The analysis of the most severe avalanche accidents of the last years in the Austrian Alps showed a distinctive correlation between the general synoptic situation, slope exposure and absolute altitude. Meteorological situations, being most favourable to large avalanche release in the northern alps are northwesterly barrage situations, which rest stationary for several days.

An important role is played by the vertical temperature distribution and its changes, e.g. when temperature rises gradually at large snow fall rates, due to the advection of maritime air masses.