

# **A DETAILED LIST OF RESPONSES TO REVIEWERS' COMMENTS**

**egusphere-2024-10**

**Title: "Emission Inventory Development for Spatiotemporal Release of Vanadium  
from Anthropogenic Sources in China"**

Dear Editor,

We hereby re-submit the revised manuscript "Emission Inventory Development for Spatiotemporal Release of Vanadium from Anthropogenic Sources in China " (ID: egusphere-2024-10) for further consideration by ACP.

We are very grateful to your review and comment. We have revised the manuscript accordingly. The comments from the editor or reviewers are in black, and [responses from the authors](#) are in blue. The [text revisions of the manuscript](#) are marked in red.

All authors have reviewed the manuscript and approved the submission of the manuscript. Neither the entire manuscript nor any part of its content has been published, accepted or submitted to any other journals. Thank you very much for your attention and consideration.

Thank you very much.

Sincerely yours,

Baogang Zhang

## Responses to Editor

**Comment:** The authors made corrections taking into account most of the reviewers' suggestions and comments, which significantly improved the manuscript. Considering that this journal focuses on atmospheric processes, I would like to kindly ask the authors to add in the abstract some information that makes clear that the atmosphere is the main vanadium receptor (just a few words, as you did in the conclusions section). You already show the fluxes in there in tons, so just add a few words to emphasize it! This way, it will be clear to the reader the relevance of this subject to the atmospheric field.

**Reply:** We would like to express our sincere gratitude to your review. The mentioned issue was addressed.

Line 11-13: Cumulative flux model reveals emissions of 211095 t, 3725 t, and 0.1 t of vanadium into atmosphere, soil and water, respectively, highlighting the atmosphere as the primary vanadium receptor.

Line 22-24: These findings underscore atmosphere as the main vanadium receptor and identify the primary contributors, which is helpful to develop targeted mitigation strategies.