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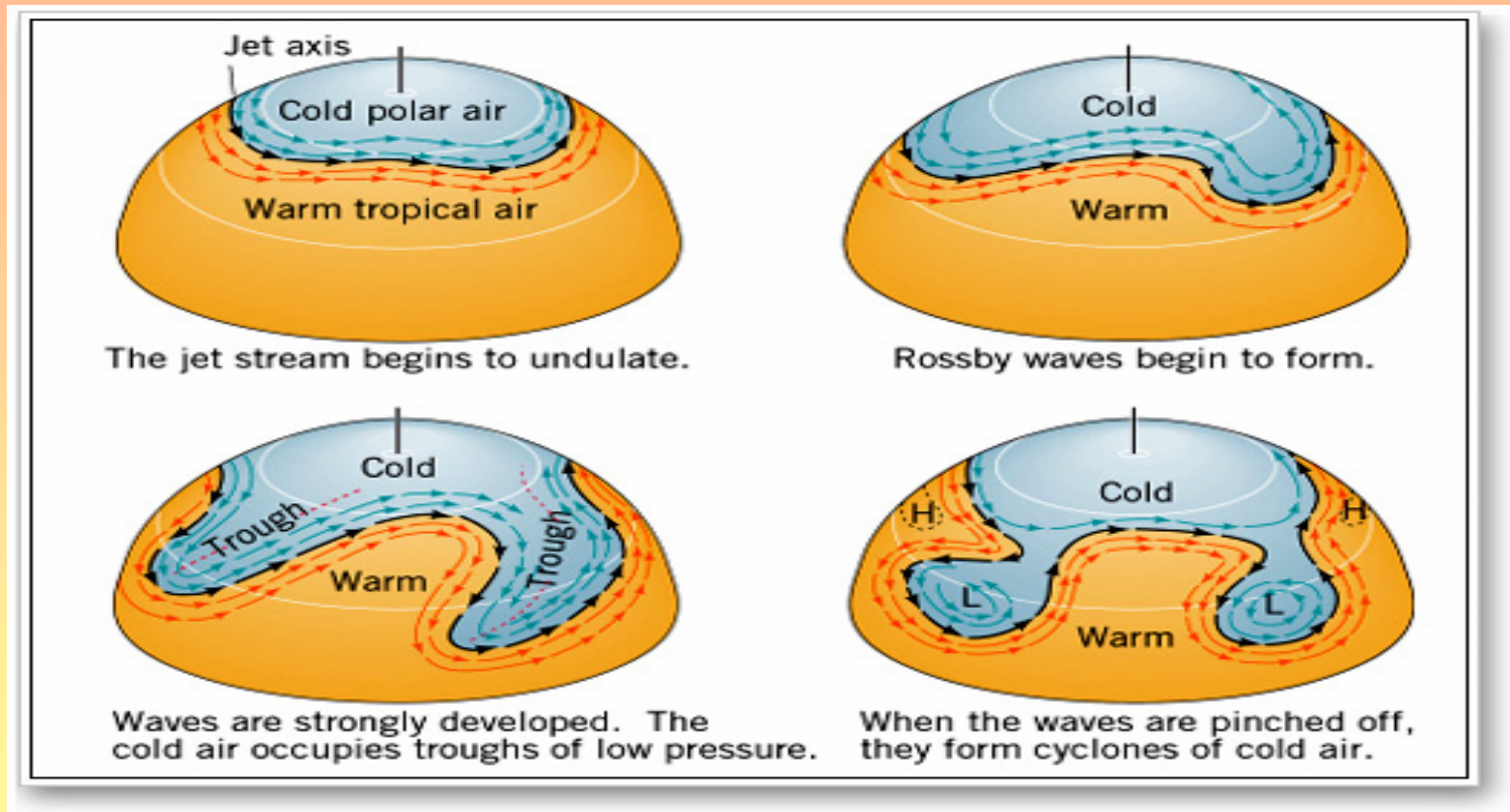


PhD research topic: Predictability and Dynamics of Rossby Waves and High Impact Weather

- Supervisor: Conny Schwierz
- Funding: Natural Environment Research Council
- Related to THORPEX:

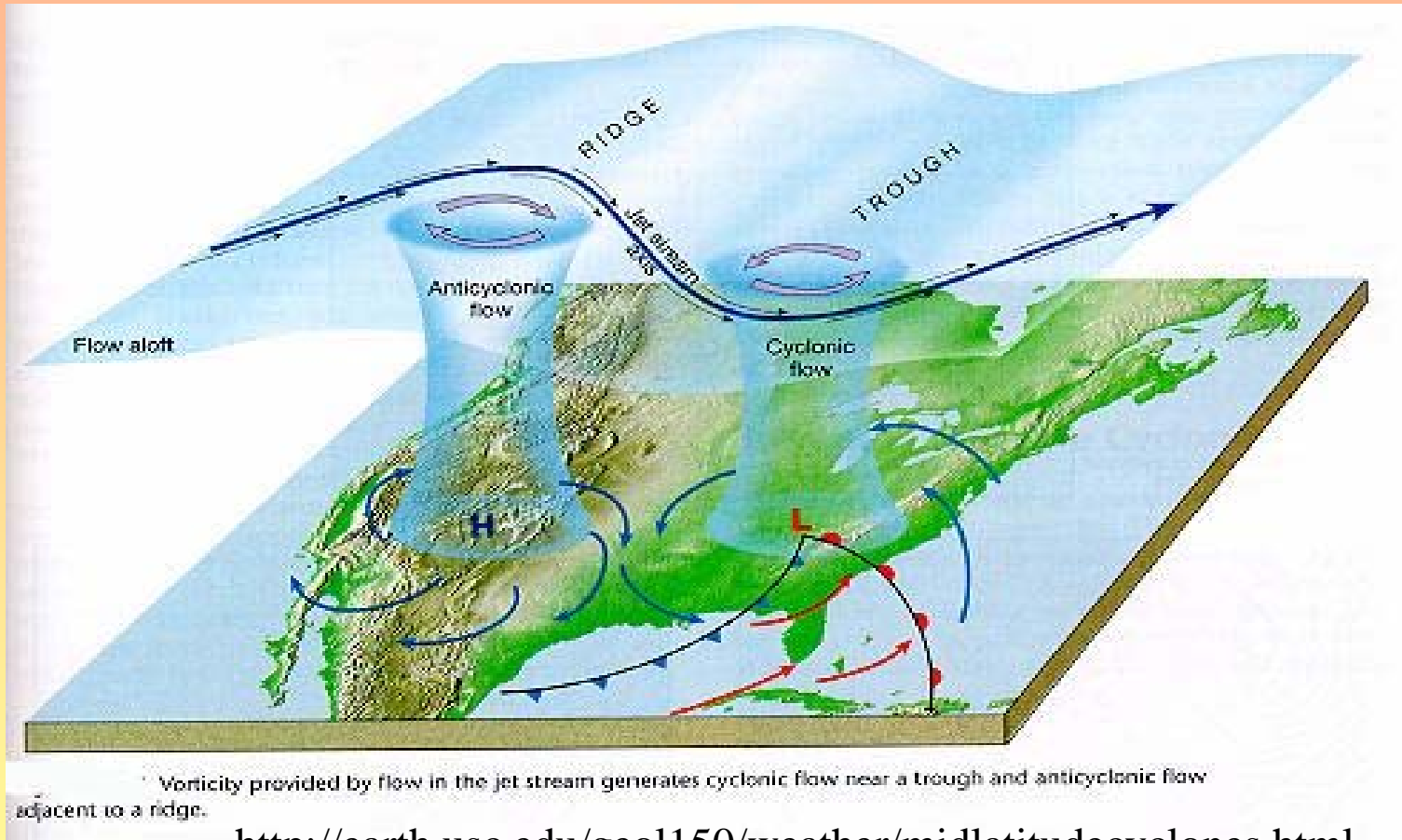
The Observing system Research and Predictability Experiment

Atmospheric Rossby Waves



- Long waves in the atmosphere
- Move horizontally and vertically
- Create stratospheric intrusions into the troposphere and vice versa

Why are they important?



<http://earth.usc.edu/geol1150/weather/midlatitudecyclones.html>

- Effect the flow of weather patterns
- Mixing of Stratospheric and Tropospheric air
- Wave breaking and cut-offs can lead to high impact weather

High Impact Weather



Schlans, Graubünden, CH
16. November 2002



Gondo, Wallis, CH
October 2000

Methodology of Research

- The ERA 40 reanalysis data has been diagnosed
 - How well do models predict waves
- Using the ECMWF dataset
 - Distribution of forecasts
 - Dynamics of forecasts
- Not straight forward
 - Assessing how to diagnose the forecast
 - Predictability
 - Triggers
 - Interactions
- Wave guide – on the tropopause