

Les Marges Passives Arctiques: un enjeu scientifique majeur

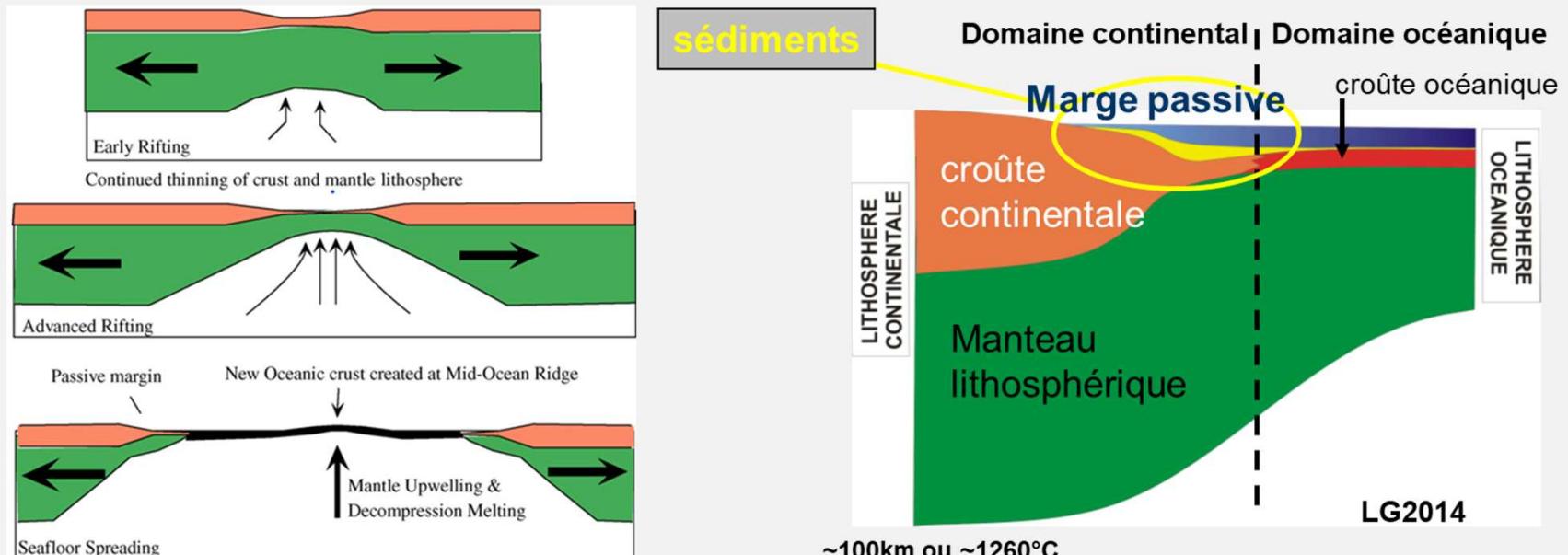
Laurent GEOFFROY, IUEM, Université de BREST,
UMR 6538 Domaines Océaniques

Et les membres des groupes: VOLCABASIN//Actions Marges II// Processus//
GRI Margins...



Svartehuk, VOLCABASIN 2012

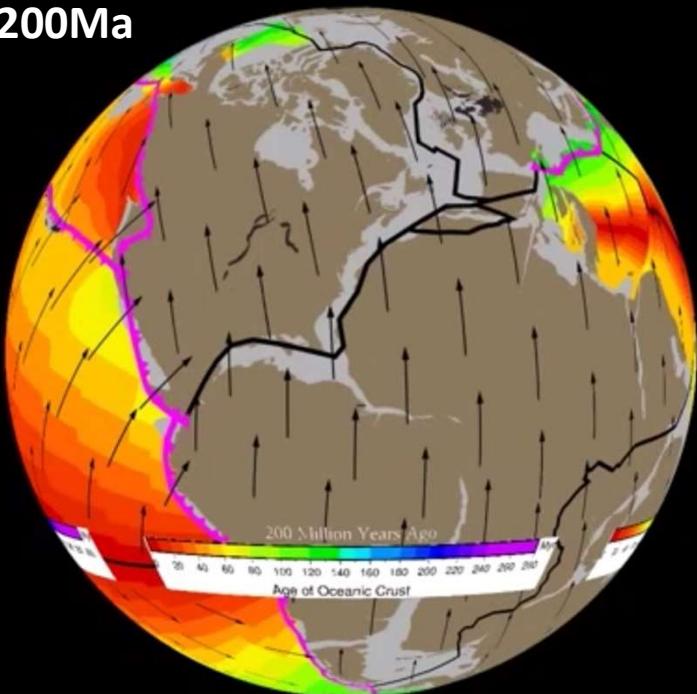
Lithosphère et transition continent-océan



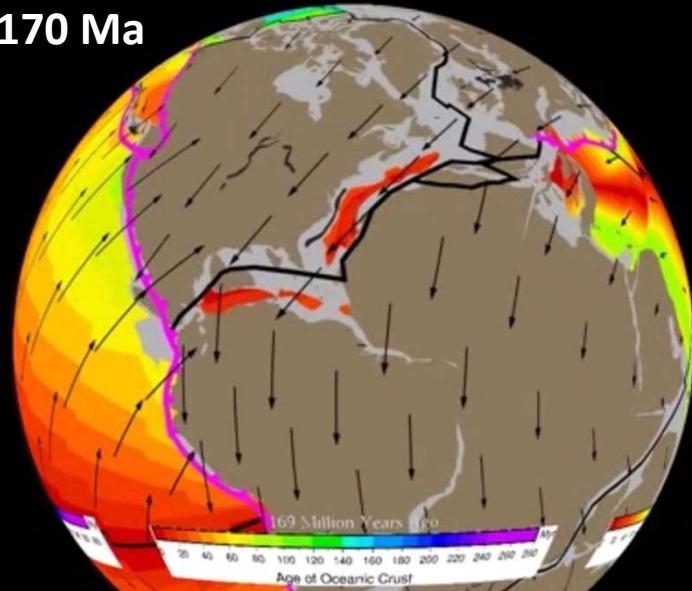
Intérêt des marges passives

- **Académique** : processus de la rupture continentale
- **Economique** : hydrocarbures
- **Environnementale/risques** : instabilités gravitaires (>tsunamis: Storegga...)

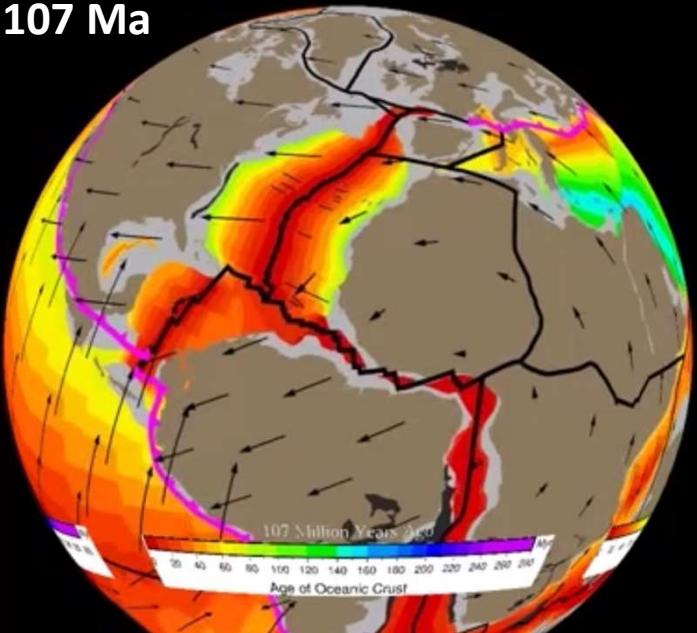
200 Ma



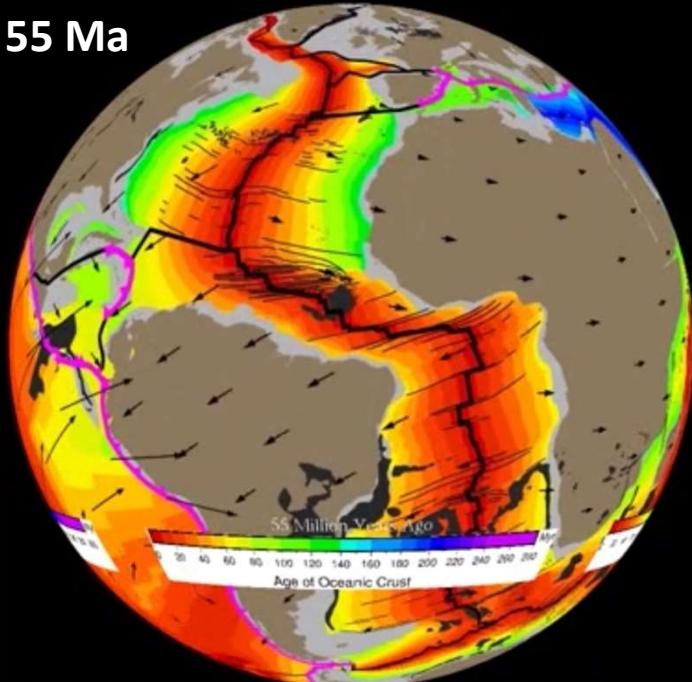
170 Ma



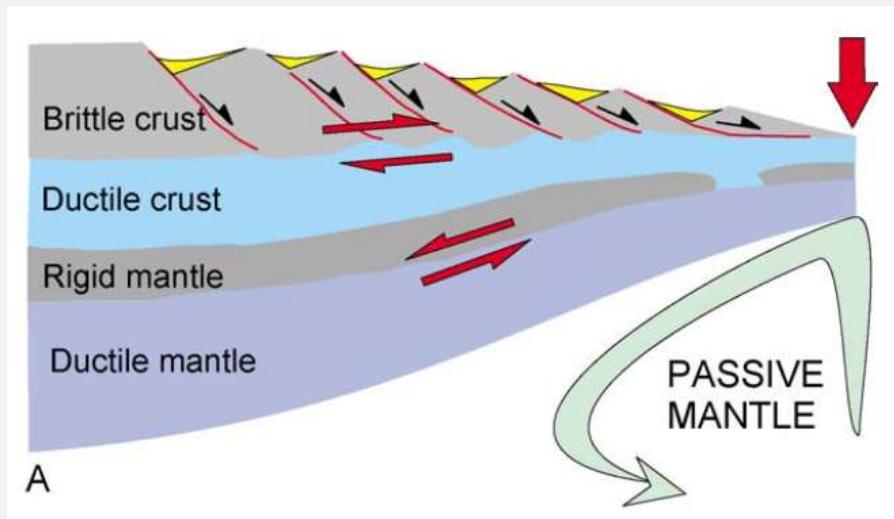
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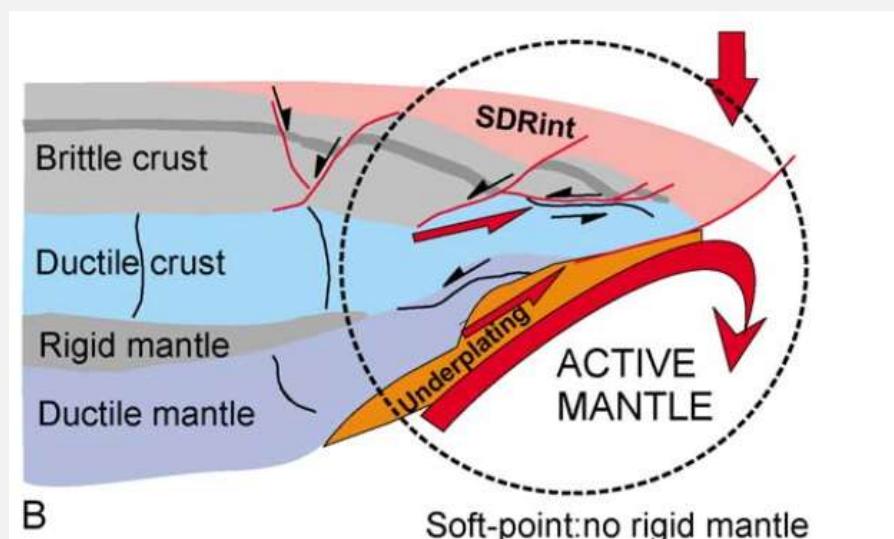
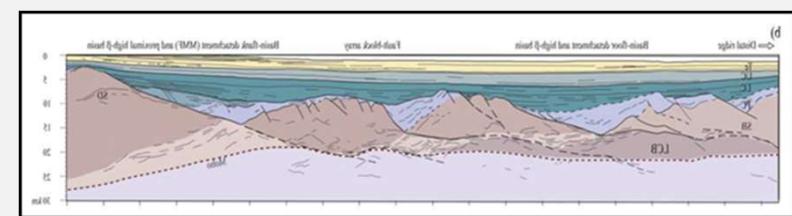
55 Ma



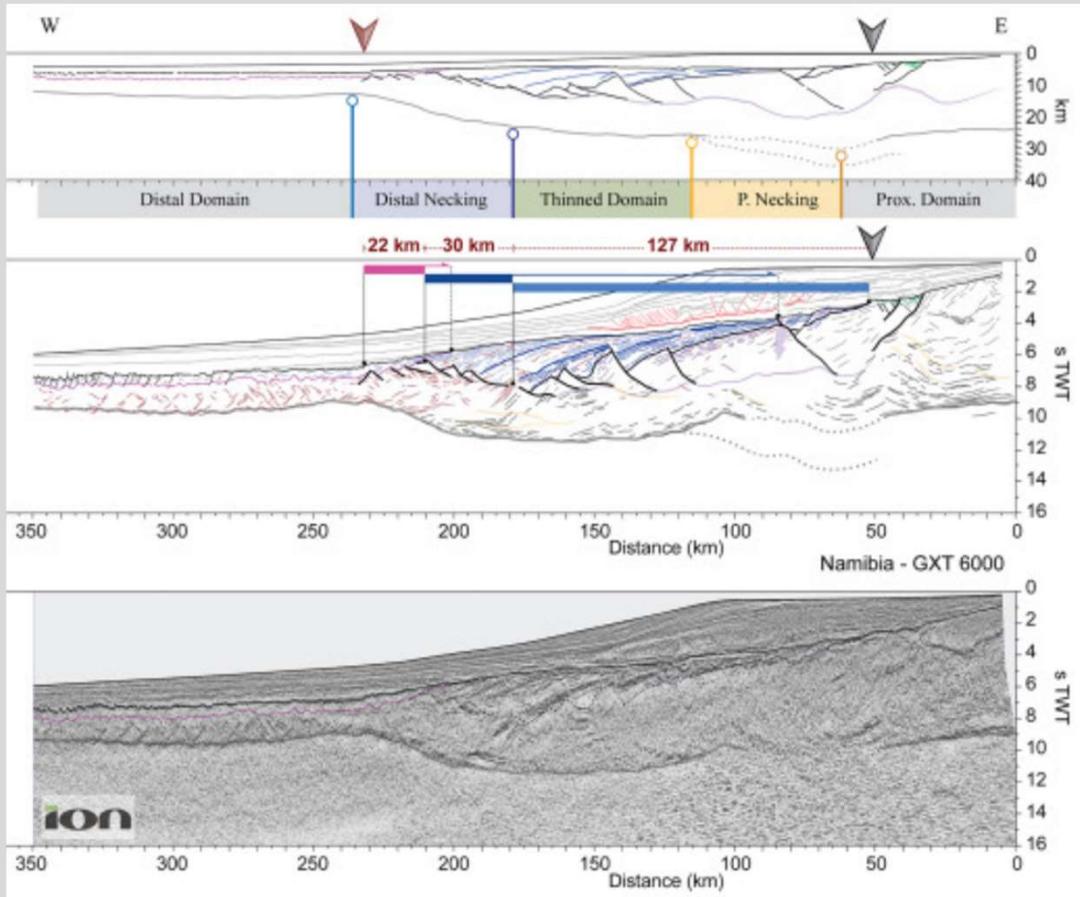
Deux grands types: « non-volcanique » et « volcanique »



Sans fusion du manteau
pendant la rupture lithosphérique :
marges sédimentaires



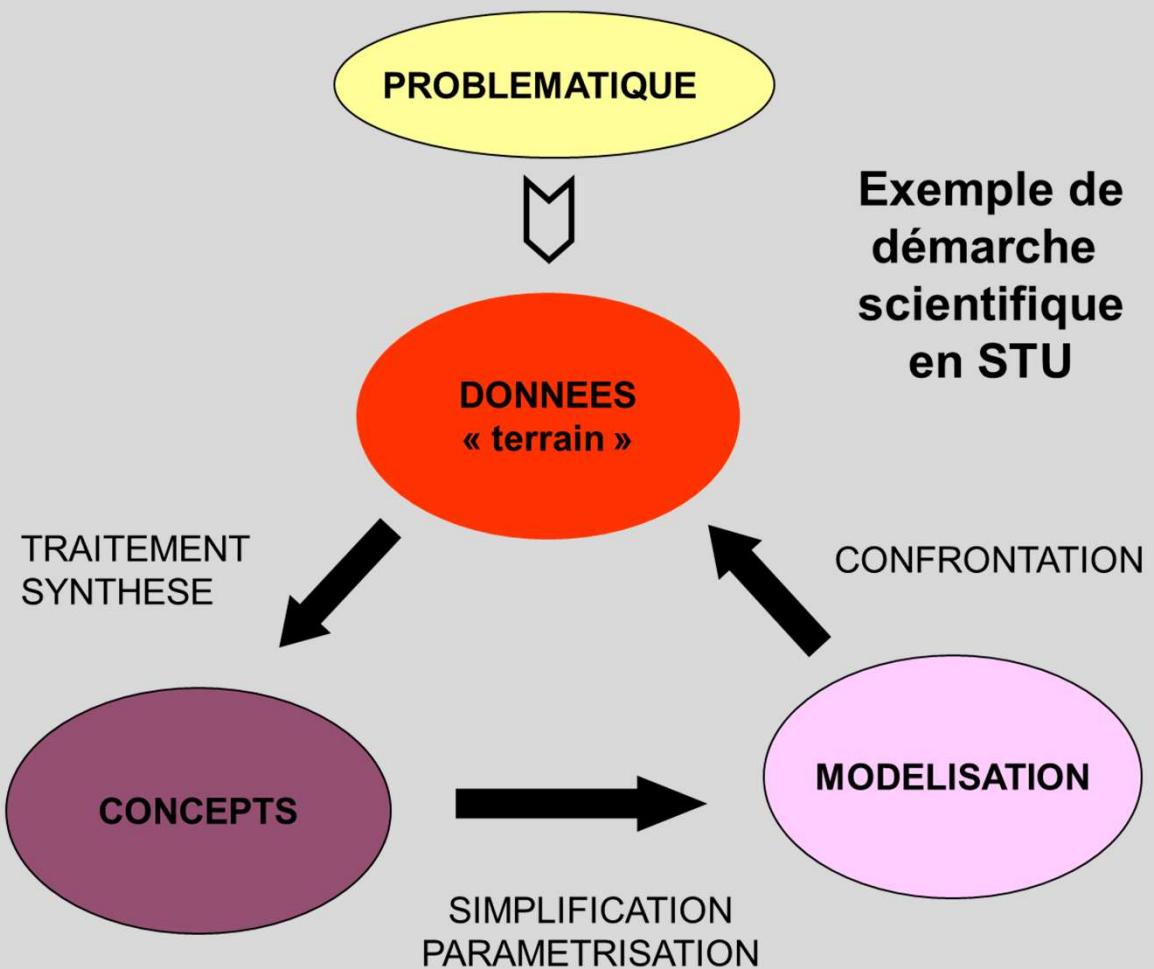
Avec fusion du manteau, avant
et pendant la rupture lithosphérique:
marges volcaniques



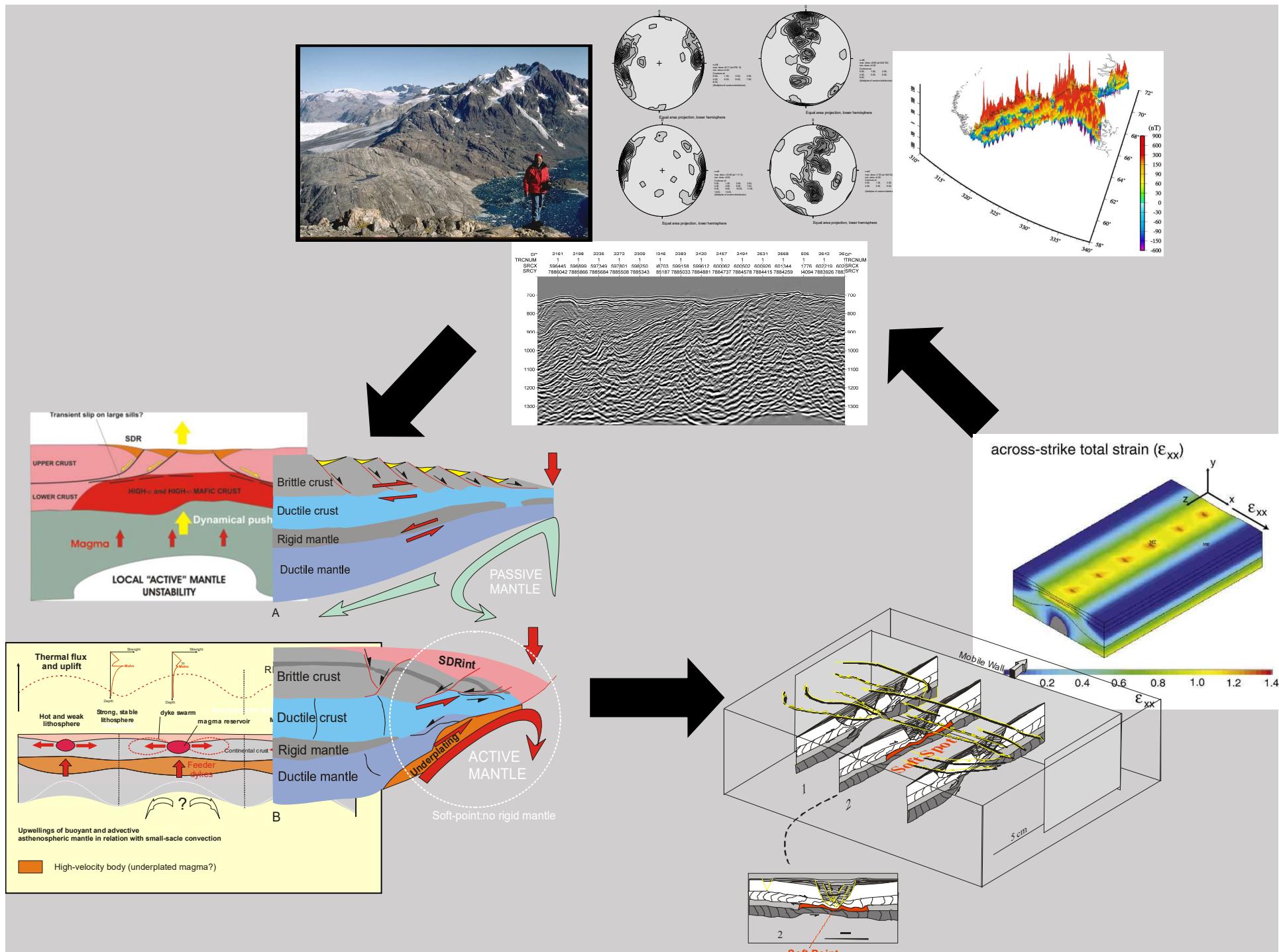
Chauvet et al., 2021

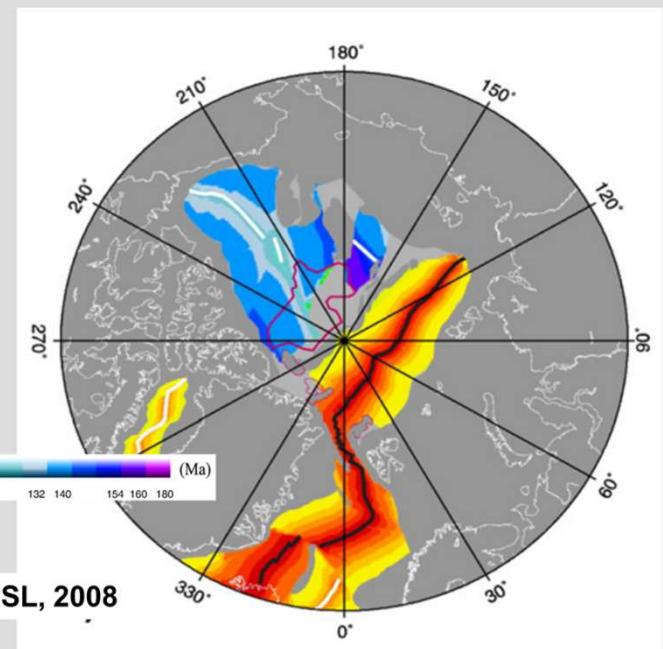
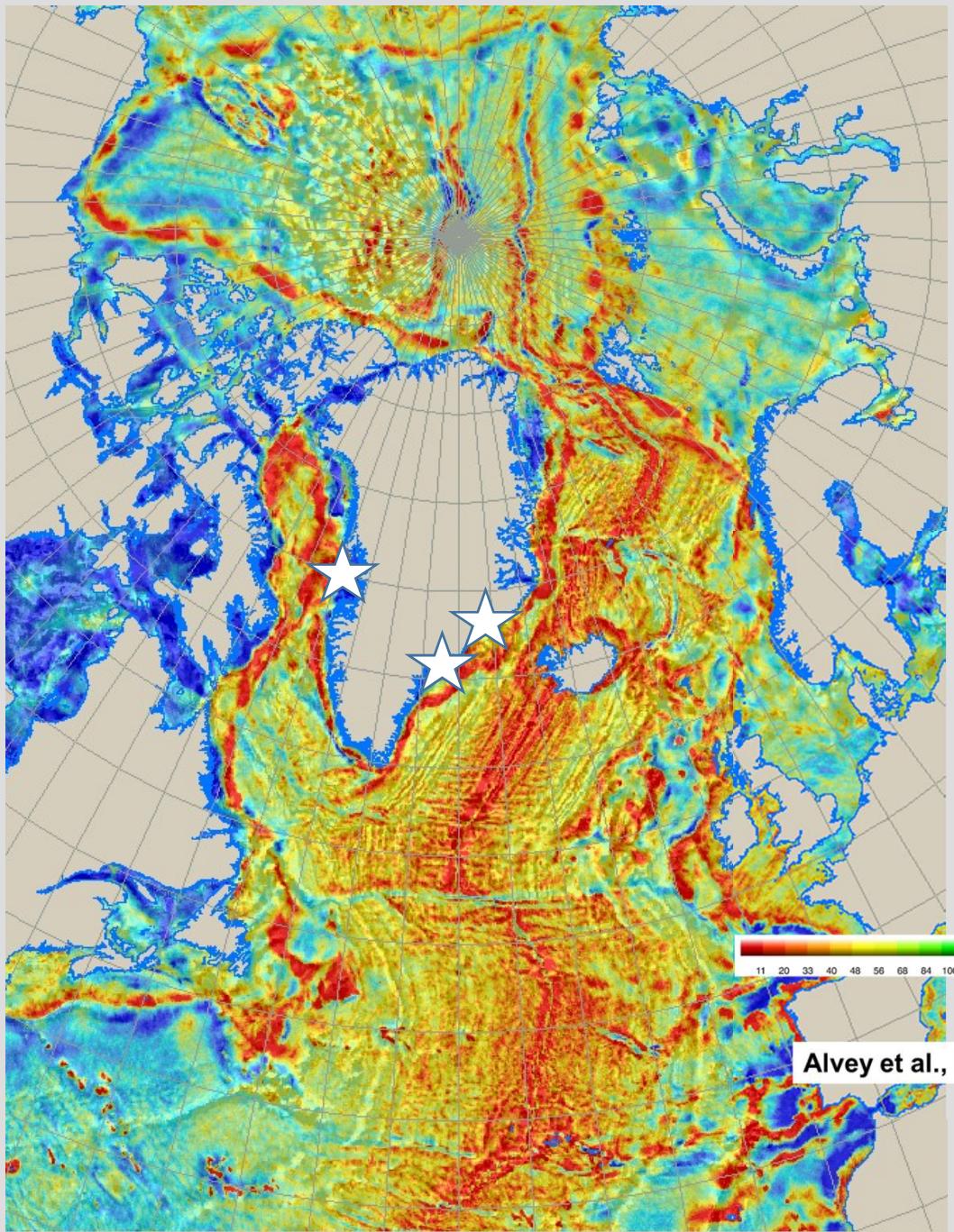
Les limites continent-océan magmatiques
(50% des marges passives)
restent mal comprises
(structure, rhéologie,
thermicité, processus de
déformation...)

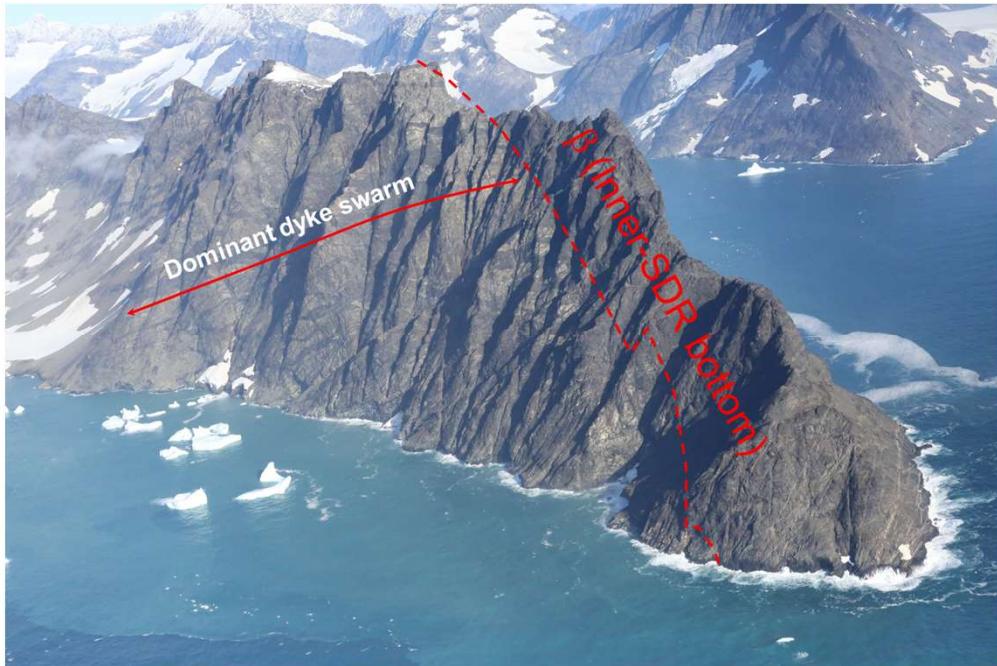
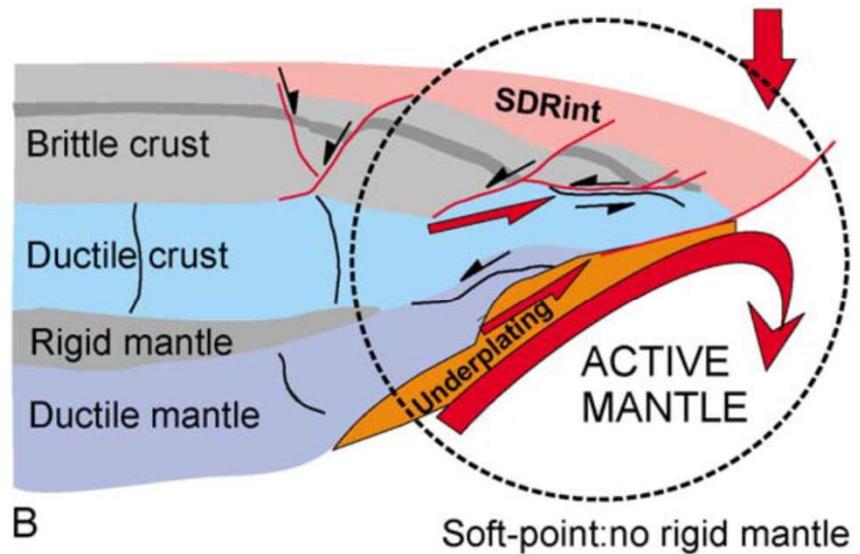
Des analogues « onshore »?
Oui, mais uniquement au
Groenland, et dans certains
cas très difficile d'accès
(relief, pack, courants...)

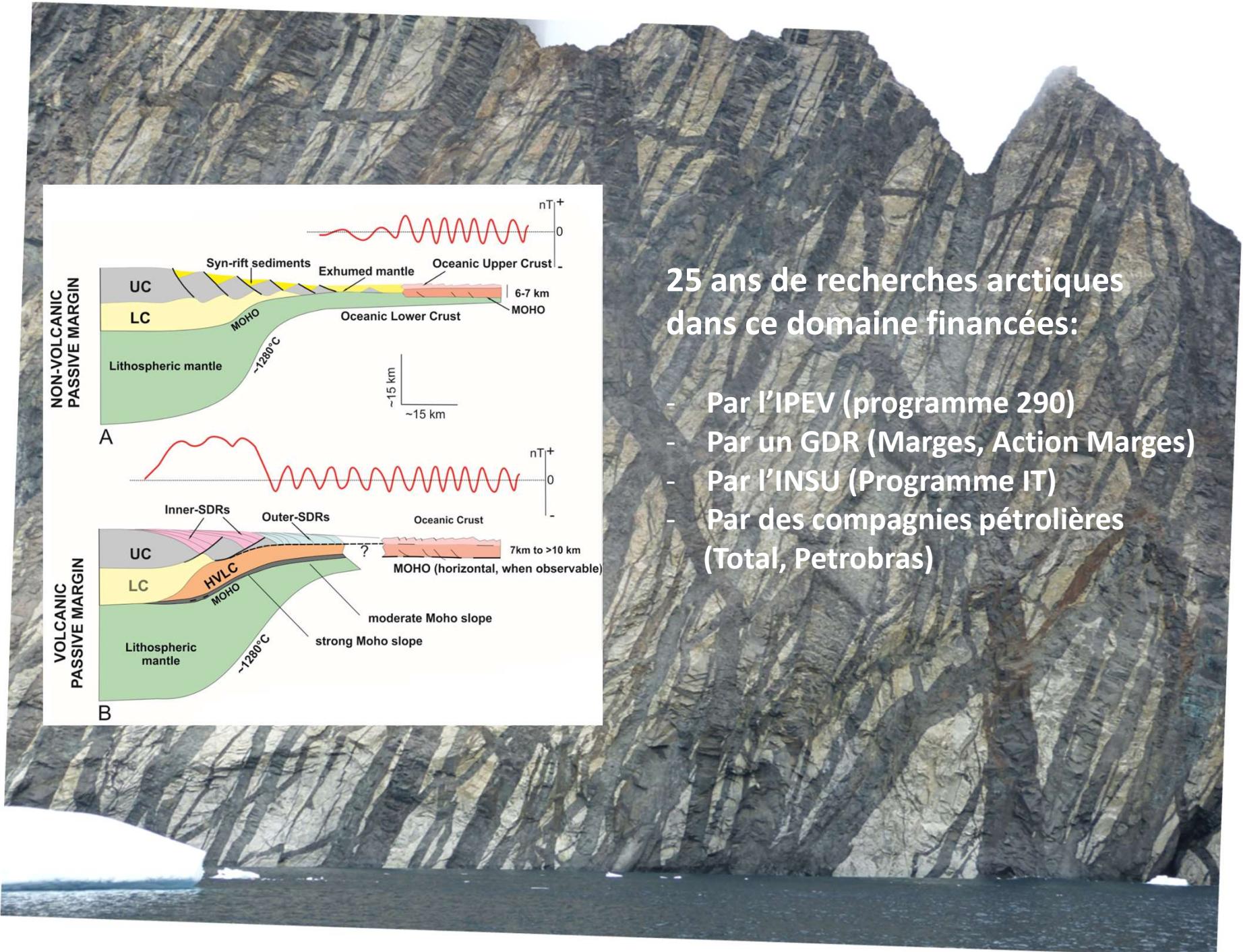


LG, 2010



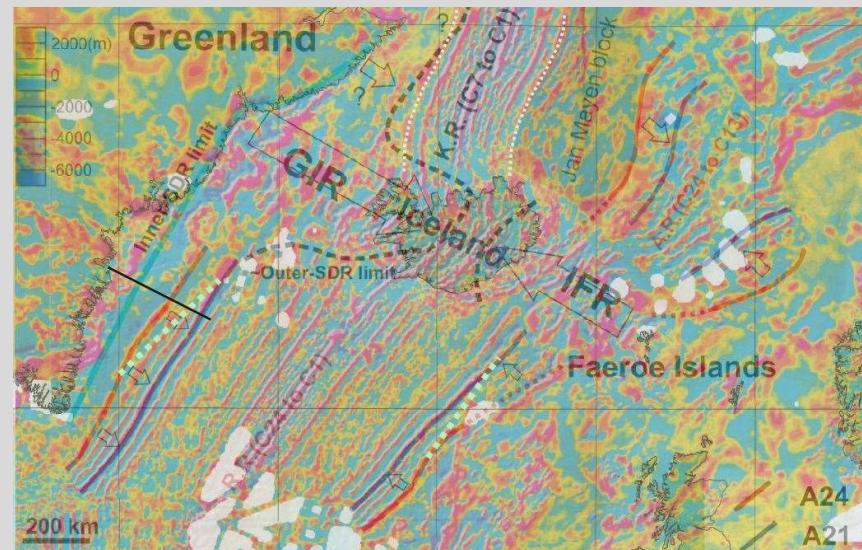
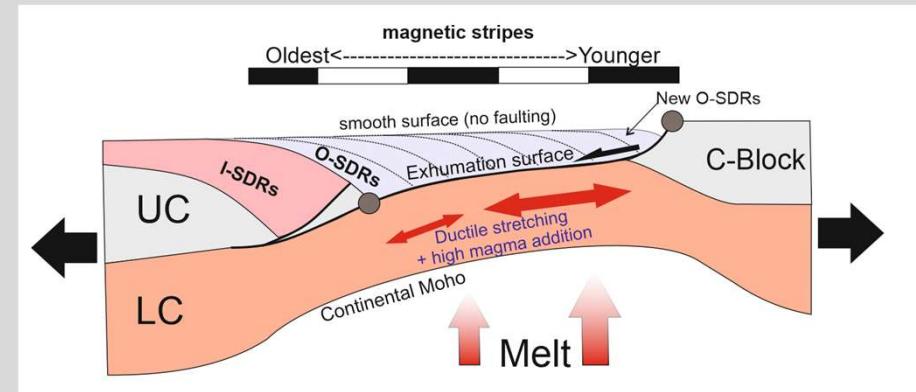
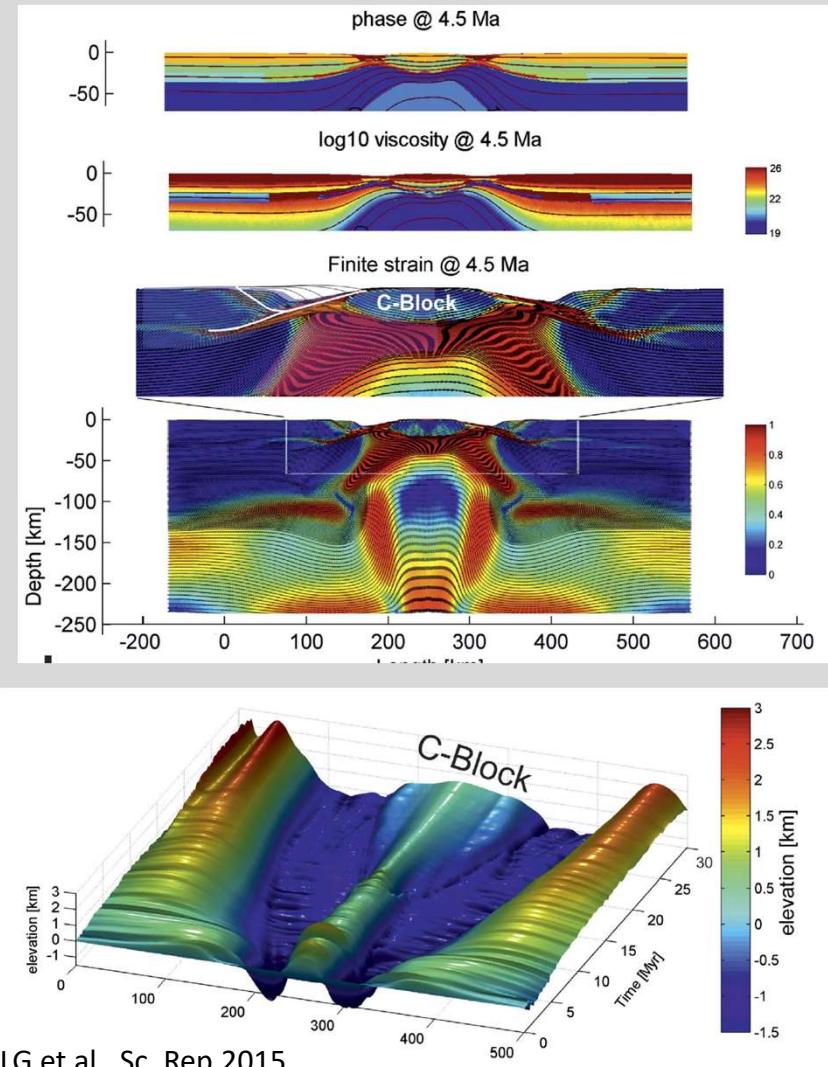








Un changement de paradigme complet dans l'Atlantique NE : l'Islande est-elle un Bloc C et la ride GIFFR un axe continental?



LG et al., submitted



Thank you!