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Correction

Correction: McCutchan, A.L.; Johnson, B.A. Laboratory Experiments on Ice Melting: A Need for Understanding Dynamics at the Ice-Water Interface. *J. Mar. Sci. Eng.* 2022, *10*, 1008

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Missing Citations and Text Correction

In the original publication [1], **Josberger 1980**, **Pettit et al., 2012**, and **Pettit et al., 2015** were not cited. The citations have now been inserted in ***Section 1.2, Key Concepts and Definitions.*** In addition, there was an error in the original publication. **The process of heat transfer was incorrectly attributed to Zeh, 2018 [56]**. A correction has been made to ***Section 1.2, Key Concepts and Definitions, Paragraph 2*** and should read:

In glacier ice formed naturally, pressurized air bubbles are frozen within the ice structure [55]. The air trapped within the ice influences fluid flow via "jetting" behavior as it is released upon melting [56,57]. Few laboratory experiments [58] and field measurements [59] isolate the effects of pressurized bubbles in ice melting. Similarly, synthetic or laboratory-made ice may also contain bubbles, though these bubbles are typically not pressurized as in glacier ice [60]. Several studies note that even without a strong gradient between the bubble pressure and ambient hydrostatic pressure, bubbles frozen within ice can influence the roughness of the ice during the melting process [61] and affect flow patterns upon release [62,63]. In order to reduce the complexity of laboratory measurements due to the presence of bubbles, many of the experimental studies presented herein used a variety of freezing techniques to produce bubble-free ice (e.g., [64–66]).

There was an error in the original publication. **A possible reading of the abstract implies that field studies have explored the influence of pressurized glacier bubbles on melting, which has not yet occurred, to our knowledge**.

A correction has been made to the **Abstract**:

Abstract: The ice-ocean interface is a dynamic zone characterized by the transfer of heat, salinity, and energy. Complex thermodynamics and fluid dynamics drive fascinating physics as ice is formed and lost under variable conditions. Observations and data from polar regions have shed light on the contributions that oceanic currents, meltwater plumes, subglacial hydrology, and other features of the ice-ocean boundary region can make on melting and transport. However, the complicated interaction of mechanisms related to ice loss remain difficult to discern, necessitating laboratory experiments to explore fundamental features of melting dynamics via controlled testing with rigorous measurement techniques. Here, we put forward a review of literature on laboratory experiments that explore ice loss in response to free and forced convective flows, considering melting based on laminar or turbulent flow conditions, ice geometries representing a range of idealized scenarios to those modeling glaciers found in nature, and features such as salinity and stratification. We present successful measurement techniques and highlight findings useful to understanding polar ice dynamics, and we aim to identify future directions and needs for experimental research to complement ongoing field investigations and numerical simulations to ultimately improve predictions of ice loss in our current and evolving climate.

check for updates

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References Correction

Refs. [58,59,61] has been added, and ref. [64] have been removed, The corrected refs. [57–64] appears below. The order of References will be authomatically updated.

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The authors apologize for any inconvenience caused and state that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. McCutchan, A.L.; Johnson, B.A. Laboratory Experiments on Ice Melting: A Need for Understanding Dynamics at the Ice-Water Interface. *J. Mar. Sci. Eng.* **2022**, *42*, 1008. [CrossRef]

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