

This is the response of L. Frossard and H.E. Rieder on behalf of all authors (AC written in italic) to the comments of Referee 1 (R1).

First of all we thank the referee for his/her positive judgment and valuable suggestions leading to an improved version of the manuscript. The individual points raised by the referee are addressed in the point to point reply below.

Specific Comments:

R1: p.13163, L16: to adjust ... ozone distribution function ... so that statistical distribution is not confused with the spatial one

AC: We changed to 'statistical distribution of ozone'.

R1: p.13163, L23: the global decrease of total ozone should be dated later than since 1970

AC: We changed to 'between the 1980s and ...' according to the referee's suggestion.

R1: p.13163, L21: to exclude ... erythemal ...or to replace it by ... biologically active UV radiation ... as the UV radiation generally is the subject of the interest

AC: We changed to 'biologically active UV radiation' according to the referee's suggestion.

R1: p.13180, L11: adjust ... circumpolar vortex...

AC: We adjusted according to the referee's suggestion.

R1: p.13181, L5: to replace ODS by EESC

AC: We adjusted according to the referee's suggestion.

R1: Figures 4-9: in the figure captions the full designation: Pointwise regression coefficient estimates ... instead of Coefficient estimates ... is recommended.

AC: We adjusted to 'Pointwise regression coefficient estimates' according to the referee's suggestion.

Technical Comments:

AC: All technical comments have been addressed according to the referee's suggestion.