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**Pliocene Diatom Biomarkers in Sabrina Coast. EAIS Continental Marginal Dynamics**

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PNRA Tytan project, supported by the National Institute of Oceanography and Applied Geophysics (OGS), focused on the advances and retreats dynamics of the ice sheet and on variations in the glacial regime. Unit 2 focused on Diatom biomarkers and assemblages analysis on sediments of core PC03, collected during the IN2017-V01 cruise on the eastern flank of the Minang-a (or Whale) submarine Canyon. The project aims at reconstructing the depositional environment of the continental margin off the Totten Glacier and diatom data remained a key tools to constrain past ice-sheet dynamics and to forecasting future behaviour in a warming world. Preliminary dataset from diatom biostratigraphic tools allows to refer the base of the core to Pliocene while the upper part of the core records more modern EAIS dynamics, indicative of minor sedimentary evolution steps of the continental margin.

Diatom assemblage analyses highlight Eocene-Oligocene reworked material and freshwater diatom inputs in Pliocene sequence, strengthening the debate about ice-sheet and paleoceanographic models, WAIS cyclic collapse and suspected Pliocene EAIS retreat into major subglacial Antarctic basins.