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Interactive comment on "The potential of polarization measurements from space at mm and sub-mm wavelengths for determining cirrus cloud parameters" *by* J. Miao et al.

J. Miao et al.

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As already pointed out by Dr. Q. Liu, ice particle shape is important for assessing the impact of cirrus clouds on the climate change. Exactly in this point are we trying to improve our understanding on the microphysical properties of cirrus clouds by studying the potential of a new remote sensing technique, i.e., the polarization measurements from space at mm and sub-mm wavelengths. Our simulation results presented in this paper are valid only for optically thin clouds. For example in Fig. 5, the polarization difference expressed in brightness temperature is for a cloud with IWP of 6 Gram per Square Meter, which corresponds to an optical depth at 683 GHz of less than 0.1.

Interactive comment on Atmos. Chem. Phys. Discuss., 2, 1403, 2002.