

Atmos. Chem. Phys. Discuss., referee comment RC2
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Comment on acp-2021-760

Anonymous Referee #2

Referee comment on "Secondary ice production processes in wintertime alpine mixed-phase clouds" by Paraskevi Georgakaki et al., Atmos. Chem. Phys. Discuss., <https://doi.org/10.5194/acp-2021-760-RC2>, 2021

Review of manuscript "Secondary ice production processes in wintertime alpine mixed-phase clouds" by Georgakaki et al.

Overall the paper is well written and presents important aspects of various secondary ice productions mechanisms in orographic mixed-phase clouds.

I recommend the publication of the paper in ACP after addressing the minor issues enlisted below.

1. Line 211: Please clarify if the whole 2D-S spectrum was considered for estimating the observed ice number concentrations. It is good practice to remove particles smaller than 200 μm while reporting the number concentration of ice particles from the 2DS probe as the shattering removal algorithm may not remove all the artifacts. Authors can add a few lines on these uncertainties.

2. Line 258: Define ERA5

3. Line 261: Define MODIS

