

Figure 2.10: Staggering of horizontal grid descriptors (lengths and areas). The grid lines indicate the tracer cell boundaries and are the reference grid for all panels. a) The area of a tracer cell,  $A_c$ , is bordered by the lengths  $\Delta x_g$  and  $\Delta y_g$ . b) The area of a vorticity cell,  $A_\zeta$ , is bordered by the lengths  $\Delta x_c$  and  $\Delta y_c$ . c) The area of a u cell,  $A_w$ , is bordered by the lengths  $\Delta x_v$  and  $\Delta y_f$ . d) The area of a v cell,  $A_s$ , is bordered by the lengths  $\Delta x_f$  and  $\Delta y_u$ .