Author reply to Anonymous Referee #3

The format of this reply is as follows. The referee comments are cited in grey italic font. Our replies to the individual comments are given in regular, black font.

The paper introduces the new visualization tool Met.3D, which is tailored for the challenging data situation of weather forecast simulation data. The tool convincingly combines 2D and 3D visualization techniques, supports the visual analysis of forecast ensembles operators, and takes into account the challenges with the geo-spatial grids, in particular handling pressure levels adequately. In particular, performance issues are solved by proposing GPU implementations for the different algorithms. The discussion if / when to use 2D vs. 3D is well-balanced, and the proposed 3D visualizations are very convincing. The use of normal curves in this context is very promising. The only minor negative comment is that a re-implementation of the GPU-based algorithms might be a bit tricky (and is not explained in detail) and requires a programmer to read the reference literature. The paper is technically sound and well-written, close to the requirements of weather forecasters. Summarizing, this is a very good publication, and I support publication as it is.

We would like to thank Referee #3 very much for his/her very positive feedback and appreciation of our work. We agree that we could have provided more details on the implementation of the GPU algorithms, however, this would have resulted in a very long paper. Nevertheless, the source code for all techniques is available in the public Met.3D repository referenced in Sect. 6. Also, we are happy to assist with any questions regarding potential re-implementation. Please do not hesitate to contact us.