

## ***Interactive comment on “Sensitivity of Dobson and Brewer Umkehr ozone profile retrievals to ozone cross-sections and stray light effects” by I. Petropavlovskikh et al.***

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Received and published: 7 July 2011

This paper examines various aspects of the use of Umkehr profile data. It specifically looks at the impact of internal stray light in the Brewer and Dobson spectrophotometers on the performance of the Umkehr retrieval algorithm. It also considers the probable impact of changing ozone cross-sections - as is currently being discussed in the international ozone community – on the profile results. These are significant issues and this paper makes an important contribution to understanding these issues and to stimulating discussion of the use of Umkehr data for ozone profile trend measurement. It

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should be noted that the Umkehr method provides one of a very small number of independent datasets with both the required stability and the long time span needed to be useful for long-term trend determination. The paper is clearly presented.

It would be useful to clarify the meaning of the equation found at the bottom of page 2011. Presumably the symbol  $F$  is to represent the signal detected by the spectrophotometer. But the relationship between sky brightness and the symbol  $ETC$  is not clear.

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Interactive comment on Atmos. Meas. Tech. Discuss., 4, 2007, 2011.

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