

Dear Prof. Leckebusch,

Thank you for the revision comments. We carefully revised the manuscript point by point. Followings are our specific revisions and responses.

1) Please give a full overview of applications using location-based services in Table 2 and which one are represented in which percentage in the LBS data?

Response: We list and briefly explain the most widely used applications that generate location request data on Page 5 Lines 8 – 16. Tencent is a commercial company and doesn't release a complete list of the applications and their percentage in the location request data. Instead, Tencent only releases the total number of location request per square kilometer. We listed the number of monthly unique devices (MUD) for each app in Table 2. The MUD shows the number of active users of these apps.

2) The title is not ideal: What is the variable that varies? Urban Anomalies is unclear. Anomalies of what?

Response: We changed the title to "Anomalies of dwellers' collective geo-tagged behaviors in response to rainstorms: a case study of eight cities in China using smartphone location data", please see Page 1 Line 1 – 2.

3) Abstract: Please explain more clearly the aim of the study at the beginning and give basic information which location-based services (e.g. map 20 navigation, car hailing, food delivery, etc.) are included in the NLRs.

Response: We added three sentences to explain the aim of this study. Please see Page 1 Line 11 – 17.

Best regards

Yunyan Du and all co-authors