



Figure 1: WRF-LES results showing the U -wind component at various times during the event. (a,c,e,g, and i) Vertical cross-sections slicing east-west through Lahaina (along ~ 20.88 N). Color-filled contours show the U -wind according to the colorbar, and green contours show the potential temperature. The terrain is color filled in gray, and the approximate location of the fire ignition (-156.667 W) is shown by the vertical black line. (b,d,f,h, and j) X-Y plan views of the U -wind (color-filled according to the same colorbar) and wind vectors (speed according to the key) at 10 m ASL. The white line marks the coastline, while the gray contours show the elevation at 100 m intervals. The approximate location of the fire ignition (20.883 N, -156.667 W) is shown by the orange diamond, and the magenta line shows the cross-section location. The approximate location of the hydraulic jump and flow reversal in all panels is shown with a red line. All fields are time-averaged according to the displayed time periods.