Ocean Drilling in the fields of Paleoceanography and Paleoclimatology

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Marine sediments contain one of the world’s most complete archives of past climate and paleoceanographic change. Here we will examine how geological records obtained through ocean drilling (i.e. Deep Sea Drilling Project-DSDP: 1968–1983; Ocean Drilling Program-ODP: 1983–2003; Integrated Ocean Drilling Program-IODP: 2003–2013; International Ocean Discovery Program-IODP: 2013-2023) have contributed to the advance of our understanding of paleoclimate, paleoceanographic and sea level changes. We will identify some of the outstanding questions and challenges that can best be addressed with ocean drilling. With current rising atmospheric greenhouse gases resulting in rapidly increasing global temperatures forecasted in the most recent IPCC (Intergovernmental Panel on Climate Change [IPCC], 2013, www.ipcc.ch/) report, studies of understanding global paleoclimate, paleoceanographic and sea level changes are prominent on the research agenda.