

# ***Interactive comment on* “Calculating human thermal comfort and thermal stress in the PALM model system 6.0” by Dominik Fröhlich and Andreas Matzarakis**

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Dear Anonymous Referee #2:

The authors want to thank you for your detailed analysis of their work and your efforts in improving the manuscript. Please find your comments addressed in detail below.

General: - The agent module along with the decisions the agents are making can unfortunately not be described in this manuscript as this is hardly in scope. However, there is a vast documentation of the agent module available online. Please have a look at <https://palm.muk.uni-hannover.de/trac/wiki/doc/tec/mas>. - The authors see the point

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in providing maps showing the input parameters as well. However, this would result in at least four input parameter maps (air temperature, vapor pressure, wind speed and mean radiant temperature) in addition to the result maps that can hardly be presented here. However, there might be a way to submit this as a kind of an attachment. The data can already be analyzed as it is provided along with the entire test dataset at <https://zenodo.org/record/3433720>.

Specific: 1. Modified to "Results show deviations below the relevant precision of 0.1~K for PET and UTCI and some deviations of up to 2.683~K for PT caused by repeated unfavorable rounding in very rare cases (0.027~\%)." Better? 2. In geography north arrows are neglected of the North is right up what is the case here. 3. Yes, this was already noted by anonymous referee #1. The sentence was therefore modified to "Results for the test case (e.g. Figures 4 - 6) show the changing thermal conditions over the day." 4. Unfortunately there is not results for IPT in the current version. This is due to issues with the agent module in the PALM version 6.0 that is lacking the interface to the biometeorology module. Requests to the module maintainer is still pending. If this is not addressed, IPT has to be removed entirely from the manuscript. 5. The maps presented in the manuscript are to show the general patterns of the thermal indices. The ones of PET therefore agree rather well to the ones for PT. They are therefore neglected to keep the manuscript as short as possible. 6. See specific comment #3. In contrary, I think a discrete color ramp would cause all of the map being in the same class of values obfuscating any details. 7. Agreed and replaced. 8. They are both UTCI. Added to the manuscript to avoid misunderstandings. 9. This is indicated in the next sentence, but I admit it is hard to see in the graph. 10. The statement needs to be interpreted in connection to the direct comparison with fixed input as well. Considering the input, the output of the module is perfectly plausible. Additional maps would be beneficial but need a lot of space (and there would be a lot of them if input and full diurnal cycles are considered). The authors however will check if additional maps can be uploaded as supplementary material.

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Thanks for the many technical comments. All fixed.

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