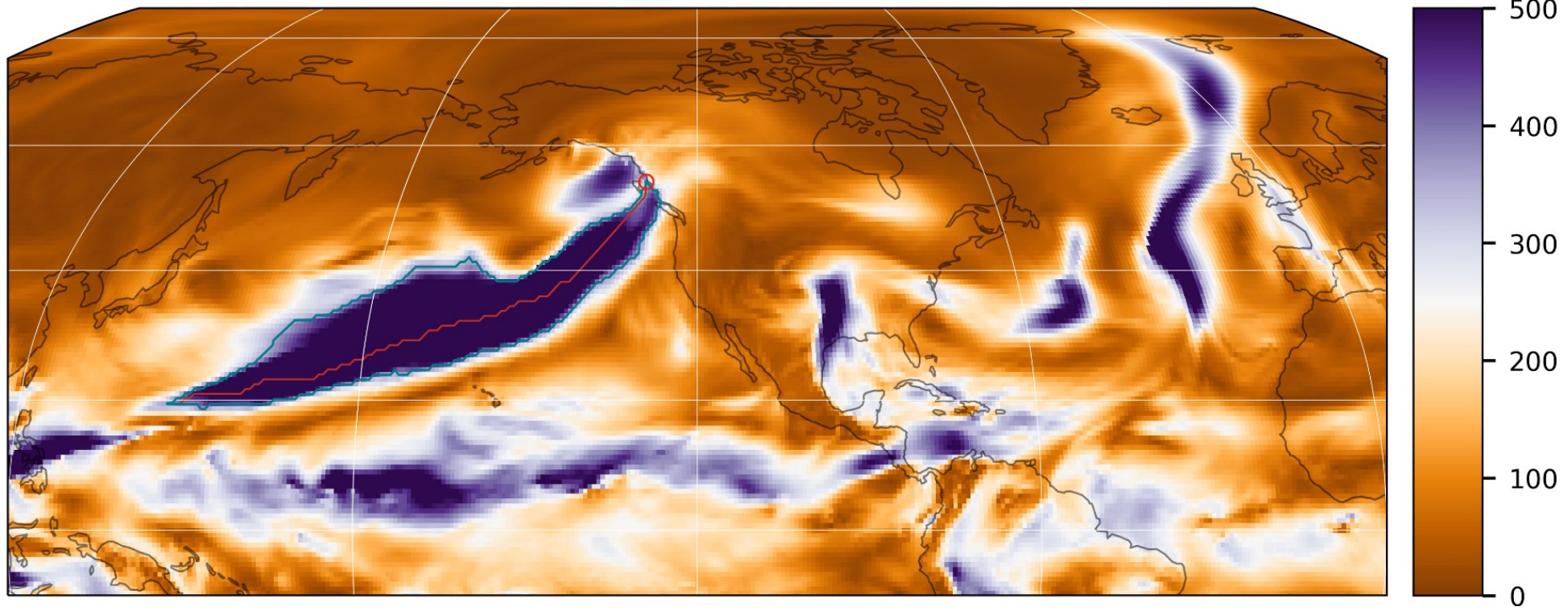




Spatio-temporal synchronization of heavy rainfall events triggered by atmospheric rivers in North America

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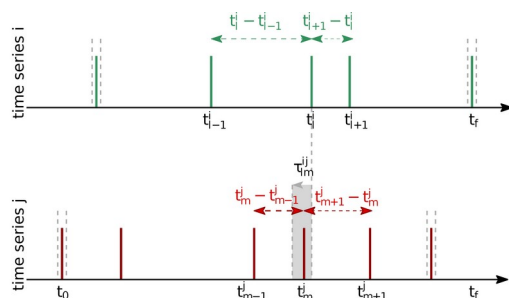


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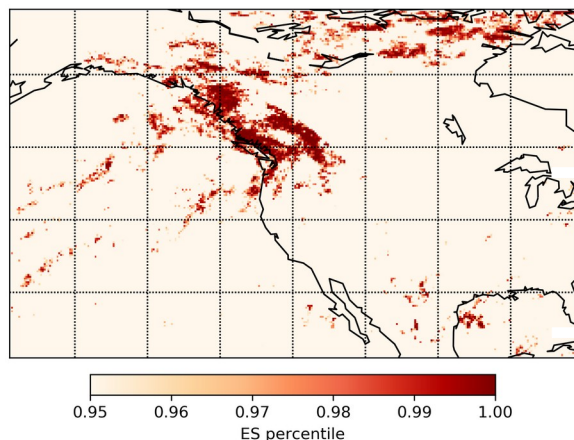
Data & Method

- Event Synchronization and network analyses
- ERA5 rainfall estimates between 1979 and 2018
- 2 atmospheric river catalogs



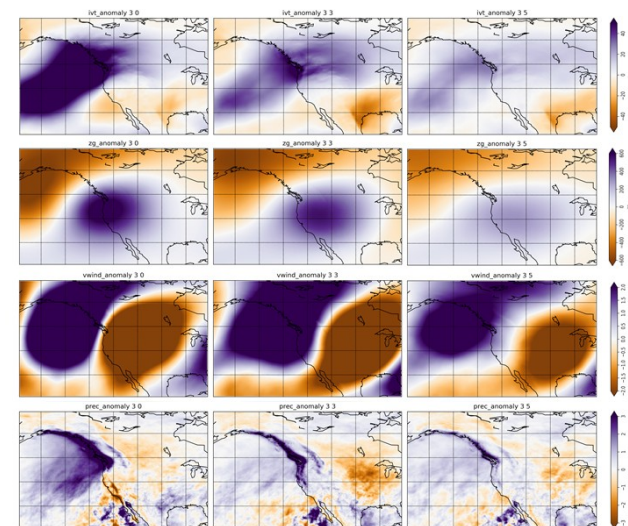
Discovery

- Impact of atmospheric rivers is not limited to the coastal areas
- Heavy rainfall events in central and eastern Canada are synchronized with strong high latitude ARs

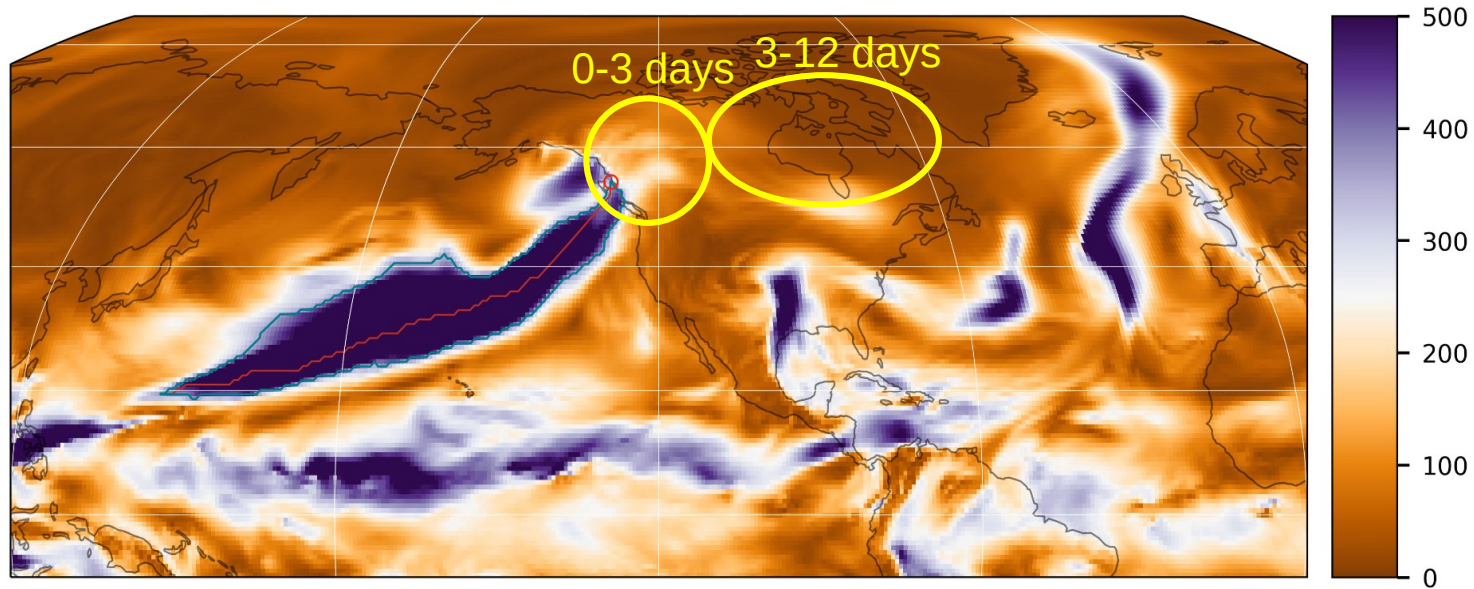


Climatology

- The disintegrating AR is transporting moisture to central and eastern Canada



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ARs trigger synchronized heavy rainfall along the coast for ~ 3 days after an AR hit the coast but also regularly trigger heavy rainfall events further inland at a higher delay