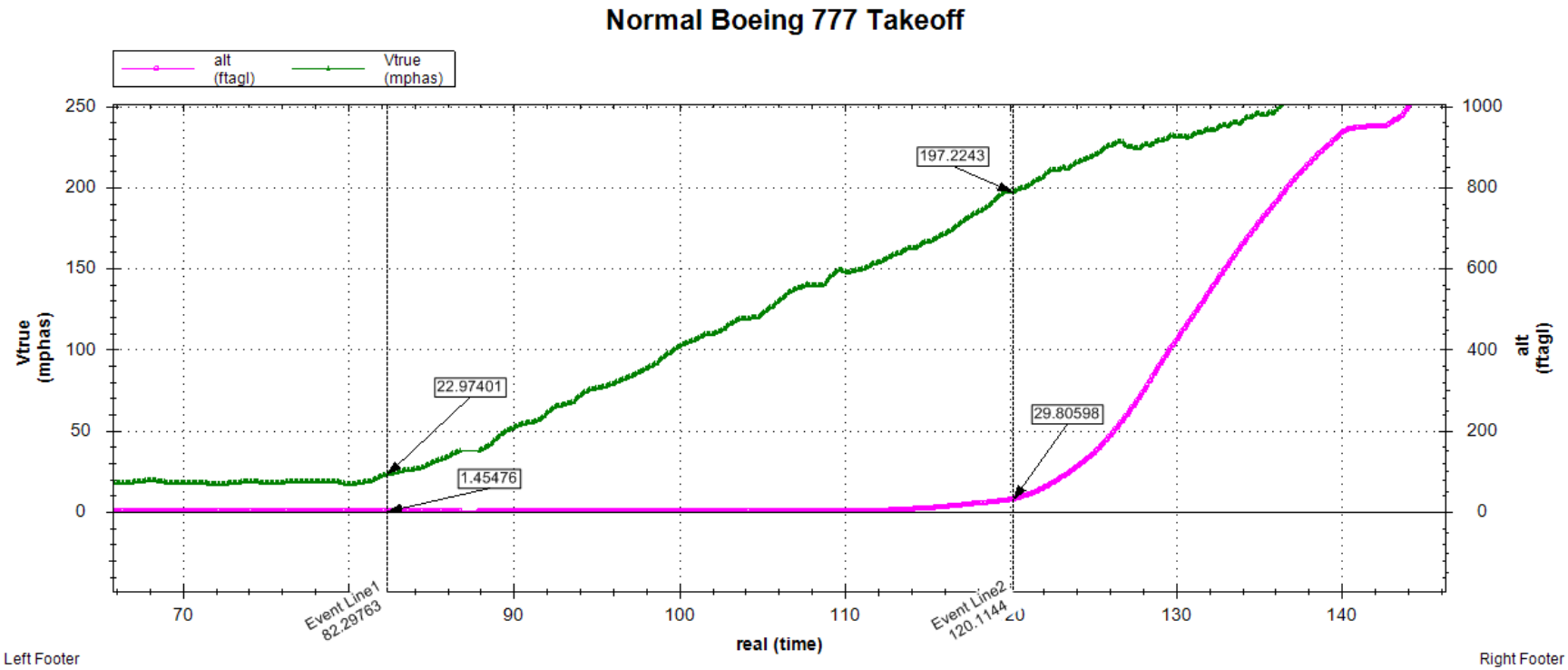
Normal Takeoff for Runway Calculations



Process:

1. Plot True Airspeed and Altitude above ground
2. Add Event Markers for the takeoff start and at 30 feet to obtain numeric values at that time.
3. Calc acceleration as follows:
    a. Convert MPH to ft/s for the two speeds
        i. 197.2 MPH = 289.2 ft/s; 23.0 MPH = 33.7 ft/s
    b. a = Delta V/Delta t
    c. a = (289.2-33.7)/(120.1-82.3) = 6.8 feet/sec^2
4. Calculate distance S = 1/2 at^2 => 1/2 * 6.8 * (120.1-82.3)^2 = 4858 ft.