

Interactive comment on “Impact of high solar zenith angles on dynamical and chemical processes in a coupled chemistry-climate model” by D. Lamago et al.

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Investigating thoroughly the effects of photodissociation at high zenith angles was something that really needed to be done, so a bouquet to the authors for doing it. My comment is that it also necessitates an extension of the normal range of wavelengths found in atmospheric chemistry models into the near infrared. See the following references: Donaldson et al., *Geophys Res Lett* 24, 2651 [1997]; Salawitch et al., *Geophys Res Lett* 29(16), 10.1029/2002GL016470, 2002; Donaldson, Tuck & Vaida, *Chemical Reviews*, Atmospheric photochemistry via vibrational overtone absorption, CR0206519, in press. We ran this sort of overtone photochemistry along trajectories in the field at Fairbanks during POLARIS, and it makes a big difference in polar regions,

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particularly at the edge of the vortex and around the terminator.

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