

Interactive comment on “Hydroxyl radicals maintain the self-cleansing capacity of the troposphere” by J. Lelieveld et al.

T. Karl

tomkarl@ucar.edu

Received and published: 22 August 2004

I agree that the magnitude of natural VOC sources is probably the most uncertain part in budget considerations. Table 3.1 (p76, Brasseur et al., 2003) of the IGAC synthesis report for example is referenced to a WMO 1998 report on stratospheric ozone depletion. It appears that the WMO 1998 report does not explicitly treat VOC budgets (except ozone depleting species such as halocarbons). It is therefore not exactly clear where the lower and upper limits for natural NMHC in Table 3.1 of the IGAC report came from. Assuming an uncertainty of plus/minus a factor of 2, the range of natural NMHC (based on carbon) from Guenther et al. (1995) would be ~500-2000 Tg/y, or roughly twice as high (best estimate ~1000 Tg/y). Recent results from the Harvard GEOS-CHEM model (e.g. Palmer et al., 2003,2004) using GOME formaldehyde column data as a proxy for isoprene emissions seem to suggest that estimates from Guenther et al. (1995) could

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

potentially be a lower limit in some regions (e.g. Asia).

Interactive comment on Atmos. Chem. Phys. Discuss., 4, 3699, 2004.

ACPD

4, S1594–S1595, 2004

Interactive
Comment

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

S1595

© EGU 2004