

Interactive comment on “Changing characteristics of atmospheric CH₄ on the Tibetan Plateau, records from 1994 to 2017 at Mount Waliguan station” by Shuo Liu et al.

Anonymous Referee #2

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General comments: In this manuscript, a 24-year long-term observation of atmospheric CH₄ at Waliguan WMO/GAW global station in the Tibetan Plateau was studied. This report is very meaningful and the analysis of the paper is very comprehensive. The CH₄ variations and its related potential causes during the long-term observation have been analyzed in details, which would help the scientific community to understand carbon cycle and formulate more informed carbon reduction policy. Given the importance and value of the long-term measurements of CH₄ in the Tibetan Plateau plus that this manuscript is well drafted, I would recommend accepting this paper after minor modifications listed as below. Specific comments: 1) Line 98: add ‘About’ before 90%. 2) Line 233-238: How frequent is the backward trajectory computed? Hourly? Please

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specify the numbers of trajectories are determined. 3) Some expression is not professional, e.g. “long-distance transport” (Lines 465), can be expressed by “long-range transport”, and so on. Please polish the whole report. 4) There are several places in results and discussion where too many details are given, which make the text a little difficult to follow. Results and discussion are suggested to be merged. 5) Lines 685-686: Suggest to give more discussions about the larger growth rates in the Tibetan Plateau than that of city region. 6) Line 1057: delete ‘CO’. 7) Why are the points not on the line in figure 8 and 9?

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