

Impact of Haneda Hangar Wake on Landing Aircraft and Wake Vortices

*Shigeru Obayashi¹, Takashi Misaka¹

1. Tohoku University

The wind environment around an airport is affected by turbulence caused by meteorological and geographical features. The small-scale atmospheric turbulence could be hazardous to aircraft take-off and landing. In this study, we assessed the influence of hangar buildings at Haneda airport on landing aircraft using unsteady numerical simulation. We also conducted large eddy simulation of wake vortices in ground effect with realistic terrain around Haneda airport focusing on the airport specific behavior of wake vortices. The impact of a crosswind over airport buildings on the behavior of wake vortex was evaluated by visualized images and vortex parameters.

Keywords: Airport hangar wake, Wake turbulence, Aviation safety