

This study aims to evaluate the multi-sensor collaborative observation and service capability, which is important and valuable to the better selection and planning of sensors for geographical disaster observation. I have read the former comments and revisions, and I can see significant improvements in this paper. Although I think this paper is close to success, I have some concerns and questions:

In the Introduction, the materials of the collaboration of heterogeneous sensors are kind of old, and it seems that some latest works are missing. Just to name a few:

Hu, et al., 2019. An Observation Capability Information Association Model for Multisensor Observation Integration Management: A Flood Observation Use Case in the Yangtze River Basin. *IEEE Sensors Journal*, 19(3), 11510-11525.

Hu, et al., 2020. Observation Capability Representation for GeoTask-Oriented Multi-Sensor Planning Cognition. *International Journal of Geographical Information Science*, 32(2), 205-228.

Wang, et al., 2020. A Collaborative Planning Method of Space-Ground Sensor Network Coverage Optimization for Multiparameter Observation Tasks. *IEEE Sensors Journal*, 21(6), 8384-8399.

In Figure 1, I think it is better to number all lines but not just “observation-transmission-process-distribution”, which could provide the reader a better understanding of the workflow.

Line 123. “WMP” should be “WMS”; line 125. “... visualization studies...”, it seems that the “studies” used here is a misspelling.

Lines 152-153. “The amount of information is used to eliminate uncertainty ...”, what uncertainty exists, and what uncertainty you are trying to eliminate?

In section 3.1, you have introduced the detailed calculations of TOPSIS step by step. However, I think it could be clearer if you introduced it in conjunction with the collaborative observation capability assessment background. For example, what is the meaning of each element in the decision matrix, and what the relative closeness reflects?

Line 279. “The specific collaborative mode ...”, the collaborative mode refers to what is not explicitly given here.

Line 287. Although this experiment is a simulation, I would like to know whether there have any specific task/emergency observation requirements (e.g., task observation space and time). Besides, I think the ability to observe the task area is a fundamental requirement. Since the satellite flying around the earth all the time, whether a satellite can monitor a specific area requires additional calculation. Thus, I would also like to know how those satellites and UAVs are retrieved from your database.

In Table 3, the first indicator is “Spatial resolution of satellites”, why not the UAV or the sensor? Besides, each collaborated satellite and UAV mounted the same sensor, what you would do if their mounted sensors were different?

Line 329. The mentioned Figure should be Figure 7.

Line 372. The result here is not clear. You claimed that the emergency response capability of good increased to 60%, but you didn't give the probability before the increase. Moreover, it seems that the third-level indexes should be sourced from satellites and UAVs, but those satellites or UAVs are not given.

Lastly, I think there lacks a criterion analysis and discussion of the experimental results. For example, although the scores of A, B, and C (section 4.1) are calculated, the reason why C is the best is not analyzed and discussed.