Enhancement of ozone precursor gases in the upper troposphere over Australia and Indonesia observed during BIBLE-A campaign

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Simultaneous observations of ozone and related species were conducted over Australia and Indonesia in Sep.-Oct. 1998 during BIBLE-A campaign. The ozone increase was observed over Australia,and ozone mixing ratio was generally small over Indonesia. However, enhancements of ozone precursor gases as NOx were frequently observed in the upper troposphere over Australia and Indonesia. In this paper, the characteristics of the enhancenment events were described, and the possible causes of the events were discussed.

Aircraft observation campaign of ozone and related species, BIBLE-A, were conducted over Australia and Indonesia in Sep. and Oct. 1998. The objective of this campaign was to understand the distribution and budget of trospoheric ozone in these regions, especially understanding of the ozone increase associated with the biomass burning. However, the observation was conducted during the La Nina period, and the precipitation in the Indonesia was larger than usual. The biomass burning in the Indonesia was not active. The ozone increase was observed over Australia,and ozone mixing ratio was generally small over Indonesia.

However, enhancements of ozone precursor gases as NOx were frequently observed in the upper troposphere over Australia and Indonesia. In this paper, the characteristics of the enhancenment events were described, and the possible causes of the events were discussed.