

Geostrophic Winds:

Coriolis balances Pressure Grad.

https://www.forecast.co.uk/pressure/



Initial Sea Surface (steady state, u=v=0 at t=0)

Will find Geostrophic Balance (steady state at $t \rightarrow \infty$)

Using (linearized) potential vorticity conservation

adapted from http://atmdyn.org/teaching/atmdyn1/08_geostrophic_adjustment.pdf

Geostrophic adjustment

- 1. Linearized PV equation
- 2. Rossby-Gill problem (Vallis chapter 3.8)



Rossby Adjustment Solutions U=U(x,t) and V=V(x,t):

