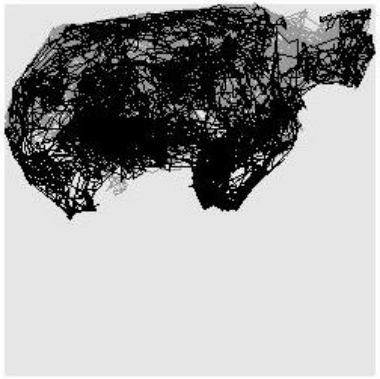


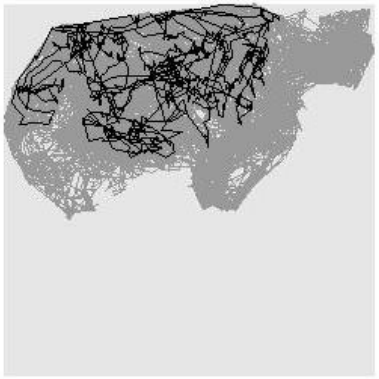
Elk











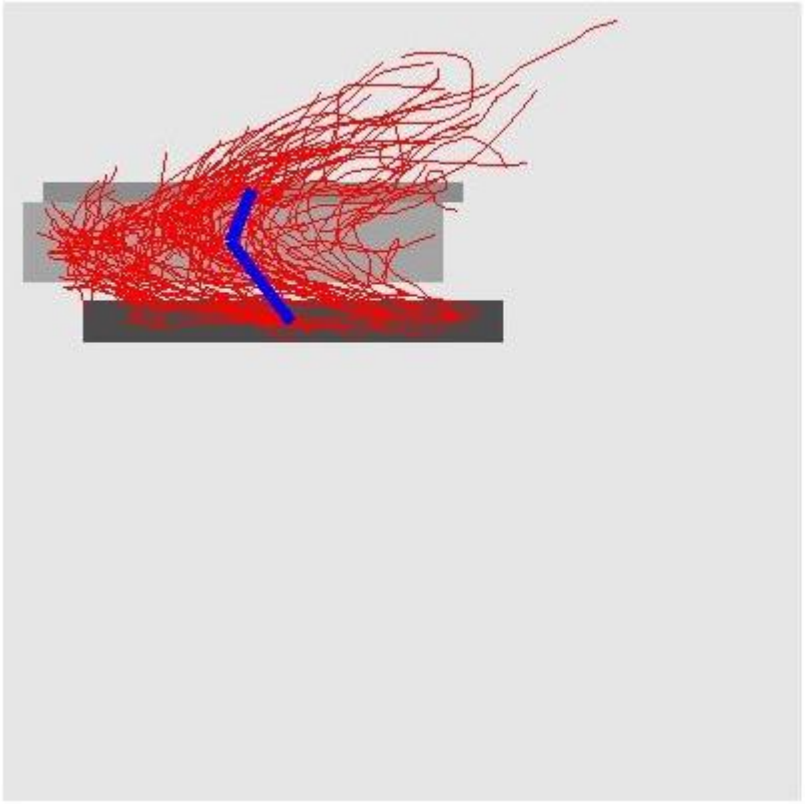
T-pattern Miner

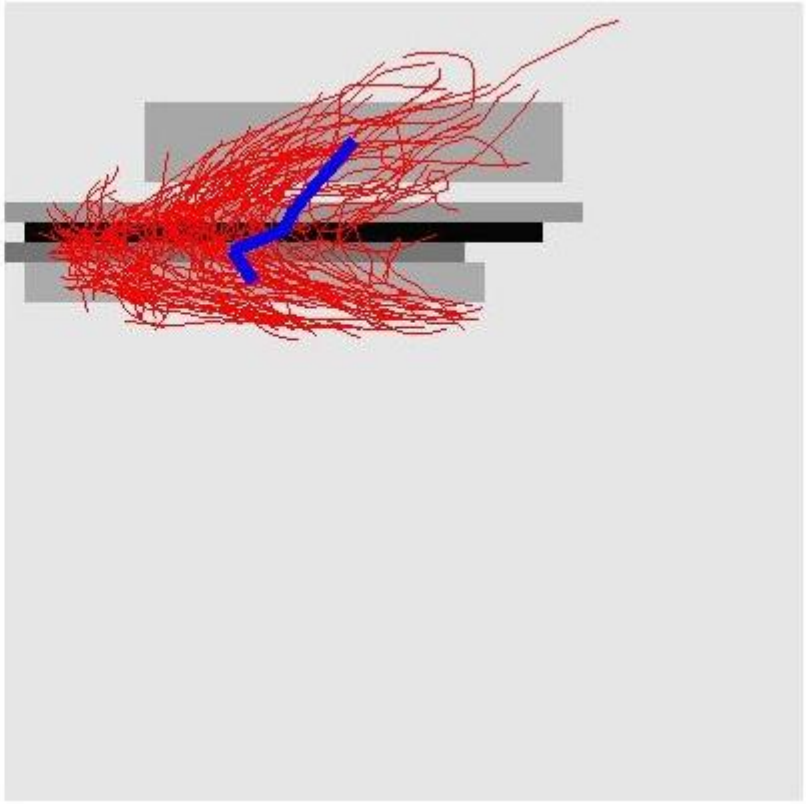
-Use trajectory density to form rectangular regions of different sizes

-Encode trajectories as sequences of regions

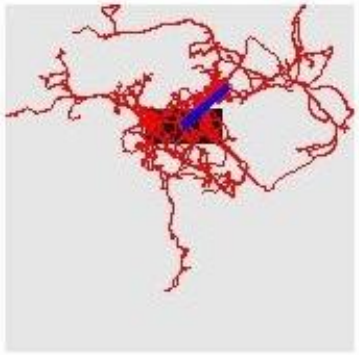
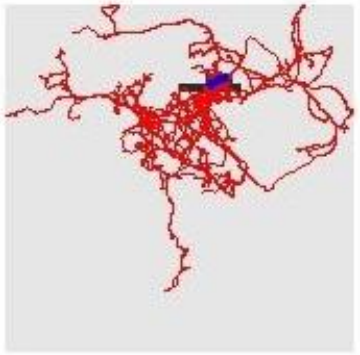
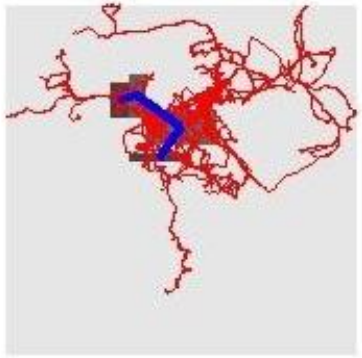
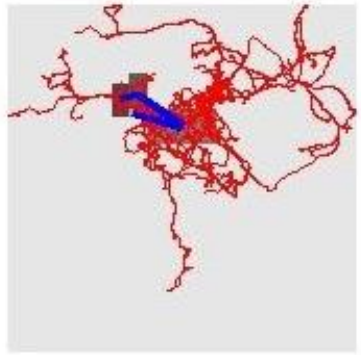
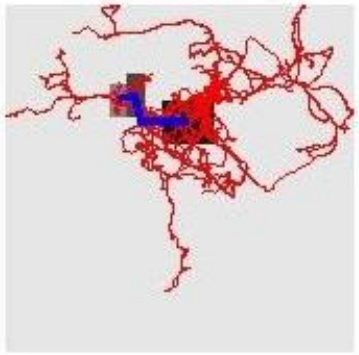
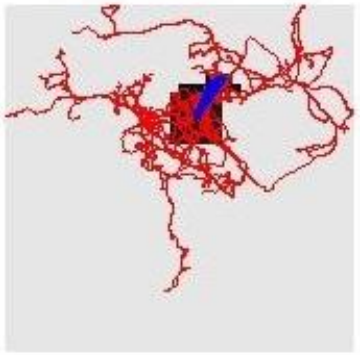
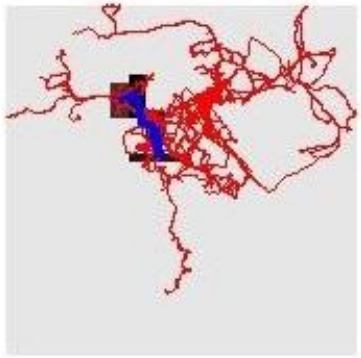
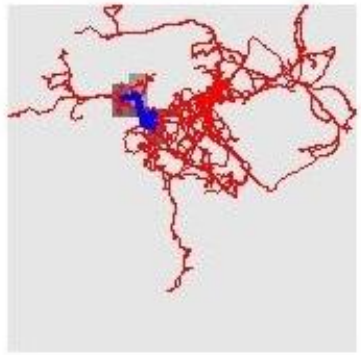
-Find frequent subsequences to be motion patterns

Hurricanes

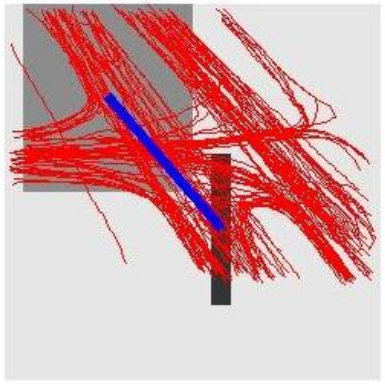
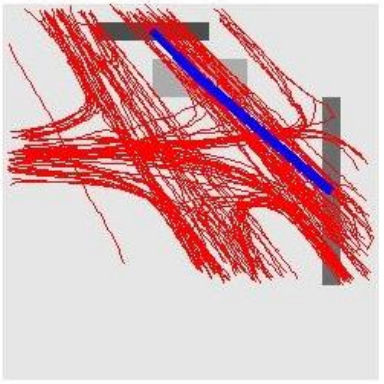
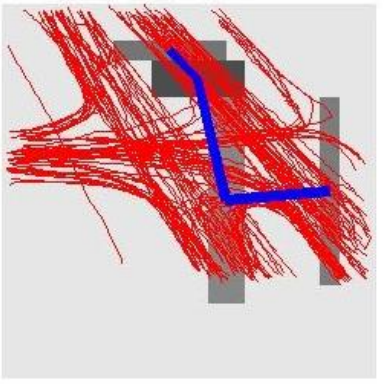
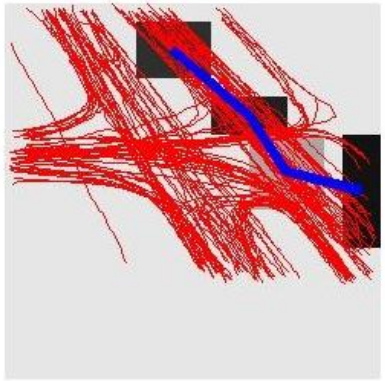
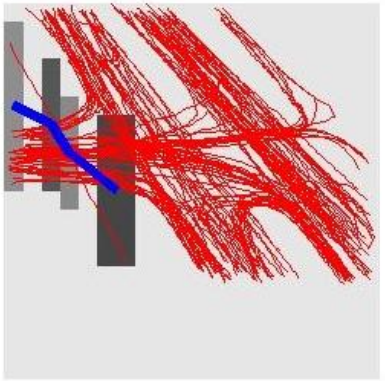
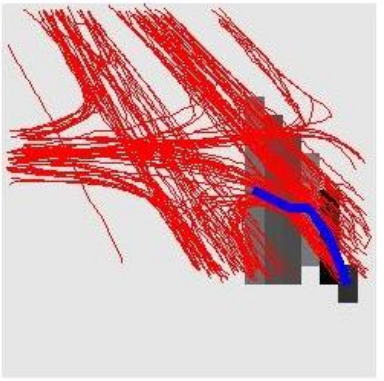




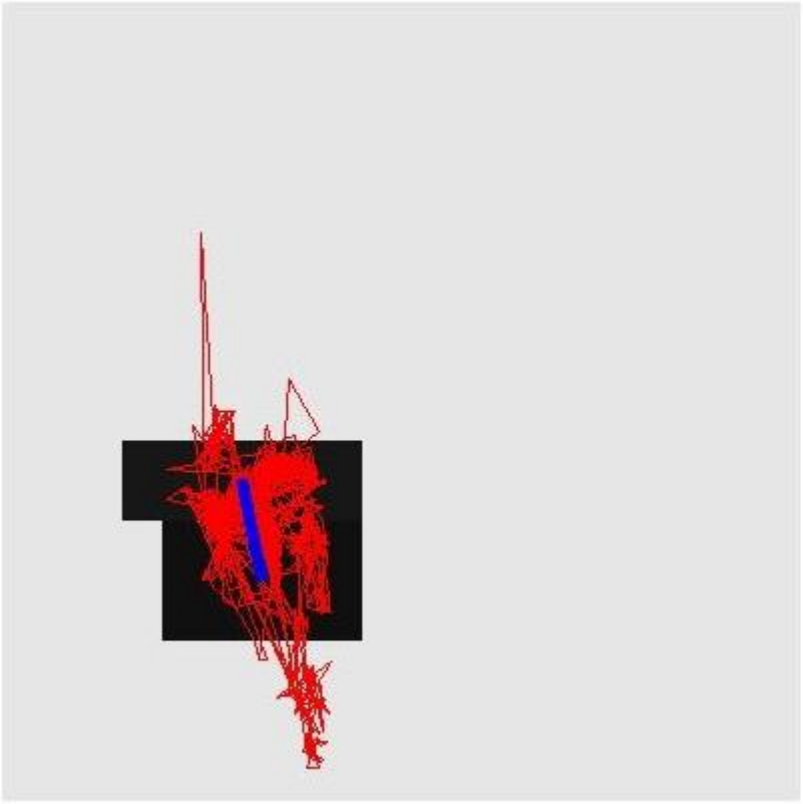
Trucks

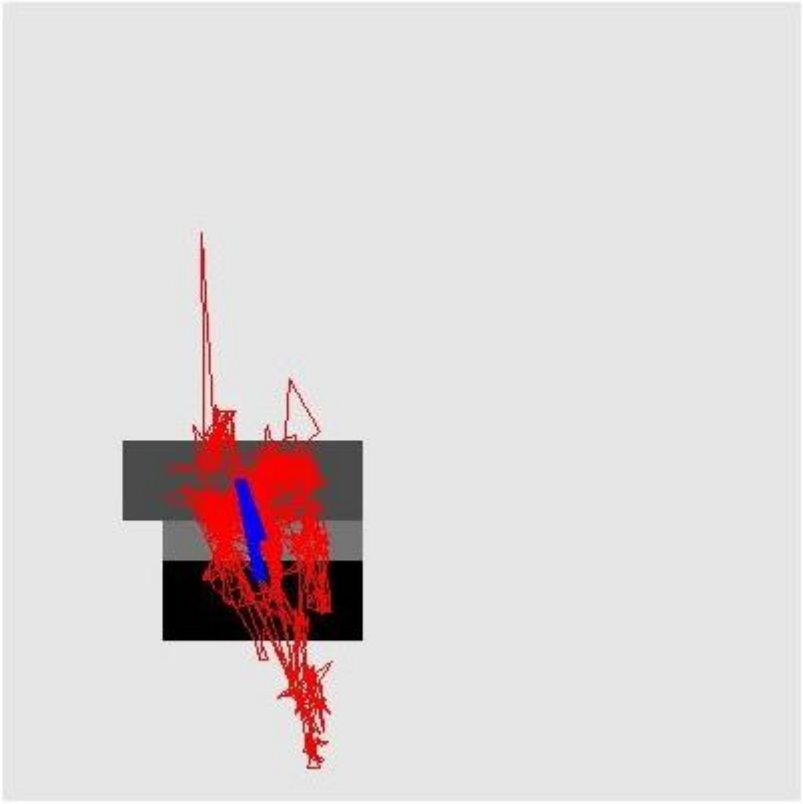









Intersection

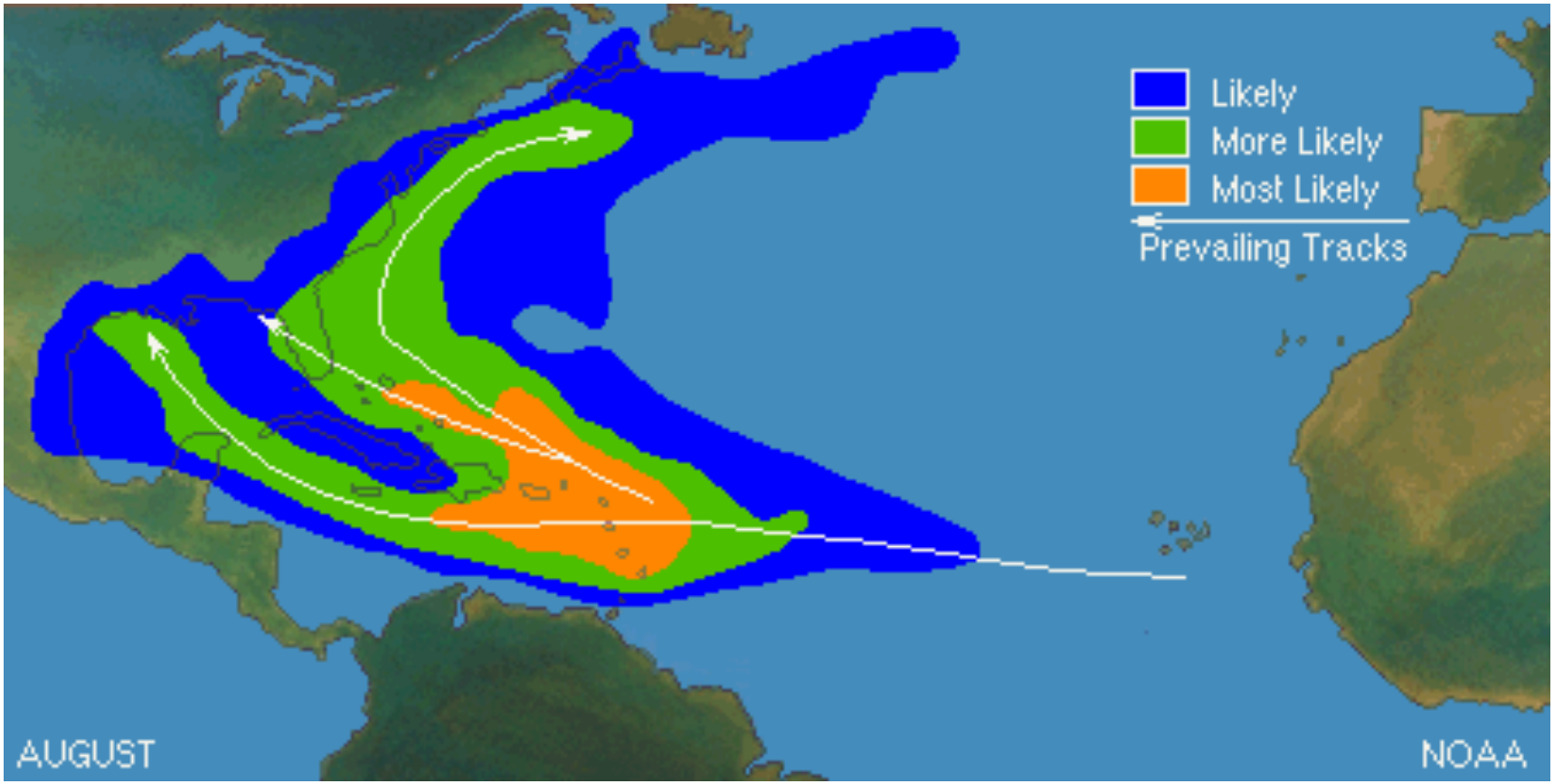







Buffalo

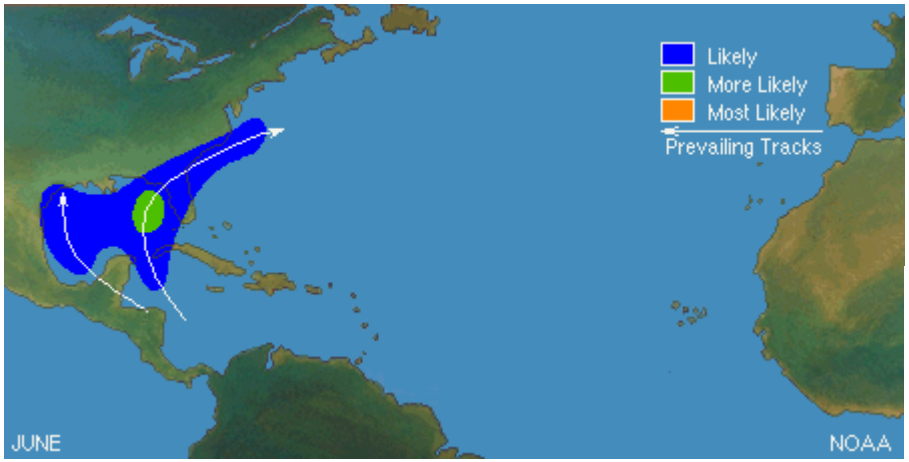


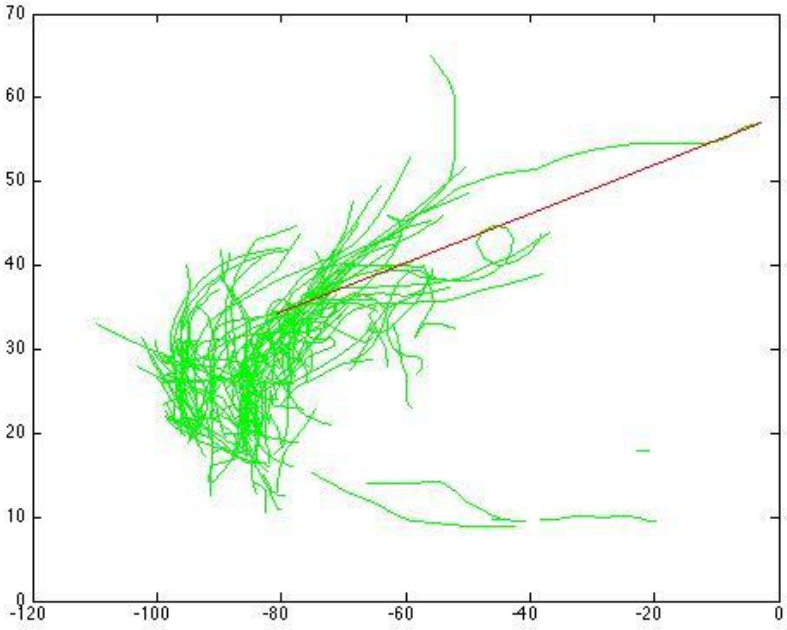


Hurricane Dataset Ground Truth & Test Results

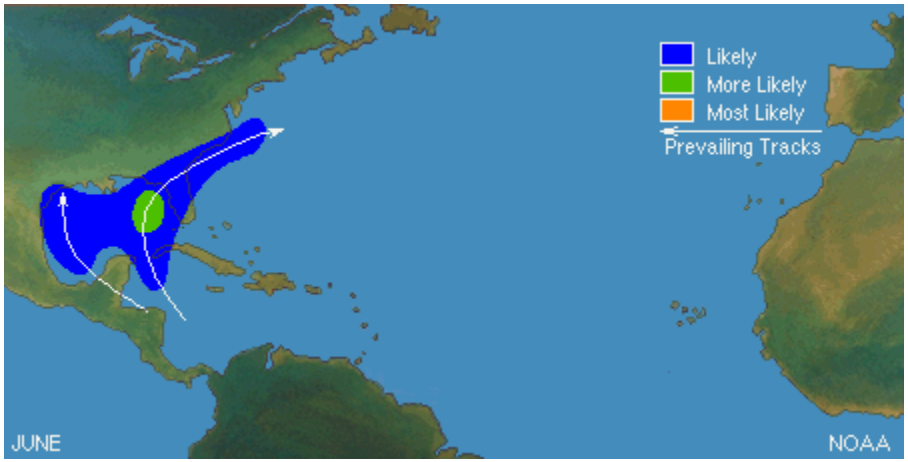


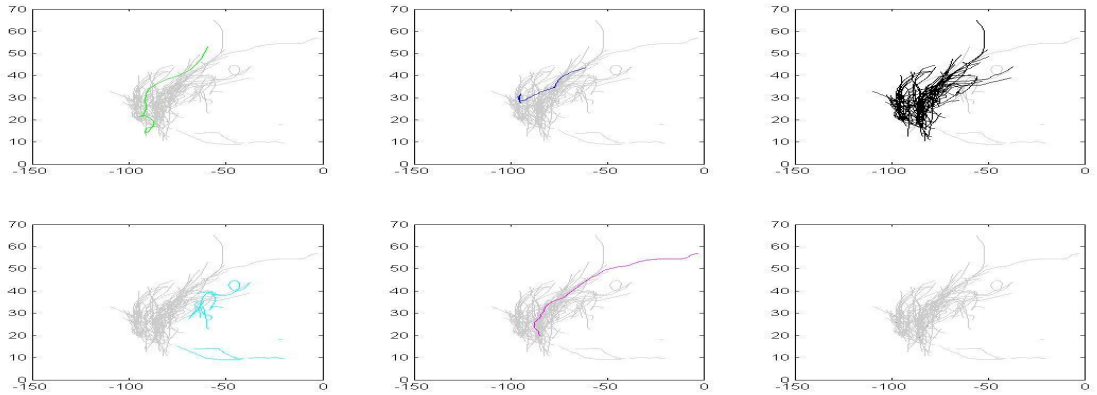
June TRACLUS



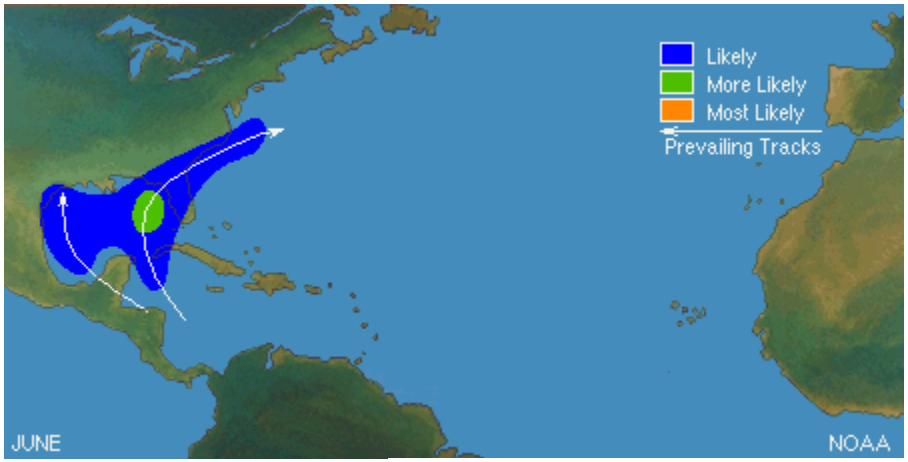


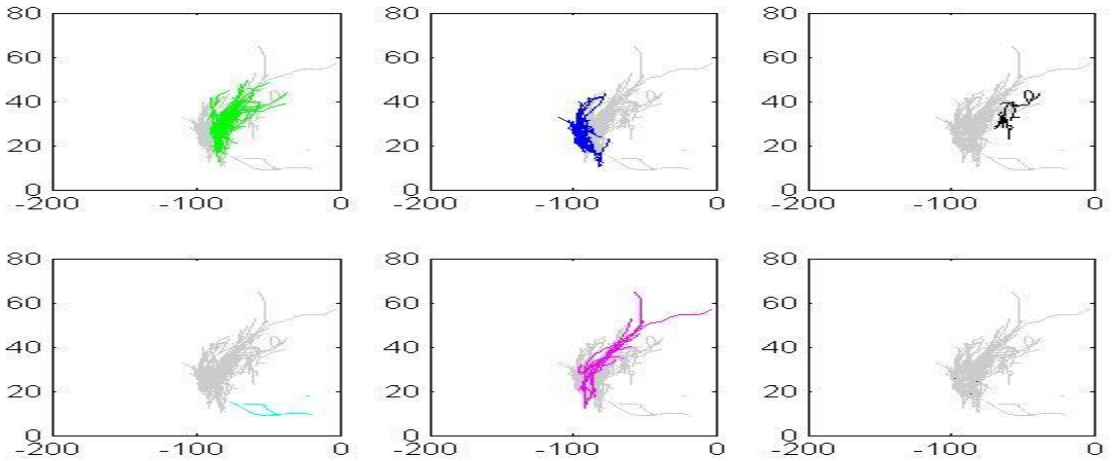
June DTW+Agglomerative Average



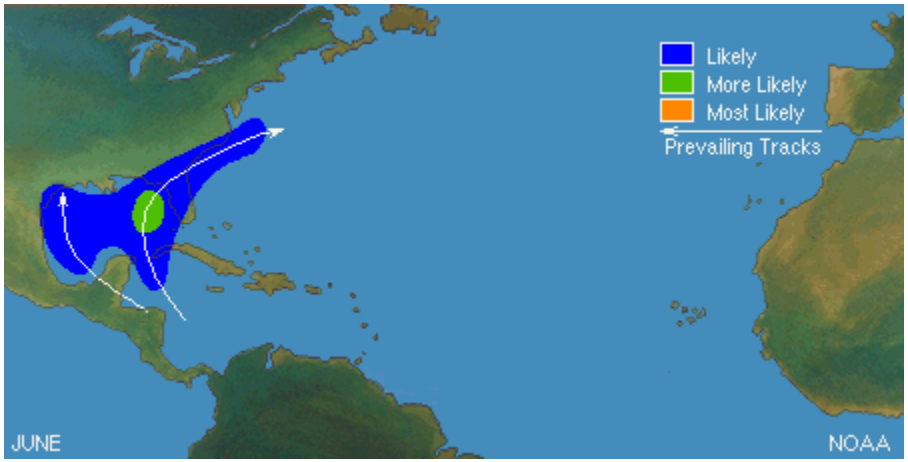


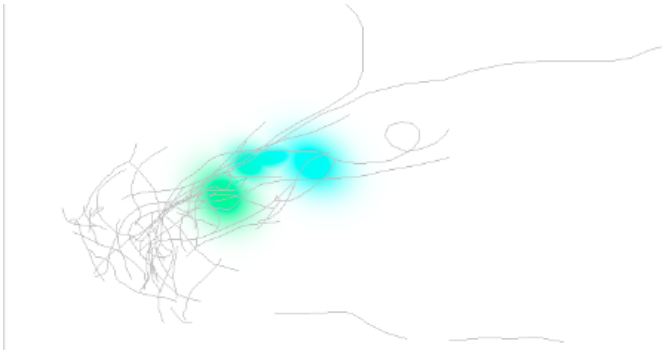
June - DTW+Agglomerative Complete





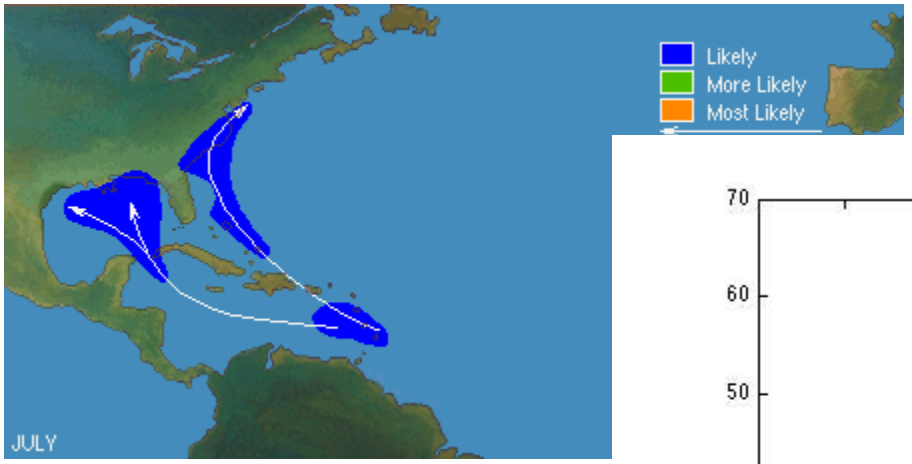
June - MP

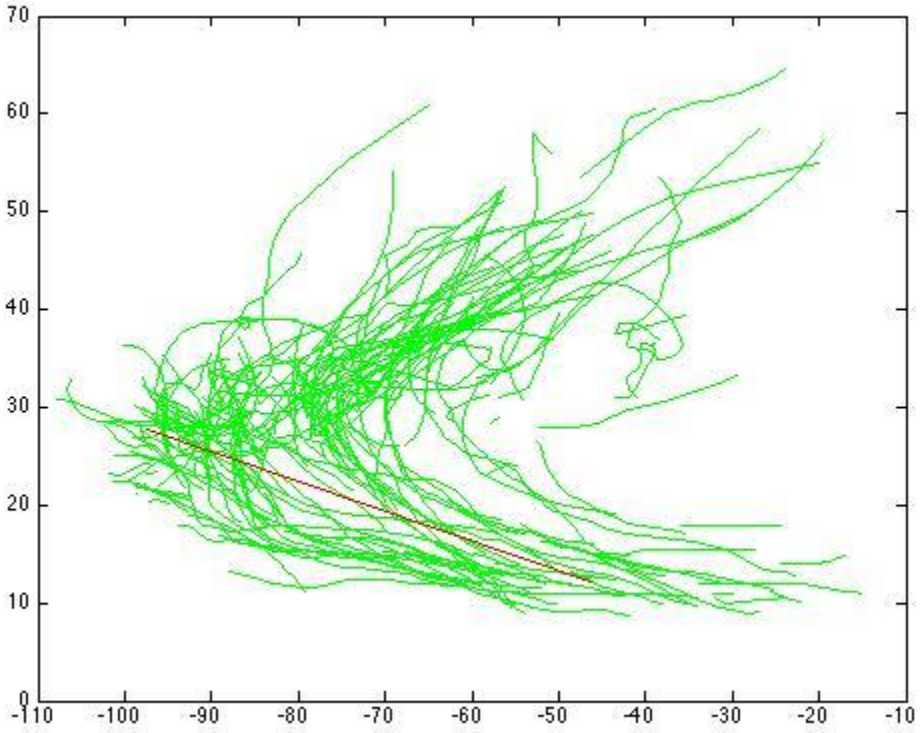

Likely
More Likely
Most Likely
Prevailing Tracks
JUNE
NOAA



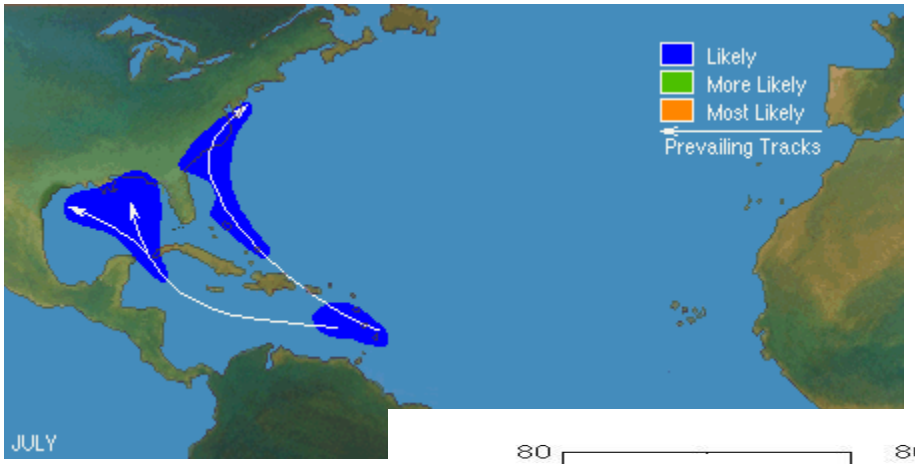


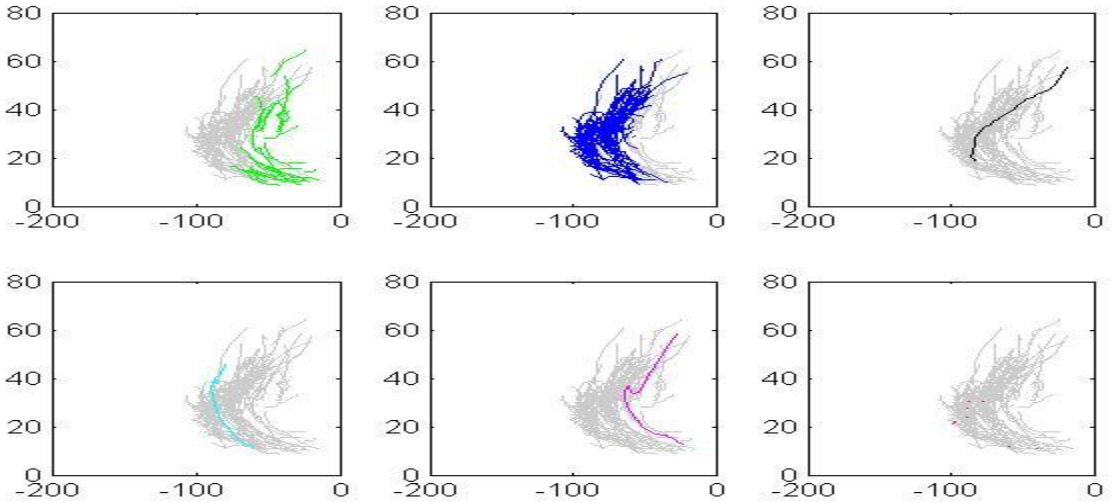
July TRACLUS



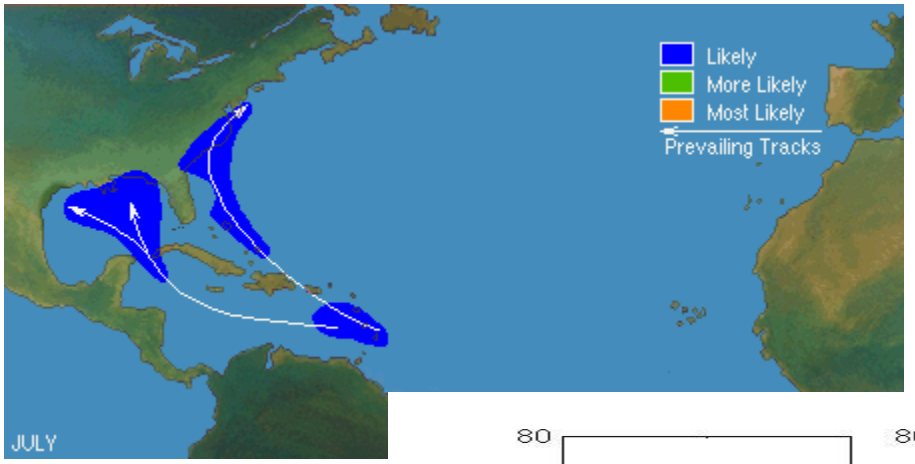


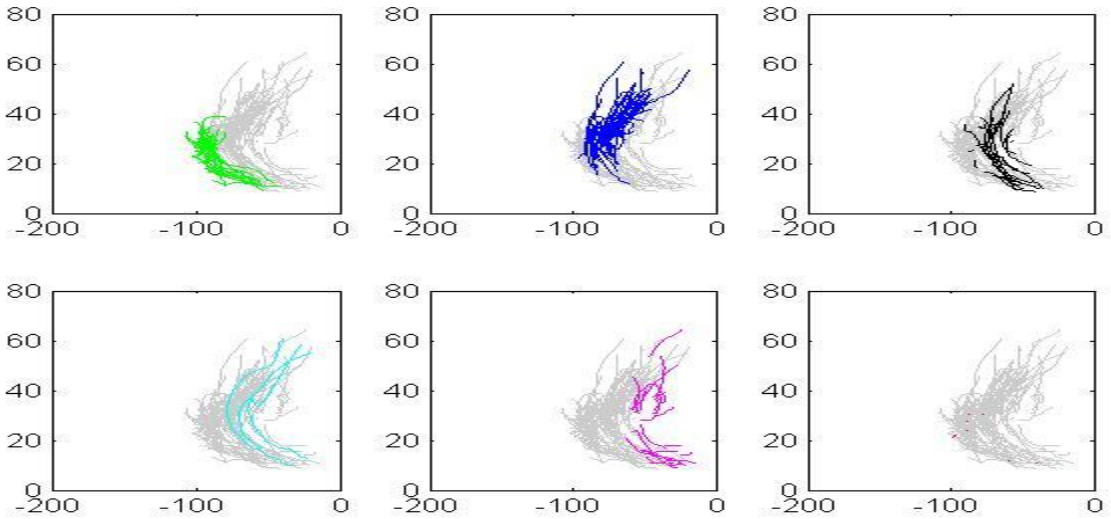
July DTW+Agglomerative Average



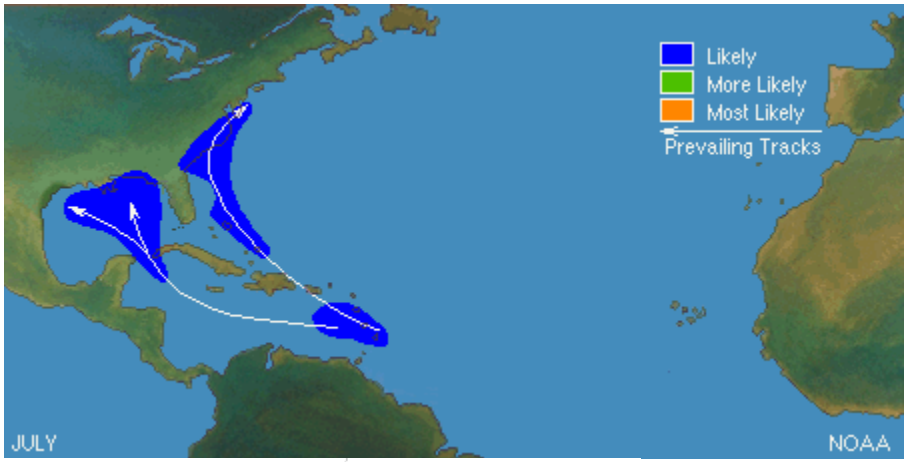


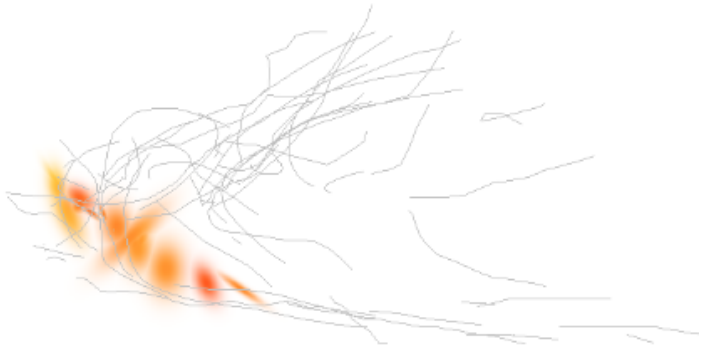
July DTW+Agglomerative Complete

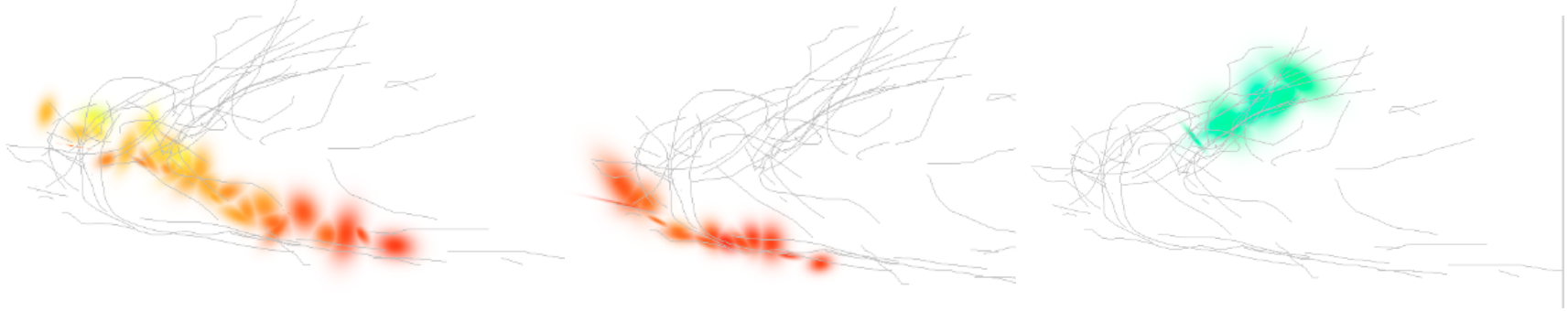




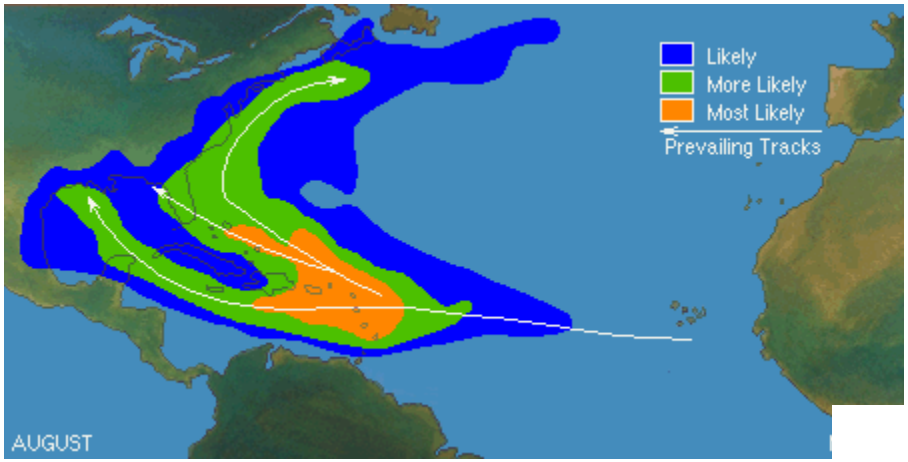
July MP

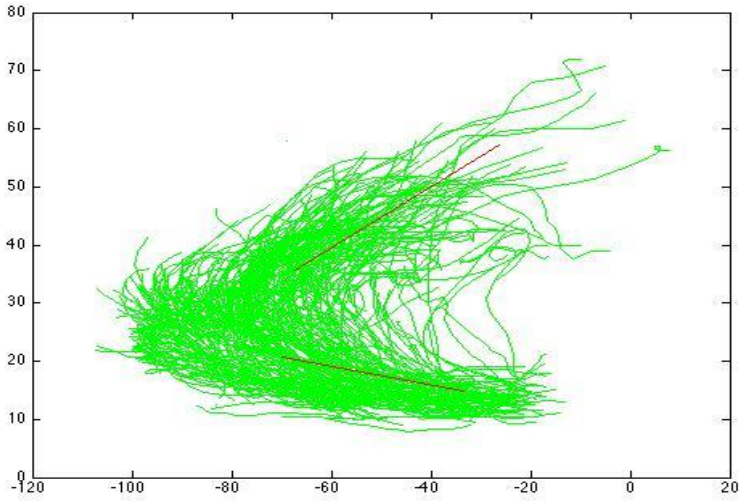

Likely
More Likely
Most Likely
Prevailing Tracks
JULY
NOAA



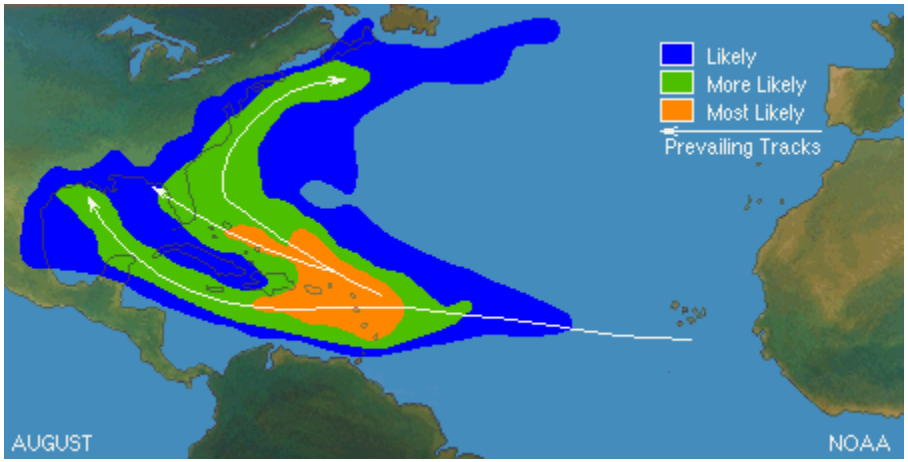


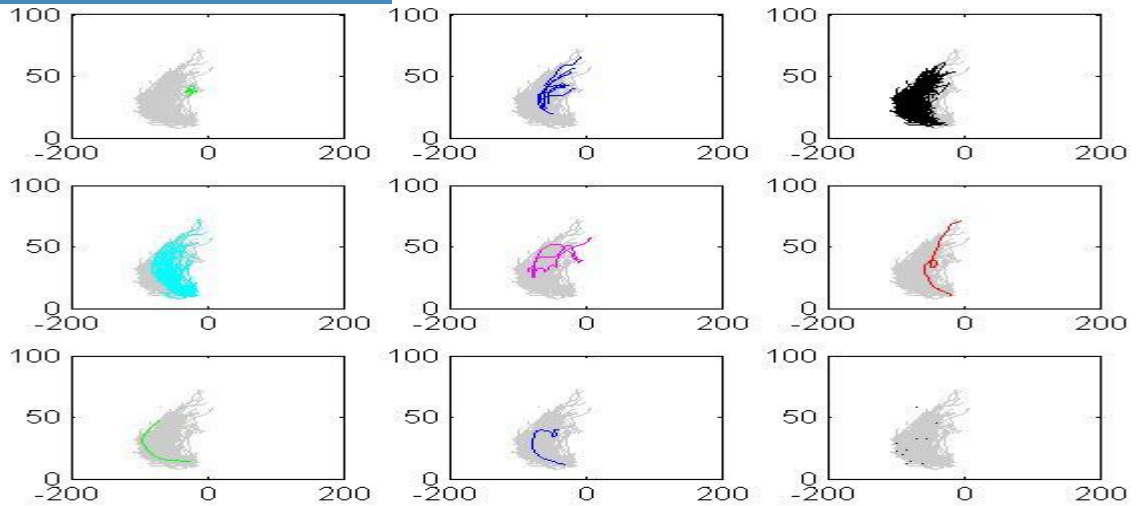
August TRACLUS



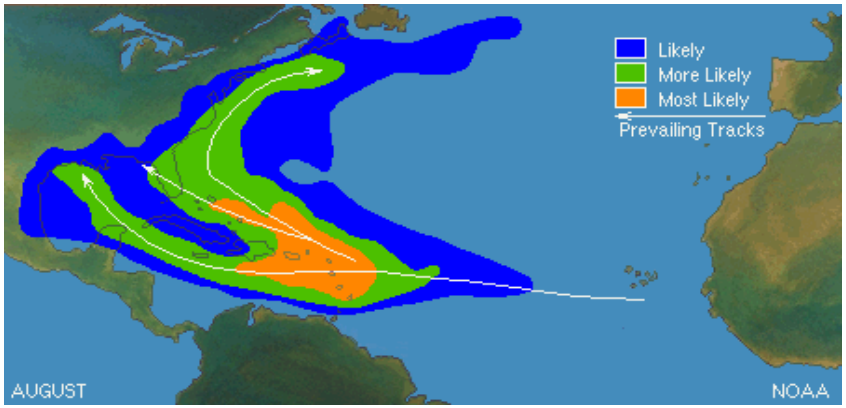


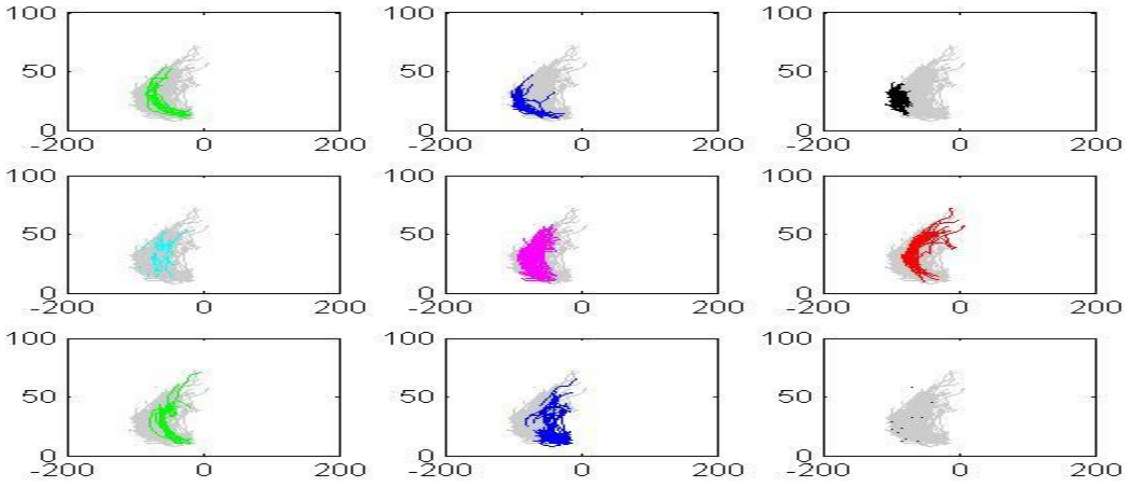
August DTW+Agglomerative Average



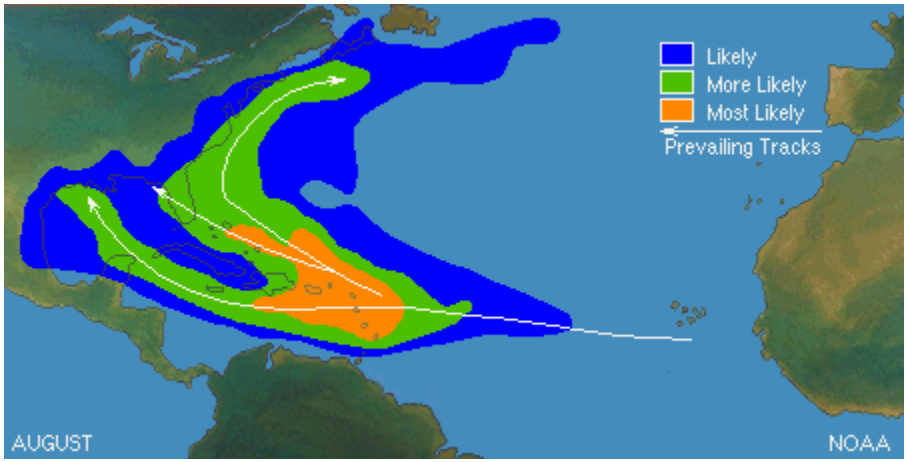


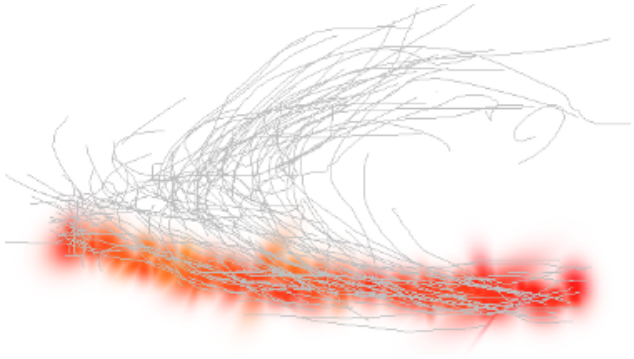
August DTW+Agglomerative Complete

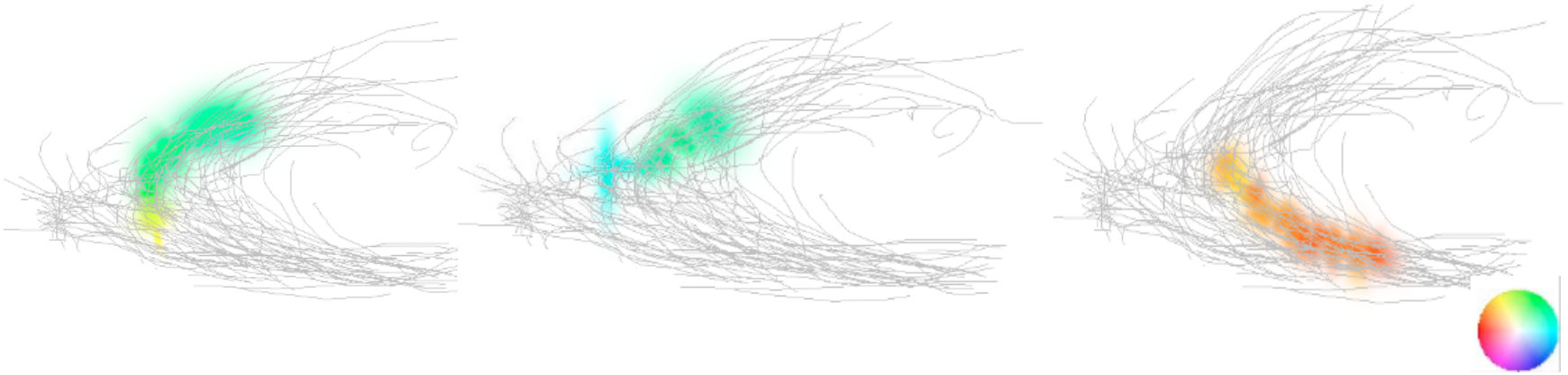




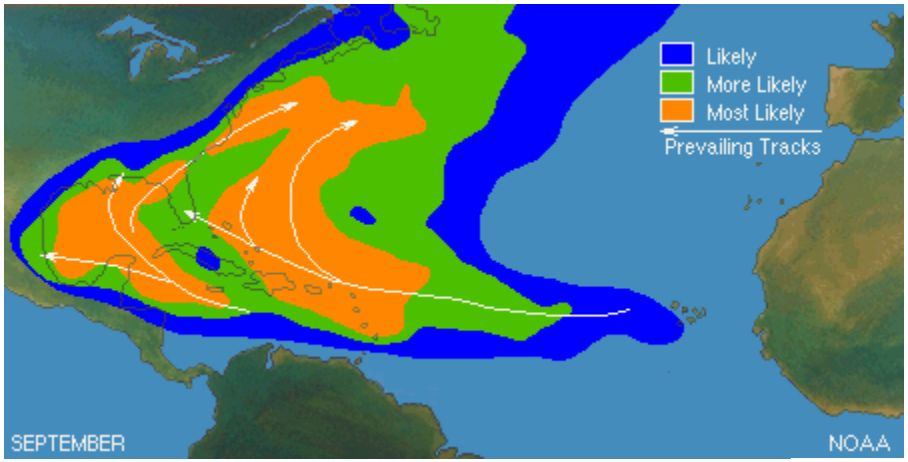
August MP

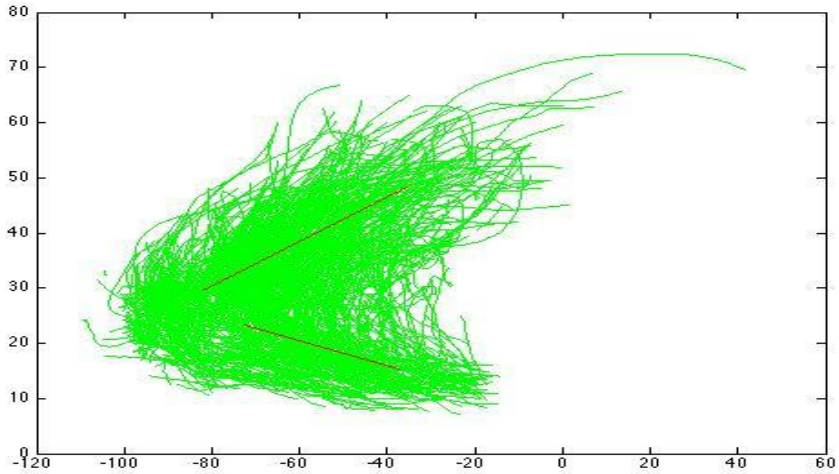

Likely
More Likely
Most Likely
Prevailing Tracks
AUGUST
NOAA



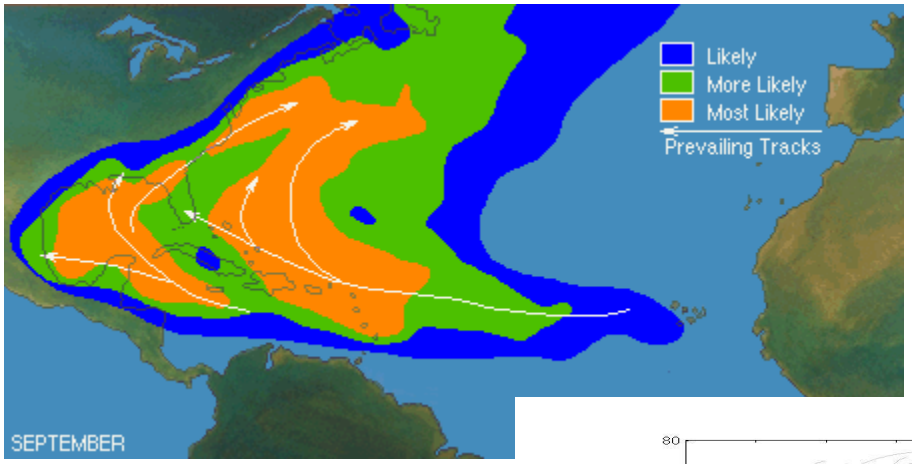


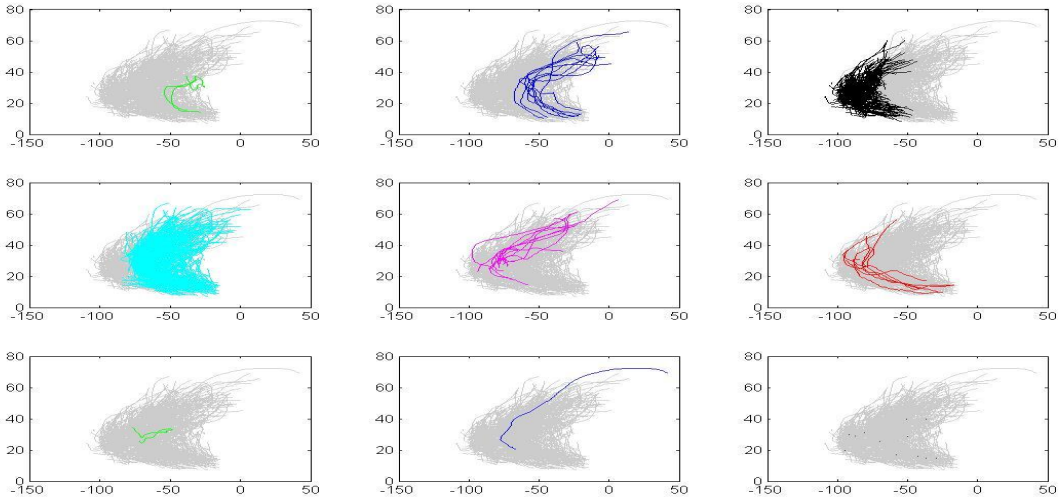
September TRACLUS



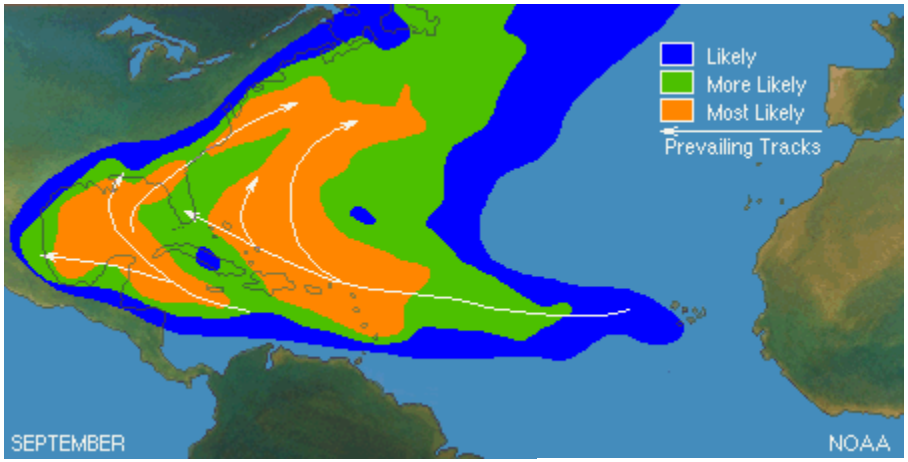


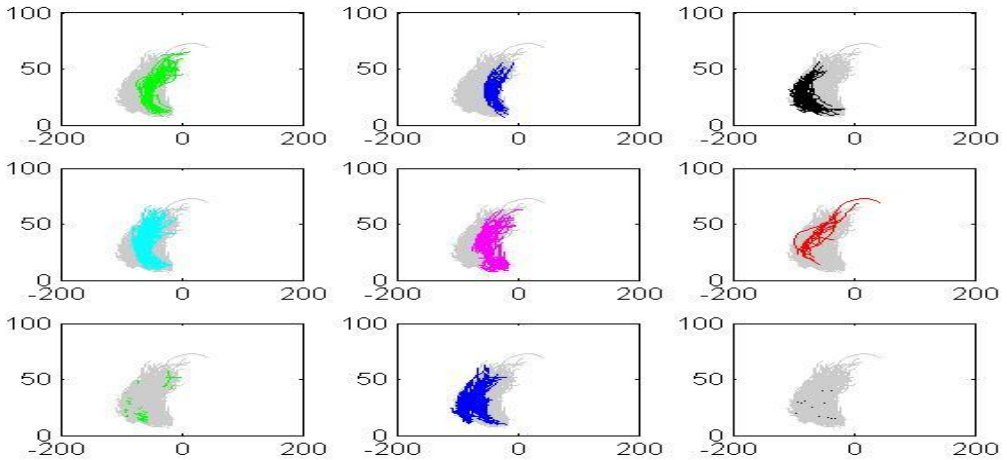
September DTW+Agglomerative Average



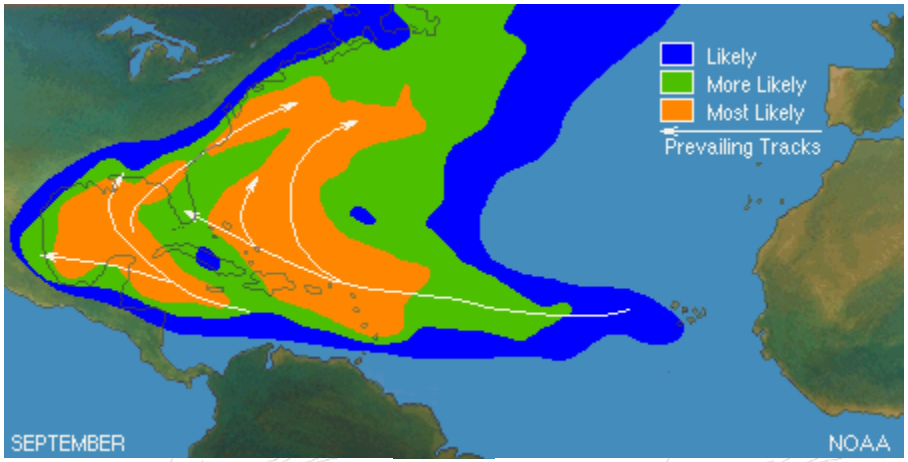


September DTW+Agglomerative Complete

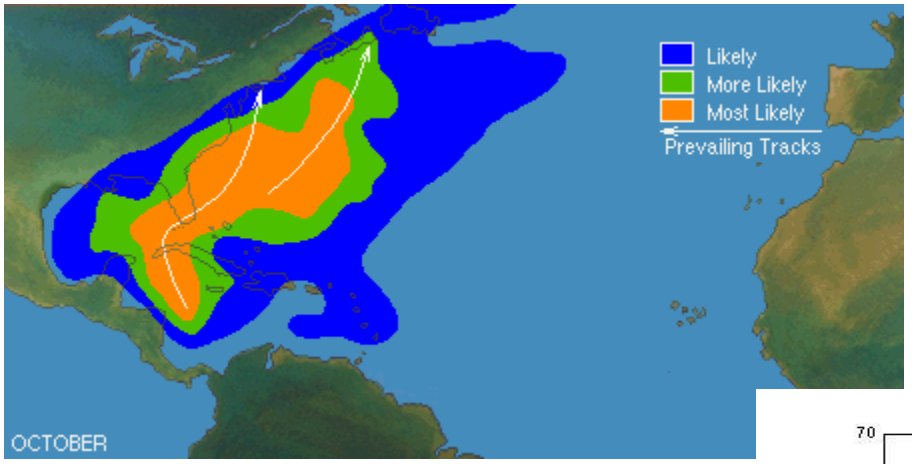


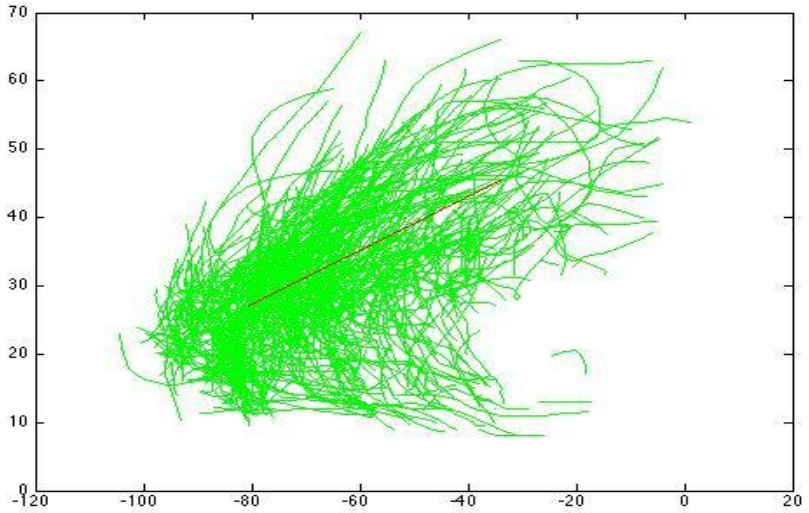


September MP

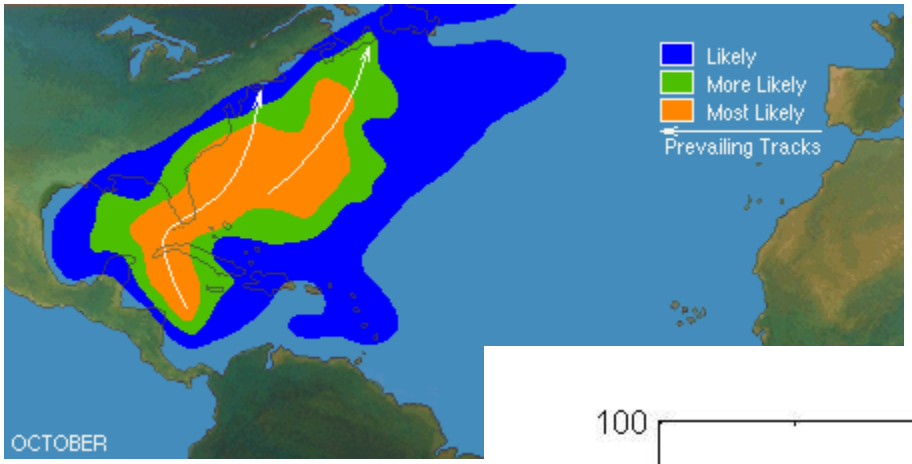


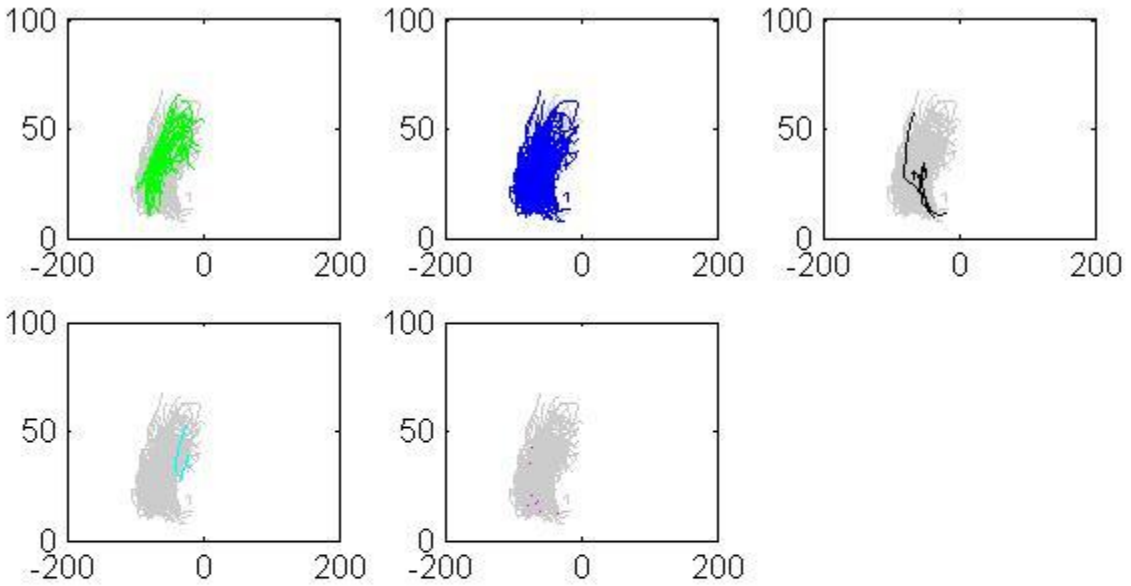
October TRACLUS



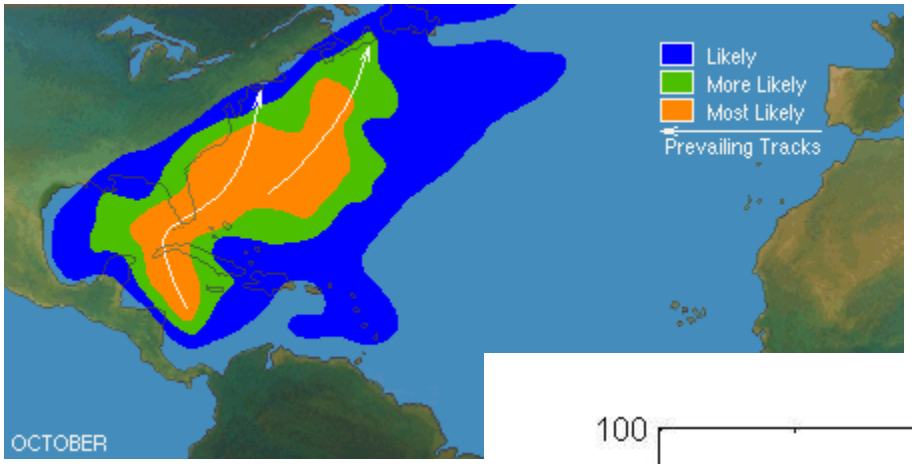


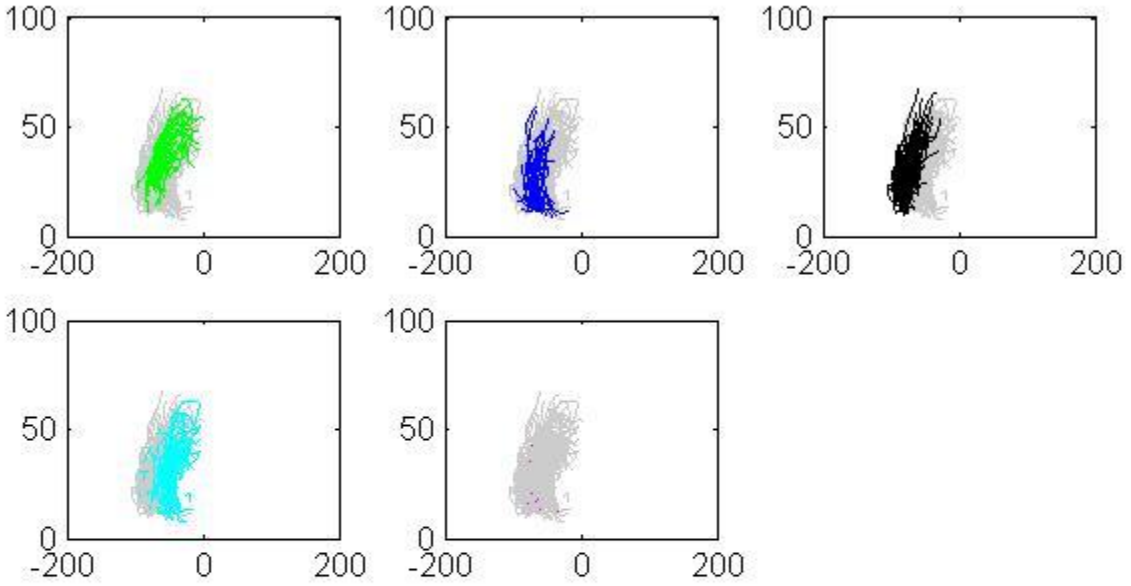
October DTW+Agglomerative Average



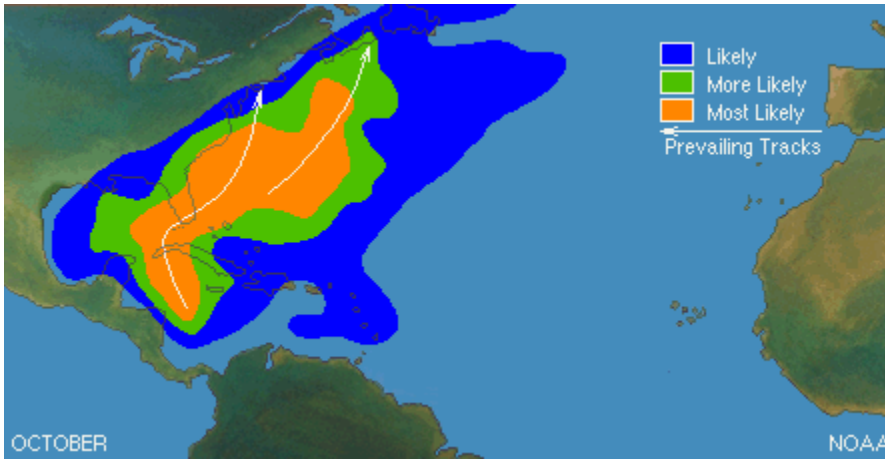


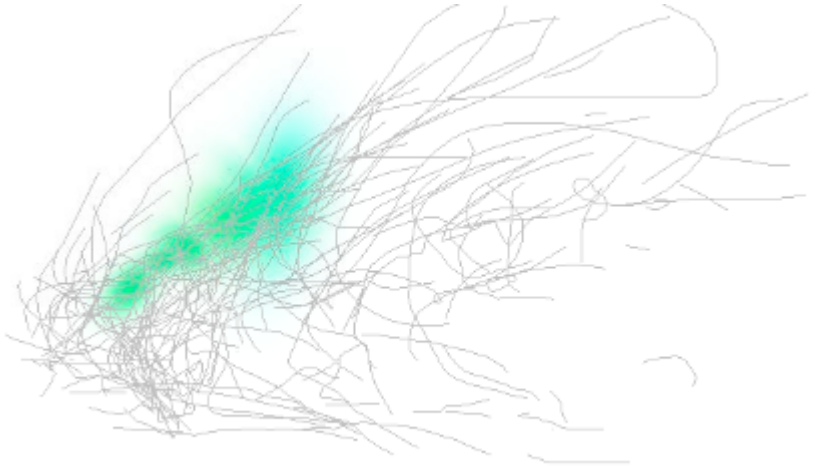
October DTW+Agglomerative Complete

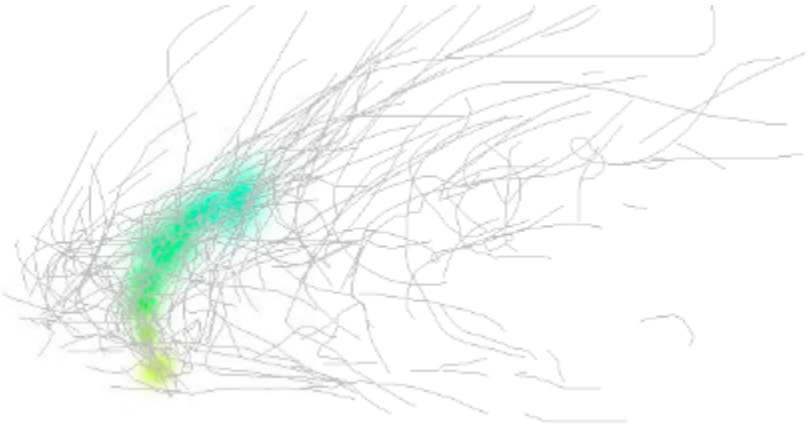


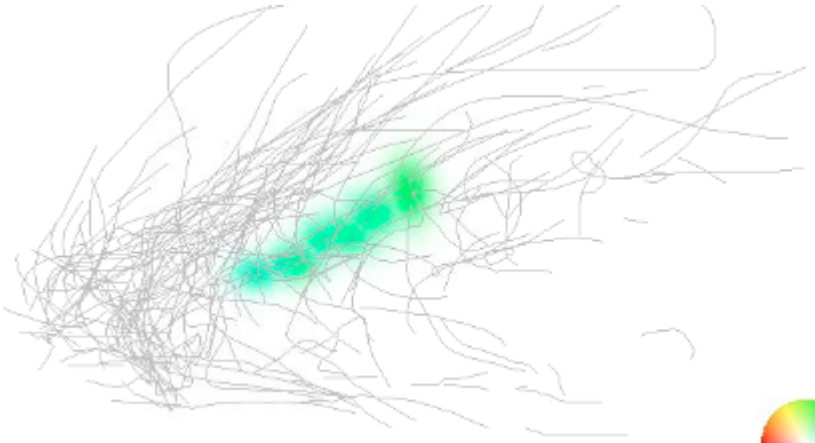


October MP

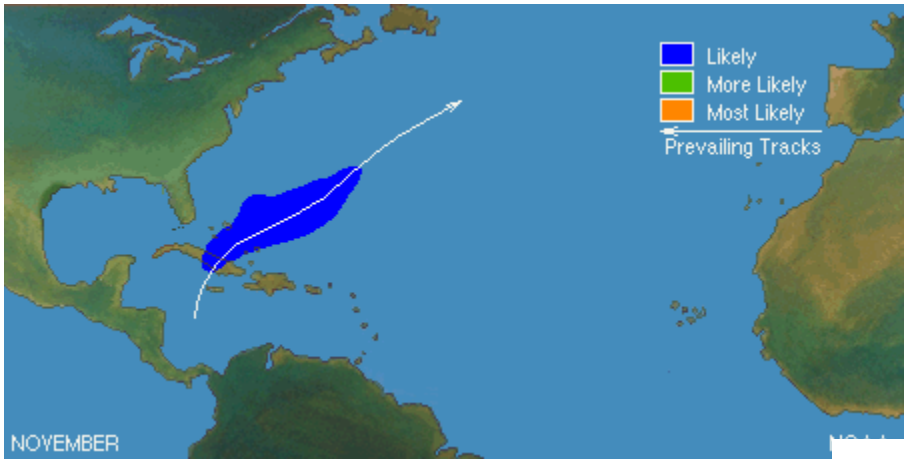

Likely
More Likely
Most Likely
Prevailing Tracks
OCTOBER
NOAA

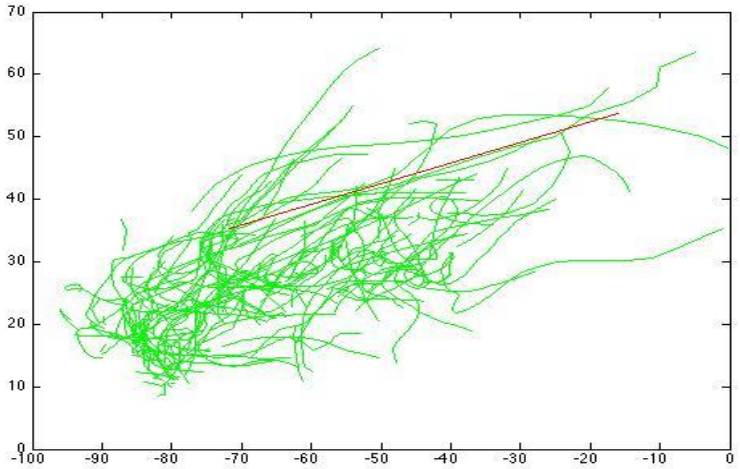




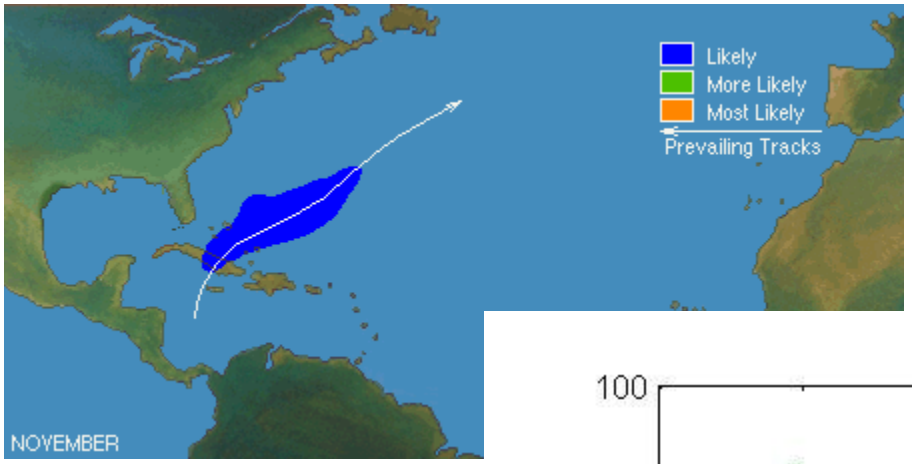


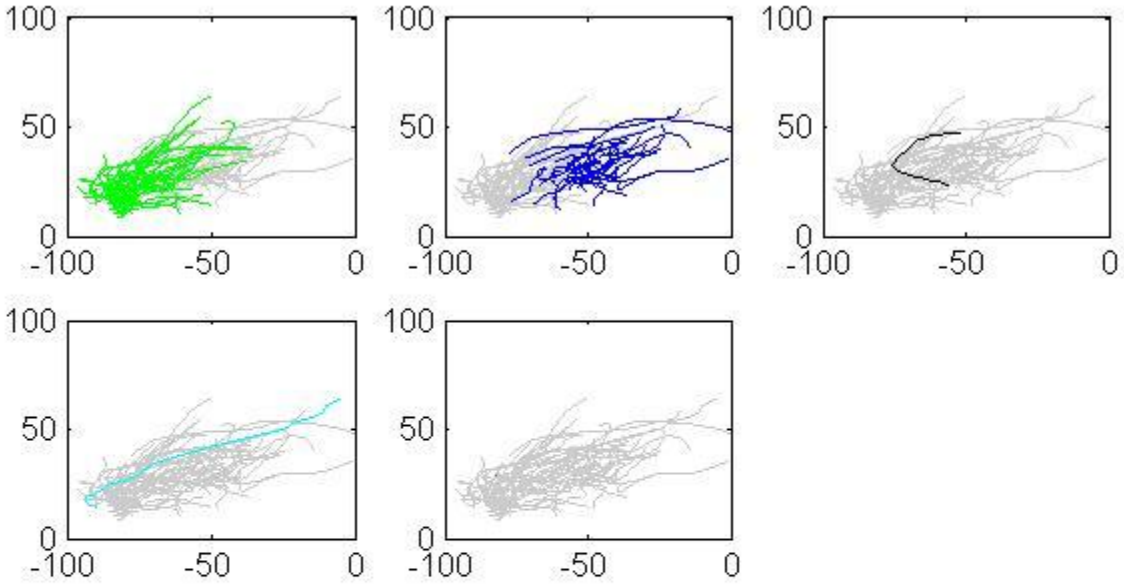
November TRACLUS



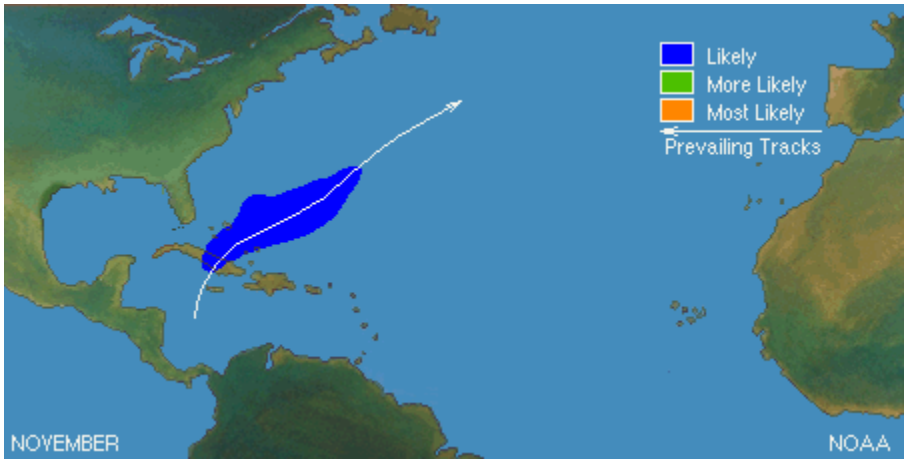


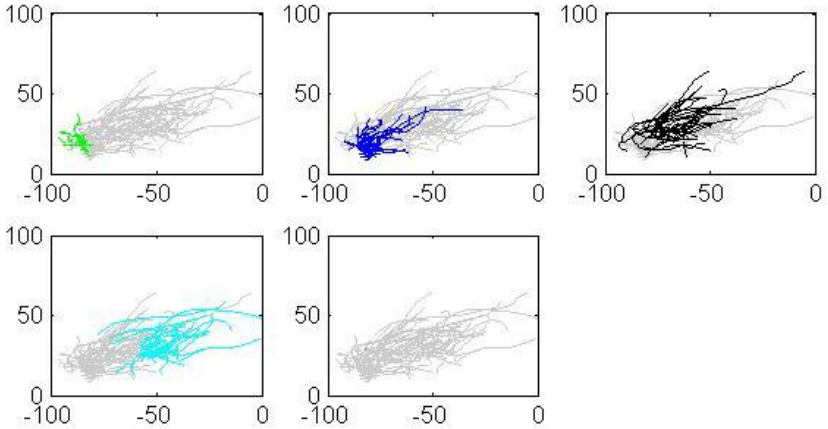
November DTW+Agglomerative Average



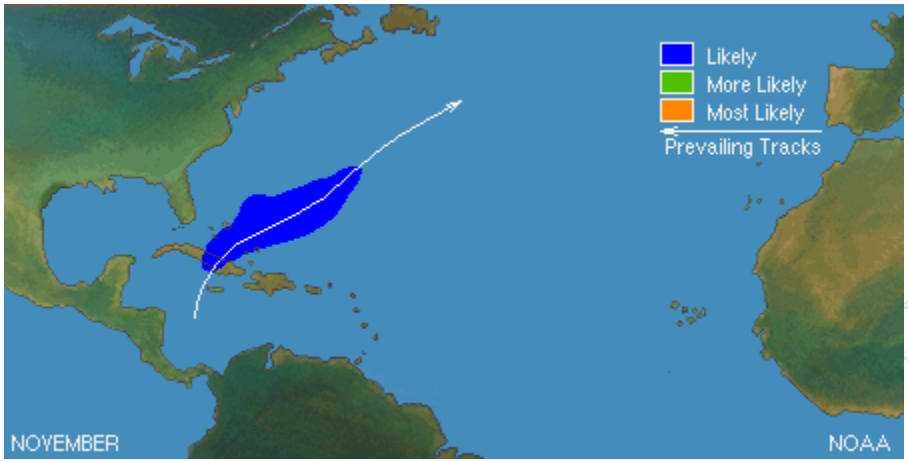


November DTW+Agglomerative Complete





November MP


Likely
More Likely
Most Likely
Prevailing Tracks
NOVEMBER
NOAA

