

Dear referee,

Please find below the answer to your comments and corrections. The changes in the text have been done in bold face.

Regards.

Rémi Adam, Barbara Comis and Juan-Francisco Macías-Pérez on behalf of the NIKA collaboration

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Referee Report

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?

*** Taken into account**

- 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?

*** Taken into account**

- 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?

*** Thanks to your comment, we have noticed that the flux of the point source used at 260 GHz was the wrong one in the plot of the y profile (see also the related additional change below), and this makes your comment even more relevant. Indeed we observe 3 peaks at ~12, 30 and 50". They might indicate the presence of additional sub-mm point contamination as we now discuss in the text.**

- 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?

*** Taken into account**

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...").

*** We have reworded this paragraph using a footnote**

Additionnal changes:

*** We have noticed that the point source parameters given in Table 3 are not the correct ones at 260 GHz. They are indeed different from what is given in the text in Section 2.4. This has been corrected.**

*** Fig. 10: The y-axis was missing the normalisation $E(z)^{2/3}$, which has been modified but does not change our conclusions.**