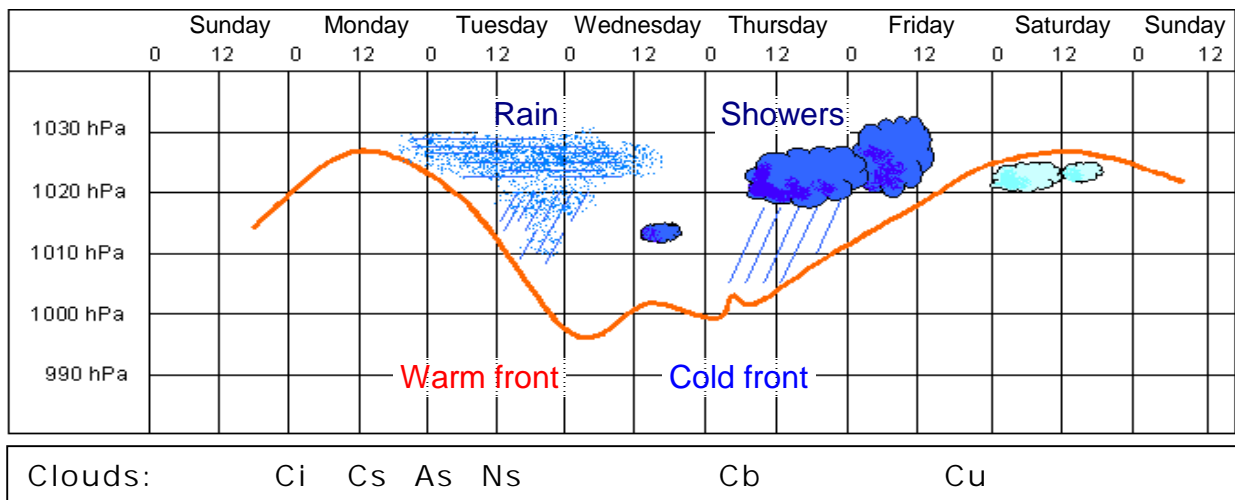


(5/10) Passage of a front

There is no direct connection between air pressure and the weather at any given point in time at a given location. However, tracking how *rapidly* the air pressure changes at a given place can provide important clues about the weather. Pressure measurements are recorded on an instrument called barograph. In the figure, values are compared with information about cloud types. Pressure differentials are behind the movements of air masses, and determine the strength of wind.

Passage of a low-pressure zone with warm and cold fronts



A rapid decrease in air pressure ('falling barometer') invariably signals the approach of bad weather. If the direction of the wind at the same time is shifting in a clockwise direction (e.g. from east to south), this means that a low-pressure zone is approaching. This may be corroborated by the appearance of the typical cloud formations: cirrus (Ci), cirrostratus (Cs), altostratus (As). Rainfall is imminent at this point. Nimbostratus (Ns) is frequently associated with strong rains. An extremely fast drop in air pressure signals the approach of a storm.

Between the warm and cold front, the air pressure rises slightly, but only for a short time. The cold front frequently brings heavy showers, caused by the rapid lift of warm, moist air, accompanied by the formation of cumulonimbus clouds (Cb) and strong gusting winds at the surface. In the wake of its passage, the barometer will rise again, and progressively drier air follows, with typical cumulus (Cu) 'fair-weather clouds'.