Dear Dan,

with respect to your Figure 2c and the respective paragraph on page 11-12, here are some comments from my side to the ice crystal numbers in Krämer et al. (2009) (find the frequencies of occurrence of ice crystal numbers N_ice shown in Fig.9 at the next side) :

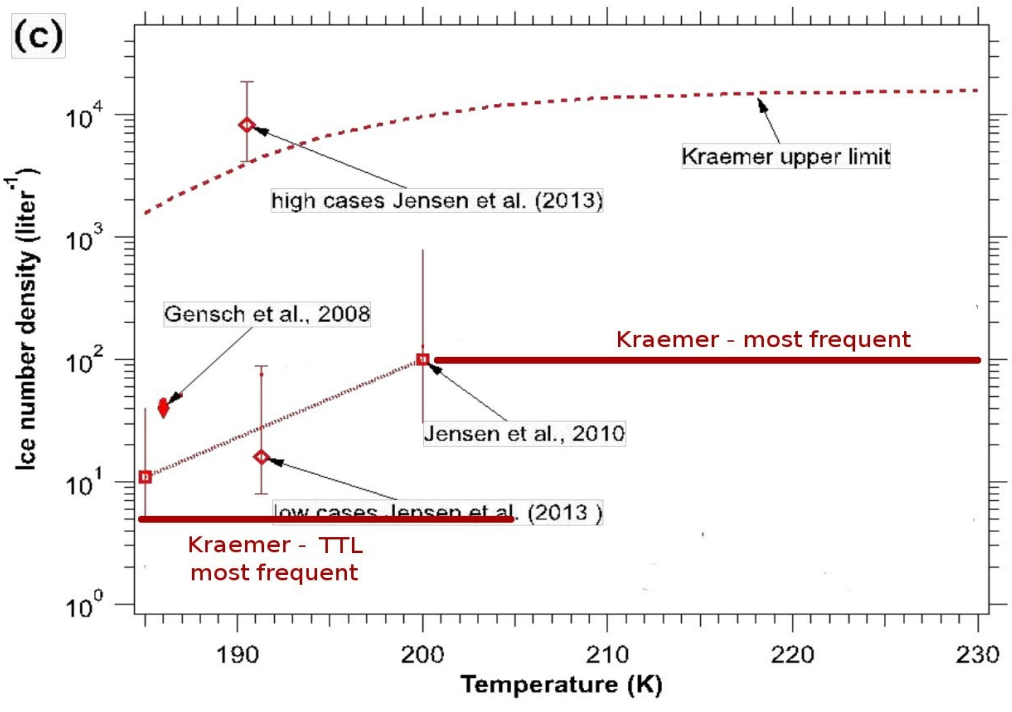
The high ice crystal numbers for T > 225 K were measured in lee-wave clouds behind the Norwegian Mountains. We performed model studies (unfortunately unpublished) confirming the measurements. We do not believe that the measurements are contaminated by shattering, since these numbers were found only during two flights in one field campaign (by the way: shattering is a problem particularly in mixed phase clouds, in cirrus the effect of shattering is overrated; this is confirmed when comparing old and recent measurements in cirrus which are corrected for shattering).

This brings me to the next point: from a large data set of recent measurements at mid-latitudes an increase in the middle N_ice for T > 200 K is not confirmed, this increase came from the measurements mentioned above. The most frequent ice crystal number in this temperature range is 0.1 cm-3.

Next point are the TTL - N_ice for T < 205 K. Here, the most frequent N_ice we found is 0.005 cm-3, which is confirmed by the model simulations of Spichtinger and Krämer, 2013 (would be nice if you could note the good agreement between observations and simulations in the paper). The higher ice crystal numbers from outflow were observed with a much lower frequency.

Last comment, to the upper and lower N_ice limits: I think the upper N_ice line from Krämer et al. (2009) is not too bad and is confirmed for T > 200 K by recent measurements. However, the lower line is caused by the sample volume of the FSSP. From recent measurements including optical imaging probes with a larger sampling volume, N_ice concentrations down to 10^(-4) cm-3 were found for all temperatures.

Below you see a version of your Figure 2c with the updates from above included. I would be glad if you agree to replace your Fig. 2 c (and the respective passage in the text) with the updates – which I think represent 'state of the art':



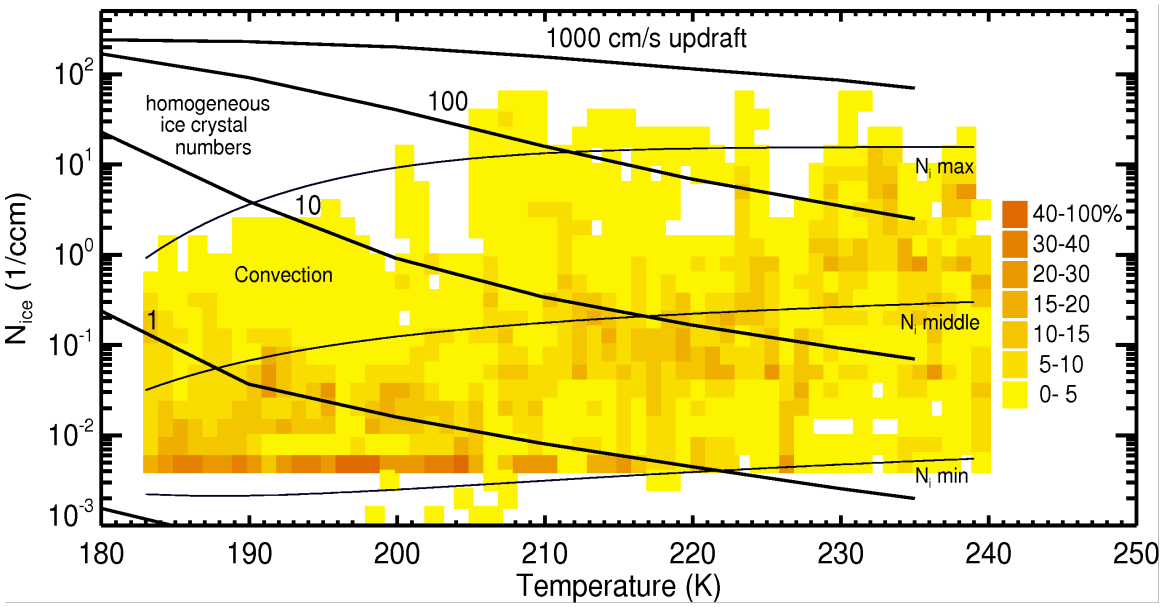


Figure 9 of Krämer et al. (2009)

Best wishes, Martina