



Antarctic scientific drilling – a view to the future.

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Over the past 40 years, Antarctic scientific drilling has progressed using ship-based and land- or ice-based drilling platforms to recover sedimentary rock cores from the continental margins of Antarctica and surrounding offshore regions. These past efforts have yielded important archives of paleoclimate and paleoenvironmental data, culminating in two recent ANDRILL projects as well as a planned IODP expedition to the Wilkes Land margin. Future Antarctic scientific drilling, based on international proposals, will be required to address important remaining questions about Antarctica's role in Earth systems. Addressing the technical and logistical challenges posed by new drilling proposals will require the creative involvement of scientists, engineers, drillers, technicians, educators and logistical support staff, as well as enhanced international partnerships and stable funding. The collaborative activities and outcomes of the International Polar Year (IPY) provide a unique opportunity for the science community to develop an integrated, long-term Antarctic scientific drilling Science Plan, which can (1) serve as a framework for evaluating future proposals for scientific drilling on and around Antarctica, (2) lead to a sustainable implementation plan for these efforts which addresses technological and logistical needs and funding requirements, and (3) catalyze action toward improving our understanding of this important region of our planet.