



Lunedì 23 ottobre 2023

Ore 14.00 - Aula Pognante, *Dipartimento di Scienze della Terra, Torino*
oppure da remoto: [via webex al seguente LINK](#)



A new insight into the Late Miocene- Early Pliocene Biogenic Bloom



Maria Elena Gastaldello

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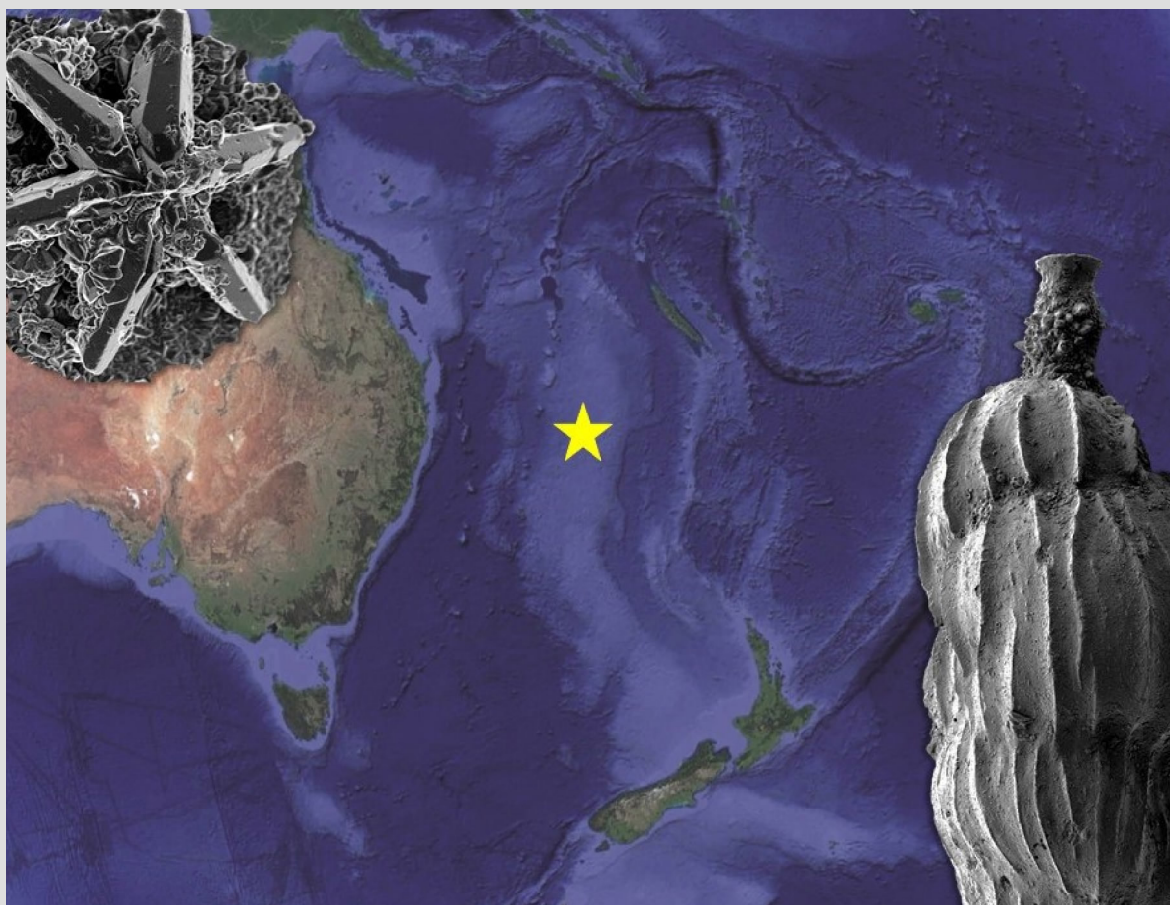


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The Late Miocene-Early Pliocene Biogenic Bloom (~ 9 -3.5 Ma) is a paleoceanographic phenomenon defined by anomalously high marine biological productivity. Marine sedimentary records in the Indian, Pacific, and Atlantic oceans, point to a significant increase in primary productivity maintained for several millions of years. Surface primary productivity is typically limited by the availability of nutrients, whose residence times are fairly short in the global ocean. Therefore, the global nature and the multimillion years duration of the Biogenic Bloom makes this phenomenon a paleoceanographic puzzle. Two main explanations for these anomalously high productivity conditions have been proposed: a major redistribution of nutrients triggering an intensification of regional upwelling; or an absolute increase of nutrients delivery to the oceans. The widespread signal and common patterns of the Biogenic Bloom point to global forcing. However, recent palaeoceanographic studies provide evidence for regional differences in its expression and timing, and underline the importance of studying regional scale processes to fully understand this phenomenon.



The Speaker

Maria Elena Gastaldello is a PhD student at the University of Padova, specialized in micropaleontology and paleoceanography. Her PhD project aims to reconstruct the paleoceanographic and paleoenvironmental changes at the seafloor during the Late Miocene-Early Pliocene Biogenic Bloom phenomenon. She combines micropaleontological analyses (benthic foraminifera, calcareous nannofossils) with geochemical proxies (e.g. oxygen and carbon stable isotopes, carbonate content).

