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Carl Friedrich Gauß und Russland. Sein briefwechsel mit in Russland wirkenden wissenschaftlern. Karin Reich and Elena Roussanova. Erki Tammiksaar

Aurora: Douglas Mawson and the Australasian Antarctic expedition 1911–14. Beau Riffenburgh. *Ian Stone* The transatlantic moutains – rocks, ice, meteorites and water. Gunter Faure and Teresa M. Mensing. *Alan Vaughan* Mawson's last survivor – the story of Dr Alf Howard AM. Anna Bemrose. *David W.H. Walton* Cold front. Conflict ahead in Arctic waters. David Fairhall. *Njord Wegge*.

# **ONLINE ONLY OBITUARIES**

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# **COVER PHOTO**

Glacial ice is both a window into the Earth's climatic history and a unique habitat for microbes. Sampling is typically accomplished through deep ice coring, as illustrated in the photograph of ice from the West Antarctic Ice Sheet. (Photograph courtesy of Heidi Roop.) On the micro-scale, glacial ice consists of water crystals meeting at triple junctions, which are, themselves, connected through a vein structure as shown in the micrograph of surrogate ice containing two important chemical constituents of glacial ice (methane sulphonate and nitrate). Ice-vein chemistry can be investigated non-destructively by laser Raman spectroscopy, as shown in the accompanying spectrum. See the article by Robert E. Barletta and Christopher H. Roe in the accompanying issue.

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