



Wind speed/streamlines at 30,000 ft MSL (300 mb)

The Graphical Turbulence Guidance (GTG-2.5) graphics (Figure 1) are computer-generated four-dimensional forecasts of the likelihood of clear air turbulence (CAT) associated with upper-level fronts and jet streams. It is not intended to predict turbulence associated with convection and thunderstorm clouds or breaking mountain waves. The GTG also does not provide forecasts from the surface to 10,000 feet, and may be used as a higher-resolution supplement to Airmets and Sigmets, but not as a substitute for them.

Wind streamlines (Figure 2) are plotted lines showing the wind flow pattern. Streamlines are useful because they show where air converges and diverges. To estimate where turbulence might be encountered, look for lines plotted close together and/or sharp curves. Multiple variations in color—wind speed—may also indicate turbulence.

The lifted index (Figure 3) is a common measure of atmospheric instability. It depicts the temperature air near the ground would have if it were lifted to a higher level (usually around 18,000 feet) and comparing that temperature to the actual data. Negative values indicate instability—the more negative, the more unstable the air is, and the stronger the updrafts are likely to be.

