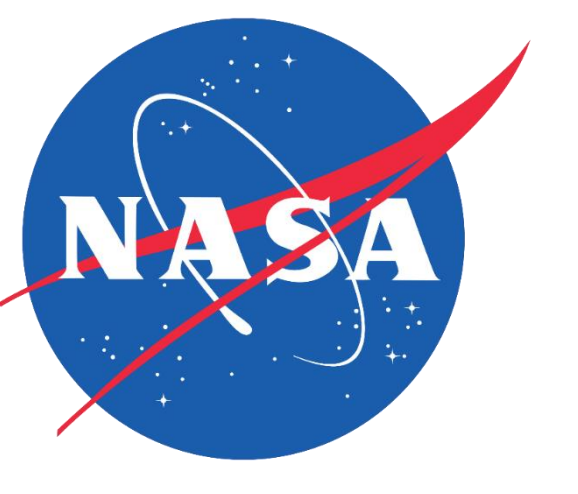




Northeast Alaska Climate

Evaluating Snow Variability through a Climatological Analysis to Support Ecological Monitoring in Northeast Alaska



Study Area/Period

National Petroleum Reserve - Alaska

Arctic National Wildlife Refuge

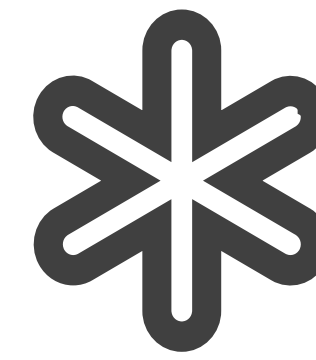
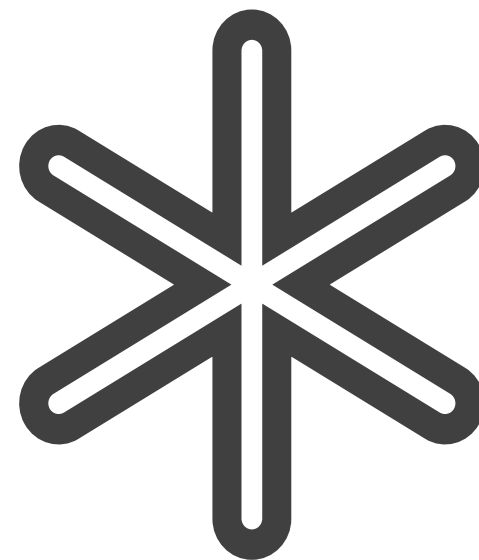
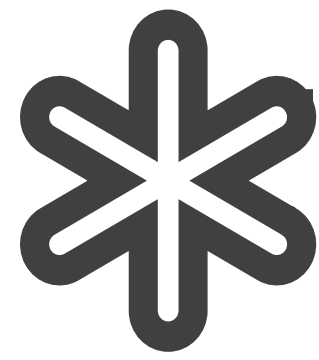
Alaska



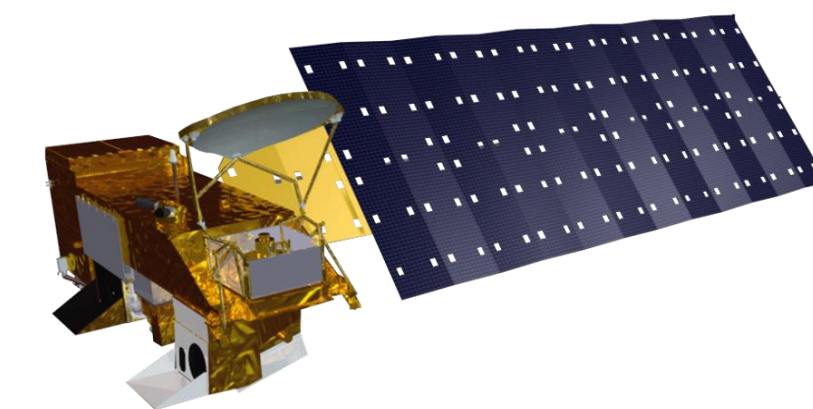
0 1,000 Km

Basemap credit: Esri, GEBCO DeLorme

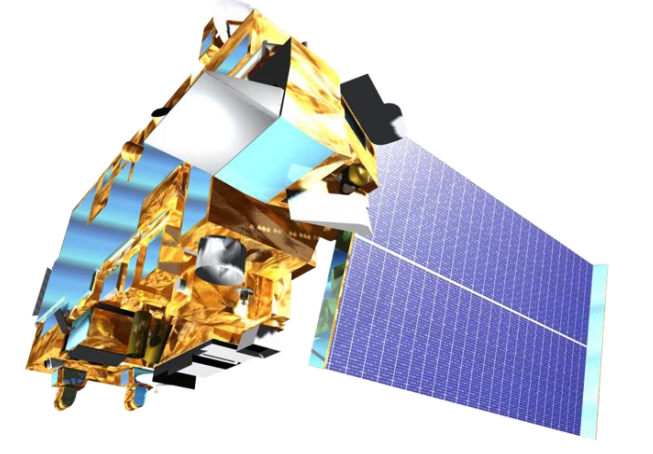
How are Snow Conditions Changing in Northeast Alaska?



Earth Observations & Products

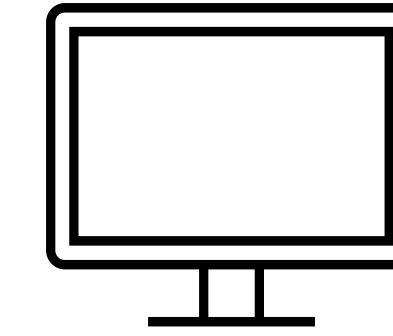


Terra MODIS



Aqua AMSR-E/AMSR2

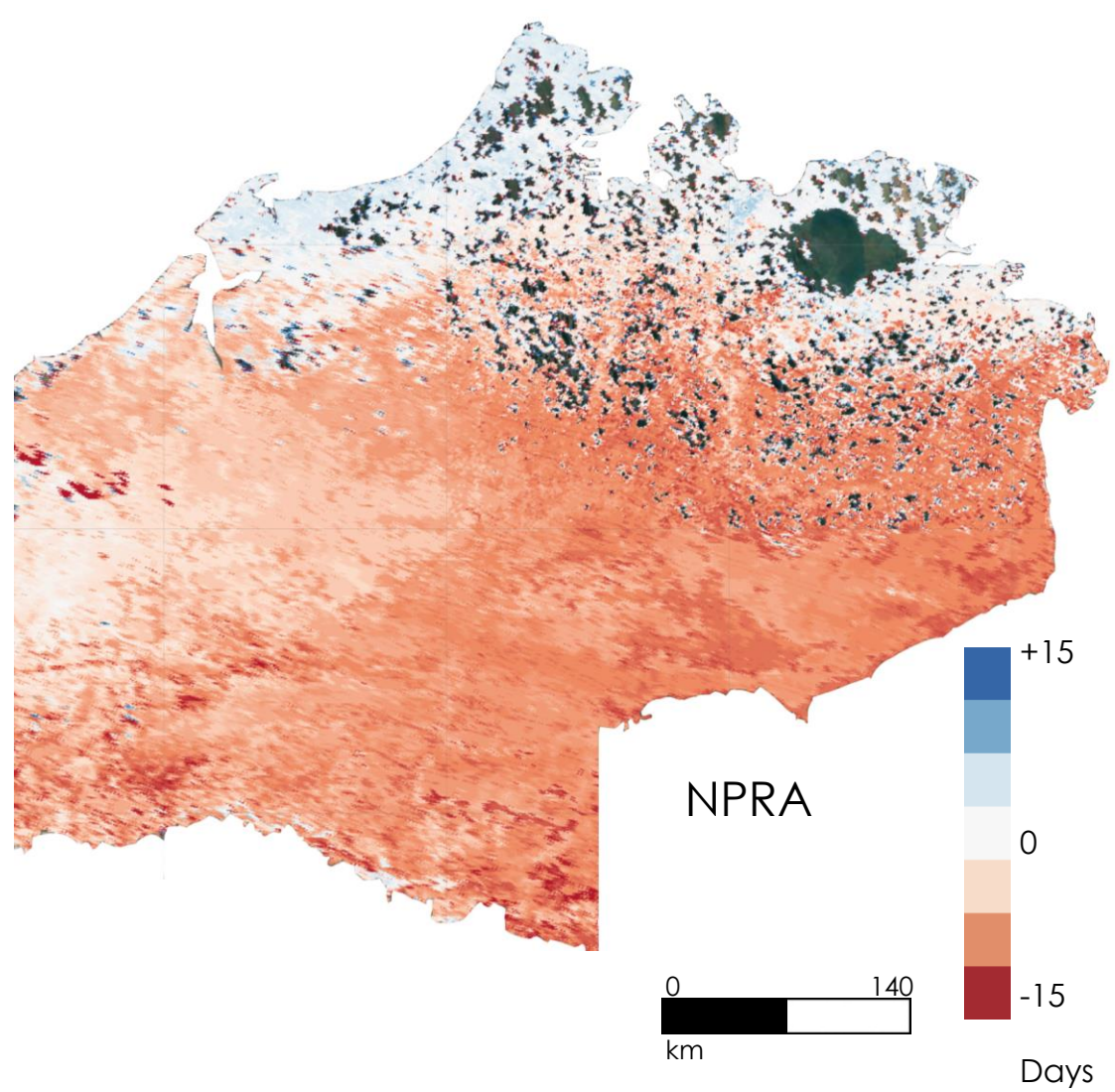
Image Credits: NASA



2.1 Global Land Data Assimilation System (GLDAS-2.1)

Snow Season Change

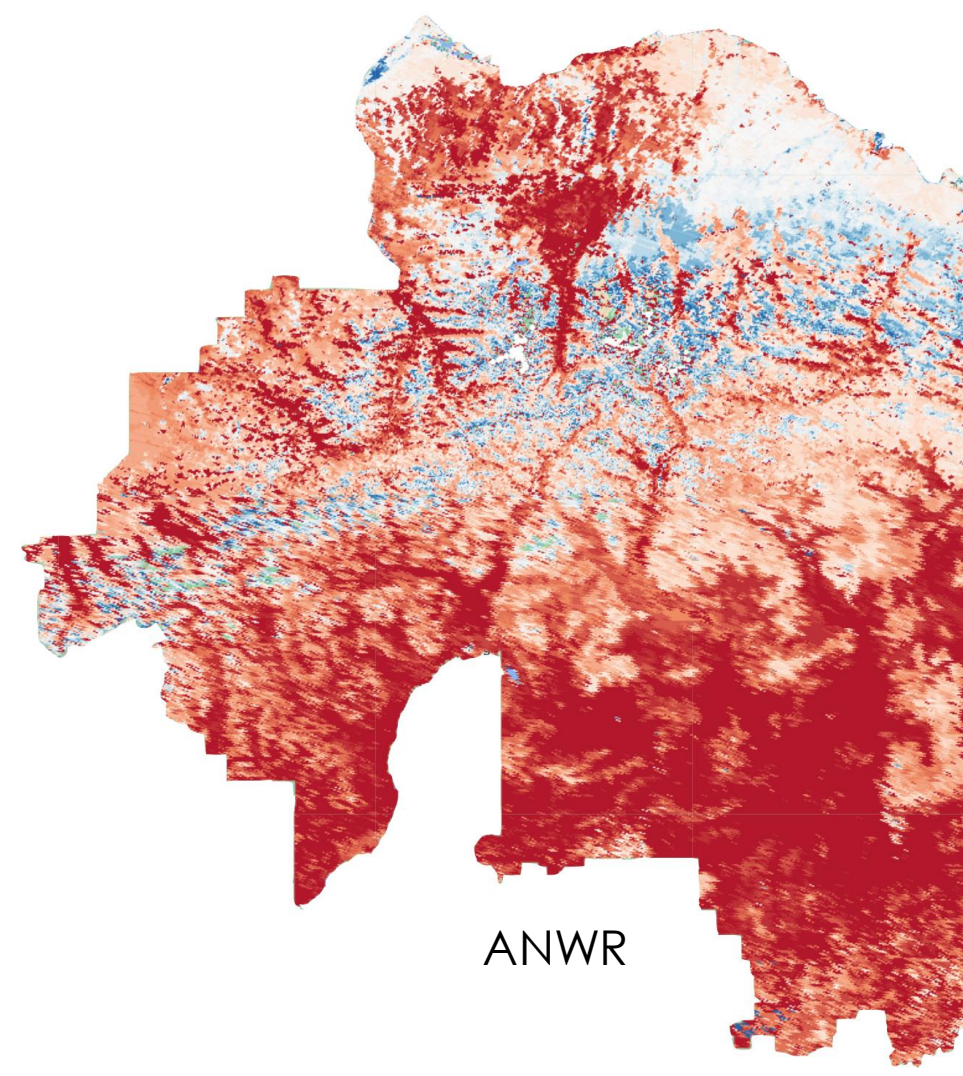
Last Day of Snow Season Difference between 2000 and 2022



NPRA

0 140 km

+15
0
-15
Days

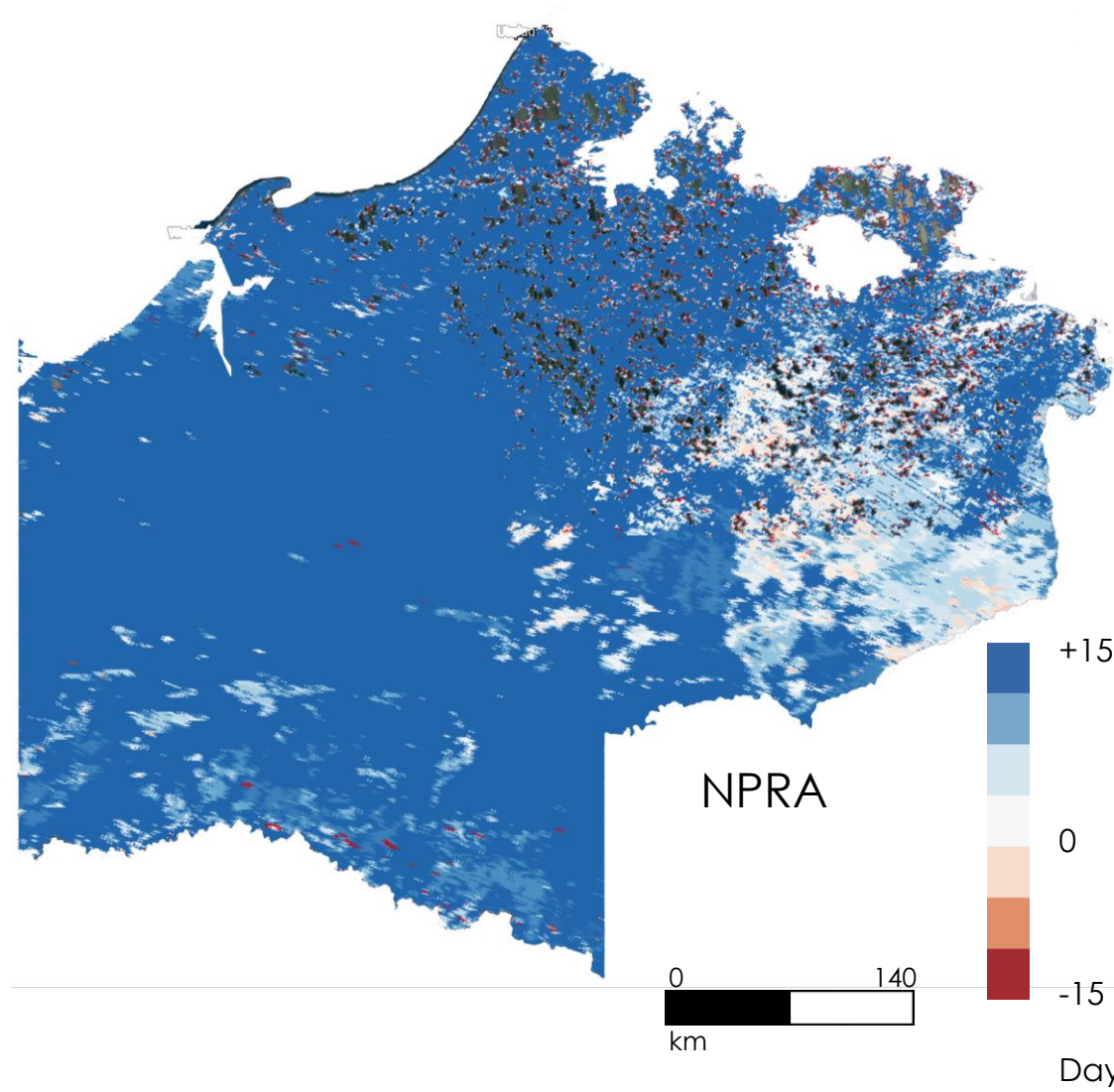


ANWR

0 140 km

+15
0
-15
Days

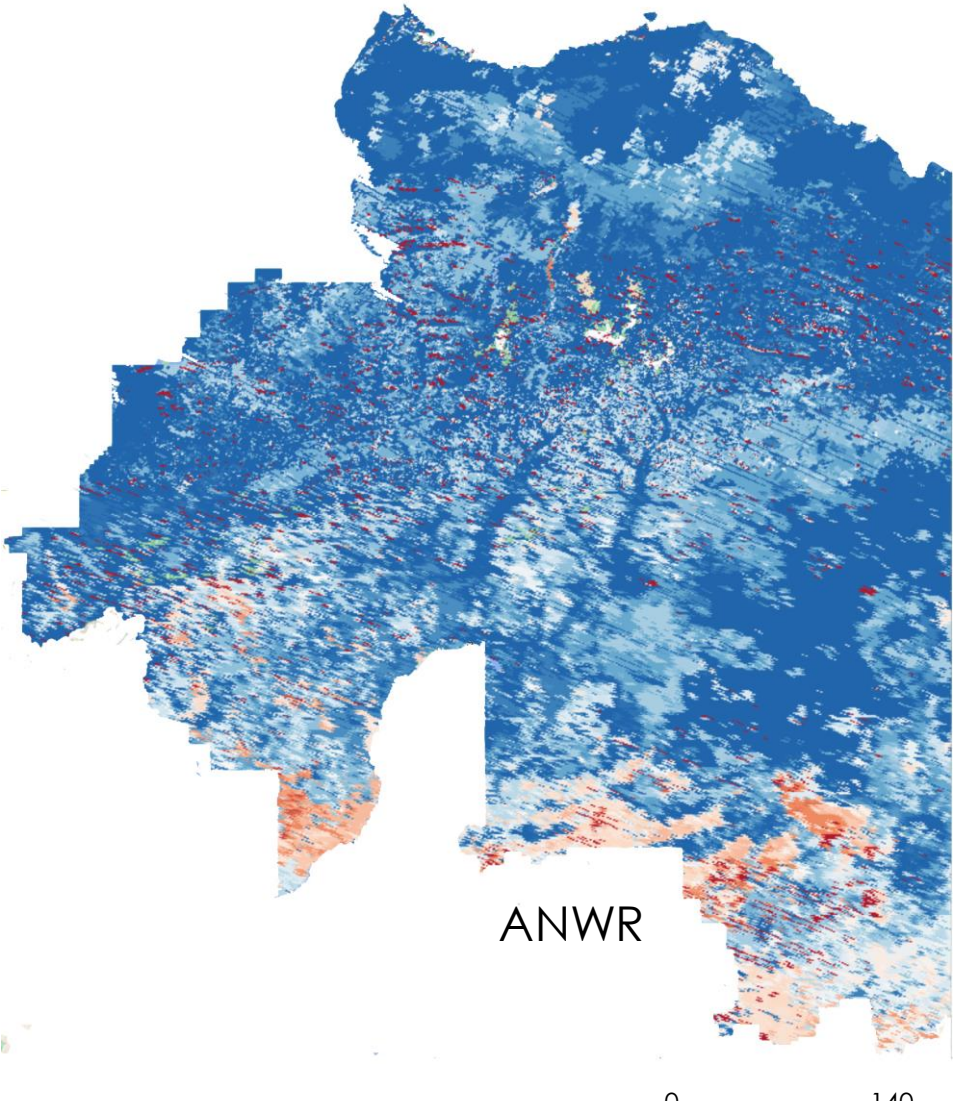
First Day of Snow Season Difference between 2000 and 2022



NPRA

0 140 km

+15
0
-15
Days

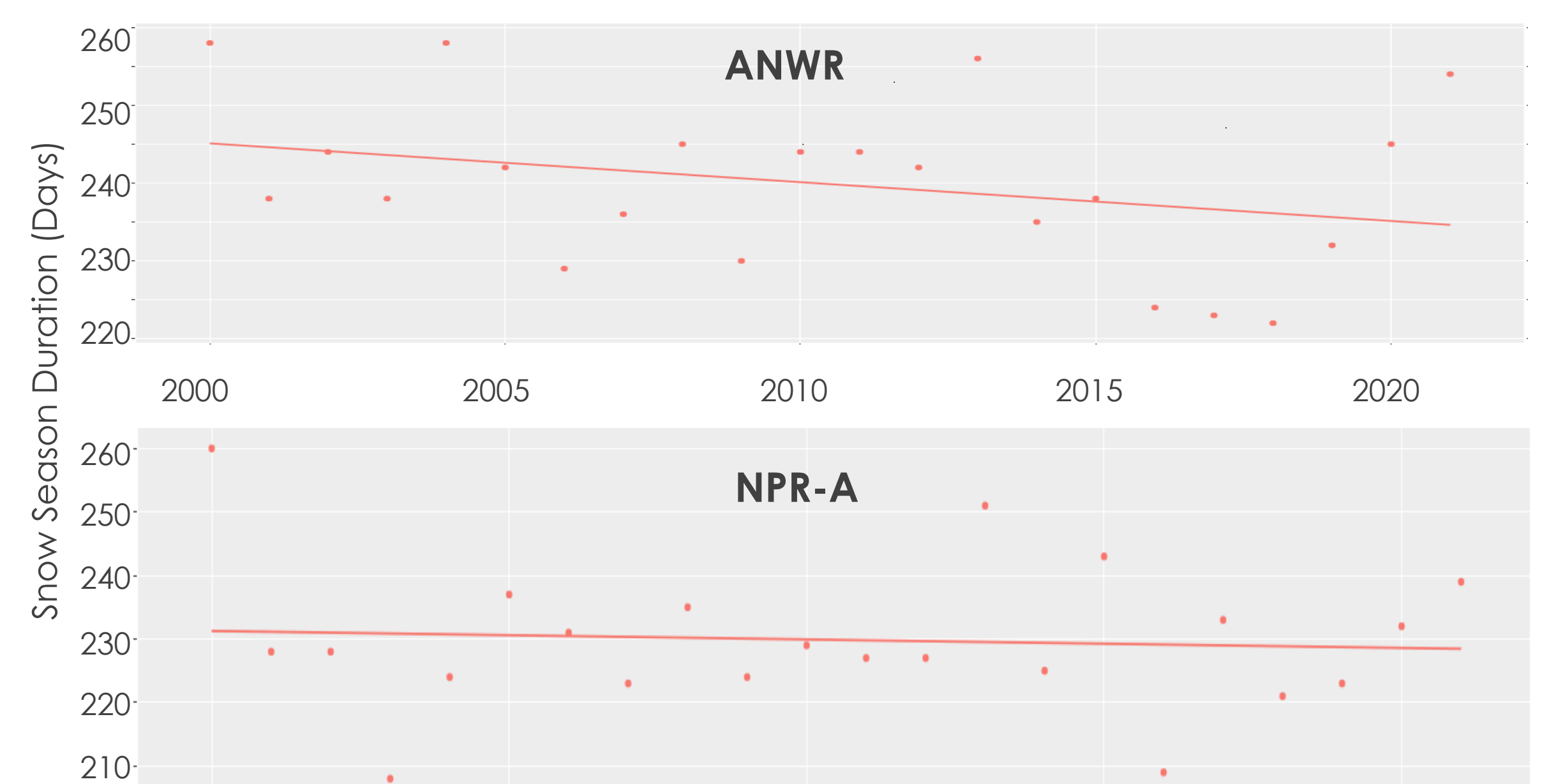


ANWR

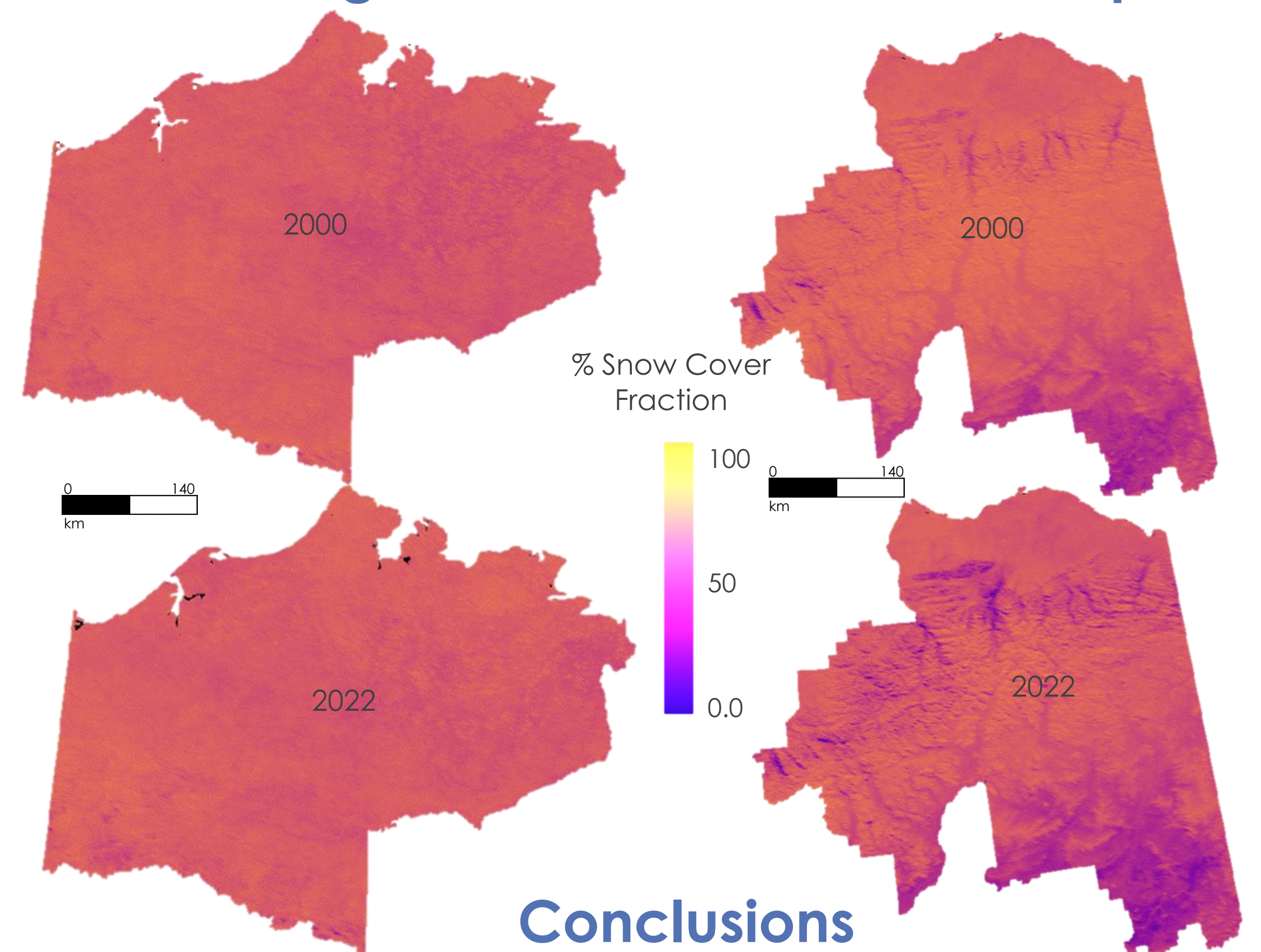
0 140 km

+15
0
-15
Days

Snow Season Duration



Average Snow Cover Fraction Maps



% Snow Cover Fraction

100
50
0.0

0 140 km

0 140 km

Conclusions

The duration of the snow season is shortening

Snow Cover is Decreasing

The last & first days of snow are occurring earlier and later respectively

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25TH DEVELOP

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