



MODIS, 2003



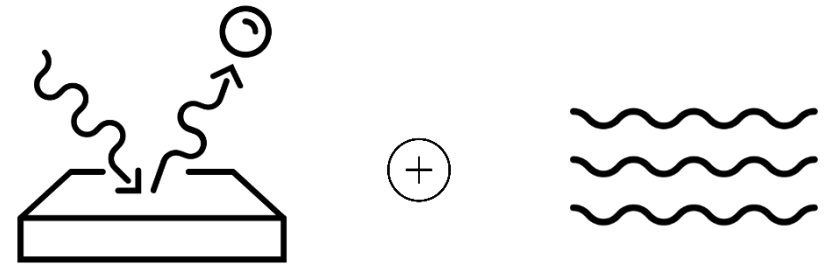
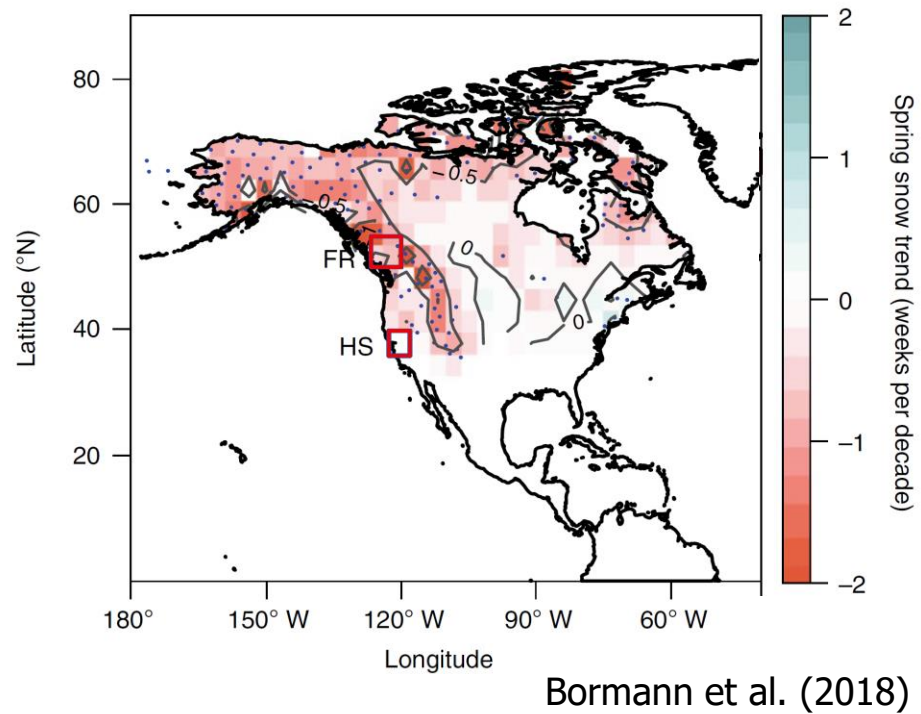


# Influence of snowmelt timing on Arctic-boreal fire season start across North America

T.D. Hessilt, B.M. Rogers, S. Potter,  
R.C. Scholten & S. Veraverbeke



# Importance of snow



# Data and methods



Long-term **snowmelt** trend from NSIDC & current daily snowmelt timing from MODIS



Daily **ignitions** from new burned area product based on Landsat and MODIS



Spatially **matched** ignitions with snowmelt timing





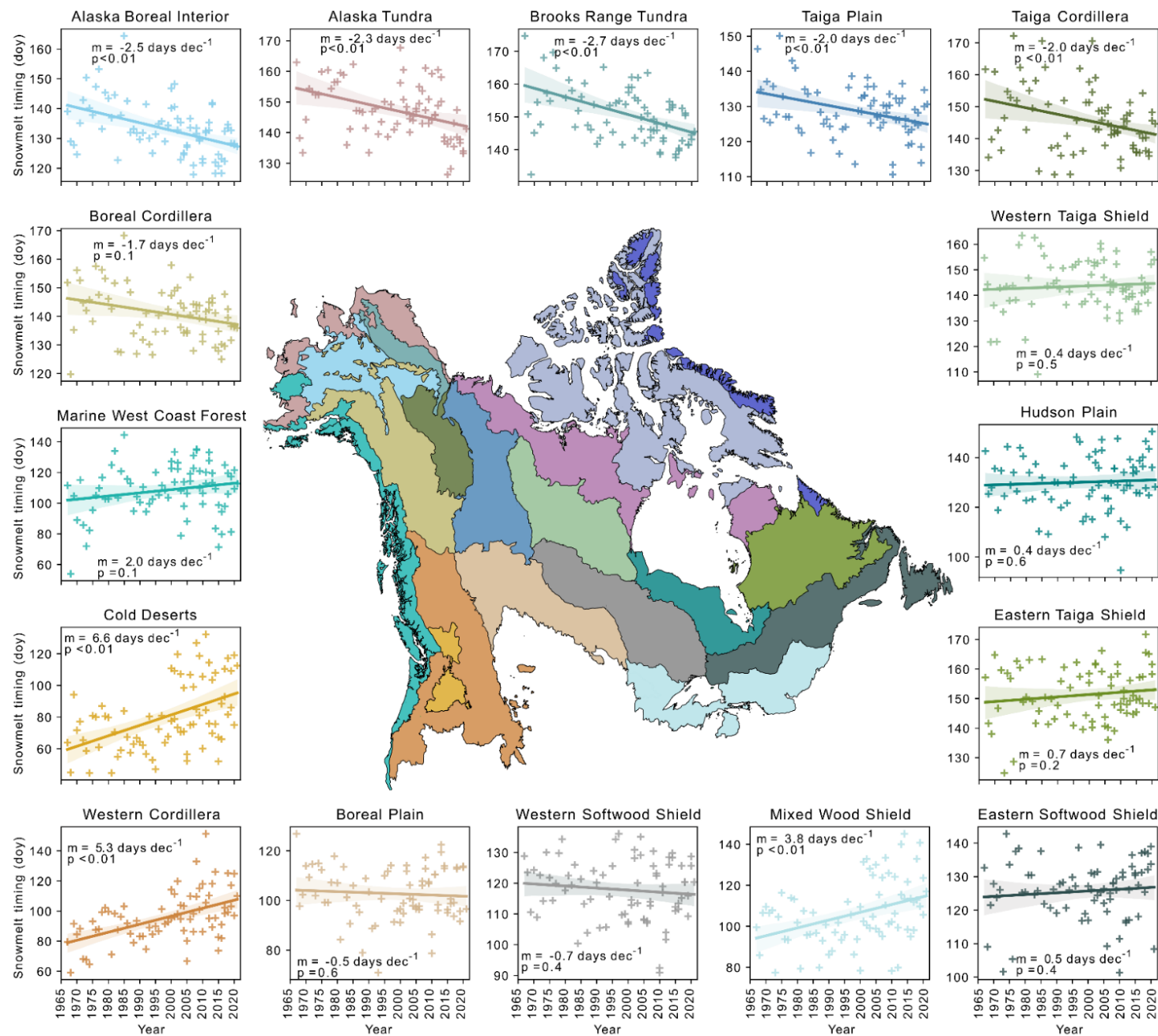
# Snowmelt timing

Tundra 2.5 days **earlier** per decade

NW 1.6 days **earlier** per decade

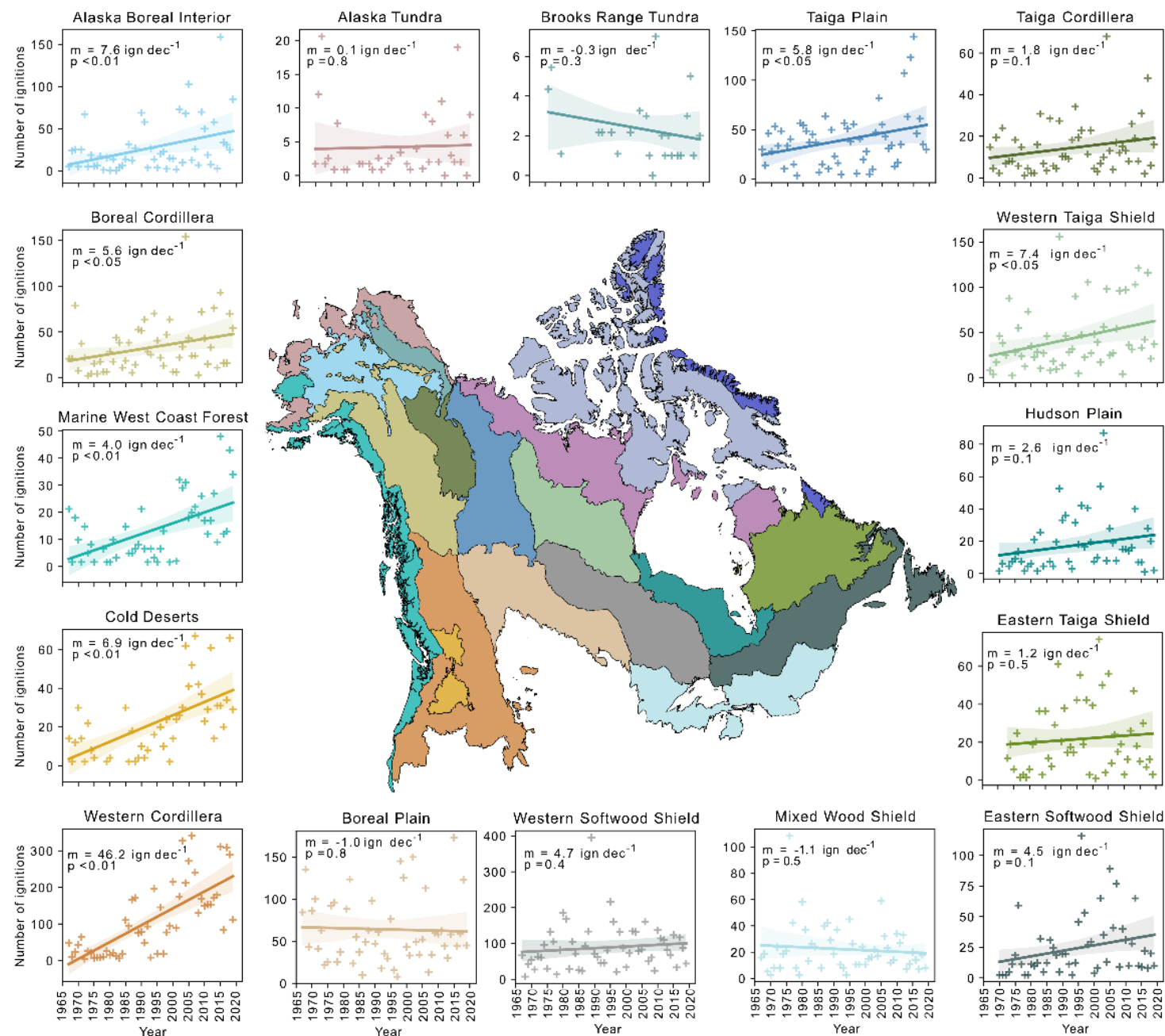
SW 4.6 days **later** per decade

SE 0.7 days **later** per decade



# Number of ignitions

Tundra	0.1 ignitions <b>less</b> per decade
NW	5.6 ignitions <b>more</b> per decade
SW	19 ignitions <b>more</b> per decade
SE	2.6 ignitions <b>more</b> per decade



# Relationship between snowmelt and ignition timing?

Earlier snowmelt → earlier ignition  
in 10 out 16 ecoregions,  $p < 0.05$

