

# Palaeoceanographic changes during the Late Cretaceous (Campanian-Maastrichtian)

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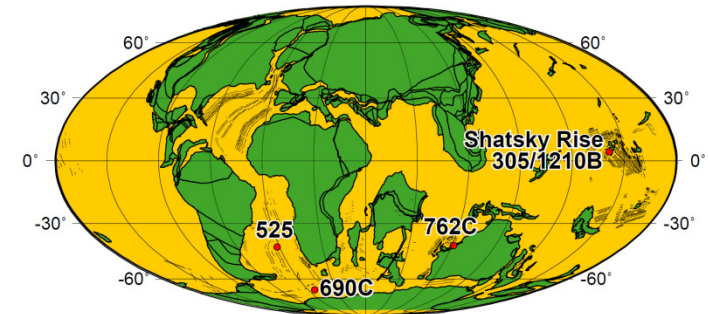
## Projects:

VO 687/10-1 and FR 1198/7-1  
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The latest Cretaceous marks the transition of the Earth's systems from the Cretaceous greenhouse to the cooler Cenozoic climate. The role of the oceans during this turnover is not well understood to date. Repeated cooling of surface- and deep-waters are recorded in the latest Campanian to the early Maastrichtian, and are accompanied by perturbations in the global carbon cycle.

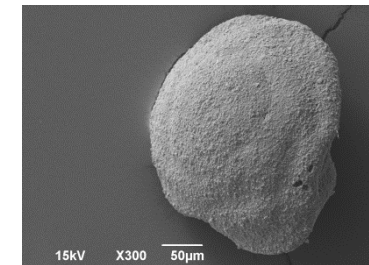
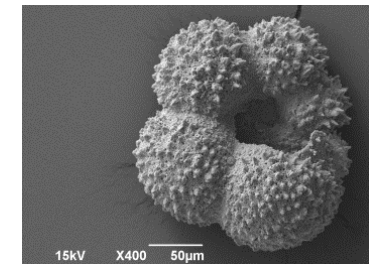
This project aims at the investigation how changes in ocean circulation and deepwater formation were related to climatic cooling.



Palaeogeographic map at 73 Ma with position of studied sites.

## Approach:

- High-resolution  $\delta^{13}\text{C}$  stratigraphy of ODP-Site 1210B (Shatsky Rise) for global correlation
- Reconstruction of surface- and deep-water temperatures at Site 1210B using  $\delta^{18}\text{O}$  of planktic (*Rugoglobigerina rugosa*) and benthic (*Nuttallides truempyi*) foraminifera
- Reconstruction of past ocean circulation by the analysis of neodymium isotopes at different sites from the South Atlantic, Southern Ocean and tropical Pacific



*Rugoglobigerina rugosa*  
*Nuttallides truempyi*