

**Referee report: Pressure distribution of the high-redshift cluster
of galaxies CL J1226.9+3332 with NIKA**

The paper presents a observation of a high-redshift galaxy cluster with a new high angular resolution tSZ camera, NIKA. It presents the first resolved observations of CL J1226.9+3332 at the 150 and 260 GHz wavelengths. The authors derive various properties of the cluster, such as morphology and mass, and find good agreement with previous multi-wavelength observations of the system. Overall, I find that the paper is generally well-written, and results are reasonable. However, in a few places the paper needs to provide more context to the reader to properly assess the stated results. I have some comments below that might help clarify the paper.

Major comments:

- In Section 3.1, could the authors elaborate on the qualitative differences between the 3 pressure profile fits and their relative merits?
- Likewise, it might be useful to give a bit more context across the board to in Section 4.2 when comparing the models. In particular, what are the implication of the varied agreement with the different models?
- In Section 4.1 the authors state that the 150 and 260 GHz y profiles are fully compatible at all radii but in Figure 4 there are 3 peaks within 60 arcsec in the 260 GHz signal that aren't in the 150. Could the author comment on these peaks?
- In section 4.2, it states that the NNN model does not produce a cool core profile, in apparent disagreement with the other models. Could the authors elaborate on this disagreement?

Minor Comment:

- The end of the 5th paragraph of the introduction is awkwardly worded and might be missing some words (starting with "The inferred mass...").