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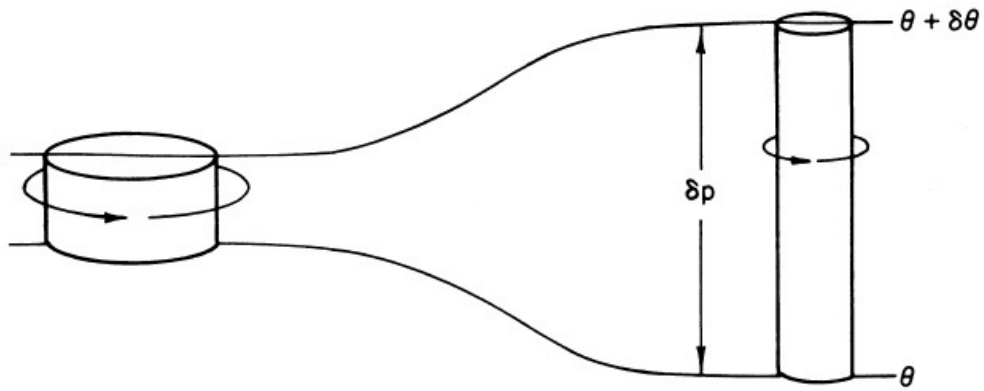
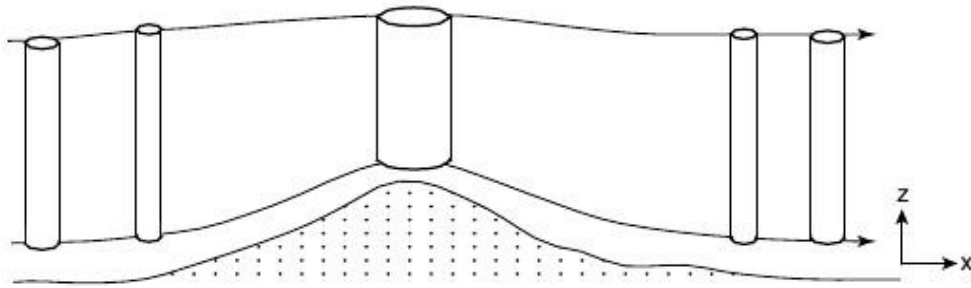


Fig. 4.7 A cylindrical column of air moving adiabatically, conserving potential vorticity.

Table 7.1 Modifications to vortex depth and vorticity as a westerly flow impinges on an isolated mountain barrier in the Northern Hemisphere



Air column depth	Increase $ \delta p \uparrow$	Decrease $ \delta p \downarrow$	Increase $ \delta p \uparrow$	Decrease (return to original value)
Change in $\left \frac{\delta \theta}{\delta p} \right $	Decrease	Increase	Decrease	Increase (return to original value)
Change in $ \zeta + f $	Increase	Decrease	Increase	Decrease
Sign of ζ	Positive	Negative	Positive	Negative
Resulting motion	Northward	Southward	Lee side trough	Southward
Change in $ f $	Increase	Decrease	Increase	Decrease

