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Title: The Characteristics of Turbulent Structure Over Hunshandake Desert Area in the Spring Season in China

Abstract: A dust storm monitoring experiment has been carried out on April 2003 at the Hunshendake desert area in China to observe the turbulent data and meteorological variables continuously under the collaborated research project between Korea and China. There are automatic and real-time data acquisition, processing and archiving schemes too. In this paper, the characteristics of atmospheric turbulence have been discussed using the turbulent data obtained by sonic anemometer and visibility sensors. The normalized standard deviations of u, v and w were discussed, and the normalized standard deviation of dust concentration was discussed too. Meanwhile, we try to have the dust-flux over Hunshandake desert area. The wind, temperature and dust spectra are found to be independent of atmospheric stability in all frequency range, but dust spectrum reveal quite similar with that of the horizontal velocity spectrum.

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