

Quantifying the Link Between Climate and **Fire** In Alaska

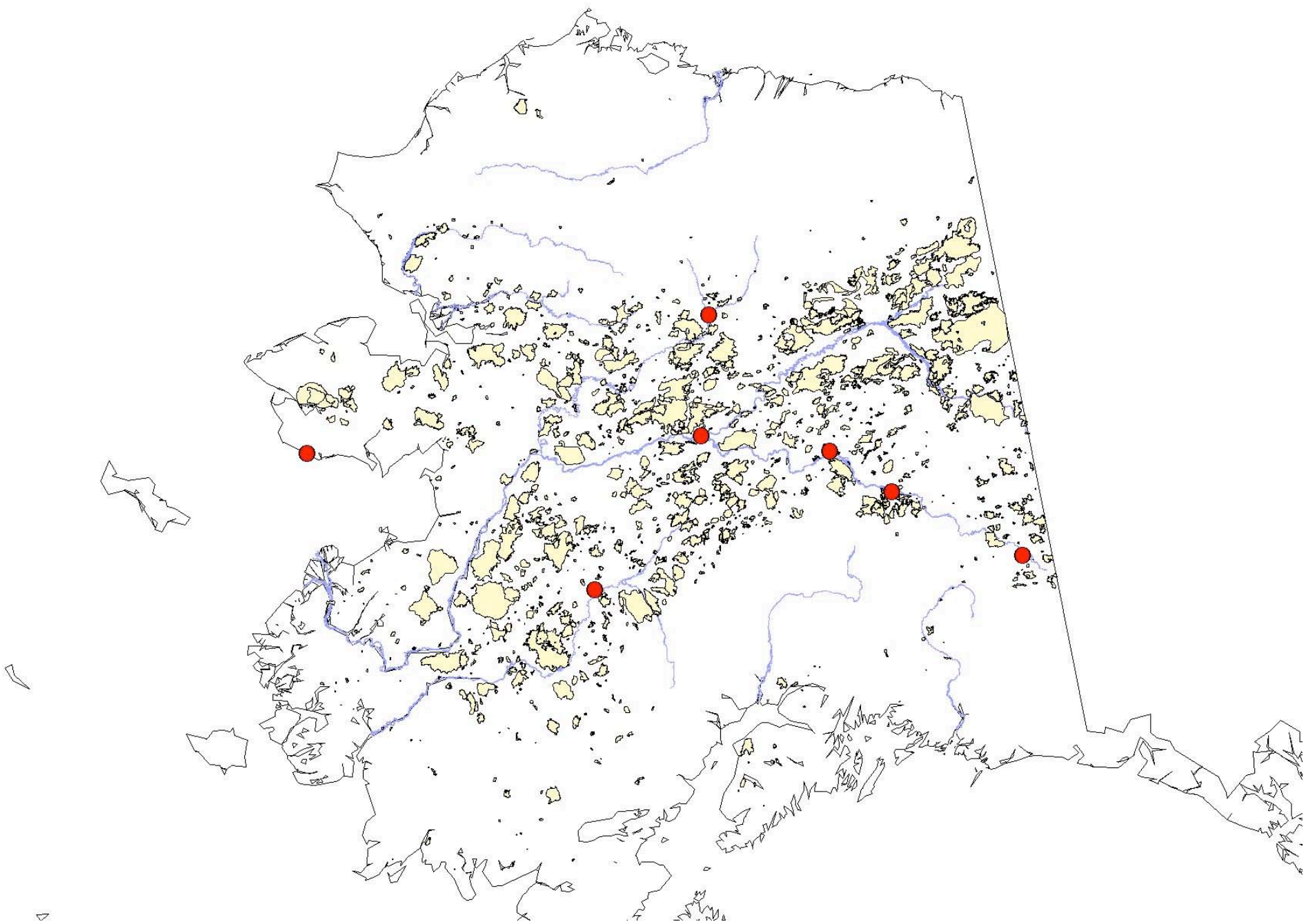
Statistical Model

Response



- Annual Hectares Burned

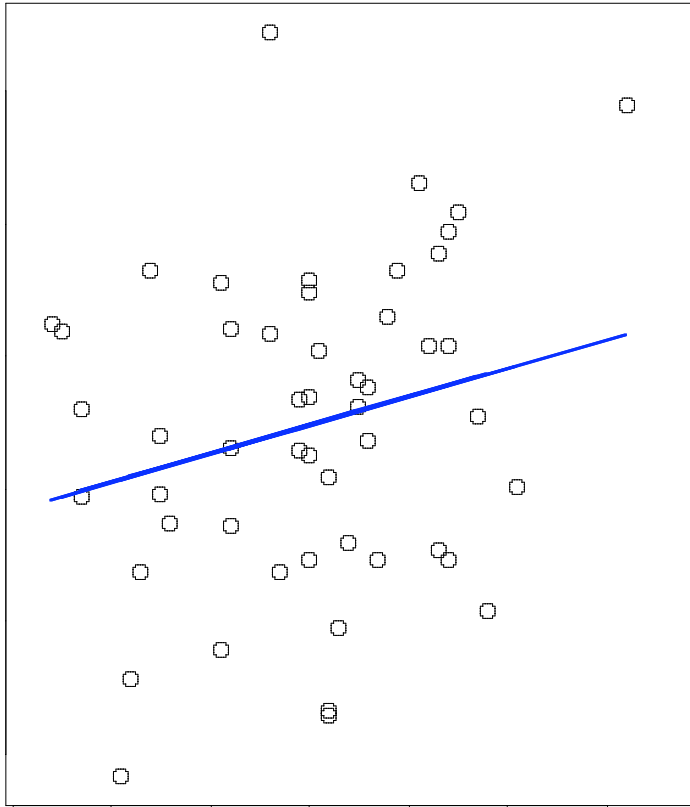
Explanatory Variables

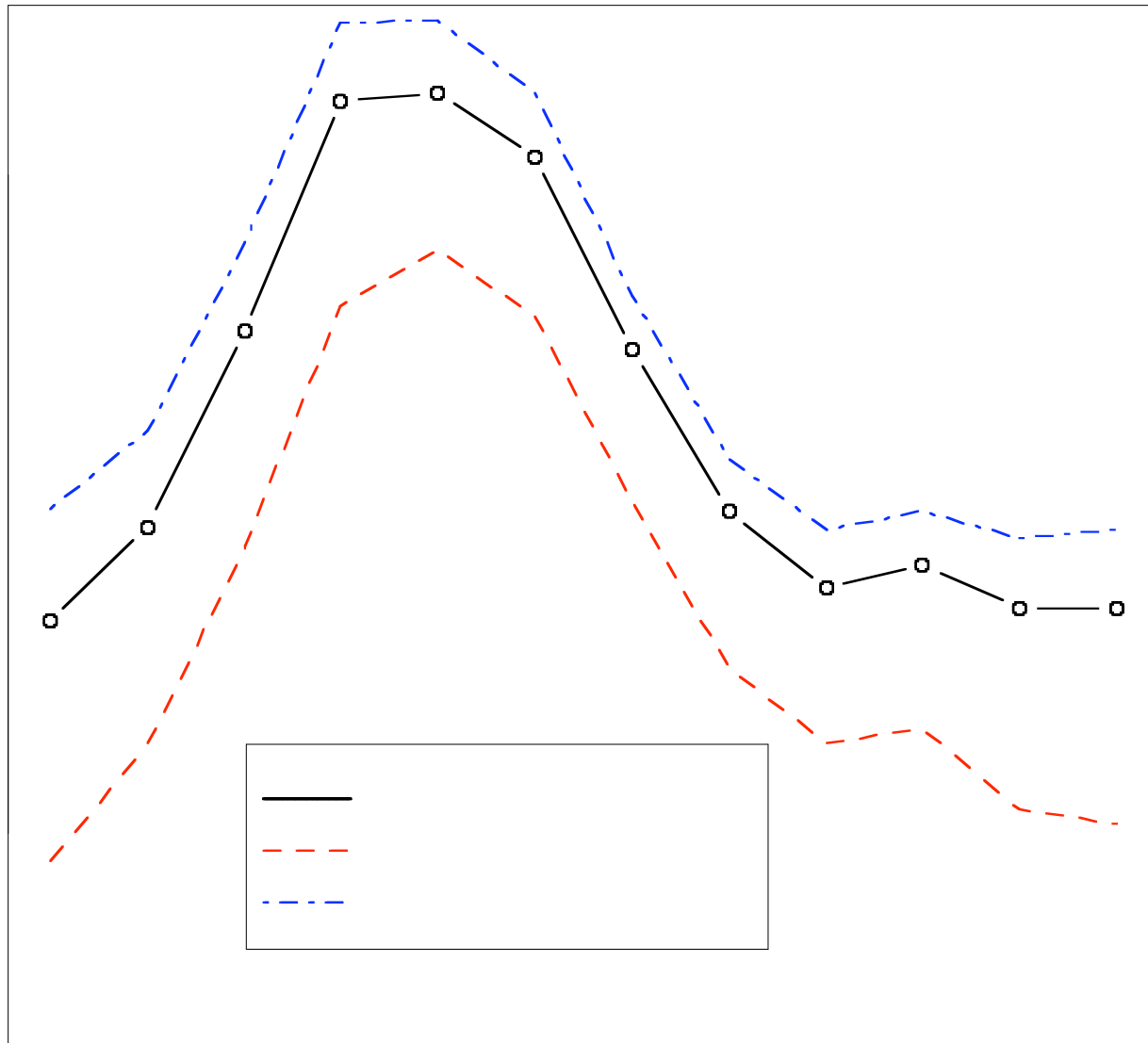
- Monthly temperature and precipitation
- Monthly indices of Eastern Pacific teleconnection intensity
- Monthly SST from Niño 3.4 region



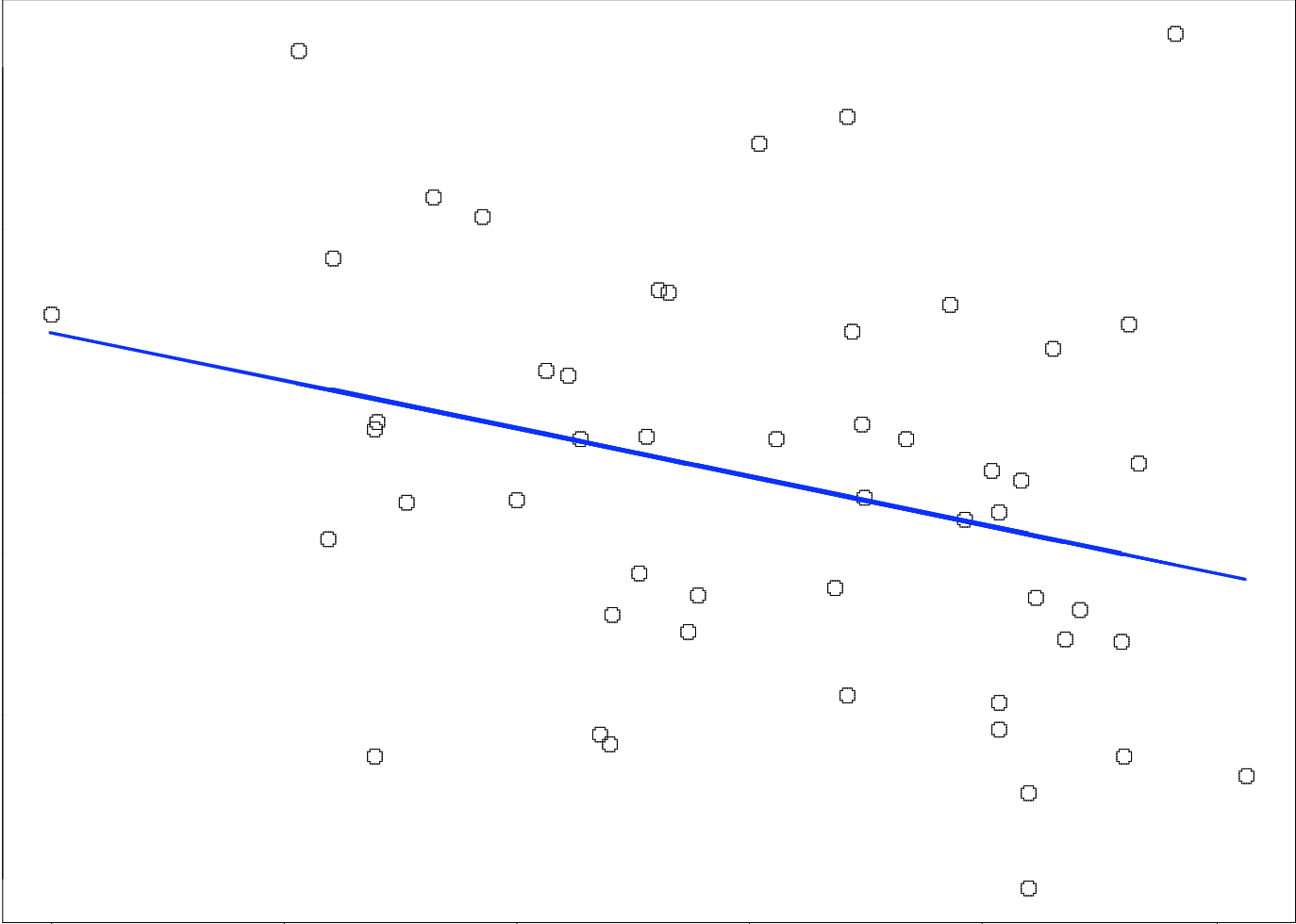
Eastern Pacific Teleconnection

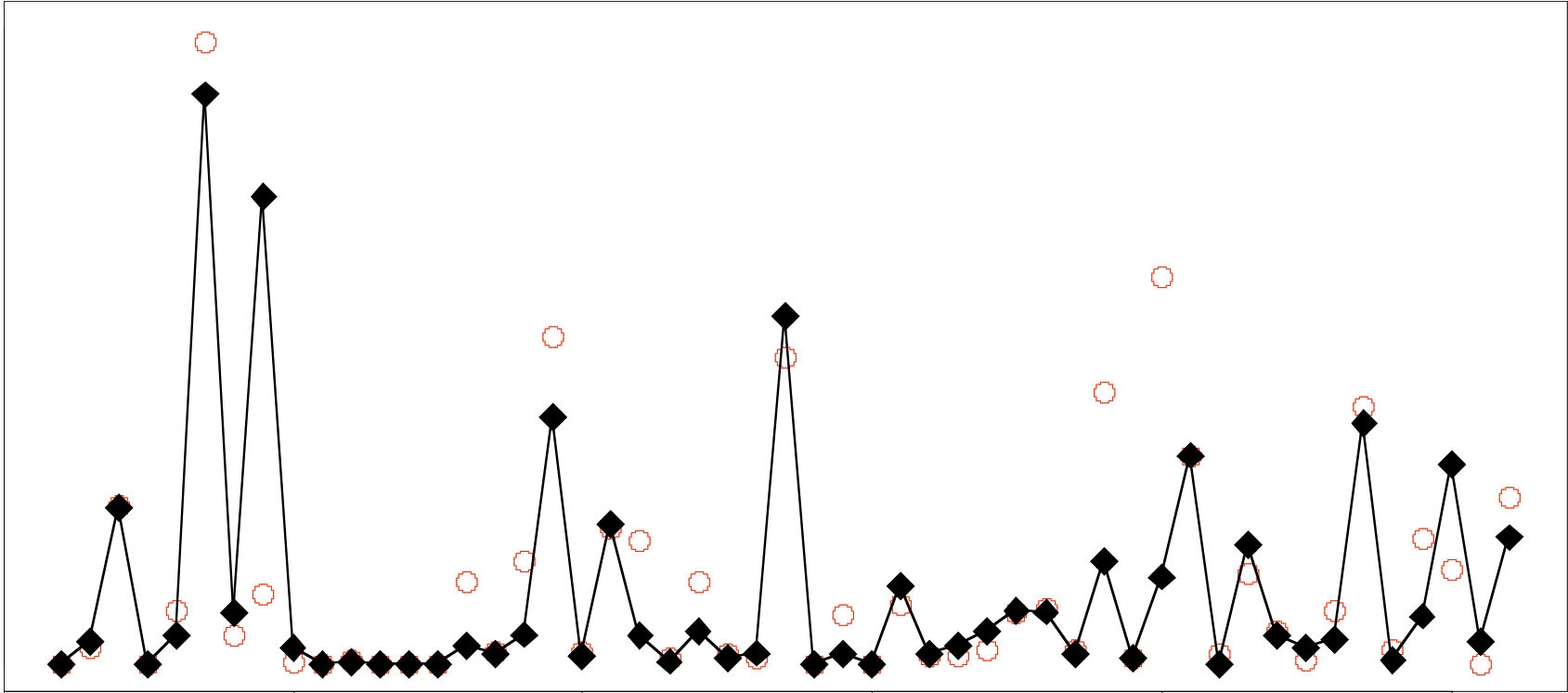
- Positive phases  a deeper than normal trough is located in the vicinity of the Gulf of Alaska
- Negative phases  increased zonal flow and strengthened westerlies in the Eastern North Pacific





Intra-annual
variability
in SST
changes
in years
preceding
ENSO
events





Conclusions

- Ocean-atmosphere interactions influence fire regime through impacts on monthly climate
- Statistical model can be used to forecast resource needs for upcoming fire season

