

# A new form of the Assman aspiration thermometer, demonstrated at the General Assembly of the German Meteorological Society in Berlin, 23–25 April 1889

RICHARD ASSMANN and BARTSCH VON SIGSFELD

translated from German and edited by ESTHER VOLKEN<sup>1</sup> and STEFAN BRÖNNIMANN<sup>2\*</sup>

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## Abstract

This is the translated and edited version of a summary of a presentation on a new form of the Assman aspiration thermometer that was given by Richard ASSMANN and Bartsch VON SIGSFELD at the General Assembly of the German Meteorological Society in Berlin, 23–25 April. The summary without title appeared on pages 278–279 of *Meteorologische Zeitschrift* **6** and was part of the “Vereinsnachrichten” that were published without author name on pages 269–280.

Superscript numbers indicate original footnotes (translated at the bottom of the page), E... numbers indicate editorial endnotes (at the end of the article), square brackets[] indicate editorial comments in the text.

Dr. ASSMANN introduced together with the engineer von SIGSFELD<sup>E1</sup> a new form of the aspiration thermometer. He explained that the original form of the device had been changed for reasons of better handling and for reducing the danger of breaking the thermometer. By making these changes, the targets mentioned could be attained. However, they led to other malfunctions of the device, which could not be identified immediately due to a severe and long lasting illness of the speaker. These malfunctions are due to the thermally conductive connection between the outer casing of the thermometer and

the inner mantle. As a result of this, the heat to which the casing is exposed and of which only a small part is eliminated by the passing air stream is transferred to the inner mantle. This malfunction can be corrected by using a poor heat conductor. The second, far more relevant malfunction is that the aspiration stream does not pass at all or only to a very small extent the space between case and mantle with the current arrangement. Consequently, the case almost assumes the temperature of a nickel-plated and polished brass surface and thus affects the inner mantle and the enclosed thermometer by heat conduction and dark radiation.

Unfortunately, WILD<sup>E2</sup> from Petersburg got hold of such a worsened device which led him to assess the device very unfavourably in an essay.

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