

NRCan Velocity Fields for SNARF

SNARF Workshop 6



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Natural Resources
Canada

Ressources naturelles
Canada

Canada



Outline

Evaluation of plate motion estimates using NAREF & CBN

New NAREF & CBN solutions

Questions about SNARF v.1.0





Evaluation of Plate Motion Estimates

NAREF & CBN velocities in ITRF

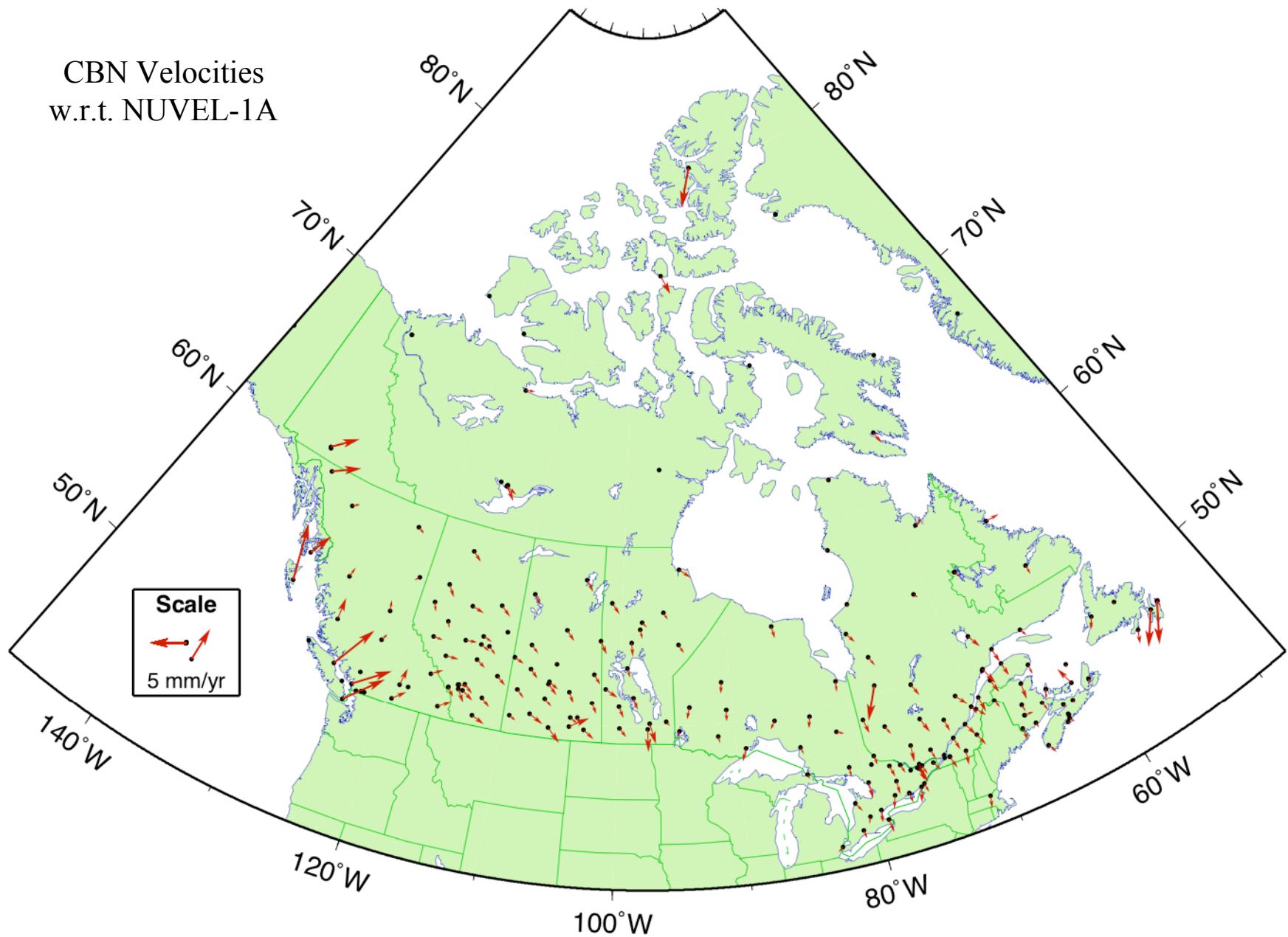
- CBN campaign surveys from 1994 to 2002
- NAREF weekly solutions 2001-2005
- ALGO constrained (weighted) to IGS05P05.snx

Removed different plate motion estimates

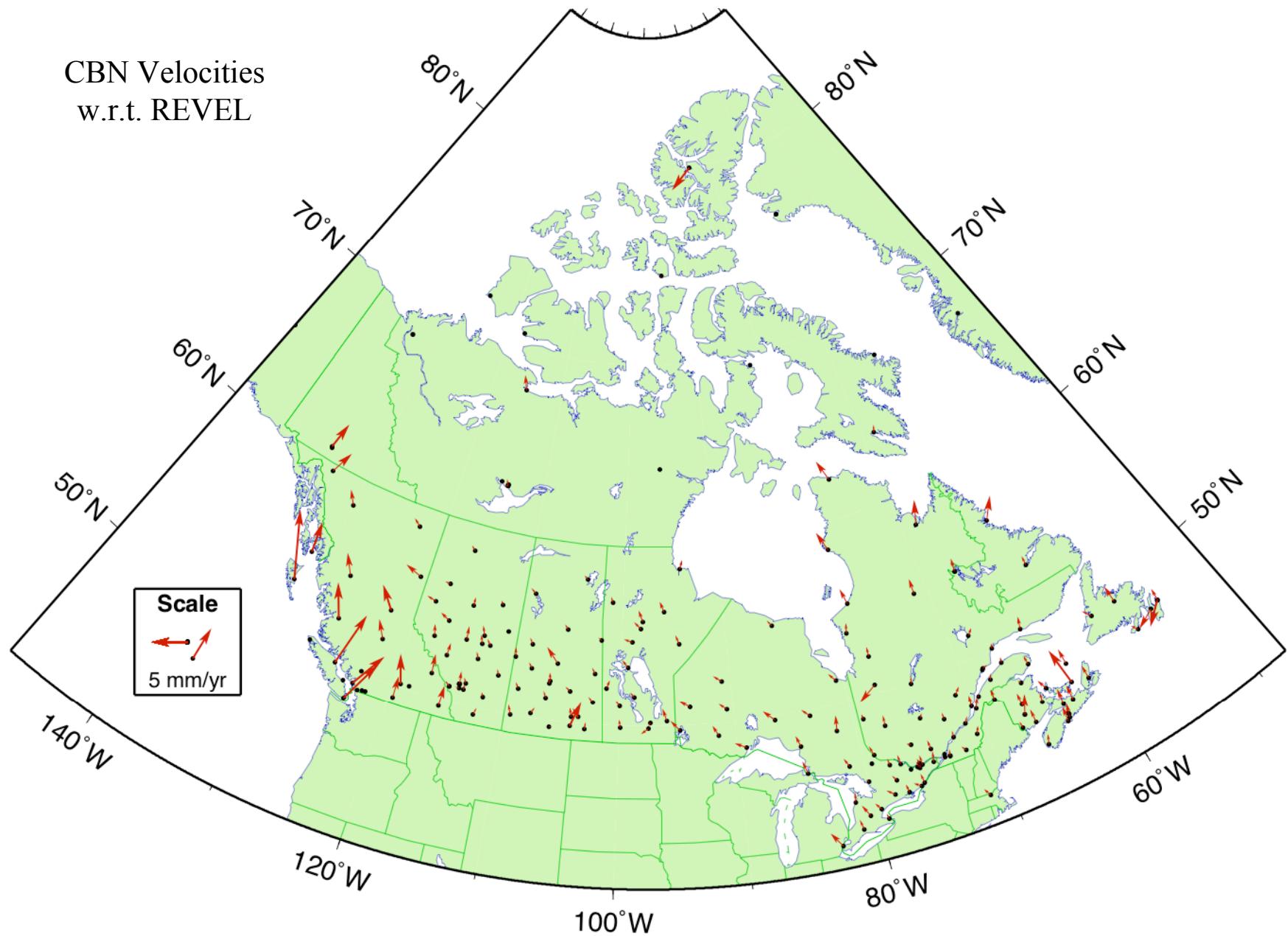
- NNR-NUVEL1A
- REVEL
- ITRF2000
- SNARF 1.0
- Calais (2006)
- Kreemer (2006)
- Sella (in press)

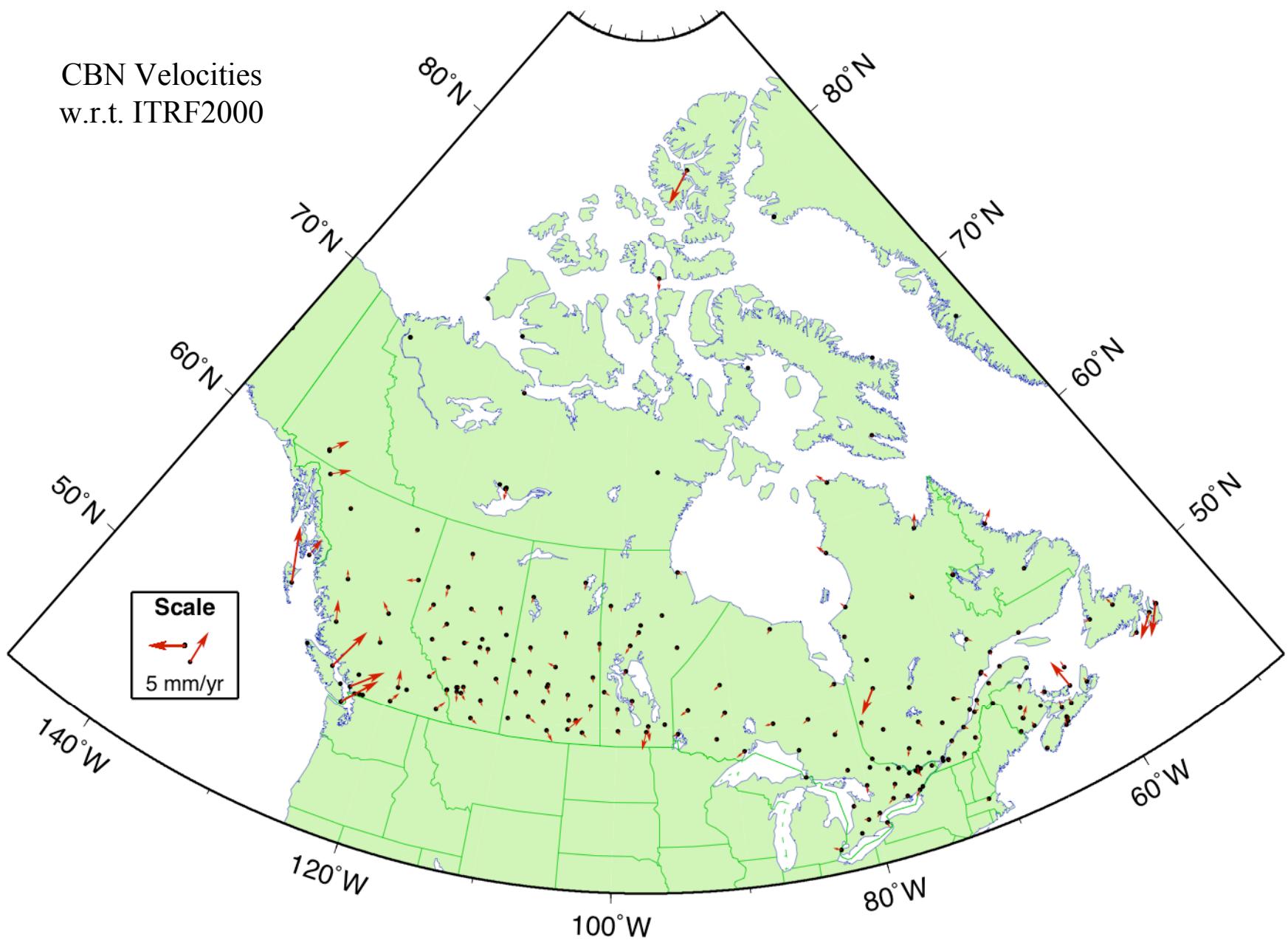


CBN Velocities
w.r.t. NUVEL-1A

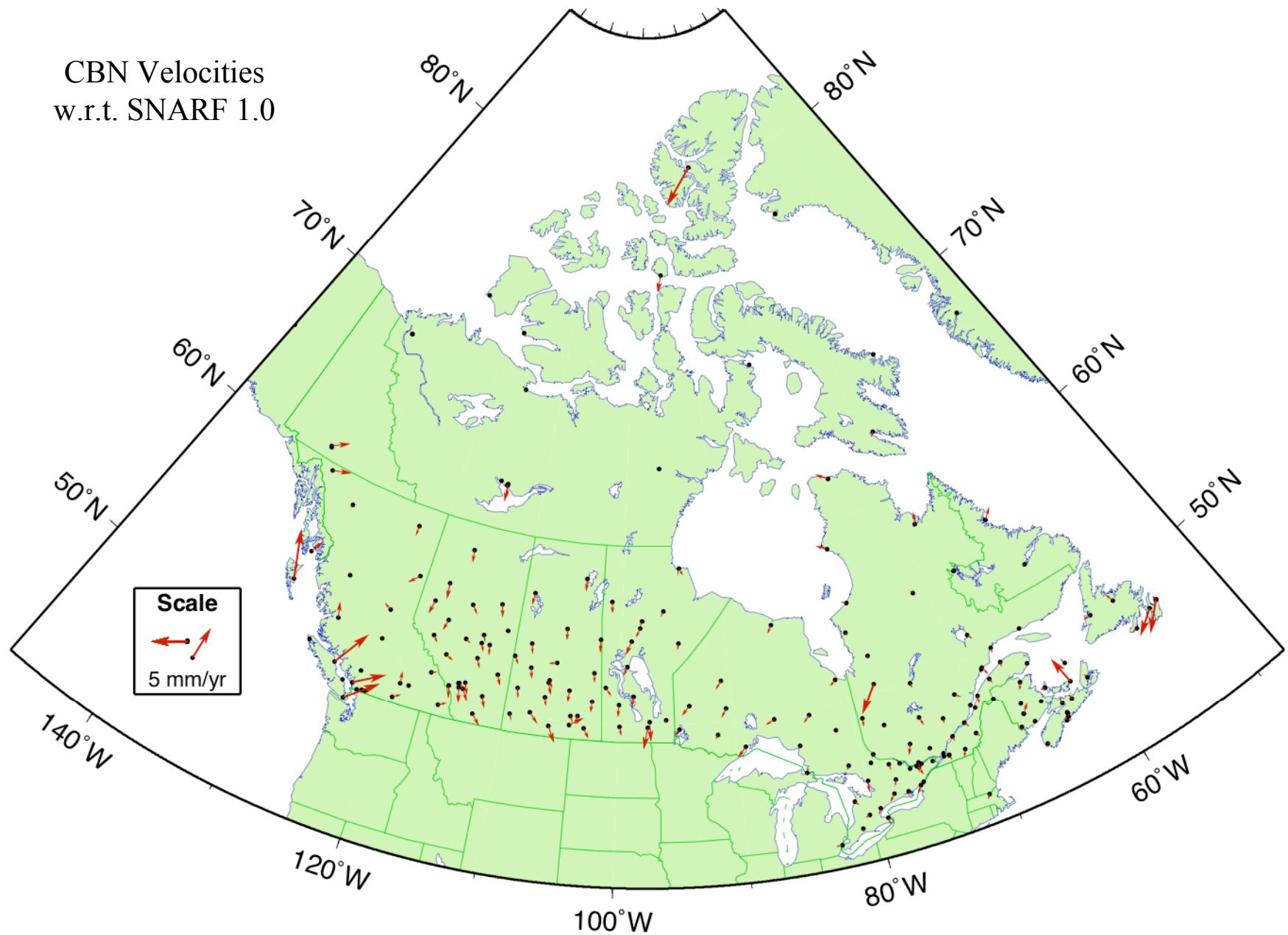


CBN Velocities
w.r.t. REVEL

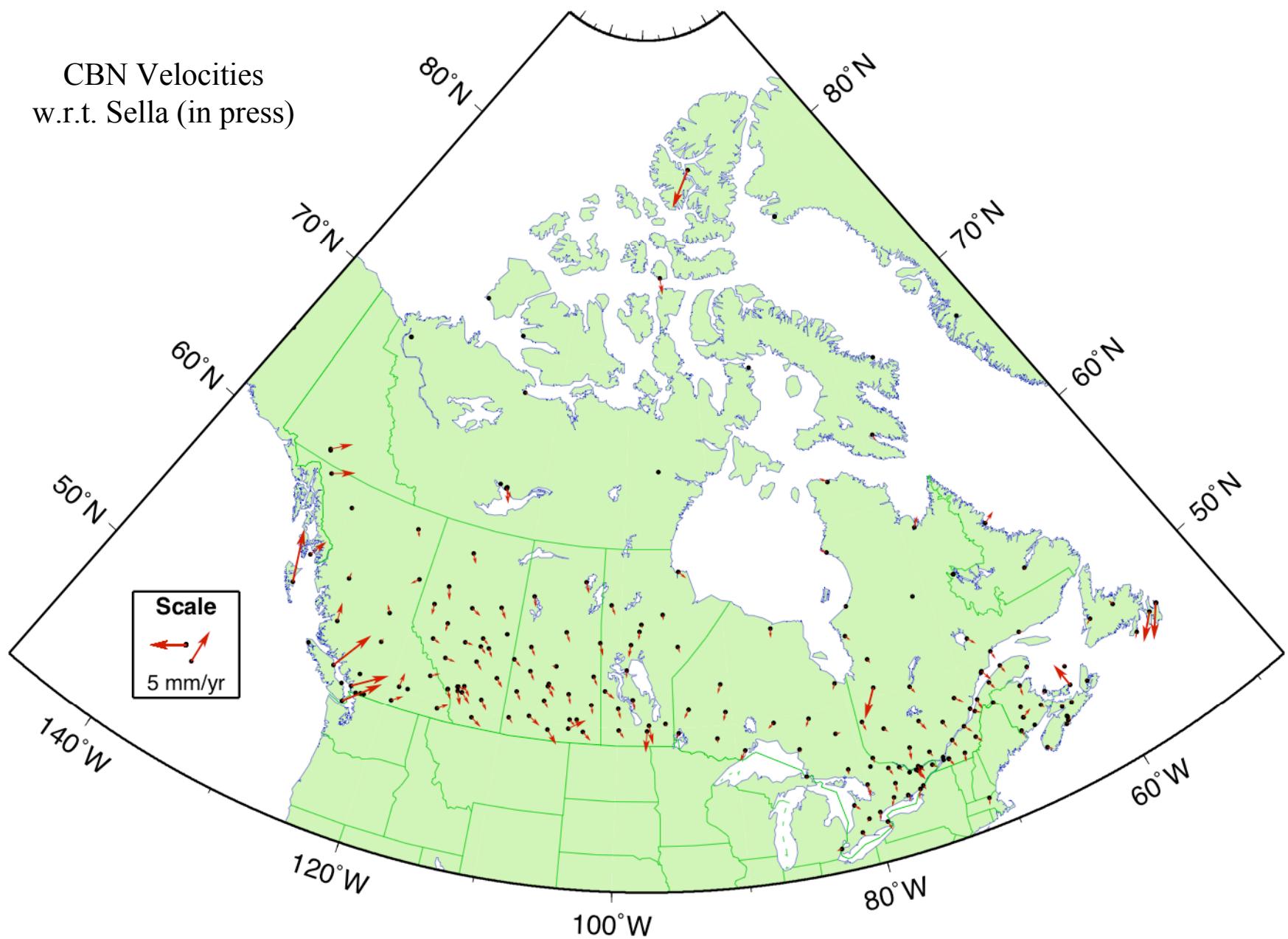




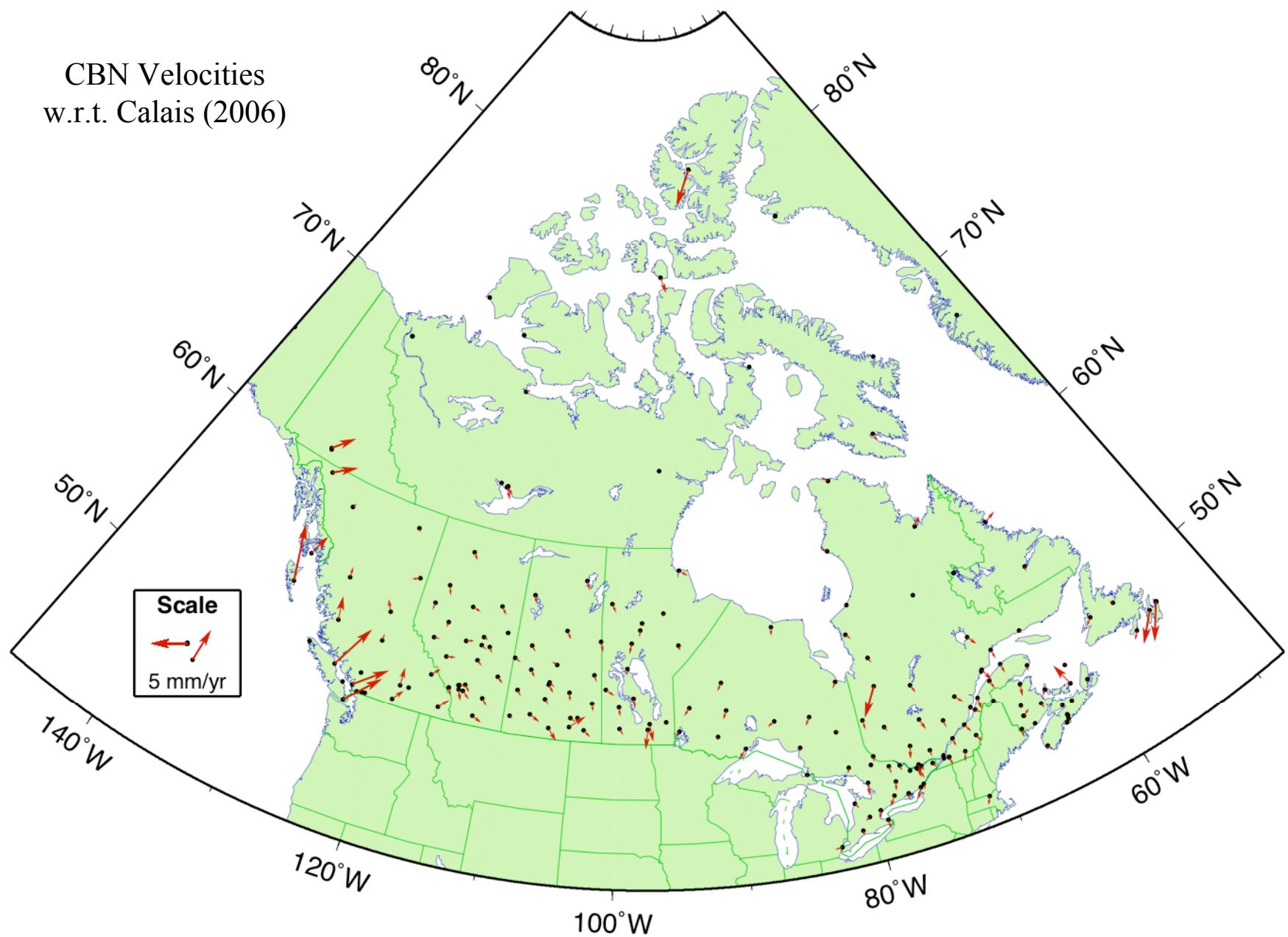
CBN Velocities
w.r.t. SNARF 1.0



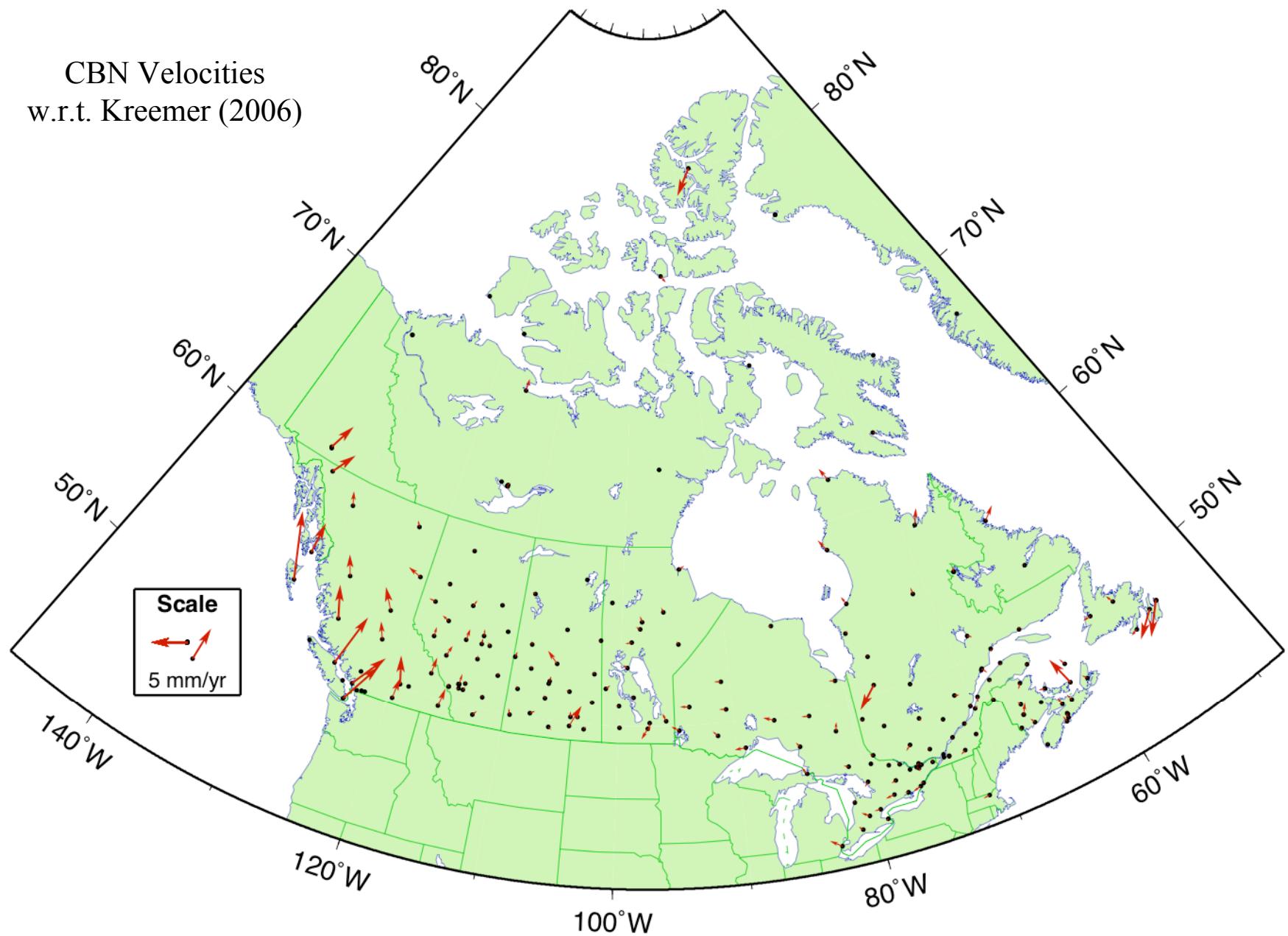
CBN Velocities
w.r.t. Sella (in press)

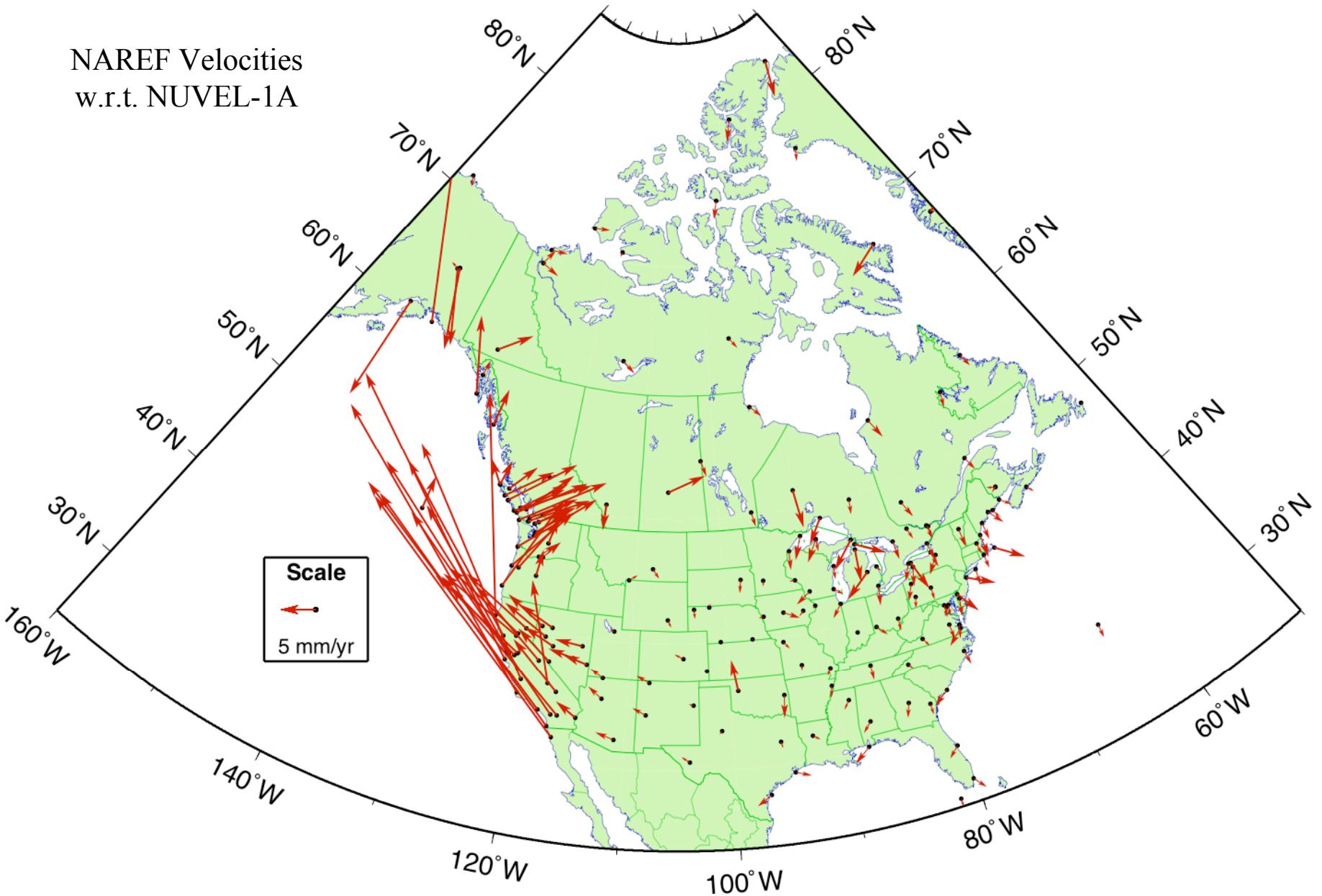


CBN Velocities
w.r.t. Calais (2006)

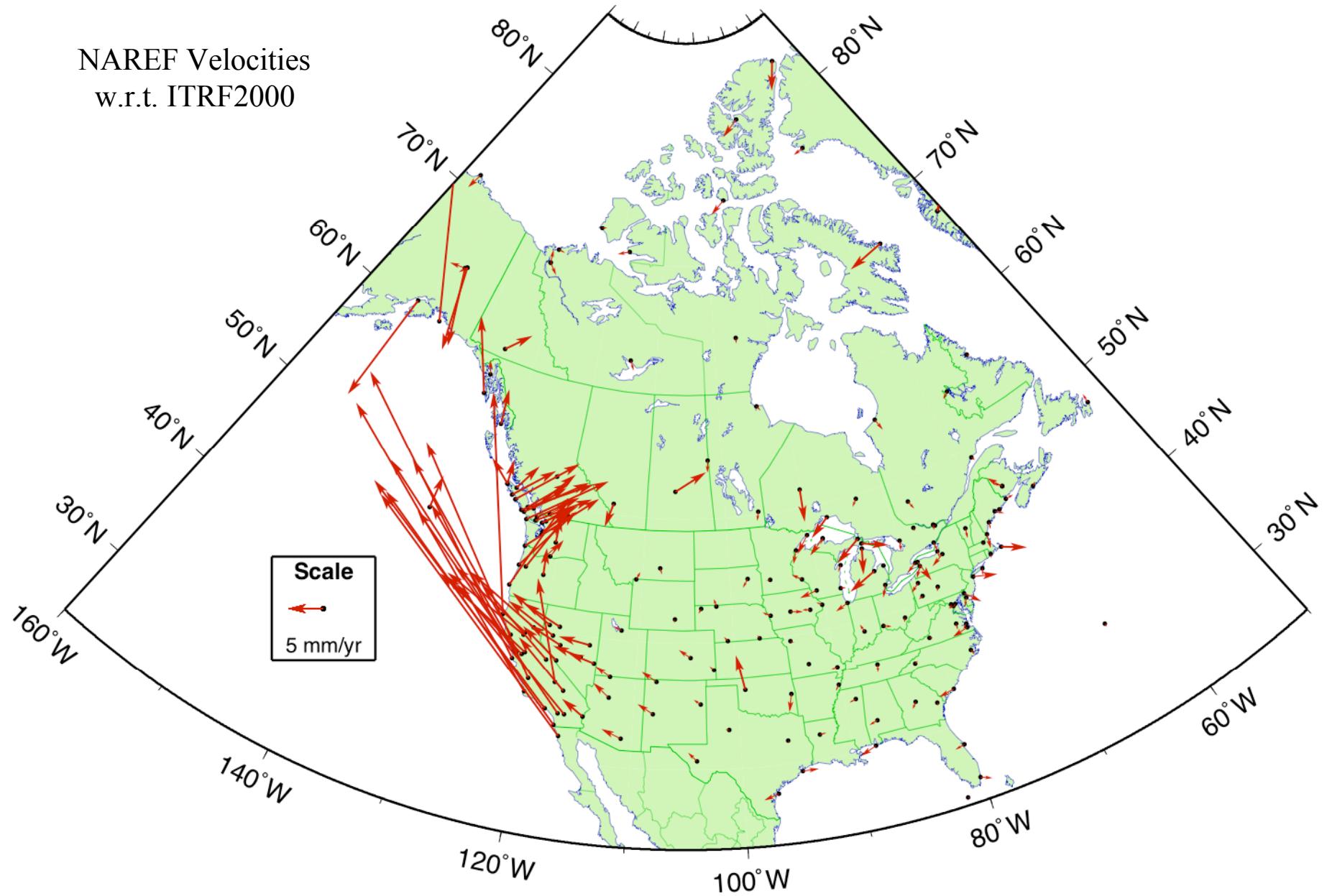


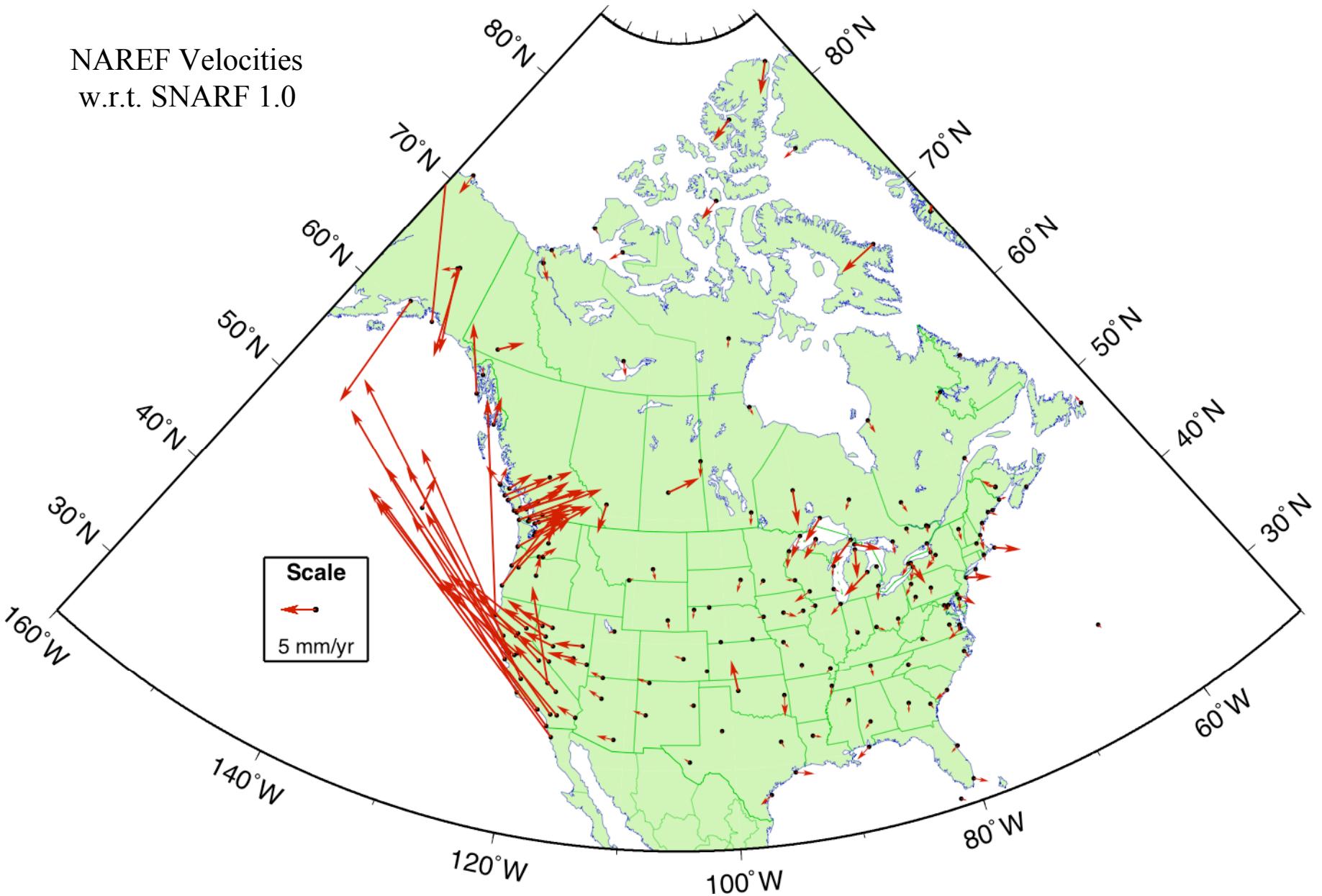
CBN Velocities
w.r.t. Kreemer (2006)



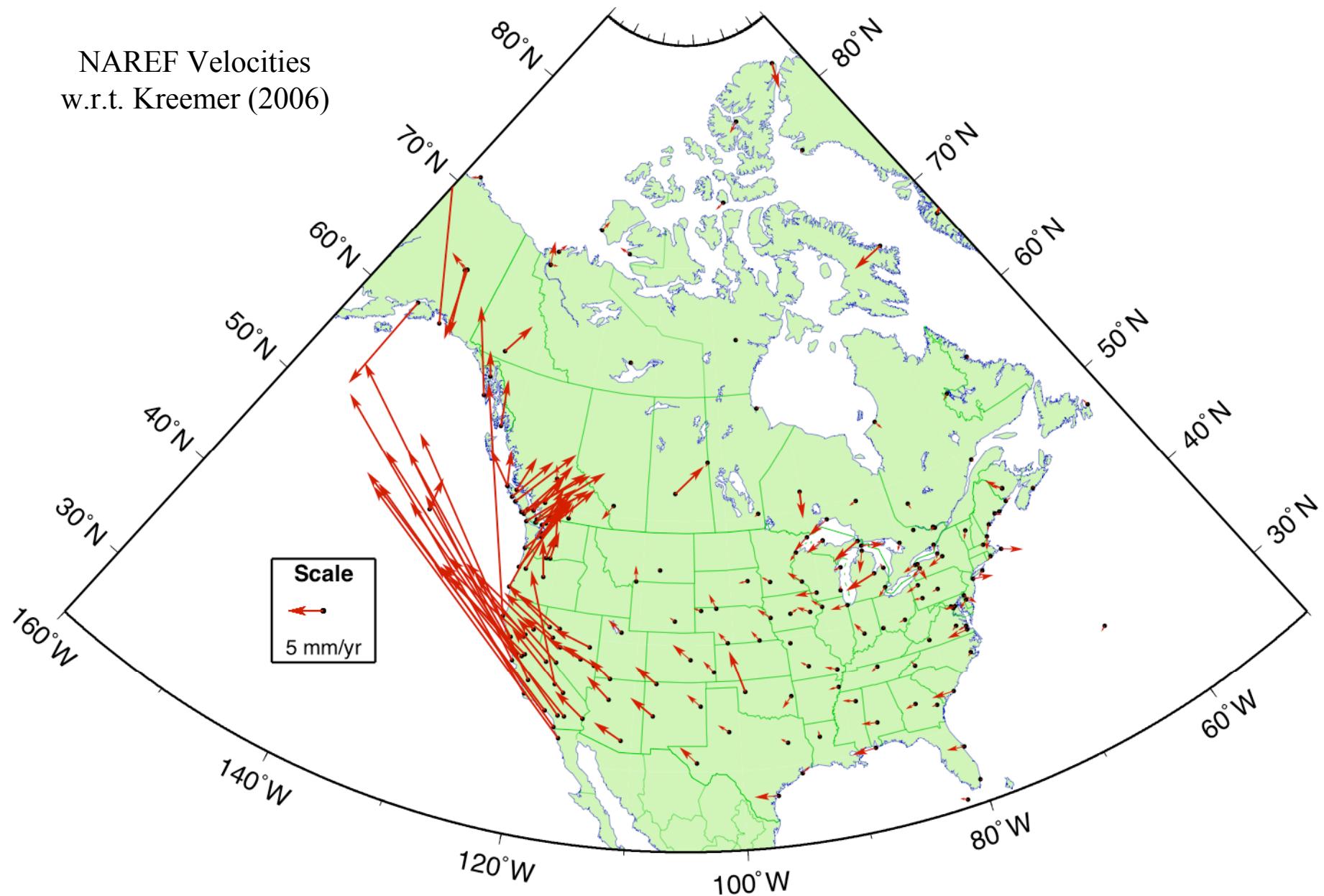


NAREF Velocities
w.r.t. ITRF2000





NAREF Velocities
w.r.t. Kreemer (2006)





New NAREF & CBN Solutions

NAREF Reprocessing

- Reprocessed GSD weekly Berense solutions with v5
- In process of recombining weekly NAREF solutions
- Including official weekly PBO solutions
- Will re-compute velocity solution
- Need redundant solutions for CORS sites (SIO?)

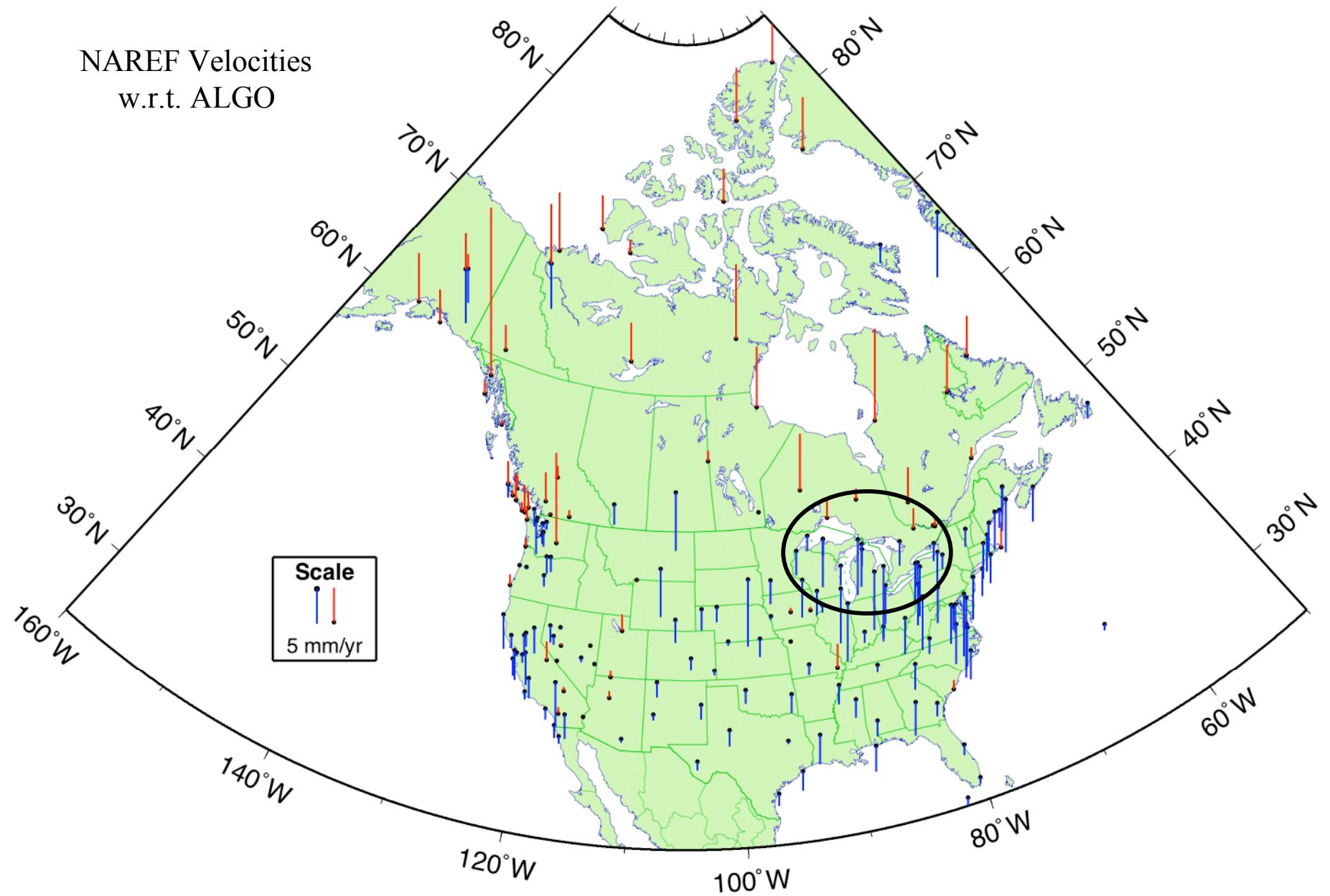
CBN Reprocessing

- Will reprocess all epochs with Bernese v5
- Will include 2005/2006 epochs
- May incorporate with NAREF velocity solution

Possibility of SIO updating “PBO” weekly solutions?

- Add as many other N.A. stations as possible since 2001





New GSD Bernese v5 Velocities
w.r.t. ALGO





IGS05 Products

Need to reprocess all data again!

- Current IGS orbits using absolute PCV & accounting for antenna domes
- Have to wait for reprocessed precise orbits (end 2007?)
- Include global stations?
- Will NAREF contributors reprocess their data?
 - GSD yes
 - NGS ??
 - MIT ??
 - SIO ?? (a N.A.-wide solution?)
 - PGC Probably





SNARF 1.0 Questions

What transformation from ITRF defines SNARF?

- Transformation determined by Jim Davis for the frame?
- Transformation determined by Tom Herring?

What stations were used to define these transformations?

What transformation should be used with PPP?

- Euler vector computed by Tom Herring?
- Transformation used to define SNARF?

