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Pollution Transport across the Pacific and its Impact on North America

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We present a study about the transport of pollution across the Pacific and how this long-range transport impacts the atmospheric composition over North America both on a regional and a local scale. Our focus is on spring 2006 when the NASA INTEX-B campaign (Intercontinental Chemical Transport Experiment) took place. The extensive set of aircraft and ground based field observations form the basis for the analysis together with satellite observations from the MOPITT and MODIS instruments and model simulations with the global MOZART-4 model and the regional WRF-Chem model. Model tracers are used to examine the contributions of different regions to pollution levels over the Pacific and to estimate the ozone production from anthropogenic NO_x sources in Asia to ozone loadings over the Pacific and North America. We acknowledge the INTEX-B team for providing the measurements.