Isopleth. A line connecting points of constant or equal value.

Isotherm. A contour line of equal temperature.

K

Katabatic. Used to describe any wind blowing down slope.

Kinetic energy. Energy due to motion, defined as one half mass times velocity squared.

L

Lapse rate. The decrease with height of an atmospheric variable, usually referring to temperature, but can also apply to pressure or density.

Lateral axis. An imaginary straight line drawn perpendicularly (laterally) across the fuselage and through the center of gravity. Pitch movement occurs around the lateral axis, and is controlled by the elevator.

Lenticular cloud. Smooth, lens-shaped clouds marking mountain-wave crests. They may extend the entire length of the mountain range producing the wave and are also called wave clouds or lennies by glider pilots.

Lift. Produced by the dynamic effects of the airstream acting on the wing, lift opposes the downward force of weight.

Limit load. The maximum load, expressed as multiples of positive and negative G (force of gravity), that an aircraft can sustain before structural damage becomes possible. The load limit varies from aircraft to aircraft.

Load factor. The ratio of the load supported by the glider's wings to the actual weight of the aircraft and its contents.

Longitudinal axis. An imaginary straight line running through the fuselage from nose to tail. Roll movement occurs around the longitudinal axis, and is controlled by the ailerons.

M

Mesoscale convection system (MCS). A large cluster of thunderstorms with horizontal dimensions on the order of 100 miles. MCSs are sometimes organized in a long line of thunderstorms (e.g., a squall line) or as a random grouping of thunderstorms. Individual thunderstorms within the MCS may be severe.

Microburst. A small-sized downburst of 2.2 nautical mile or less horizontal dimension.

Minimum sink airspeed. Airspeed, as determined by the performance polar, at which the glider achieves the lowest sink rate. That is, the glider loses the least amount of altitude per unit of time at minimum sink airspeed.

Mixing ration. The ratio of the mass of water vapor to the mass of dry air.

Multicell thunderstorm. A group or cluster of individual thunderstorm cells with varying stages of development. These storms are often self propagating and may last for several hours.

O

Olphin flight. Straight flight following speed-to-fly theory. Glides can often be extended and average cross-country speeds increased by flying faster in sink and slower in lift without stopping to circle.

P

Parasite drag. Drag caused by any aircraft surface that deflects or interferes with the smooth airflow around the airplane.

Pilotage. Navigational technique based on flight by reference to ground landmarks.

Pilot-induced oscillation (PIO). Rapid oscillations caused by the pilot's overcontrolled motions. PIOs usually occur on takeoff or landings with pitch-sensitive gliders and in severe cases can lead to loss of control or damage.

Pitch attitude. The angle of the longitudinal axis relative to the horizon. Pitch attitude serves as a visual reference for the pilot to maintain or change airspeed.

Pitot-static system. System that powers the airspeed altimeter and variometer by relying on air pressure differences to measure glider speed, altitude, and climb or sink rate.

Placards. Small statements or pictorial signs permanently fixed in the cockpit and visible to the pilot. Placards are used for operating limitations (e.g., weight or speeds) or to indicate the position of an operating lever (e.g., landing gear retracted or down and locked).

Precipitable water. The amount of liquid precipitation that would result if all water vapor were condensed.