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Interactive comment on "The Roland von Glasow Air-Sea-Ice Chamber (RvG-ASIC): an experimental facility for studying ocean/sea-ice/atmosphere interactions" *by* Max Thomas et al.

Anonymous Referee #1

Received and published: 20 November 2020

Review of manuscript entitled "The Roland von Glasow Air-Sea-Ice Chamber (RvG-ASIC): an experimental facility for studying ocean/sea-ice/atmosphere interactions by M Thomas et al.

This manuscript describes a state-of-the-art laboratory facility for preparing laboratory-grown sea ice in a setting that can be exploited for process study. The manuscript should be of high interest to the scientific community. The text is well written, concise, accurate, and the figures are appropriate. I have no concerns about this manuscript and recommend it be published almost as is.

I have only a few, very minor comments and a few questions for the authors: 105:

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Discussion paper

"carrying out measurements" instead of "measuring"? Fig.2 impossible to distinguish line shades / colors 413, 414: "air temperatures" are "high" or "low", not "warm" or "cold"

What is the thickest ice that can be grown in this facility? The text says it can be 20cm and still be floating. It's not clear whether the ice can be grown thicker?

How is ice growth prevented in the side tank? I assume the side tank is insulated on top, but it's not stated explicitly.

When sea ice grows, brine rejection at the growing interface necessarily increases the salinity of the ocean, or in this case, in the tank water. I wonder if the side tank in this laboratory setup could be used to help ameliorate this shortcoming associated with a finite-depth tank?

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2020-392, 2020.