

Despite of technical progress of aircrafts in last decades, hazard weather phenomena such as icing, turbulence or vertical wind shear still represent significant risk factor for all aircraft categories, especially during the approach and landing flight phases. The goals of diploma theses are to summarise present knowledge on influence of these phenomena on various categories of contemporary aircrafts, to describe possibilities of prediction of these phenomena and to outline an application of LAM NWP models outputs to this purpose. An assessment of such forecast performance comprises a part of thesis as well.