

## **Near-Global Survey of Cloud Column Susceptibilities Using ISCCP Data**

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### **ABSTRACT**

A new parameter, cloud *column* susceptibility, is introduced to study the aerosol indirect effect, which describes the aerosol indirect effect more directly without assuming how cloud droplet size will respond to changes of droplet number concentration. between the two approaches that used to retrieve cloud column susceptibilities, the one that makes no assumption of constant liquid water content leads to smaller, even negative cloud column susceptibilities. This finding is consistent with results of model studies and observations from the 1998-1999 Indian Ocean Experiment (**INDOEX**) that suggest that cloud liquid water content may be reduced during aerosol-cloud interactions. The results of this survey suggest that using constant liquid water content in models may lead to significant overestimation of the aerosol indirect effect.