Interactive comment on “Mixing between a stratospheric intrusion and a biomass burning plume” by J. Brioude et al.

Anonymous Referee #1

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General comment:

The paper presents an analysis of species measurements and modelling calculations, indicating mixing between a biomass burning and a stratospheric intrusion in the free troposphere, above Easter Texas. The paper is well written and presents significantly new results. It participates to the studies of air masses exchanges between the troposphere and stratosphere, which can have large implication in the atmospheric chemistry. The presentation of the data and the analysis is well conducted. On the other hand, the introduction and the discussion are too short, and a real conclusion is missing. In particular, more information can be given concerning the Stratosphere-Troposphere exchange, and the role of biomass burning plume in the atmospheric chemistry. With improved introduction and discussion/conclusion, the paper could be
published.

Specific comments:

The meaning of the percentages given in the discussion is not clear, so the authors must discuss this in details.

The y-axis labels on Figure 23 (“ST” and “BB”) must be explained in the legend.