

Atmos. Meas. Tech. Discuss., author comment AC1
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Reply on RC1

Youwen Sun et al.

Author comment on "Monitoring greenhouse gases (GHGs) in China: status and perspective" by Youwen Sun et al., Atmos. Meas. Tech. Discuss.,
<https://doi.org/10.5194/amt-2022-191-AC1>, 2022

Response to Referee #1:

Thanks very much for your comments, suggestions and recommendation with respect to improve this paper. The response to all your comments are listed below.

This manuscript presents a deep and extensive review of the research and developments that have emerged during approximately the last few decades with respect to 'Greenhouse gases (GHGs) monitoring in China'. All topics considered are appropriate, timely and well targeted. The document addresses relevant scientific questions; its content represents a successful review of the key elements of the subject under consideration. The manuscript correctly presents the review of ideas, tools and data. The analysis carried out clearly supports the interpretations and conclusions. The number and quality of the references, in general, are adequate and reflect well the review carried out. This study will improve current understanding with respect to what we have done and what we have to do in the field of GHGs monitoring in China. In general, the topic is interesting and fits well in the scope of AMT. I recommend for publication with some minor comments and additions that I have listed below.

Response: All your comments listed below have been addressed. Please check the point by point response as follows.

General comments

Comment [1-1]: Although the number and quality of the references are adequate and reflect well the review carried out, some recent studies regarding GHGs monitoring in China are missing. These include [doi:10.3390/rs14143334](https://doi.org/10.3390/rs14143334) for on-orbit calibration of TanSat, etc. I cannot list all of them, but the more comprehensive the article, the more readers will pay attention to it.

Response: In the revised version, we have included more recent studies regarding GHGs monitoring in China, e.g., [doi:10.3390/rs14143334](https://doi.org/10.3390/rs14143334), [doi:10.3390/rs13030517](https://doi.org/10.3390/rs13030517), [doi:10.1080/16742834.2019.1649974](https://doi.org/10.1080/16742834.2019.1649974). Please check the marked up file for details.

Comment [1-2]: The authors should check if Fig.2 includes geolocations of all sites coordinated by NOAA and WMO and Fig 3 contains all FTIR sites coordinated by TCCON, NDACC-IRWG, and COCCON.

Response: In the revised version, we have double checked the geolocations of all sites coordinated by NOAA and WMO, and all FTIR sites coordinated by TCCON, NDACC-IRWG, and COCCON. There is no problem.

Comment [1-3]: What's the dashed curve and line in Fig.5 indicating for? The authors should explain in the caption. The authors should check if all acronyms in Table 1 are already properly defined.

Response: In the revised version, we have explained the dashed curve and line in caption of Fig.5. All acronyms in Table 1 have already been properly defined. Please check the marked up file for details.

Technical corrections:

Comment [1-4]: Page 2, Line 15 (P2, L15): "reduction energy consumption" should be "energy consumption of reduction".

Response: Done. Please check the marked up file for details.

Comment [1-5]: P2, L27: "China is committed to achieve" should be "China is committed to achieving".

Response: Done. Please check the marked up file for details.

Comment [1-6]: P3, L2: "In addition to continue" should be "In addition to continuing".

Response: Done. Please check the marked up file for details.

Comment [1-7]:P6, L16: "maintenances" should be "maintenance".

Response: Done. Please check the marked up file for details.

Comment [1-8]:P8, L1: "put a large effort in" should be "put a large effort into".

Response: Done. Please check the marked up file for details.

Comment [1-9]: P9, L20: "more sensitive" should be "more sensitivity".

Response: Done. Please check the marked up file for details.

Comment [1-10]: P9, L31: "different spatiotemporal scale" should be "different spatiotemporal scales".

Response: Done. Please check the marked up file for details.

Comment [1-11]: P10, L21: "use active" should be "used active".

Response: Done. Please check the marked up file for details.

Comment [1-12]: P11, L32: "are committed to provide" should be "are committed to providing".

Response: Done. Please check the marked up file for details.

Comment [1-13]: P12, L3: "is that how" should be "is how".

Response: Done. Please check the marked up file for details.

Comment [1-14]: P13, L4: "is committed to achieve" should be "is committed to achieving".

Response: Done. Please check the marked up file for details.

Comment [1-15]: P13, L20: "challenges for" should be "challenges of".

Response: Done. Please check the marked up file for details.

Comment [1-16]: P14, L13: "data sharing platform" should be "data sharing platforms".

Response: Done. Please check the marked up file for details.

Comment [1-17]: P14, L26: "promote the implement of" should be "promote the implementation of".

Response: Done. Please check the marked up file for details.

Comment [1-18]: For consistency, "Det" in Fig.4 should be "Det."

Response: Done. Please check the marked up file for details.