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Reply on RC1

Hong-He Xu et al.

Author comment on "A multi-dimensional dataset of Ordovician to Silurian graptolite specimens for virtual examination, global correlation, and shale gas exploration" by Hong-He Xu et al., Earth Syst. Sci. Data Discuss., https://doi.org/10.5194/essd-2021-280-AC3, 2021

Thank the reviewer's comment and the detailed supplementary file. We specifically revised the manuscript and hopefully we will have it submitted soon.

We re-organized all images and assured that every specimen image shows with the scale in its own photo or separated photo. Now the updated dataset includes 2951 images and the whole size is 10.4 G. every scaled photo file is named with a postfix S. The image name consists of the number of specimen and the species name. one only troubleis that the volume of the whole dataset is quite large. It takes a while to upload and download all files.

The purposed of our study is not only providing an access of the gallery of graptolite specimens, but also showing that the image dataset is usable in data analysis and visualization and potentially using artificial intelligence.

The FSIDvis is an interactive visual explorer of graptolite specimen image data (FSIDvis), which is accessed through:

http://fsidvis.fossil-ontology.com:8089/

Hit the spacebar to view the details of graptolite specimen.

TSNE, or t-SNE (t-Distributed Stochastic Neighbor Embedding) is a technique for dimensionality reduction that is particularly well suited for the visualization of high-dimensional datasets that our specimens image dataset belongs to. We tried to analyze these data using this method and show a feasible way to classifying these specimens based on images only.

In the revised version we will invite a native English editor to proofread the whole manuscript. Thank you for your kind comment.

Some specimens were collected several years ago. Some of them were renamed and transferred. Species emendations were based on suggestions from experts of Nanjing Institute, we will give their named in the revision. We will make a further revision and state all the related issues.