



“What emerges is a remarkably clear picture of how the ocean changed during the last Ice Age.”

The team’s next step is to combine their new temperature database with paleoclimate models to test their theories.

- Atmospheric carbon dioxide dropped in several steps over 100,000 years, as Earth entered the last ice age 20,000 years ago.
- This study put together a global picture of how ocean surface temperatures, sea ice, and deep-ocean circulation changed over this time.
- The first drop in carbon dioxide, 115,000 years ago, occurred because of early cooling of the poles and expansion of sea ice around Antarctica.
- The second carbon dioxide drop, 70,000 years ago, was accompanied by a re-organization of the deep ocean and heightened ocean productivity.
- The lowest ice age carbon dioxide levels occurred 20,000 years ago when ocean temperatures, productivity, deep circulation, and sea-ice had changed the most.

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