

Session 5

1. Calculate the geostrophic wind speed (m/s) for a pressure gradient of 10 hPa per 1000 km and compare with all possible gradient wind speeds for the same pressure gradient and a radius of curvature of ± 500 km. Let $\rho = 1 \text{ kg/m}^3$ and $f = 10^{-4} \text{ 1/s}$.
2. Show that for the weak pressure gradient, the gradient wind reduces to the geostrophic wind in the case of regular anticyclone and to the inertia circle in the case of anomalous anticyclone.