Manuscript prepared for Atmos. Chem. Phys.
with version 3.2 of the LaTeX class copernicus.cls.
Date: 5 January 2012

The role of carbonyl sulphide as a source of stratospheric sulphate aerosol and its impact on climate. Supplement

Abstract. Calculated and observed stratospheric aerosol burdens, simulated mode radii and number concentrations, and volume mixing ratios of sulphur compounds.

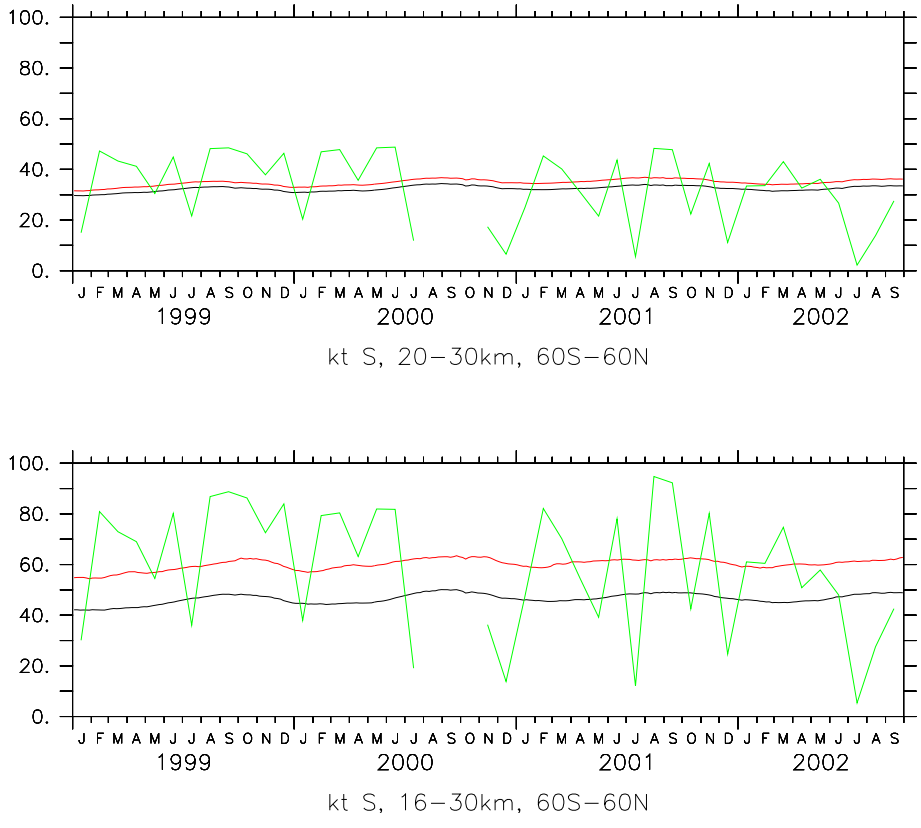

Fig. 1. EMAC-calculated and observed stratospheric aerosol burdens, integrated between 60S and 60N. Black: sulphate, red: sulphate+mass weighted organic carbon, green: observed by SAGE, dips due to data gaps, full coverage at maxima. Upper panel: above 20km. Lower panel: above 16km (or about 100hPa)

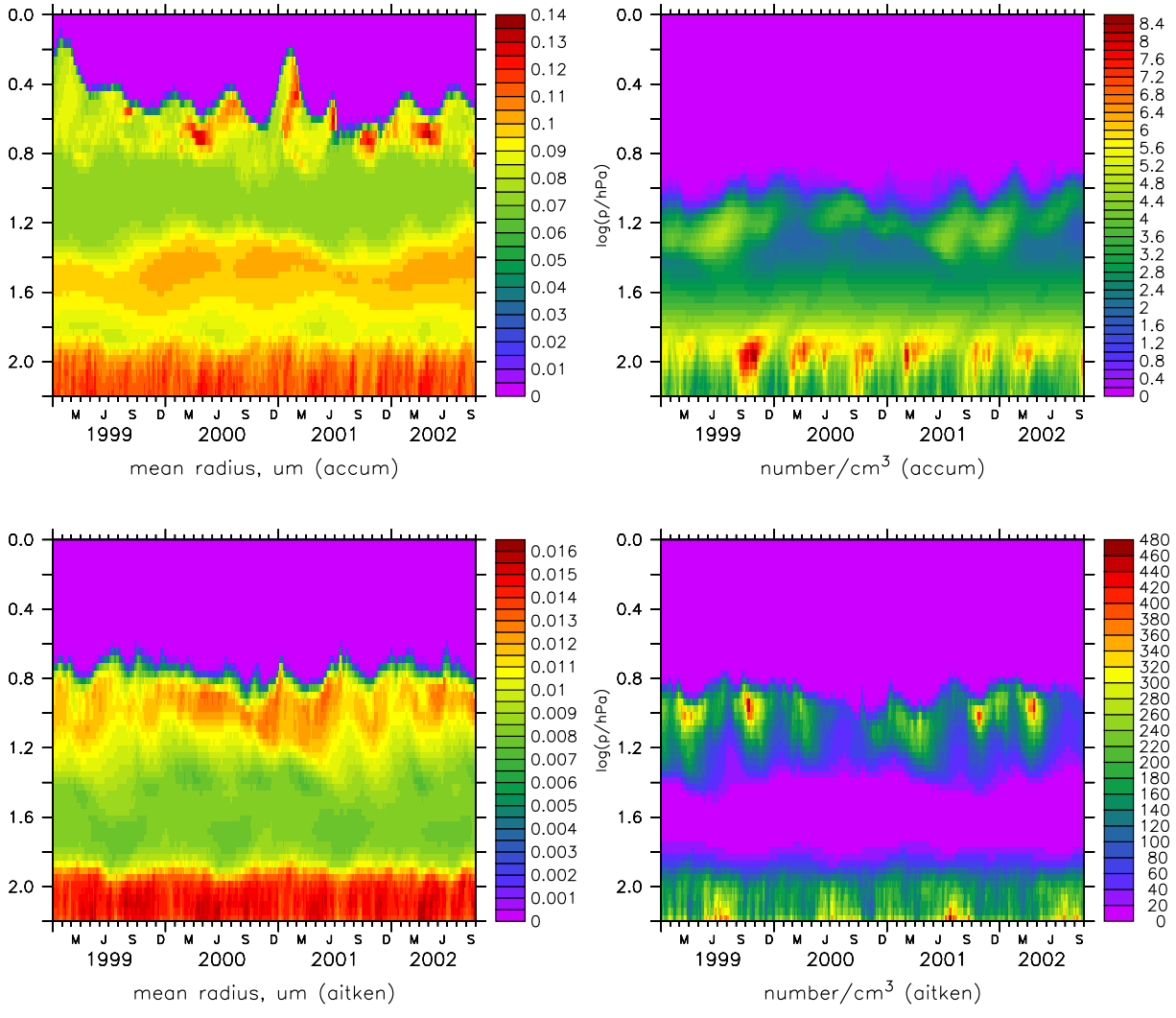

Fig. 2. Mode radii and number concentrations for accumulation and aitken modes in the tropics calculated by EMAC. Distributions with latitude at 10hPa and 100hPa (1 and 2 on vertical axis) are given on the following pages.

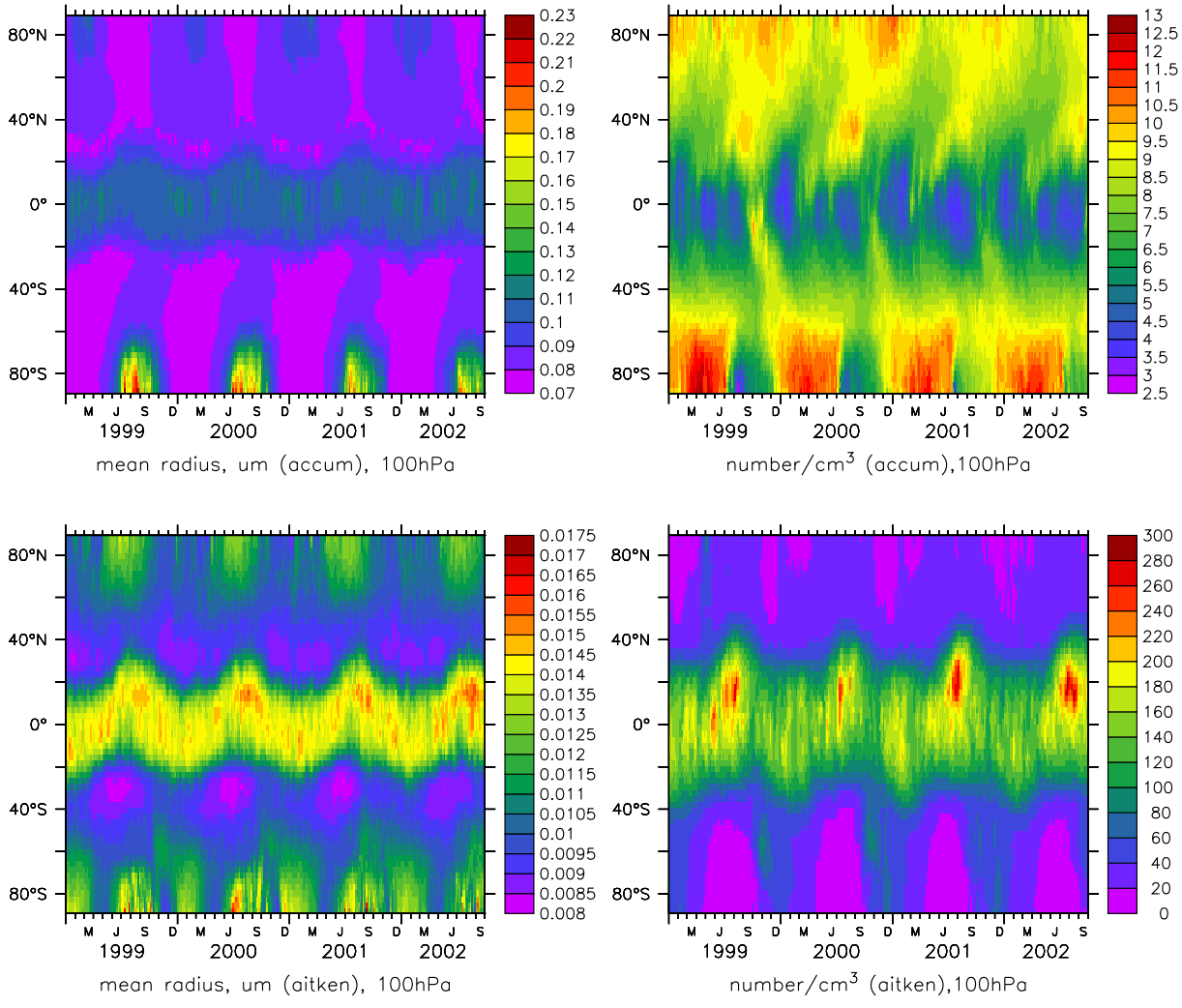

Fig. 3. Mode radii and number concentrations for accumulation and aitken modes at 100hPa calculated by EMAC

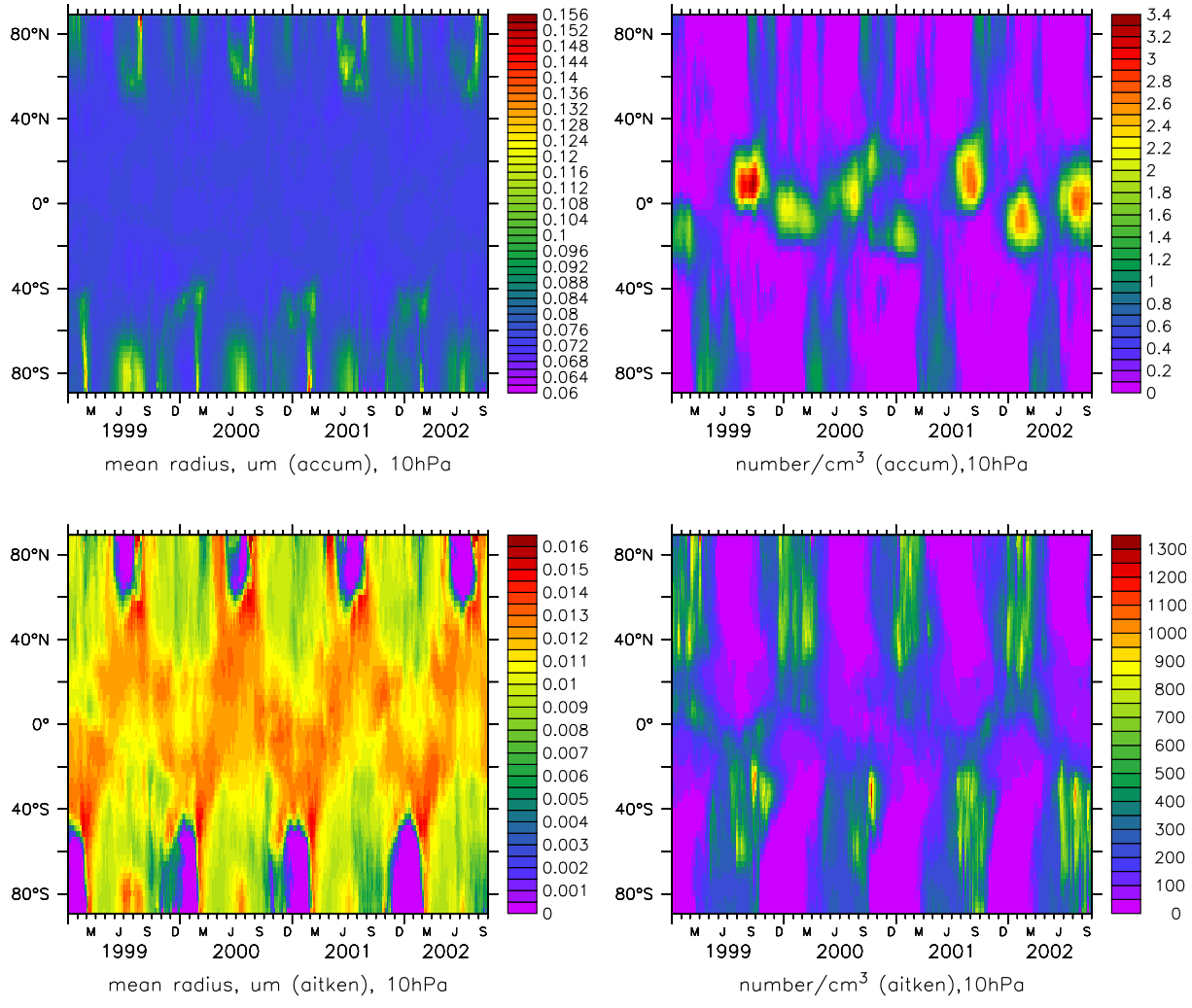

Fig. 4. Mode radii and number concentrations for accumulation and aitken modes at 10hPa calculated by EMAC

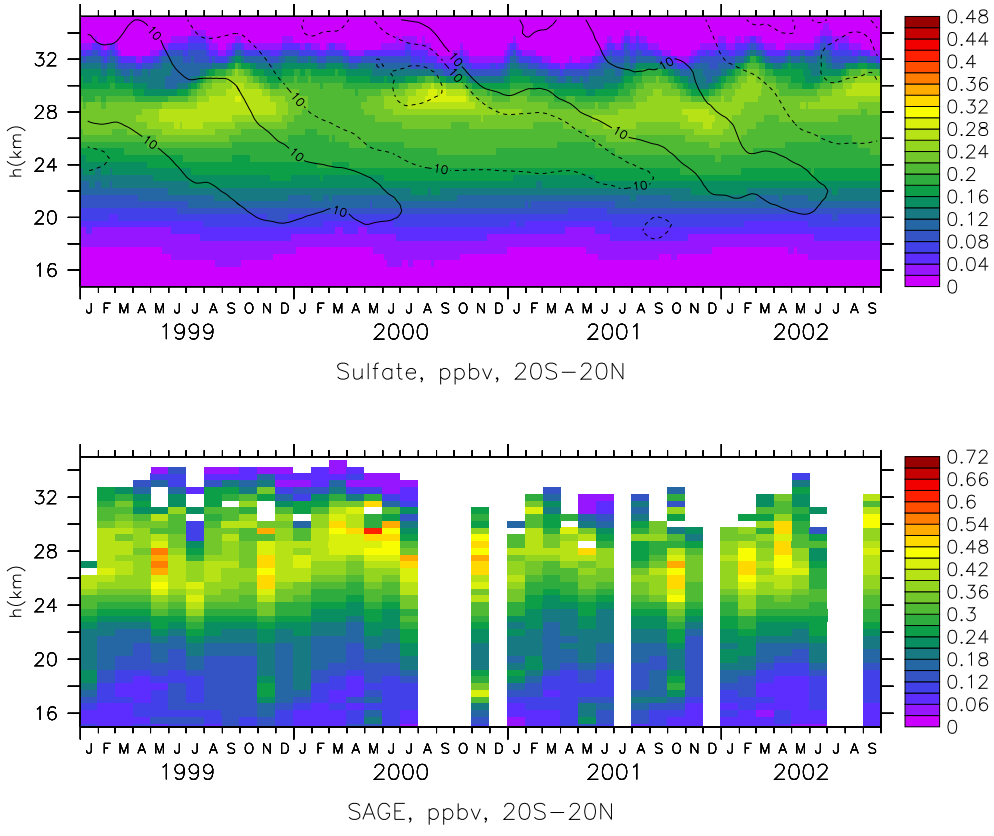

Fig. 5. As original Figure 5, but for 20^{o}S to 20^{o}N average, EMAC-sulphate and SAGE-observations only

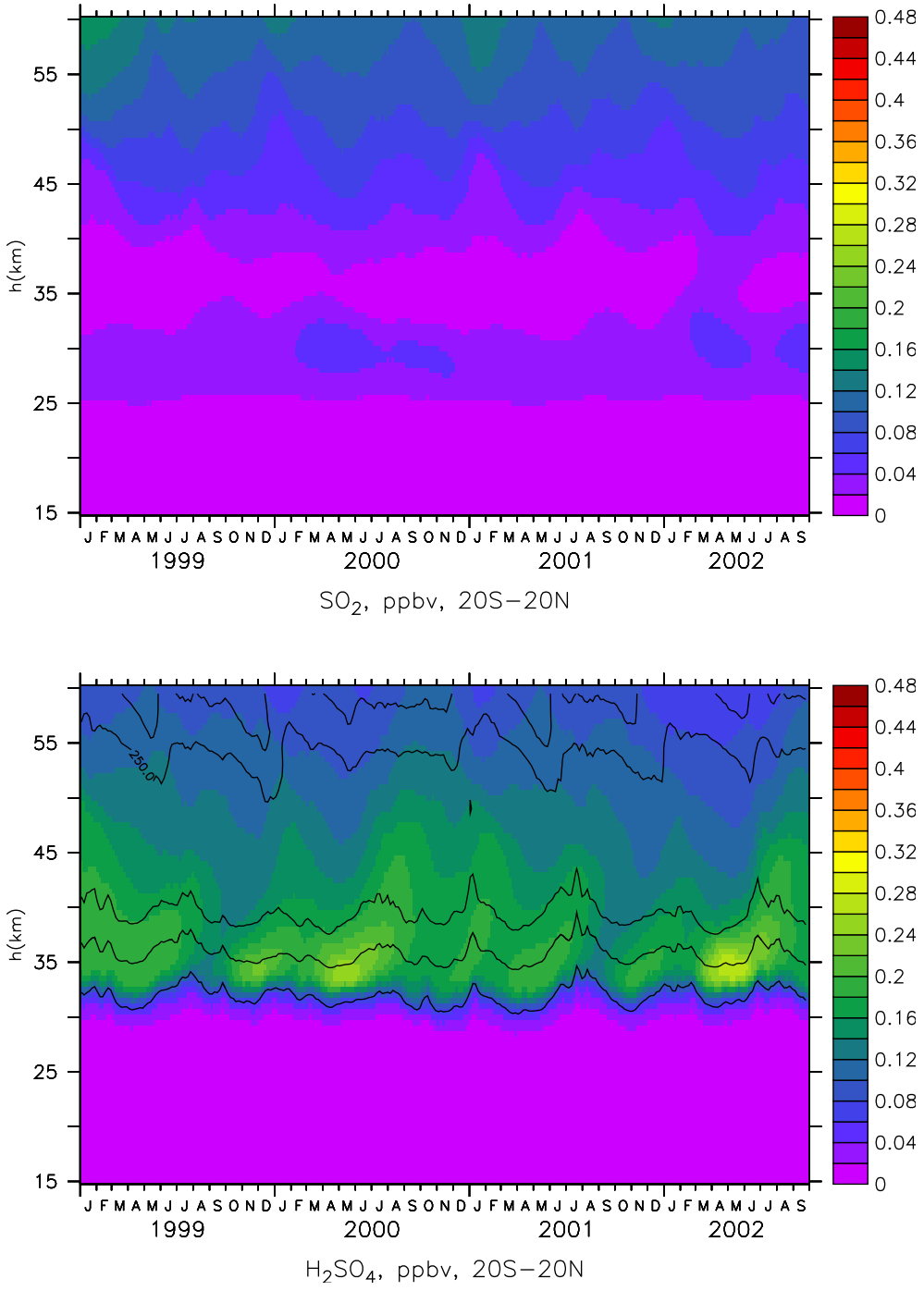

Fig. 6. As original Figure 6, but for 20^{o}S to 20^{o}N average, contours for 230, 240 and 250 K. Instead of SOx the dominating SO_2 is shown