Figure 1. Whole air sample locations for PEM-West B and TRACE-P

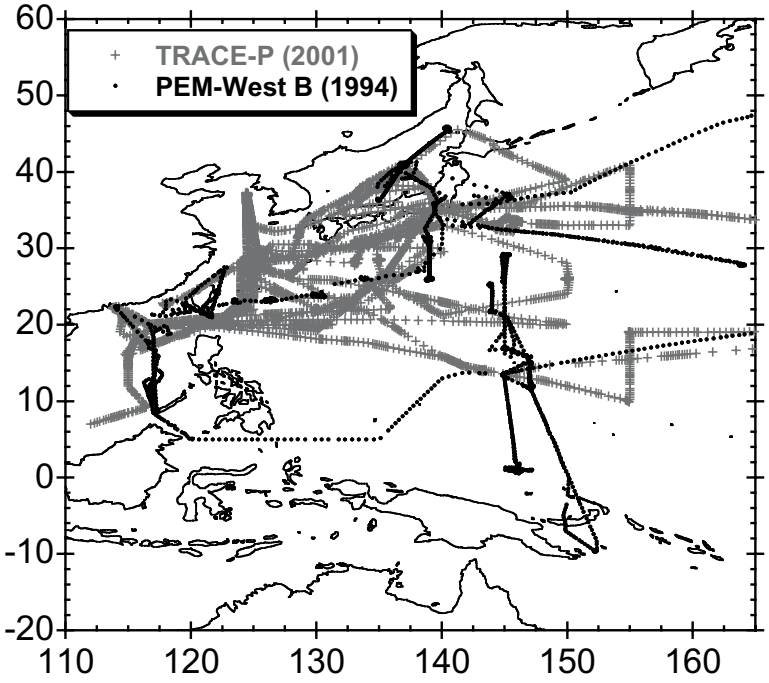


Figure 2. Ethene

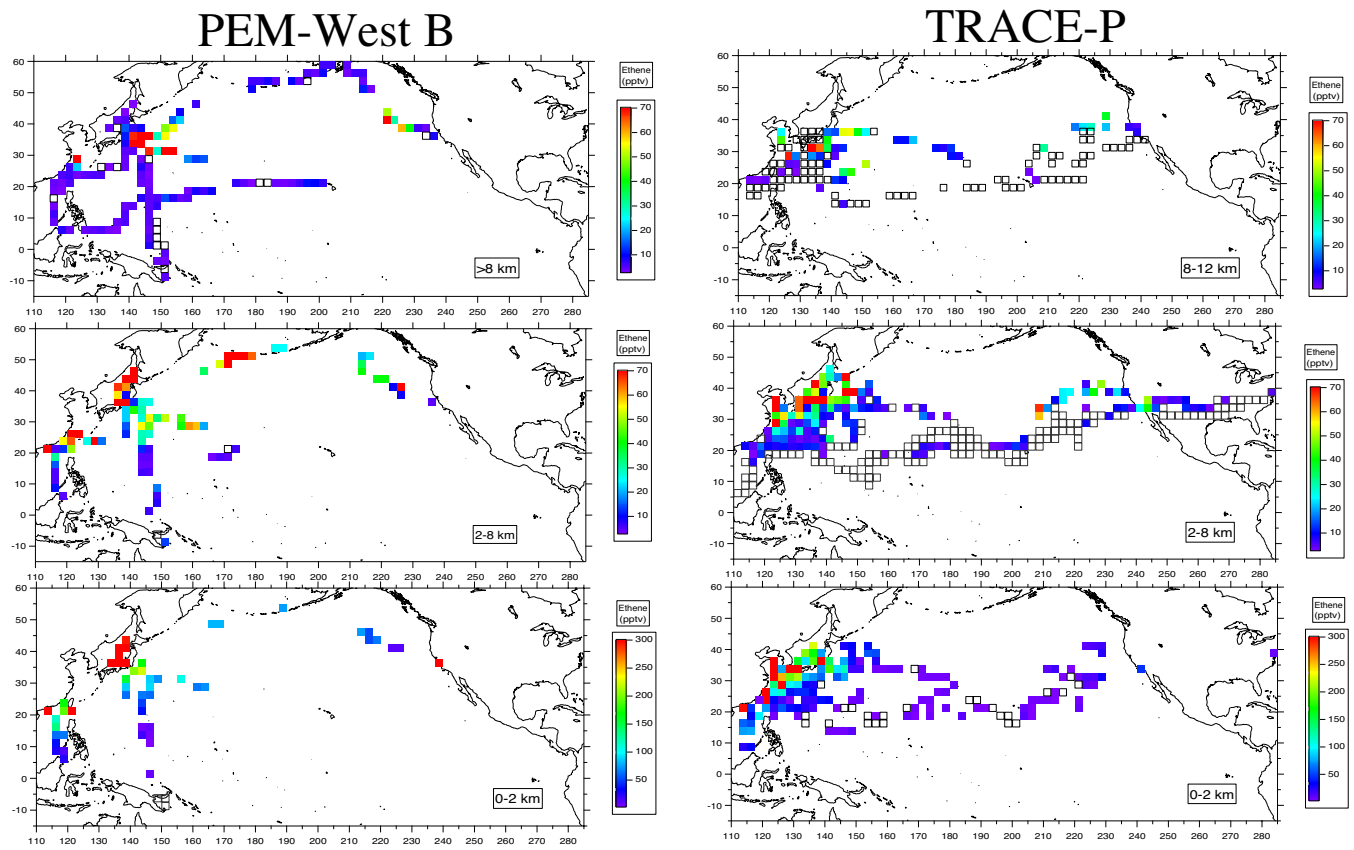


Figure 3. Ethyne

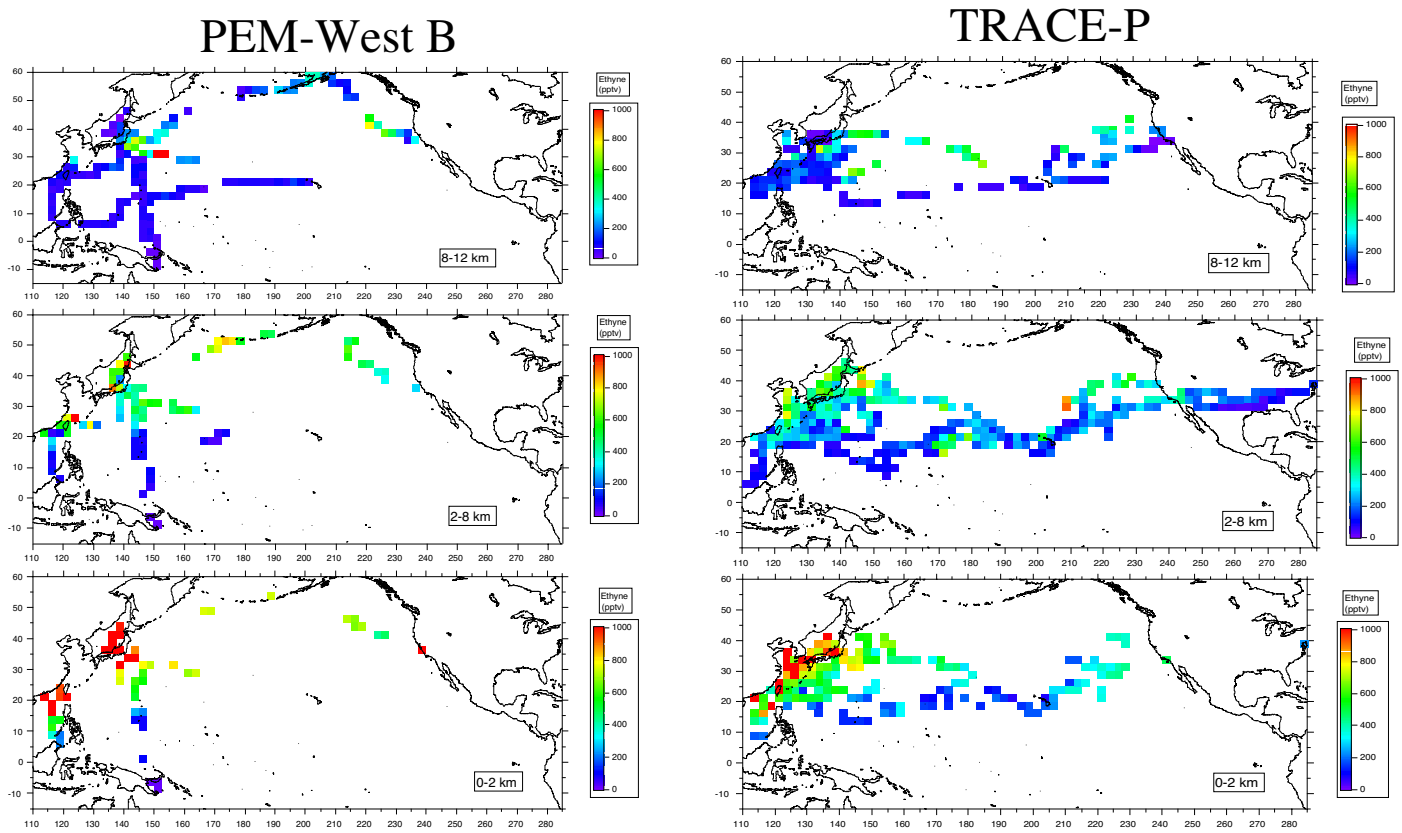
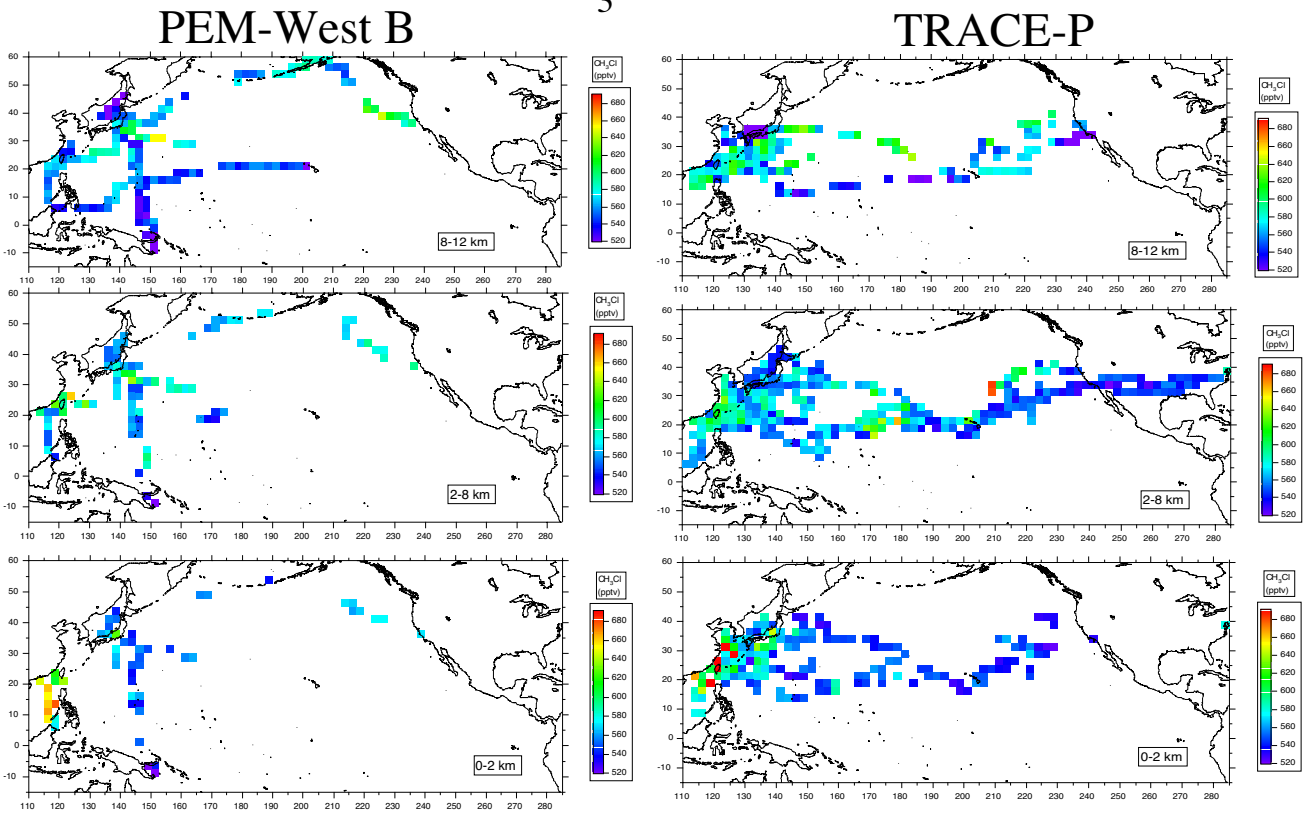


Figure 4.

CH_3Cl



TRACE P

Figure 5. Ethane

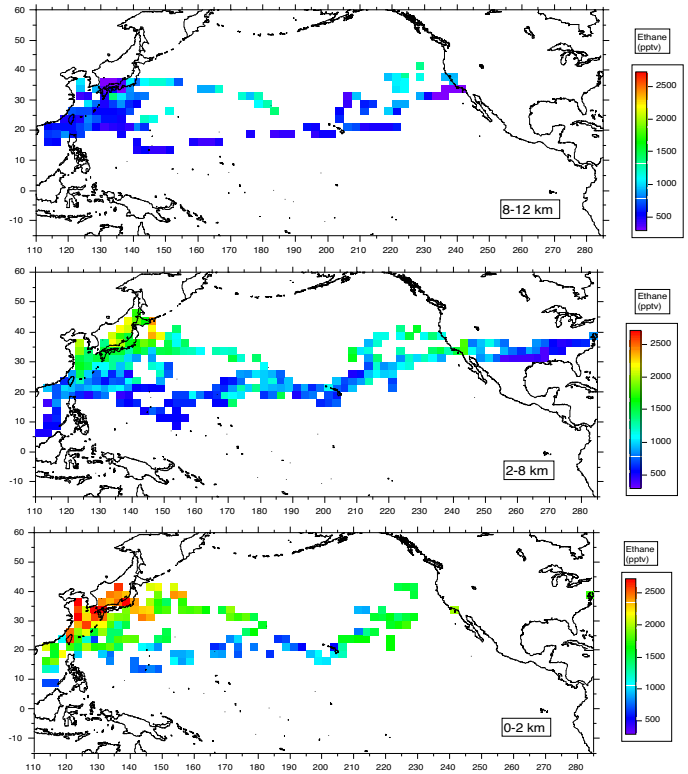


Figure 6. CH_3Br

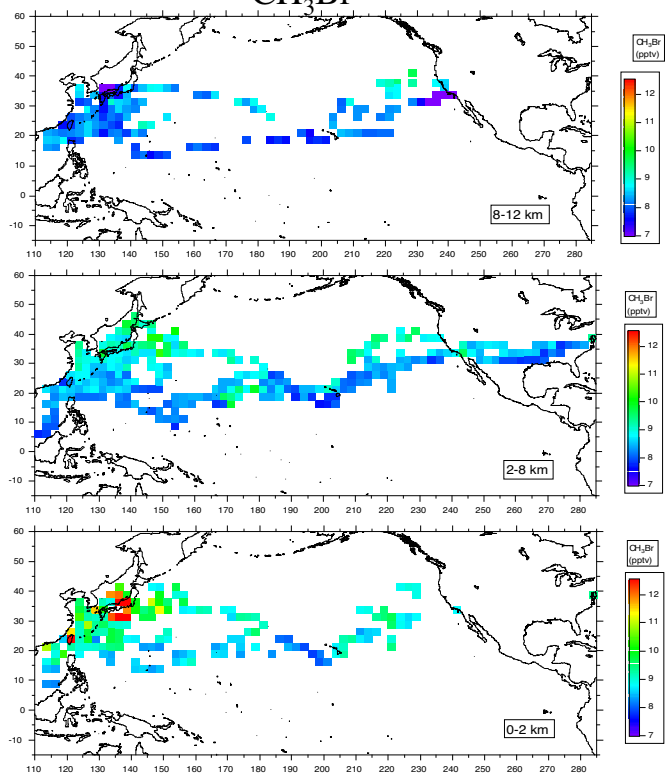


Figure 7. Halon-1211

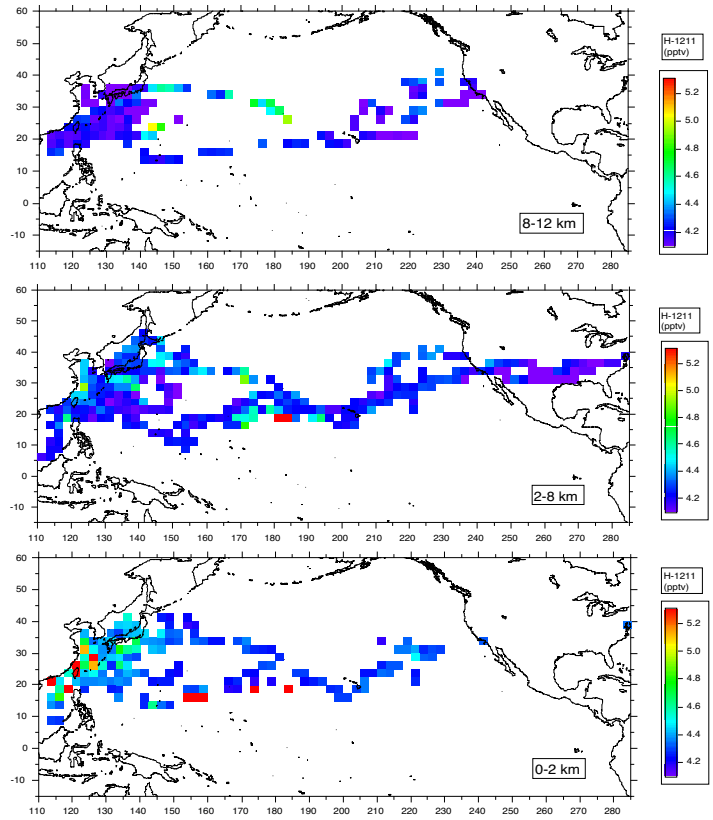


Figure 8. C_2Cl_4

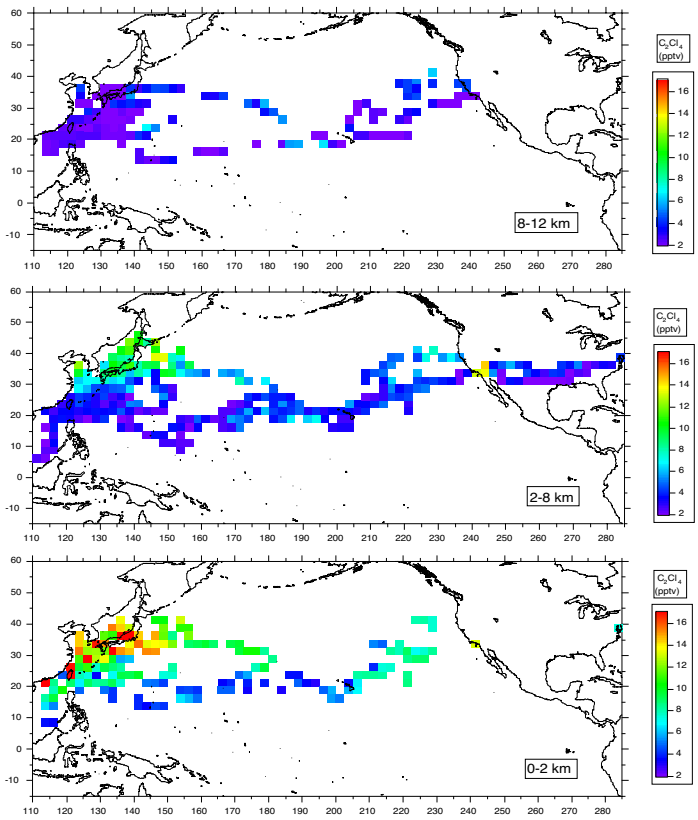


Figure 9. Mean mixing ratio values of selected trace gases for 1-km altitude increments for all samples collected west of 165°E for PEM-West B (blue) and TRACE-P (red). Error bars are the 95% confidence level of the mean

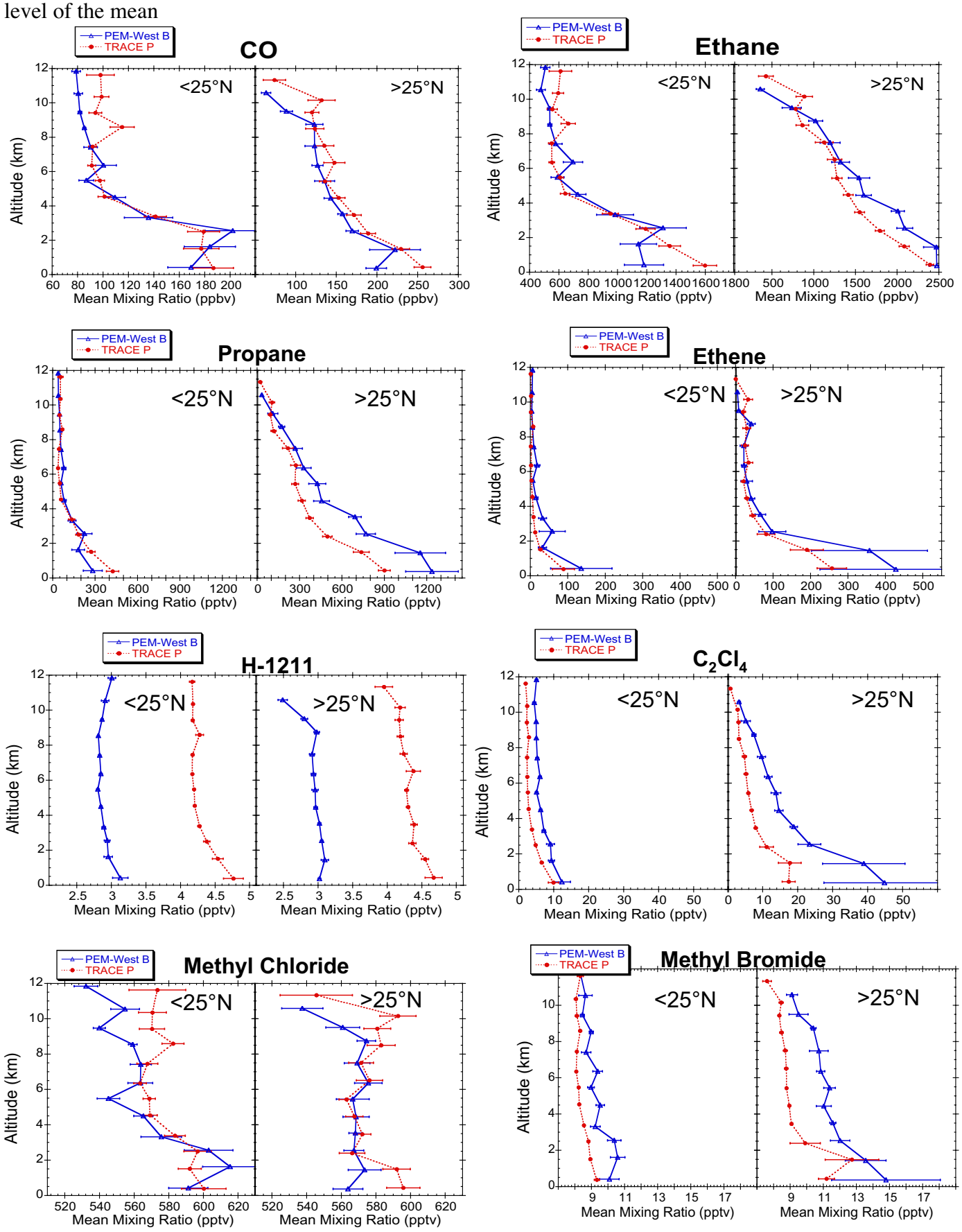


Figure 10. Temporal distribution for whole air samples collected west of 165°E during PEM-West B and TRACE-P

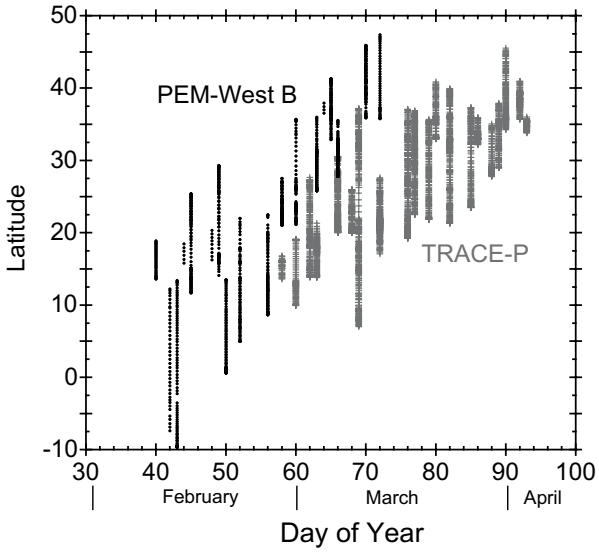


Figure 11. Median mixing ratios of 2.5° bins for TRACE-P and PEM-West B at low altitudes (<2 km) over the western Pacific (West of 165°E)

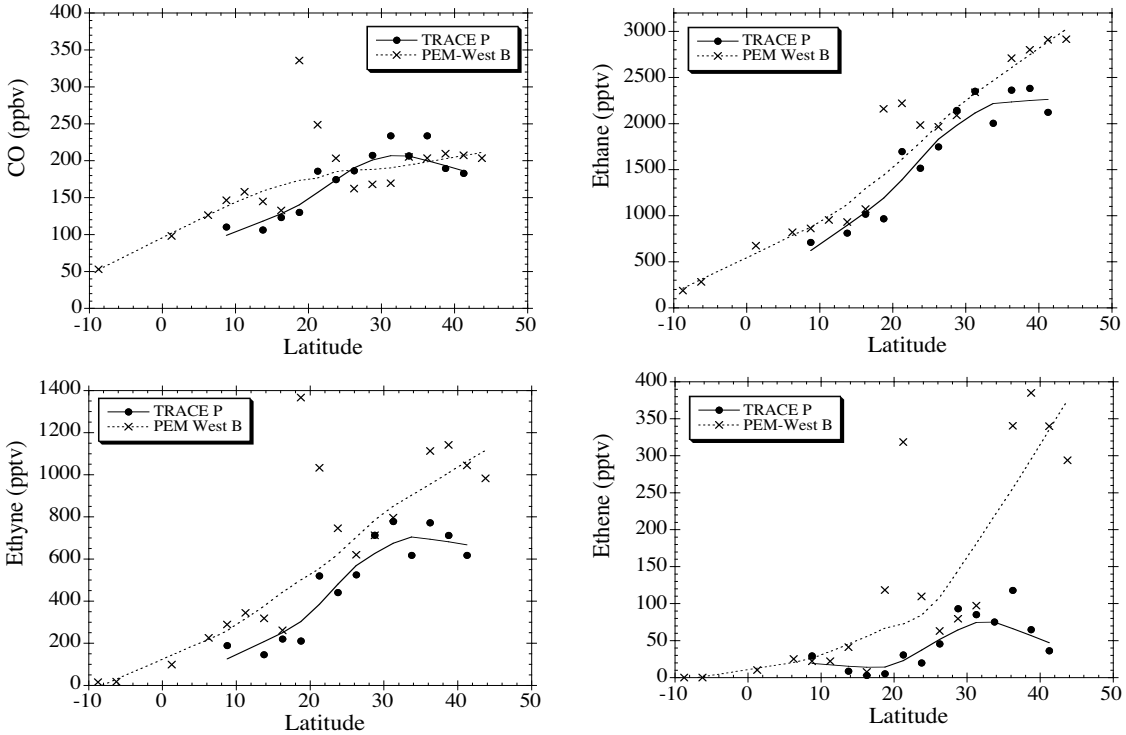


Figure 12. Figures a and c are median mixing ratios of Halon-1211 for 2.5° bins for TRACE- P and PEM-West B over the western Pacific (west of 165°E) for the altitude ranges 2-8 km (a) 0-2 km (c). Plots b and d show the difference between the median data in a and c for the two missions (TRACE-P - PEM-West B. The line is the mean difference over all latitudes and the shaded band is the 1-SD uncertainty.

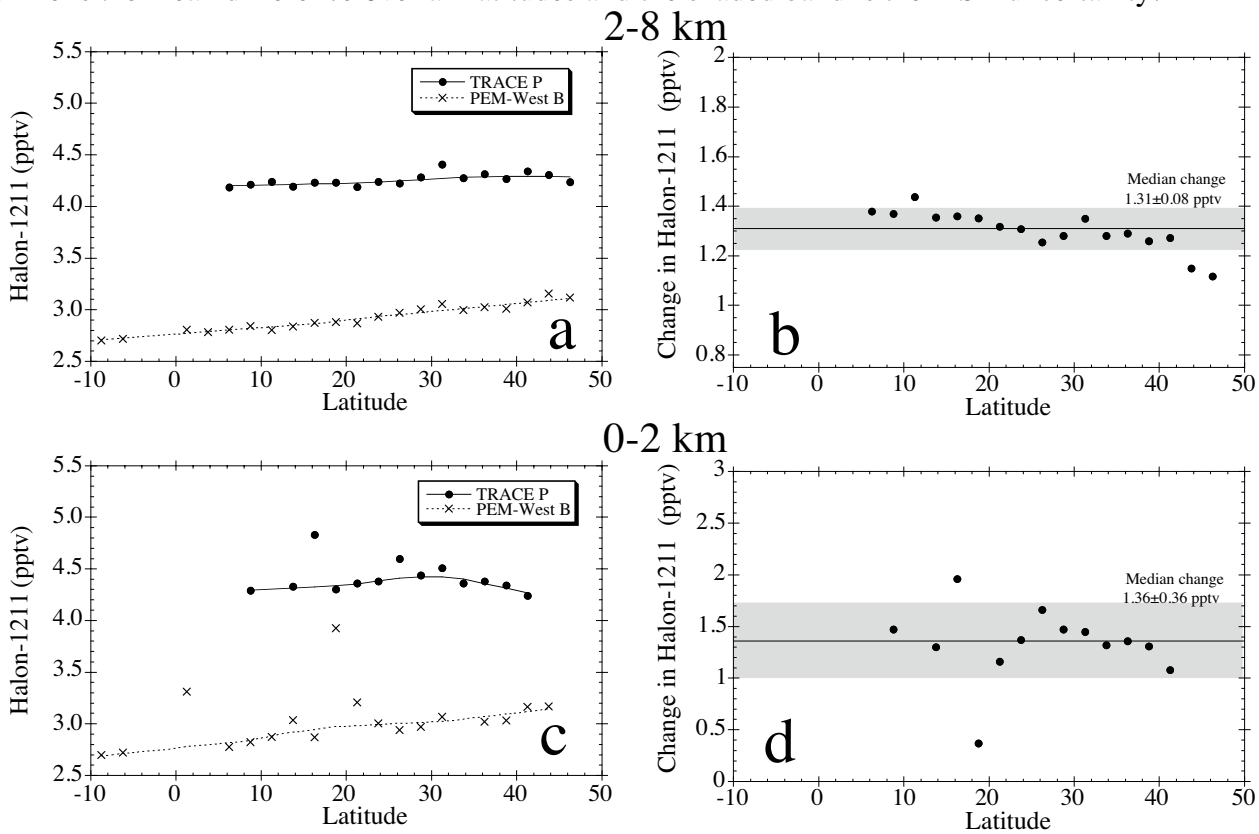


Figure 13. Spatial distribution of CH_3CCl_3 at low altitude (0-2 km) during TRACE-P.

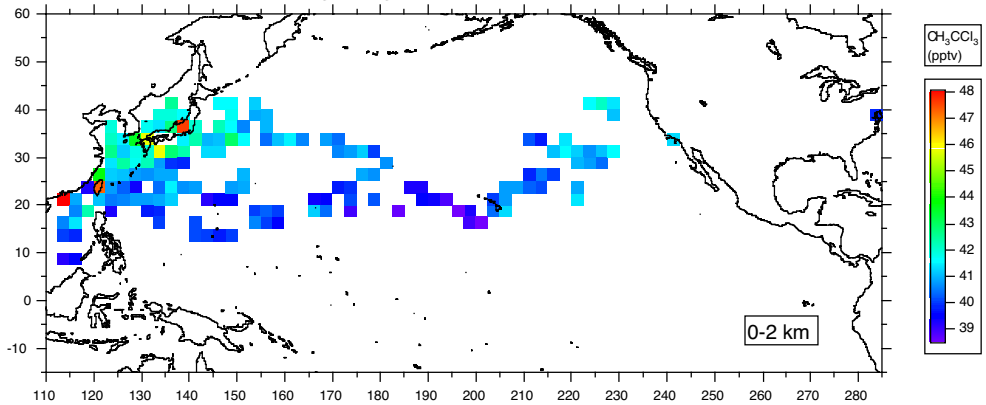


Figure 14. Spatial distribution of CCl_4 at low altitude (0-2 km) during TRACE-P.

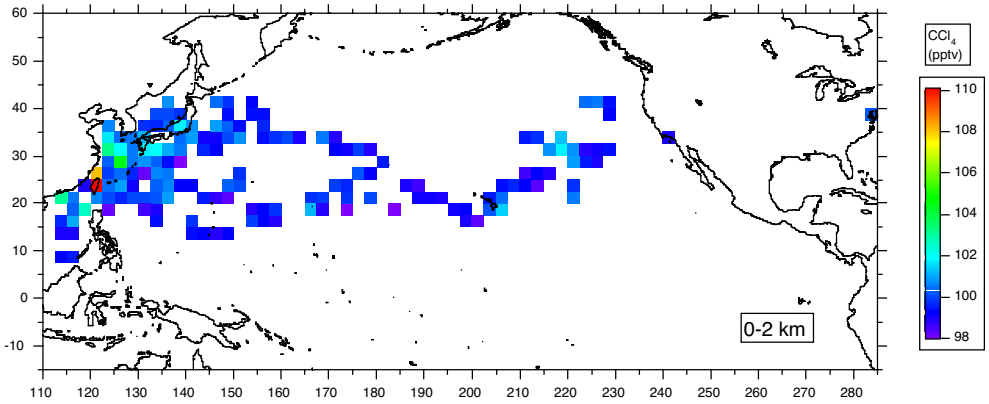


Figure 15. Same as Figure 12 but for C_2Cl_4.

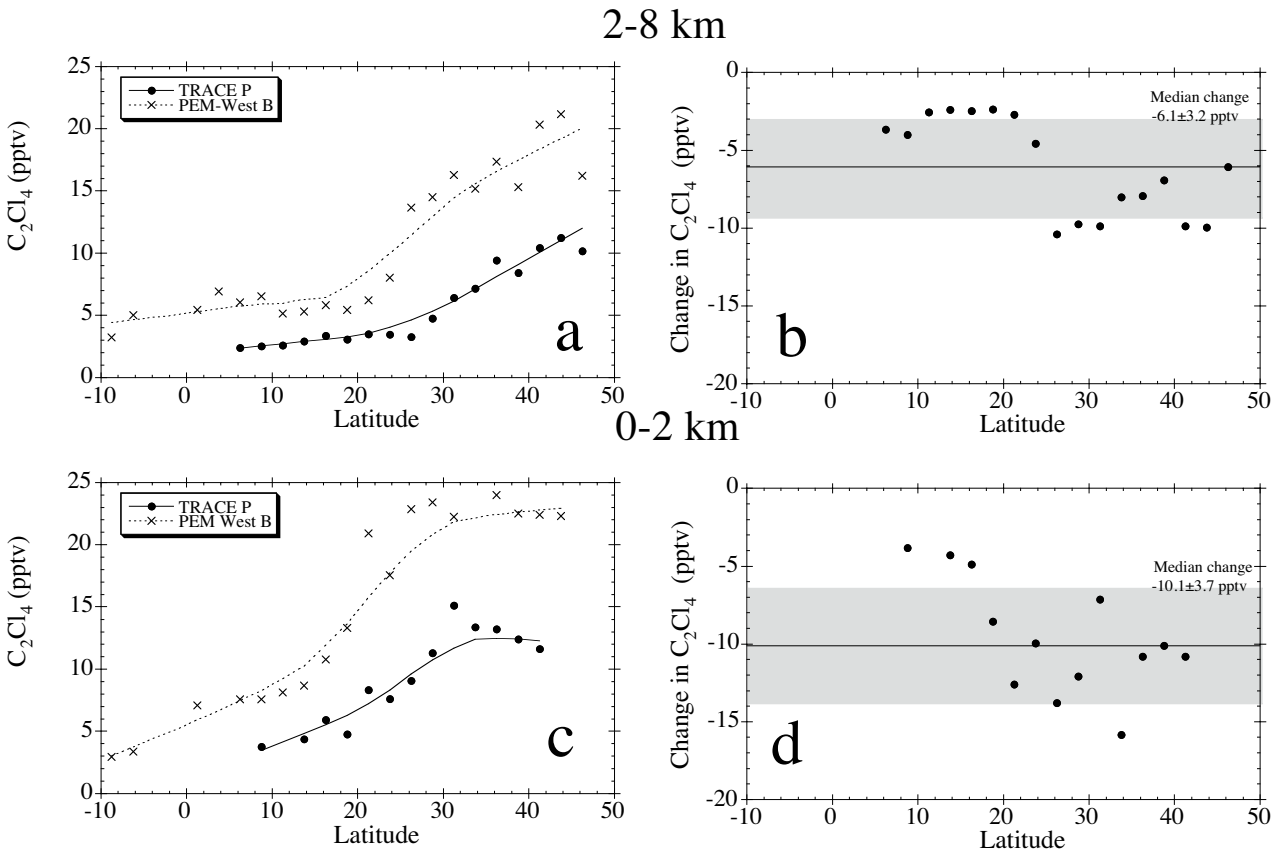


Figure 16. Same as Figure 12 but for CH_3Cl.

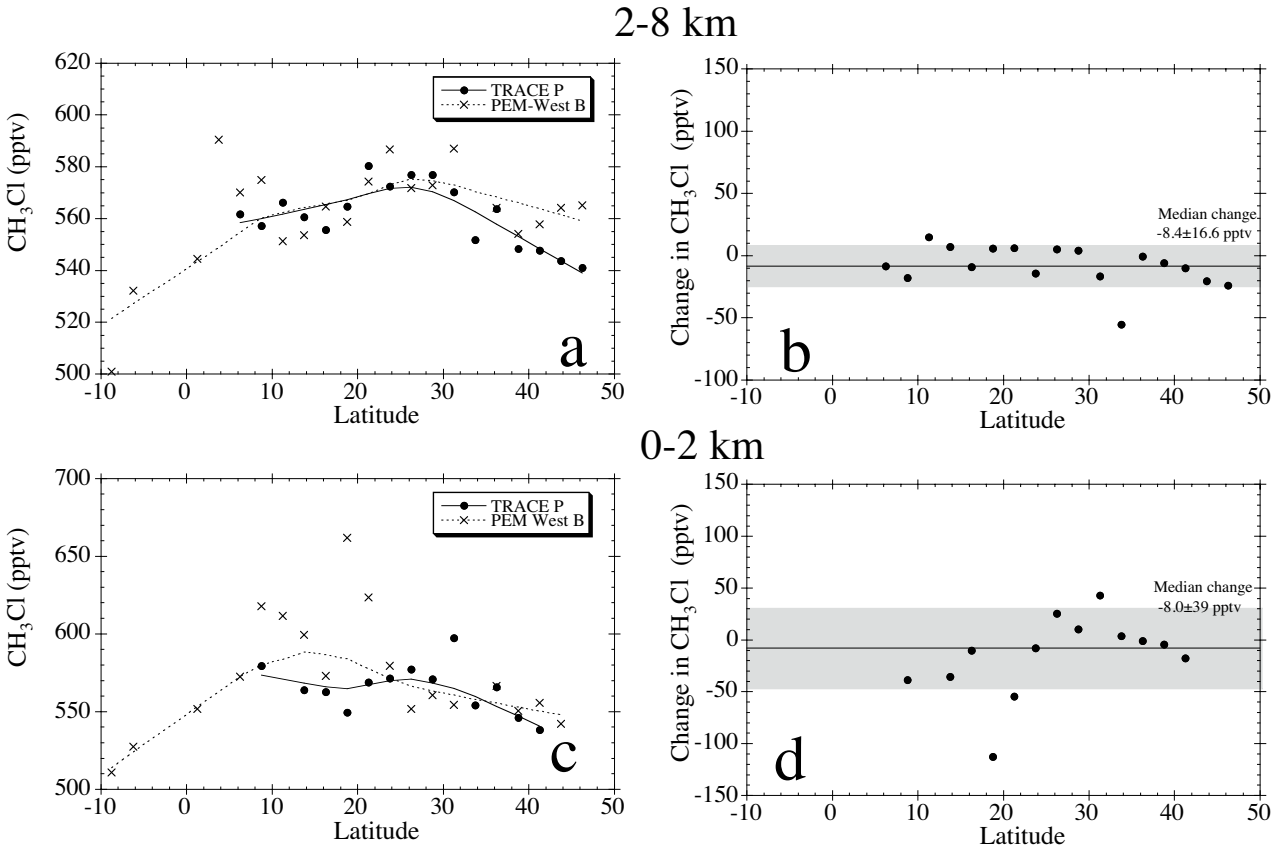


Figure 17. Same as Figure 12 but for CH_3Br.

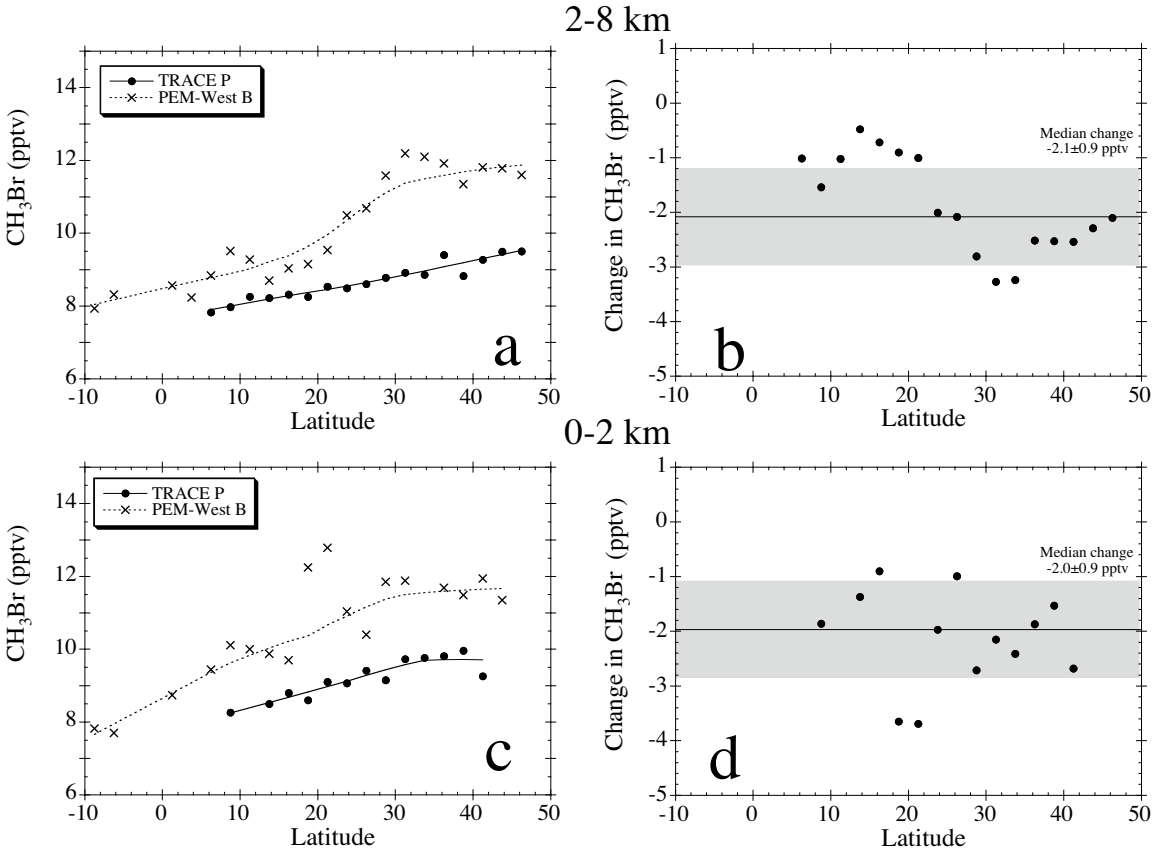


Figure 18. Location of all whole air samples collected between 0-2 km and west of 165°E on the NASA P-3B (light grey) and the NASA DC-8 (dark grey). The numbers represent flight number. The black boxes represent the "Japan Coast" (RHS) and "China Coast" (LHS) sample subsets.

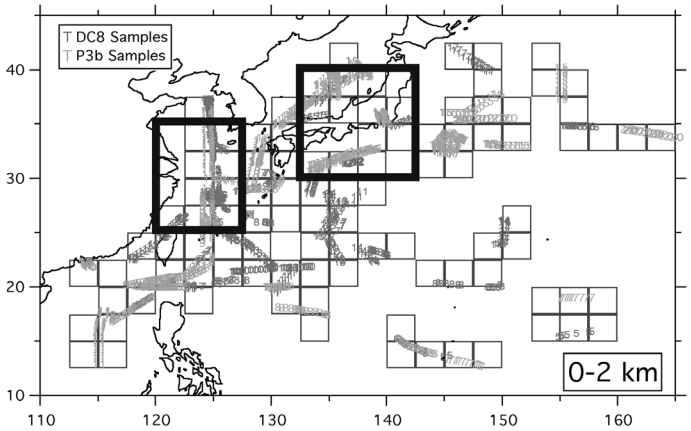


Figure 19. Correlation versus CO for samples collected near the coast of Japan (30-40°N, 135-142.5°E with landing samples removed) and off the coast of China (25-35°N, 120-127.5°E) as shown in Figure 18.

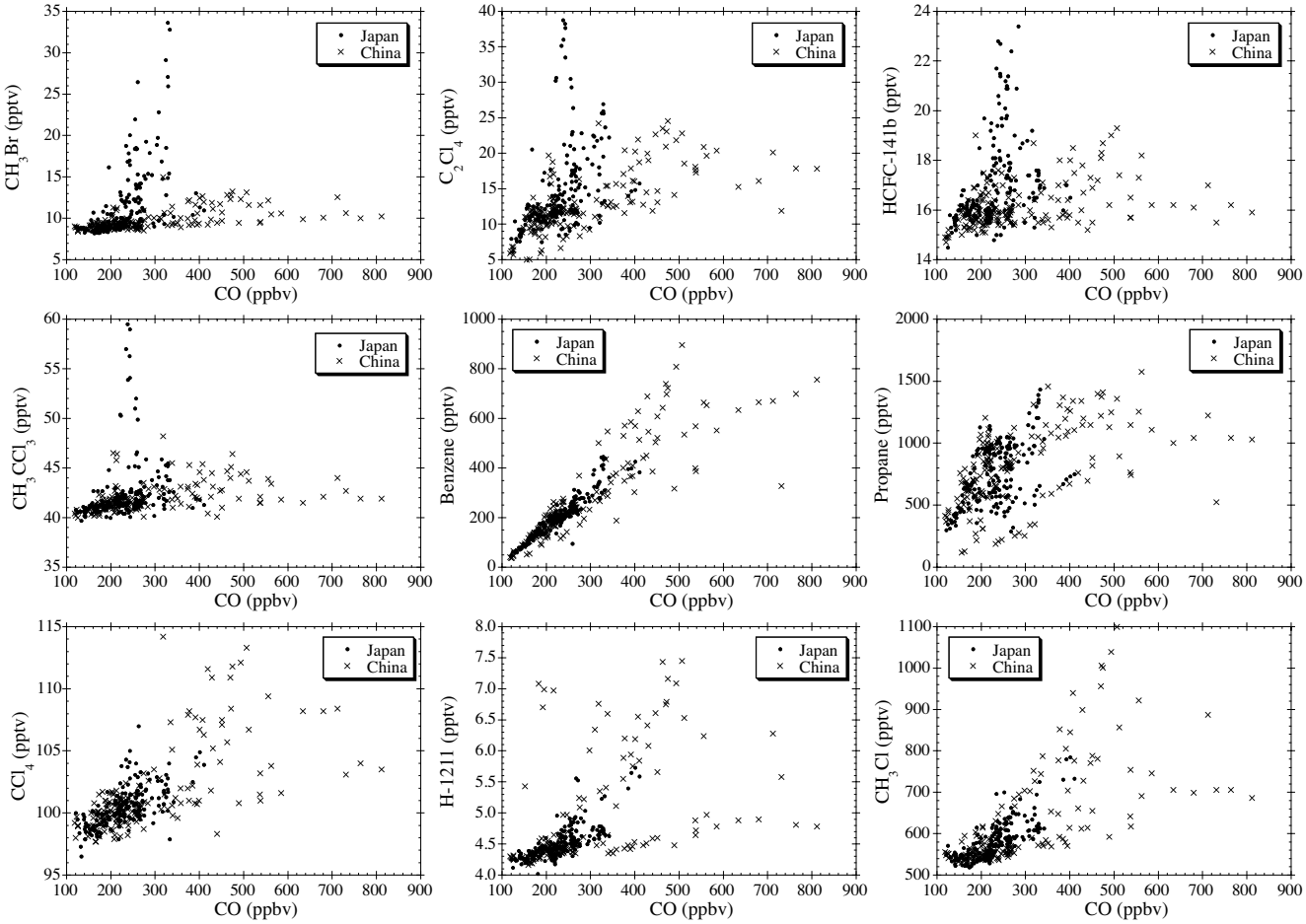


Figure 20. TRACE-A Source Region Classifications from *Kita et al.* Note: Japan and Korean classifications are combined in this analysis.

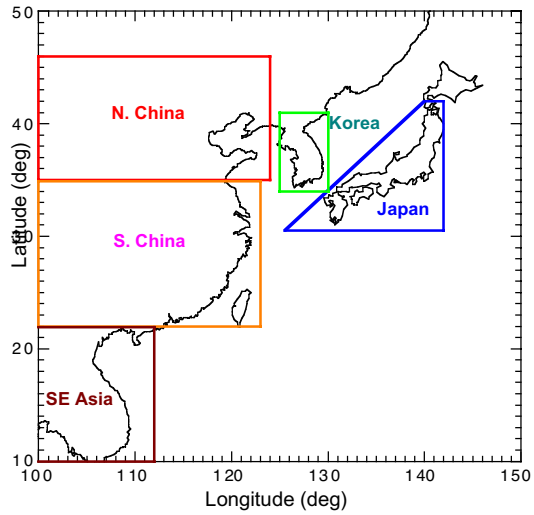


Figure 21. Selected trace gas mixing ratios vs CO for Kita classifications SE Asia, South China, North China, and Japan + Korea. (Note: Top 5% of data have been removed to better represent regional averages.)

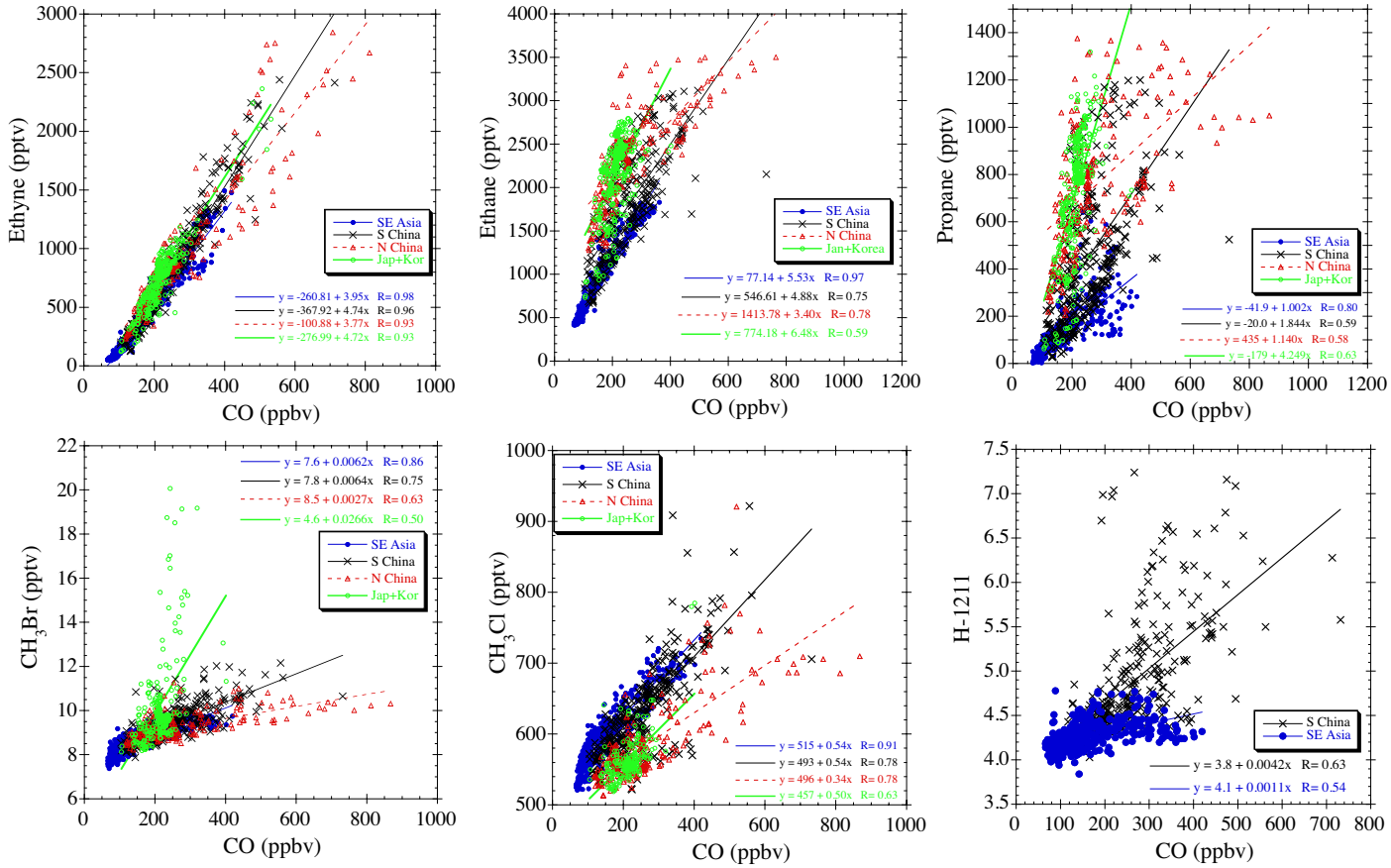


Figure 22. Mixing ratios of selected trace gases and altitude versus time for P-3B Flight 14 transit from Okinawa to Yokota. The different low altitude plumes are marked A-D.

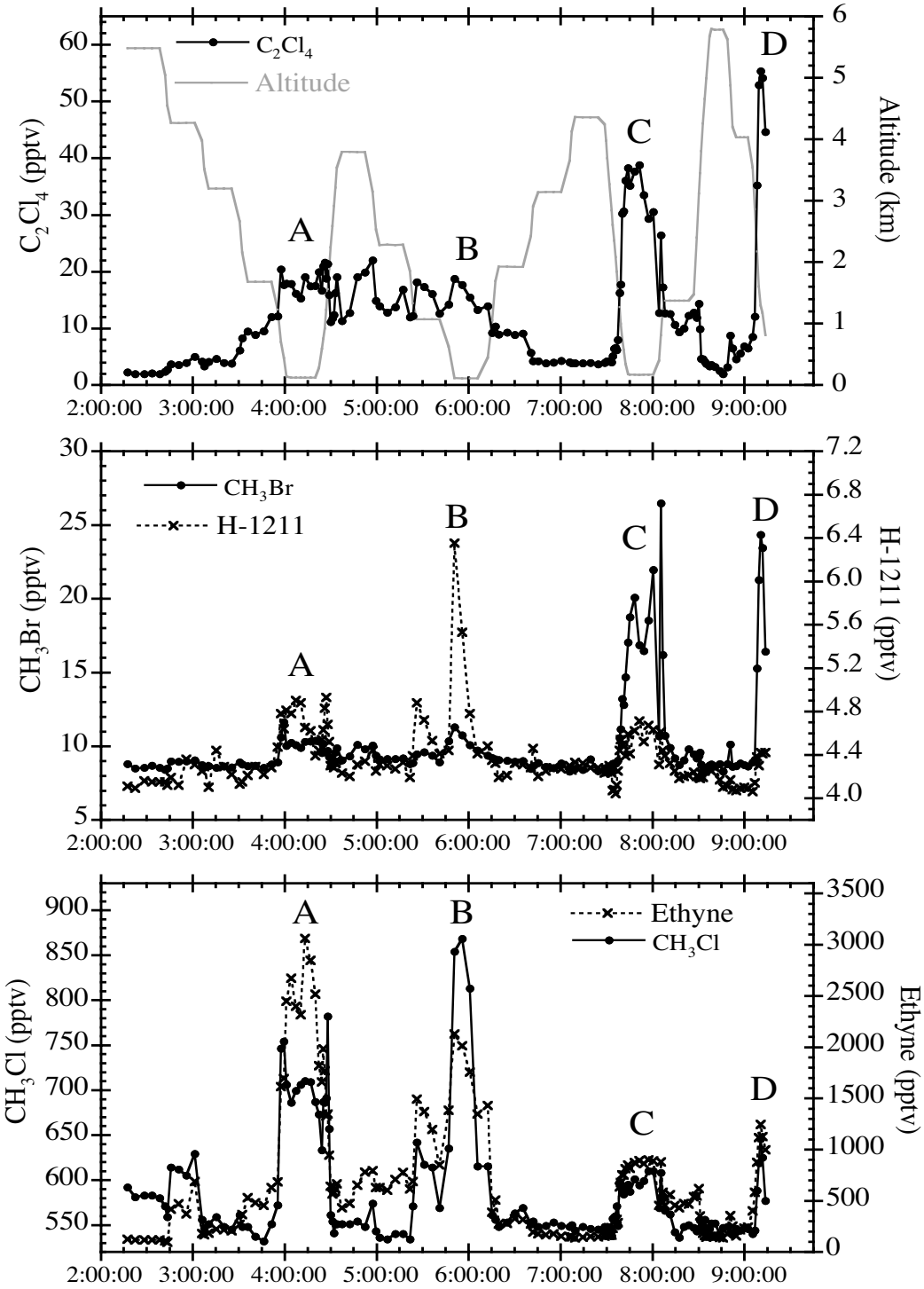


Figure 23. Flight track and backward trajectories for P-3B Flight 14. The different low altitude plumes are marked A-D as in Figure 22.

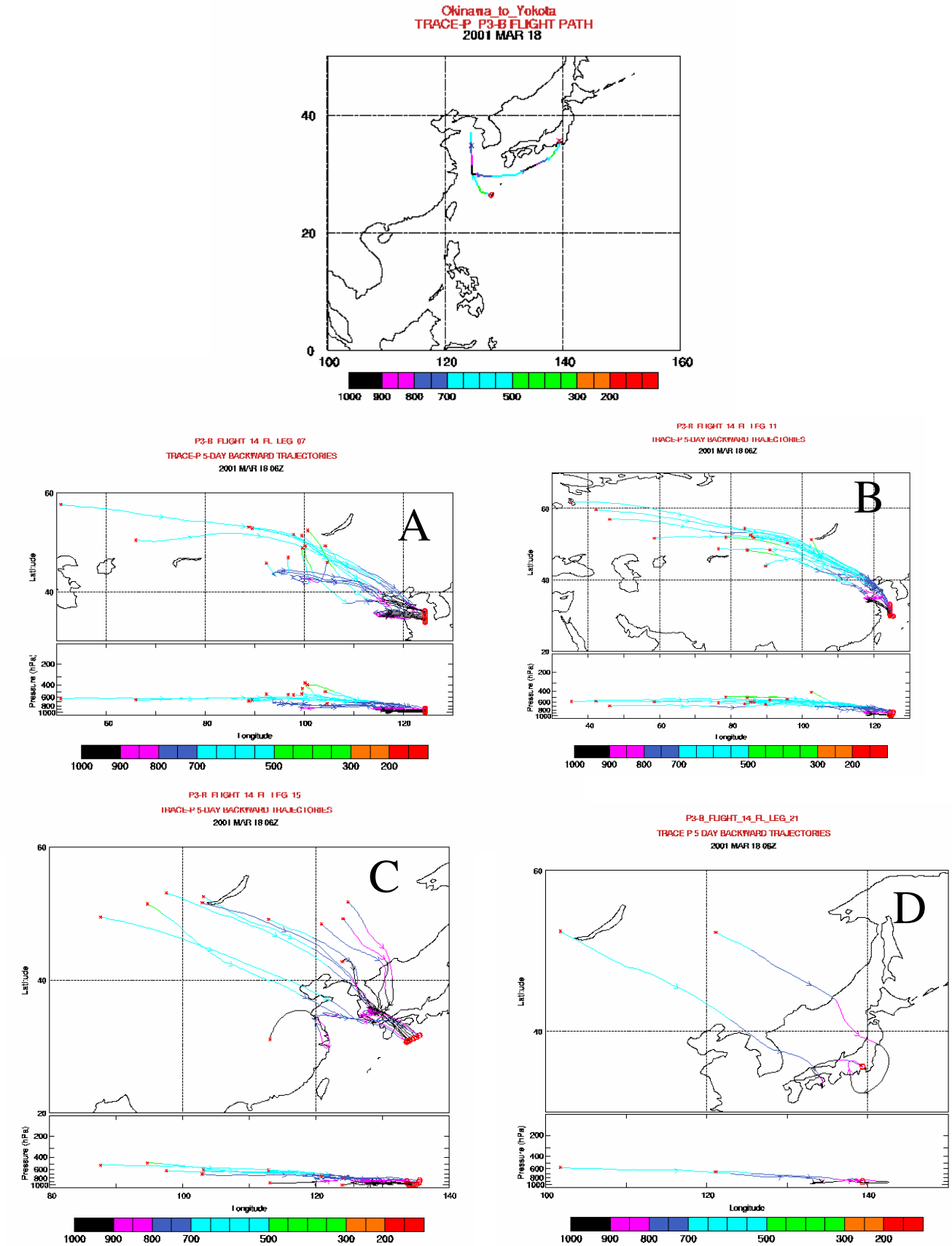


Figure 24. P-3B Flight 19, Yokota local flight over the Sea of Japan. Backward trajectory for low altitude air mass containing methyl bromide mixing ratio of nearly 35 pptv.

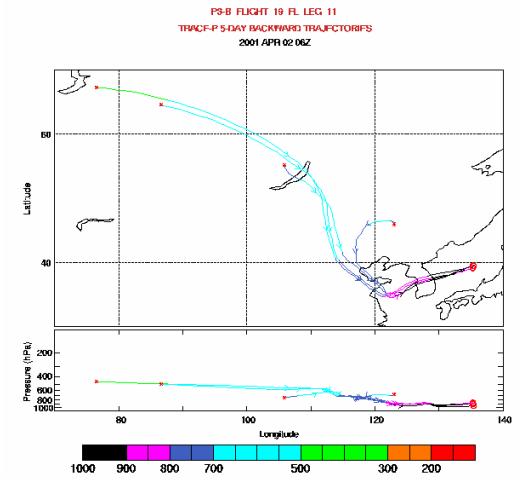
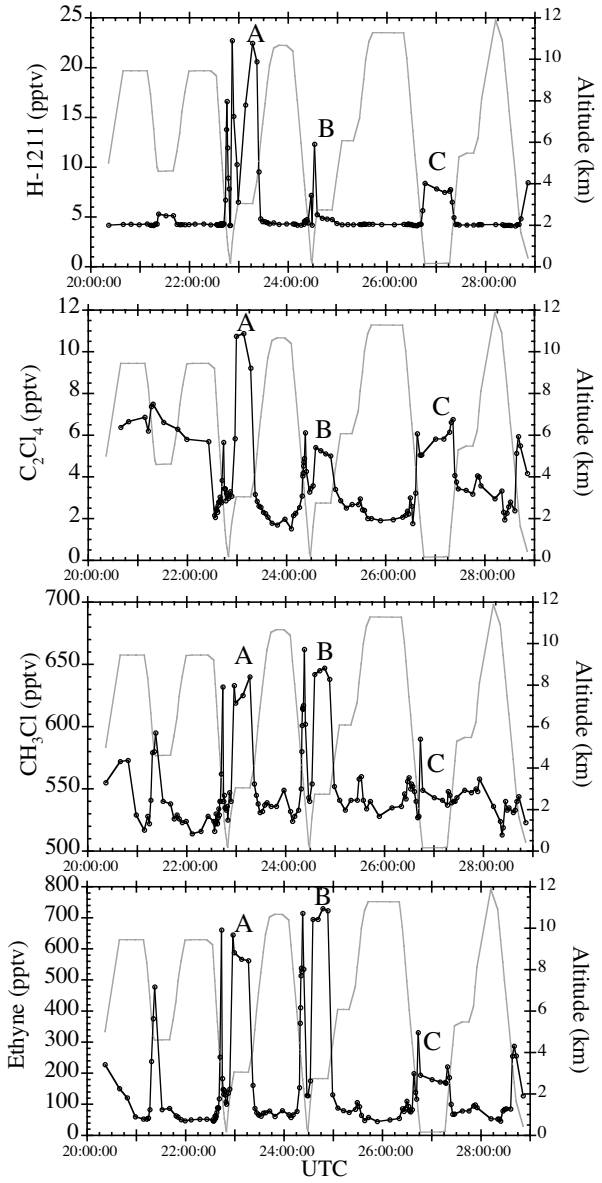


Figure 25. Mixing ratios of selected trace gases and altitude versus time for TRACE-P DC-8 Flight 5. Very high Halon-1211 in plume A with backward trajectory from mixed regions of China. Lower Halon-1211 in plume B with backward trajectory potentially showing greater biomass burning influence from further west.



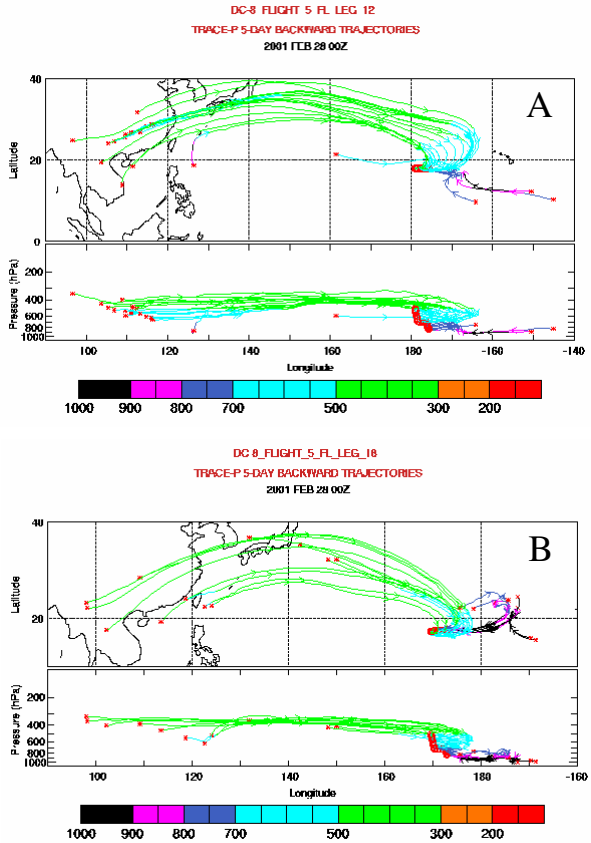


Figure 26. Vertical profile from TRACE-P DC-8 Flight 4, a biomass burning plume in the mid troposphere NE of the Hawaiian Islands

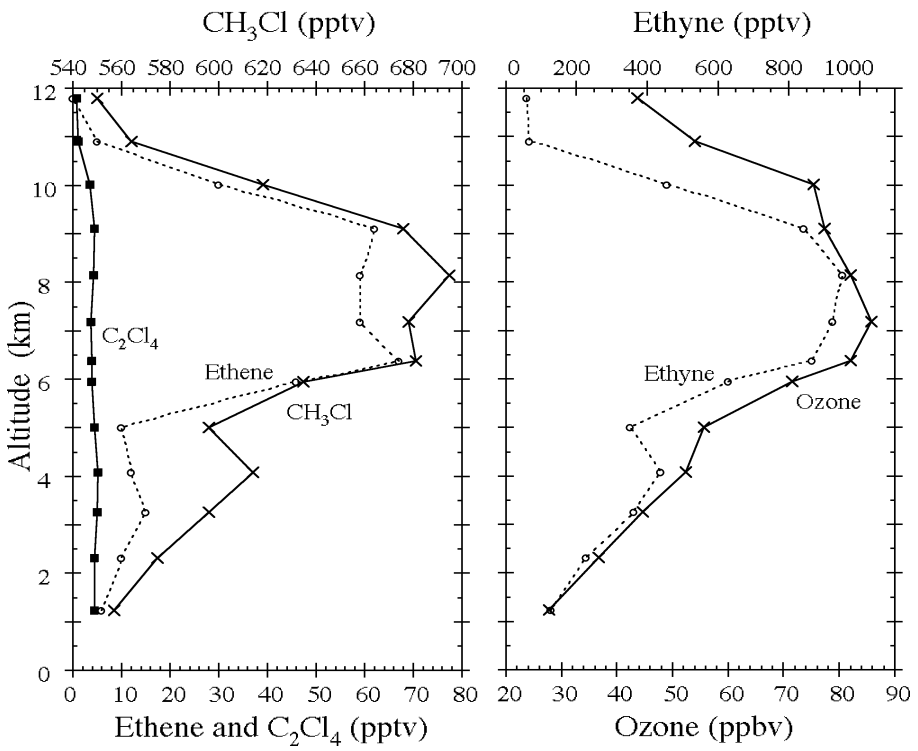
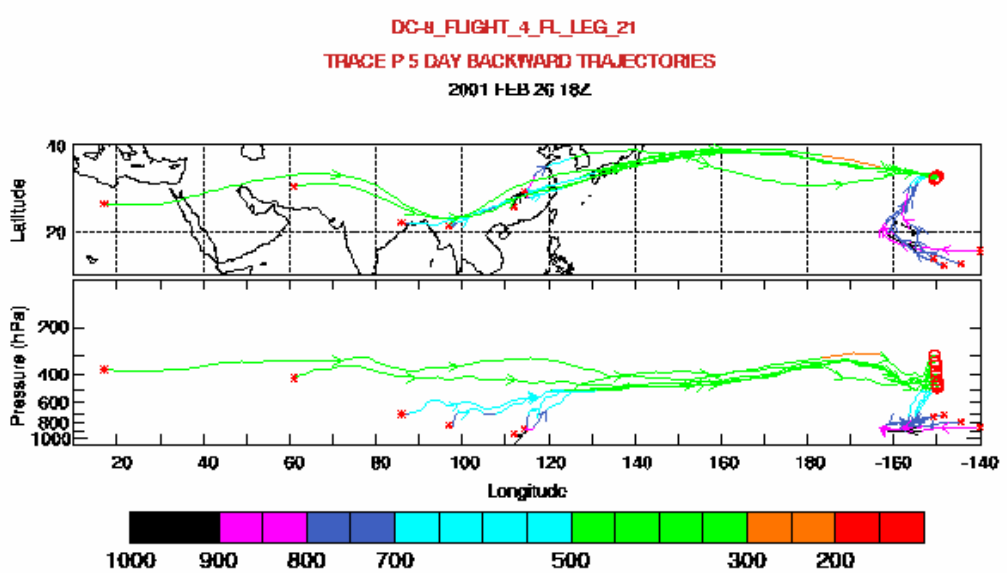



Figure 27. Backward trajectories for the vertical profile in Figure 26.