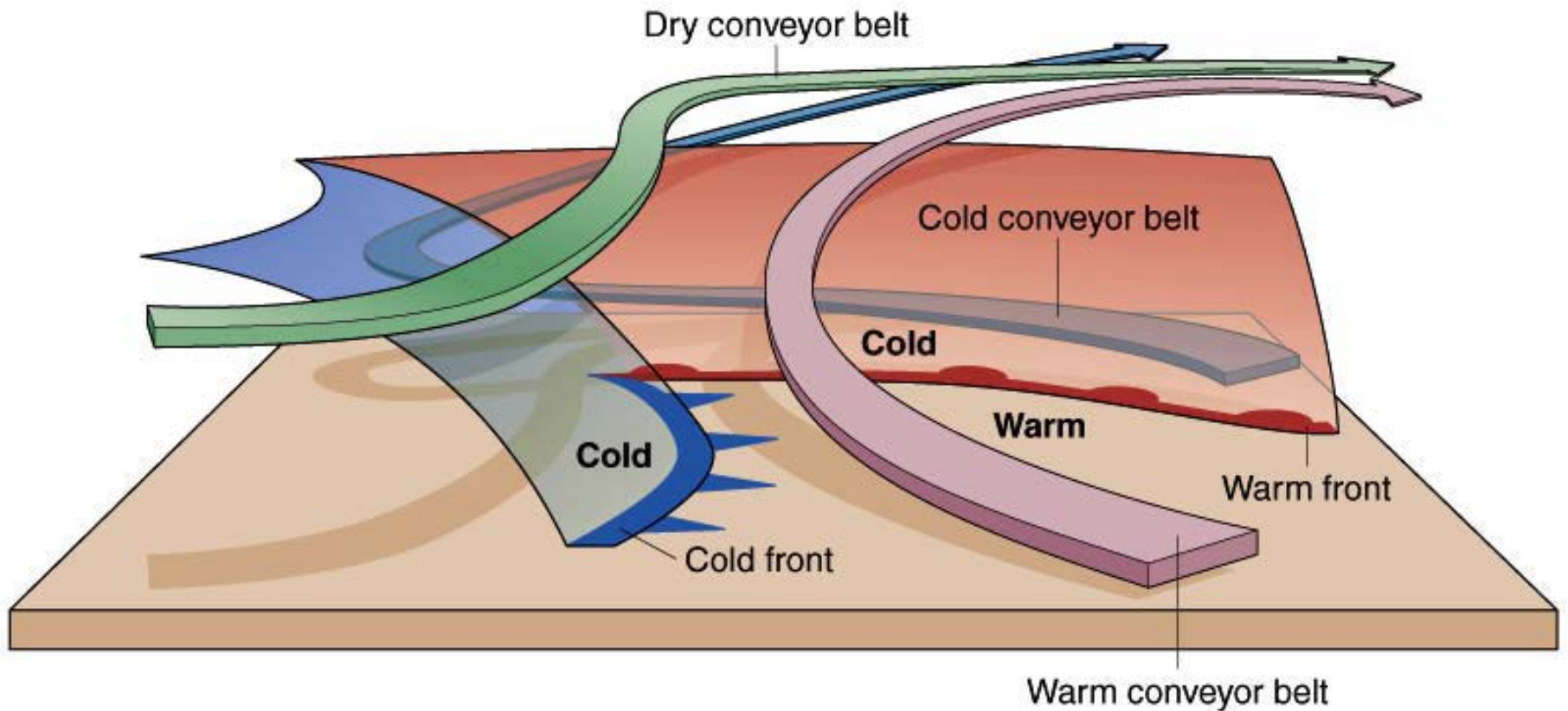


Unit 22

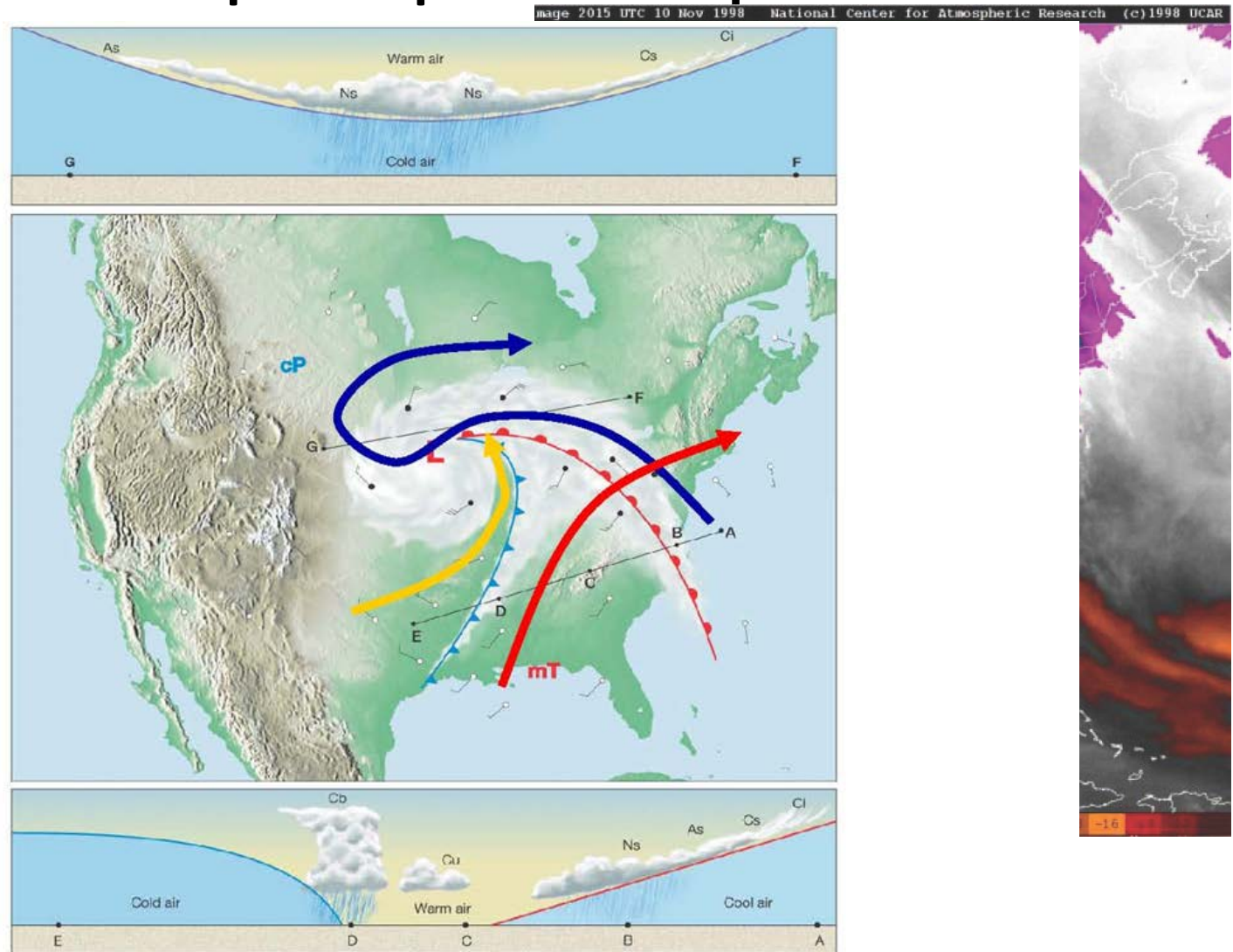
Conveyor belt theory and jets

Nicole Mölders

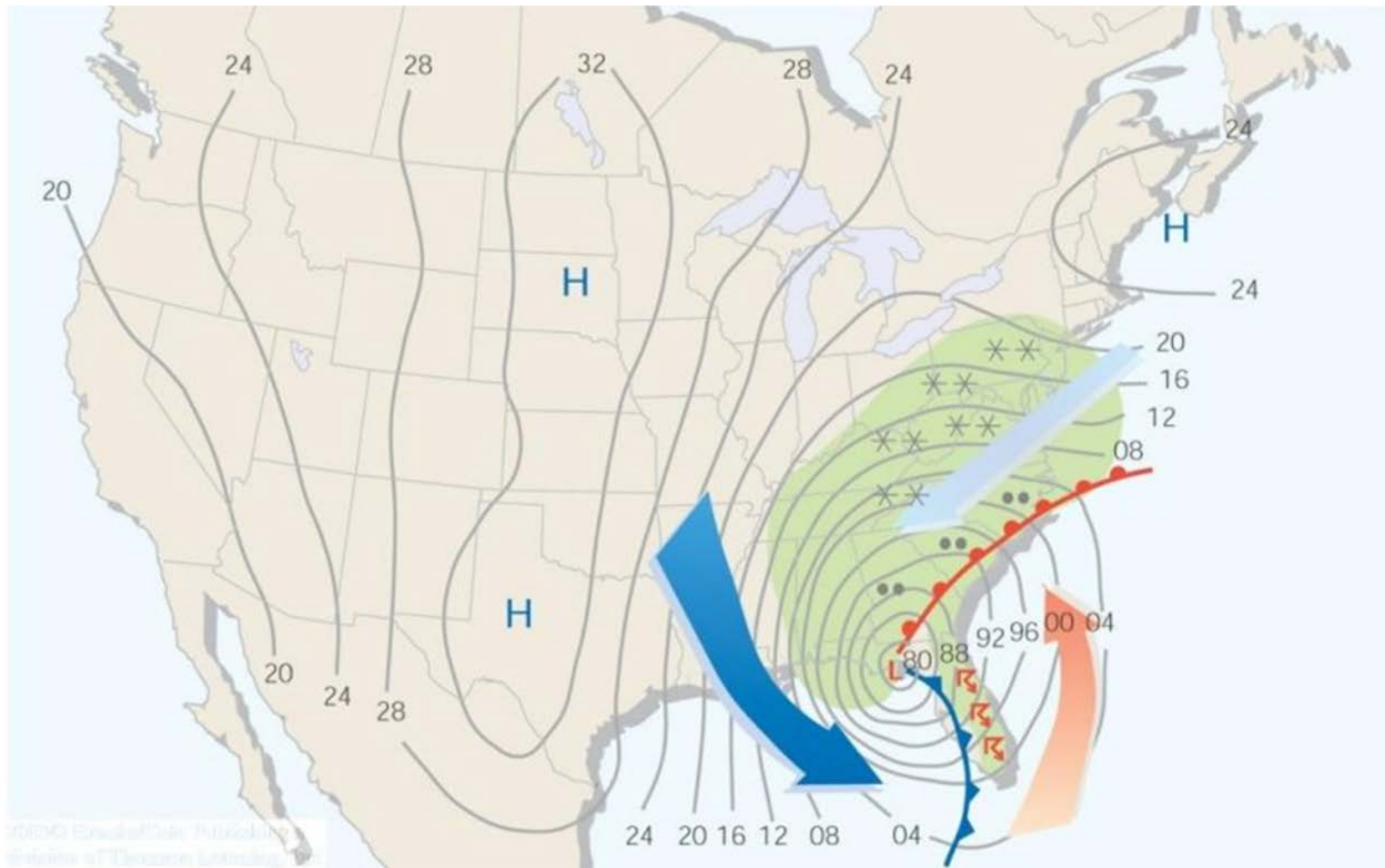
Conveyor belt model



Conveyor Belt model helps explain the cloud and precipitation patterns



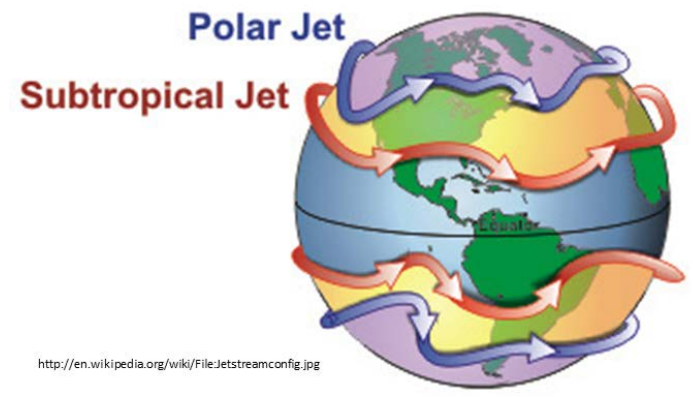
Surface map with cyclone



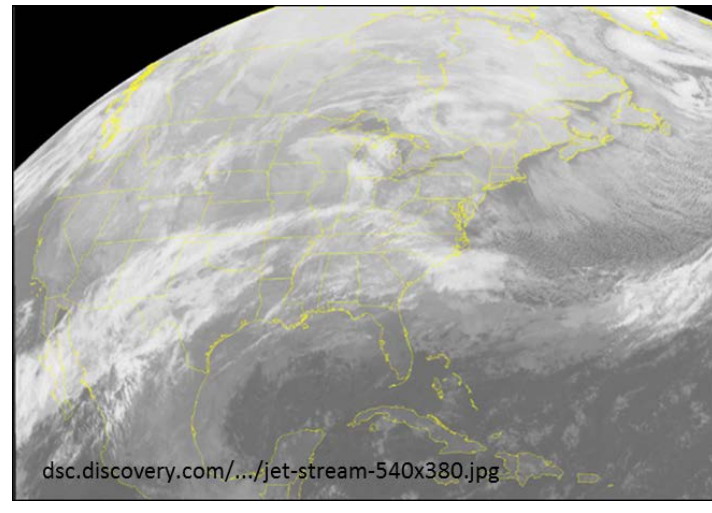
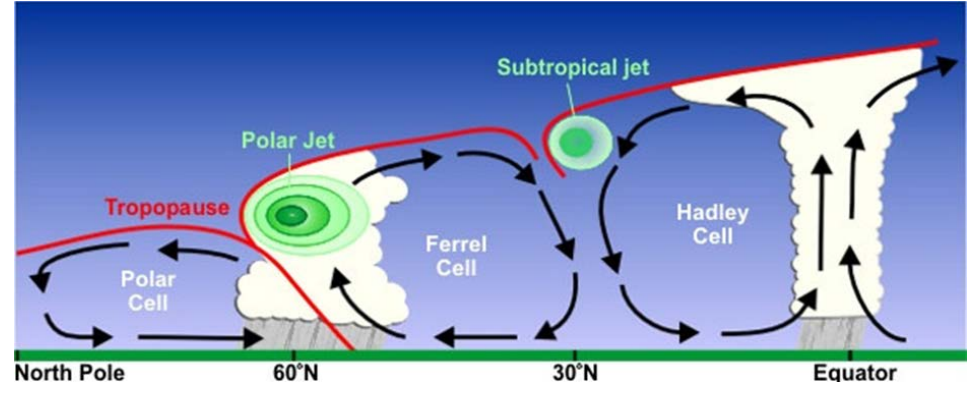
Jet stream



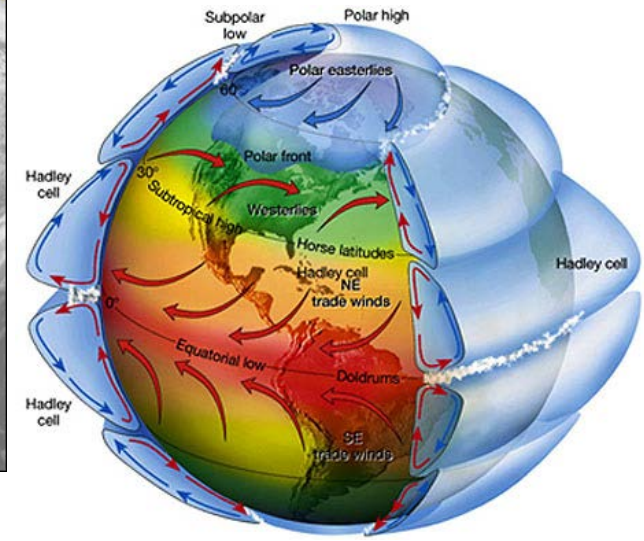
From: ww2010.atmos.uiuc.edu/.../cyc/upa/gifs/jet2.gif



<http://en.wikipedia.org/wiki/File:Jetstreamconfig.jpg>



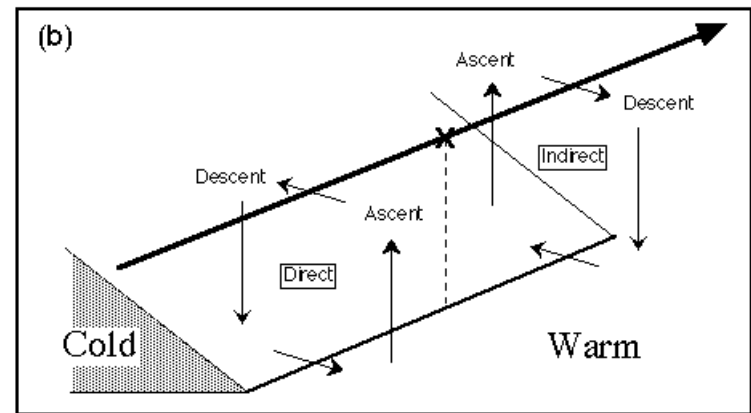
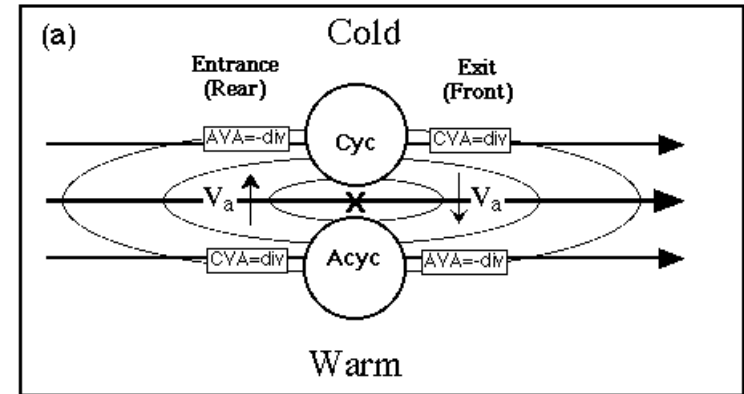
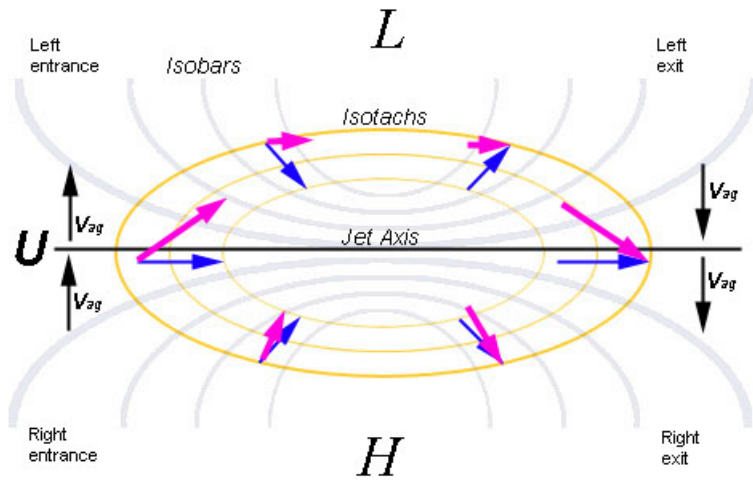
dsc.discovery.com/.../jet-stream-540x380.jpg



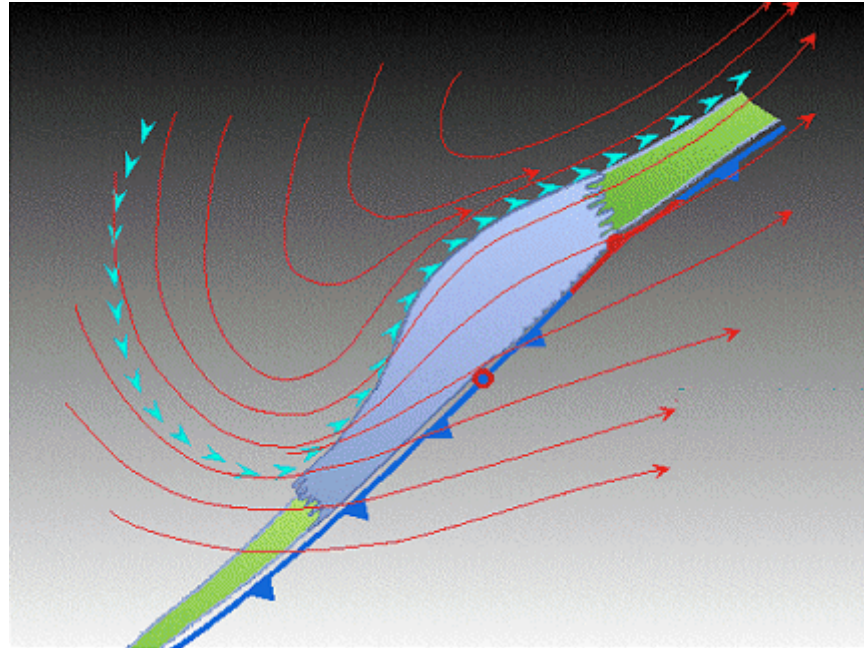
Jet stream over Canada

From: http://en.wikipedia.org/wiki/Jet_stream

Jet streaks



Interaction jet and cyclogenesis



References

- Utpal Manna, S. S. Sritharan (2007), Lyapunov Functionals and Local Dissipativity for the Vorticity Equation in L \ddot{o} p and Besov spaces, *Differential and Integral Equations*, **20**: 581-598.
- Barbu, V. , S. S. Sritharan (2000) Accretive Quantization of the Vorticity Equation. In: A. V. Balakrishnan, Birkhauser (eds), *Semi-groups of Operators: Theory and Applications*, Boston, 296-303 <http://www.nps.edu/Academics/Schools/GSEAS/SRI/BookCH12.pdf>
- Cramer, M. S. *Navier-Stokes Equations - Vorticity Transport Theorems: Introduction*". Foundations of Fluid Mechanics.
- www.nordita.org/~jpjmarti/.../Physics_of_Climate_Nordita_2009.ppt
- www.geoearth.uncc.edu/faculty/mdeastin/.../METR4245-dynamic-review.ppt
- http://www.vos.noaa.gov/MWL/dec_08/milibar_chart.shtml
- [climate.gi.alaska.edu/courses/geog401/lectures/class24\(midlat_cycl\).ppt](http://climate.gi.alaska.edu/courses/geog401/lectures/class24(midlat_cycl).ppt)