Press Releases

September 25, 2017
JAMSTEC

International Ocean Discovery Program Expedition 369 to Start - Australia Cretaceous Climate and Tectonics -

The International Ocean Discovery Program (IODP[*1]) will begin Expedition 369, "Australia Cretaceous Climate and Tectonics - Tectonic, paleoclimate, and paleoceanographic history of the Mentelle Basin and Naturaliste Plateau at southern high latitudes during the Cretaceous" by the JOIDES Resolution[*2] on September 26, 2017.

This scientfic expediction will collect data and core samples from drilling sites in the Great Australian Bight and the Mentelle Basin. It aims to 1) investigate the timing and causes for the rise and collapse of the Cretaceous hothouse and how this climate mode affected the climate-ocean system and oceanic biota; 2) determine the relative roles of productivity, ocean temperature, and ocean circulation at high southern latitudes during Cretaceous oceanic anoxic events; 3) identify the main source regions for deep- and intermediate water masses in the southeast Indian Ocean and how these changed during Gondwana breakup; 4) characterize how oceanographic conditions changed at the Naturaliste Plateau during the Cenozoic opening of the Tasman Passage and restriction of the Indonesian Gatewa; and 5) resolve questions on the volcanic and sedimentary origins of the basin and provide vital stratigraphic control on the age andnature of the prebreakup succession.

A total of 31 partcipating members include three scientists from Japan, and those from the U.S., European countries, Brazil, China, India and Australia.

For more details, please refer to:
http://iodp.tamu.edu/scienceops/expeditions/australia_climate_tectonics.html
http://publications.iodp.org/scientific_prospectus/369 (Scientific Prospectus)

*1 International Ocean Discovery Program (IODP)
The International Ocean Discovery Program (IODP) is a multinational cooperative project that started in October 2013. The scientific drilling vessel D/V *Chikyu*, operated by Japan, and the *JOIDES Resolution*, operated by the U.S., are utilized for expeditions. There is also an option to charter mission-specific platforms by European countries. The mission of the IODP is to shed light on global environmental changes, the earth's mantle and crustal dynamics and tectonics, and the biosphere beneath the seafloor. It took over the Integrated Ocean Drilling Program carried out from October 2003 to 2013.

*2 The *JOIDES Resolution* is the U.S. drilling vessel that participates in the IODP.
Compared to the deep-sea scientific drilling vessel, the *Chikyu* by JAMSTEC, the *JOIDES Resolution* is used more often for drilling in shallow waters.

JOIDES Resolution ©IODP

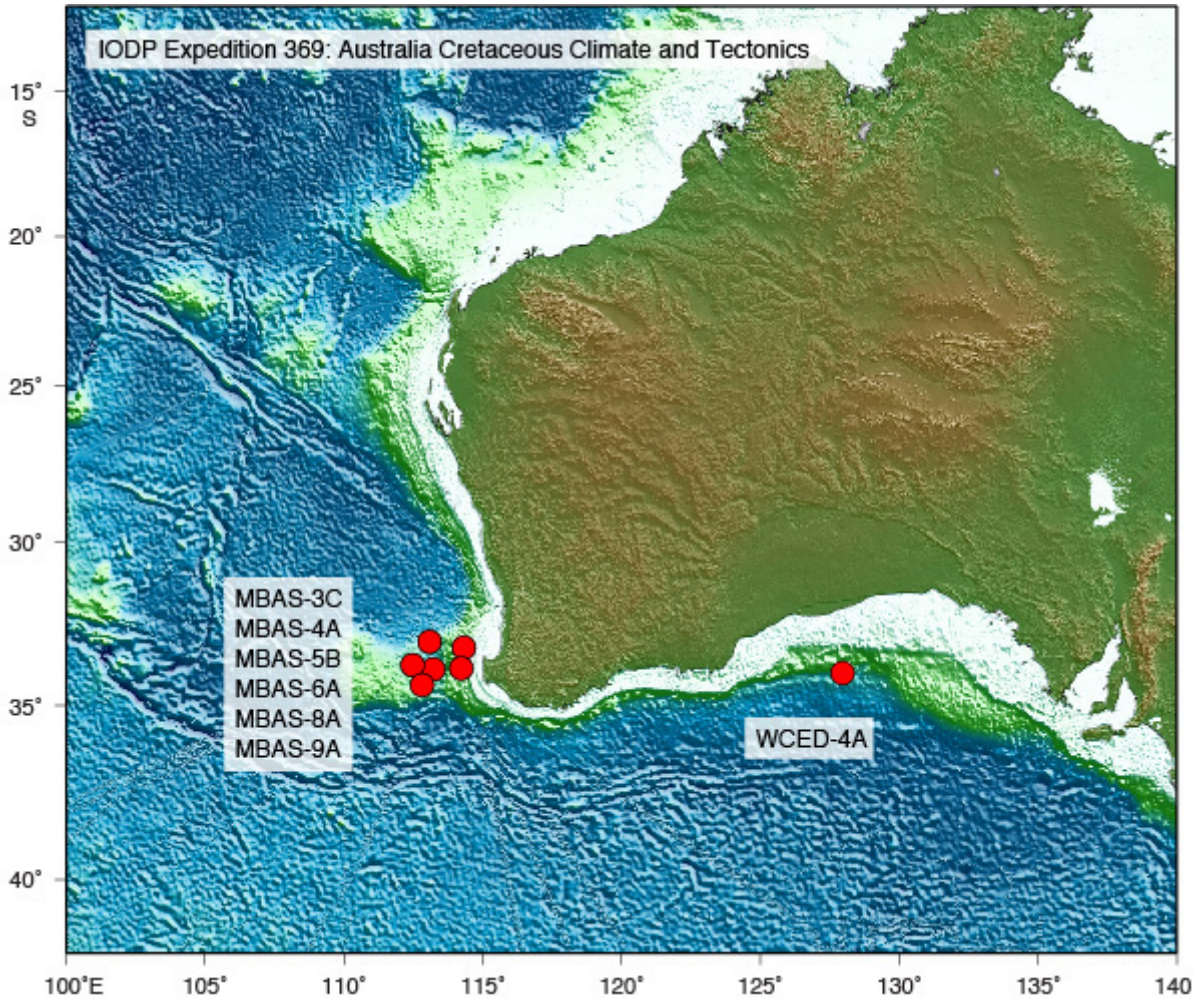

Figure 1. Planned drilling sites in this expedition 369 (©IODP)

Table 1. Overview of Drilling Sites (order of drilling)

Site	Water depth	Depth of penetration	Estimated time at site
WCED-4A	3,046m	570m	5.4 days
MBAS-8D	3,901m	1,200m	20.7 days
MBAS-4B	2,801m	880m	10.3 days
MBAS-9A	861m	1,200m	10.7 days

*Alternate sites			
MBAS-8B	3,901m	1,200m	18.0 days
MBAS-4C	2,801m	880m	13.6 days
MBAS-6A	1,211m	1,200m	14.4 days
MBAS-3C	3,131m	1,500m	25.5 days
MBAS-5B	2,711m	750m	11.6 days

The location of WCED sites is in the Great Australian Bight, and MBAS in the Mentelle Basin.
(These drilling sites may be subject to change depending on cruise prepartion, climate conditions and research progress.)

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