Below are comments based on my second review of manuscript amt-2023-148, i.e. the review of the revised version amt-2023-148-manuscript-version2.
I am refering to Line, Sect., Eq., Fig., etc. numbering of amt-2023-148-ATC1 and amt-2023-148-manuscript-version2.

Some changes and improvements have been done. This has clarified several issues that I had while reading the manuscript in the first review. However, some issues such as wrong, sloppy, or confusing formulations still remain or have been introduced in new explanations. Also a discussion of the seemingly good results is missing.

Seemingly good results:
In my previous review I have noted that despite many assumptions, the results are seemingly good. This is both surprising and interesting and needs better and further discussion. In particular it is interesting how DEID estimated well snowpack densities agree with manually measured density despite the fact that average hydrometeor density is used as proxy of the snow pack density.

Validation measurements and calibrations (vmelt, kappa, c, cmelt) are using a limited variety of very simply-shaped hydrometeors. Is kappa the same for ice and liquid (melting and evaporation)? How/why can these then be used for real snow particles, why are the results so good? This is not obvious and should be briefly discussed.

Area not properly defined:
Area $A(t)$ (and Aice and Aliq) is still not prpoperly defined. You simply state that it is the area of the ice particle, melted hydrometeor ...
Formulations like "$A(t)$ is the area of each frozen hydrometeor and water droplet at time t," are ambiguous.
This is ambiguous and may for example refer to the total surface area.
Regarding the heat transfer, it should be a contact area between hydrometeor and hot plate (or some sort of effective contact area).
Regarding your measurement method, it should be cross-sectional area as seen on your 2D images (Ap you call projected area).

Errors in Eq. (1)-(3):
In Eq. (1), it looks like $T_h(t)$ is the temperature of the whole hydrometeor (having a cross-sectional area $A(t)$).
This is a simplification hiding details that you likely consider in your algorithms. In addition to the integral over time there should be an integral over the area and $T_h(t)$, as well as $T_{ice}(t)$ and $T_{liq}(t)$, is evaluated at each location. Presumably in your algorithm you do this double integral as two sums, one over all hydrometeor pixels of the image and one over all time steps (images) during melting and evaporation.
Without a double integral, I don't see how you can go from Eq. (1) to Eq. (2) only using $A(t) = A_{ice}(t)+A_{liq}(t)$. (In your algorithm, a pixel is either ice or liquid, thus you can split the area integral in the two parts you indicate in Eq (2). However, just as Eq. (1), Eq. (2) is wrong (over-simplified).

To say that the camera doesn't see ice, and therefore Aice=0 is wrong. If starting with ice, then of course neither is Aice zero, nor the terms m*Cice*(T0 -Tice)+m*Lf.

You seem to assume that heat transfer through Aice goes exclusively into temperature increas of ice and melting of ice (and heat transfer through Aliq does not go into these ice terms).

So I would clearly state this assumption (important since during part of the time integral in Eq. (3) ice is still present) and directly introduce Eq. (3), i.e. skipping Equations (1) and (2), making sure the integral is properly formulated. It is worth already here mentioning that when the camera is set to only see hydrometeors after melting, this is done in post-processing only.

Be consistent, e.g, if using Aliq, then use it also in Eq. (3).

Reformulte "Note that the initial and final temperature of all frozen hydrometeors is T0 = 0degC andTp, respectively, during evaporation", which is confusing as you refer to a "frozen hydrometeor" (during part of the evaporation part of the hydrometeor is frozen and below T0).

In Eq. (3) it is wrong to use Cliq*Tp. The specific heat Cliq needs a temperature difference (i.e. Tp-T0). The same applies to Equations (B1) and (B2).

Sect 2.2 Particle density
Unclarities remain about h and volume estimate:

Fig. 1 is not "illustrating" well a heat transfer rate and control volume. They need to be better explained in the text and equations.

That m*Lff is "the sum of the internal energy per unit mass of a frozen hydrometeor and its latent heat of fusion" is another example of a wrong/sloppy formulation.

What is the reason or motivation behind hypothesis Eq. (5)?

Explaining DeltaTmelt below Eq. (5), you have Tp(t). But earlier you stated that Tp was constant.

You refer to the wrong Appendix (should be B not A).

DeltaTevap is not defined.

Equation (8) is wrong.

Without your explanation in the response, one needs some guessing to understand the reasoning behind the "simple height relationships like h = 2R/3". R is (only in caption of Fig 1) introduced as "radius of the hydrometeor", h as the "effective thickness of the hemisphere". You should (more clearly) refer to the special case of a hemispherical ice particle here. You still need a general definition of h in the text. This is important for clarity of course, but also as the definition of vmelt seems to be based on h.

It is unclear how, in the laboratory, you can use Eq. (9) with its term hij. How can you determine all hij?

"...used Eq. (9) to calibrate laboratory ice particles and compare snowflake habits." What do these refer to?

Line 137: "Note that are impacted by variability..." Something is missing.

In caption of Fig. 2 "(a) Time series of the area of the ice particle (dashed black line) and the melted portion of the ice particle (solid black line)" is another example of a wrong/sloppy formulation.

Sect 2.3 bulk snowpack-derived quantities
The assumption "... by assuming neither leaving any space between snowflakes nor overlapping" is wrongly placed, it is not needed for the avaerage density defined by Eq. (12).
The snow accummulation rate in Eq. (13) needs the above assumption. The assumption, however, seems unmotivated and Eq. (13). Link your text "Note that the bulk..." to that assumption.

Sect 3.1: ice partile height vs effective height
You don't seem to refer to Fig. 3 (only to Fig. 3d).
Fig. 3b, Fig. 3d, and in text related to Fig 3d, the height h seems to be a height rather than the effective height h. Also, in Tab. 1, h seems to be close to R derived from Ap (not to 2/3*R as I would expect) if the ice particle were a hemisphere. In Fig. 3b, the ice particle doesn't look hemispherical (max height is less than R). Deff in that figure is not explained.
L. 376-377 also talk about height rather than effective height. Check for consistency.
If the side view in Fig. 3b is taken with the thermal camera shown in Fig. 3b, i.e. from above (Response 19), then I am not sure how it can be a side view.
You should be clearer and more detailed in your description of preparing ice particles in Sect.s 3 and 4 and resulting shapes and contact angles. I am wondering about the role of the silicone mold and didn't understand earlier that it has a certain shape (circular deepening or flat or other shapes deepenings as suggested by Line 315?).

Fig. 5
In the text related to Fig.5 explaining the geometrical volume estimates, it is unclear what Dv is (column III aggregates).

Approximations in Appendix B
As you equate (B1)=(B2) you need to relate Equations (B1) and (B2) to the whole mass (that is melted completely in B1 and then evaporated completely in B2). You need to specify over which part of the area A (or pixels) you effectively integrate in each of these equations (see comments on integrals in Equations (1) and (2) above).
Explain what the "averaging approximation" means. Note that you already use an approximation when using an average DeltaTmelt and DeltaTevap that should be explained (or refer to somewhere in the paper). (See your Response 10, for example)

Appendix D errors:
An error of only 1.4% for the area measurement seems very good. Can you describe briefly how this was determined or estimated?

Uncertainties in h: are these based on the laser measurements or the indirect method involving assumptions and approximations around DeltaTevap*Delta_tevap?