

Interactive comment on “Ionization effect of solar particle GLE events in low and middle atmosphere” by I. G. Usoskin et al.

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New reconstruction of solar proton energy spectra developed by the authors gives a new opportunity for community to include calculated ionization rates into global photochemical models to study the response of ozonosphere to external forcing. Now we can estimate such response having ionization rates caused by solar protons with the energy of more than 500 MeV, which penetrate deeper in the atmosphere. It is important to understand the role of cosmic influence in Global Change. So, this publication is very useful for current and future studies.

Interactive comment on Atmos. Chem. Phys. Discuss., 10, 30381, 2010.