Reworked Coccoliths: proxy to reconstruct Volturno hydrographic basin runoff variation

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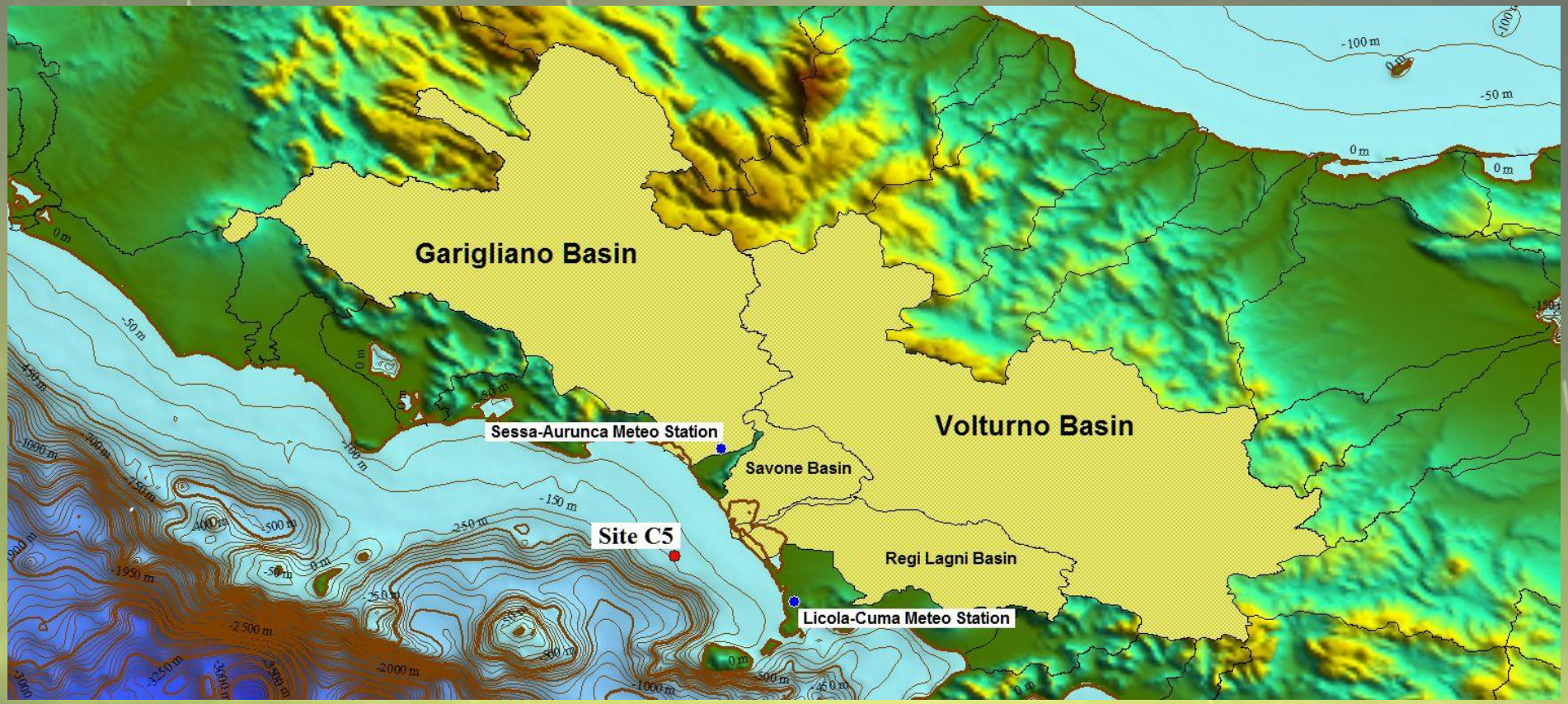
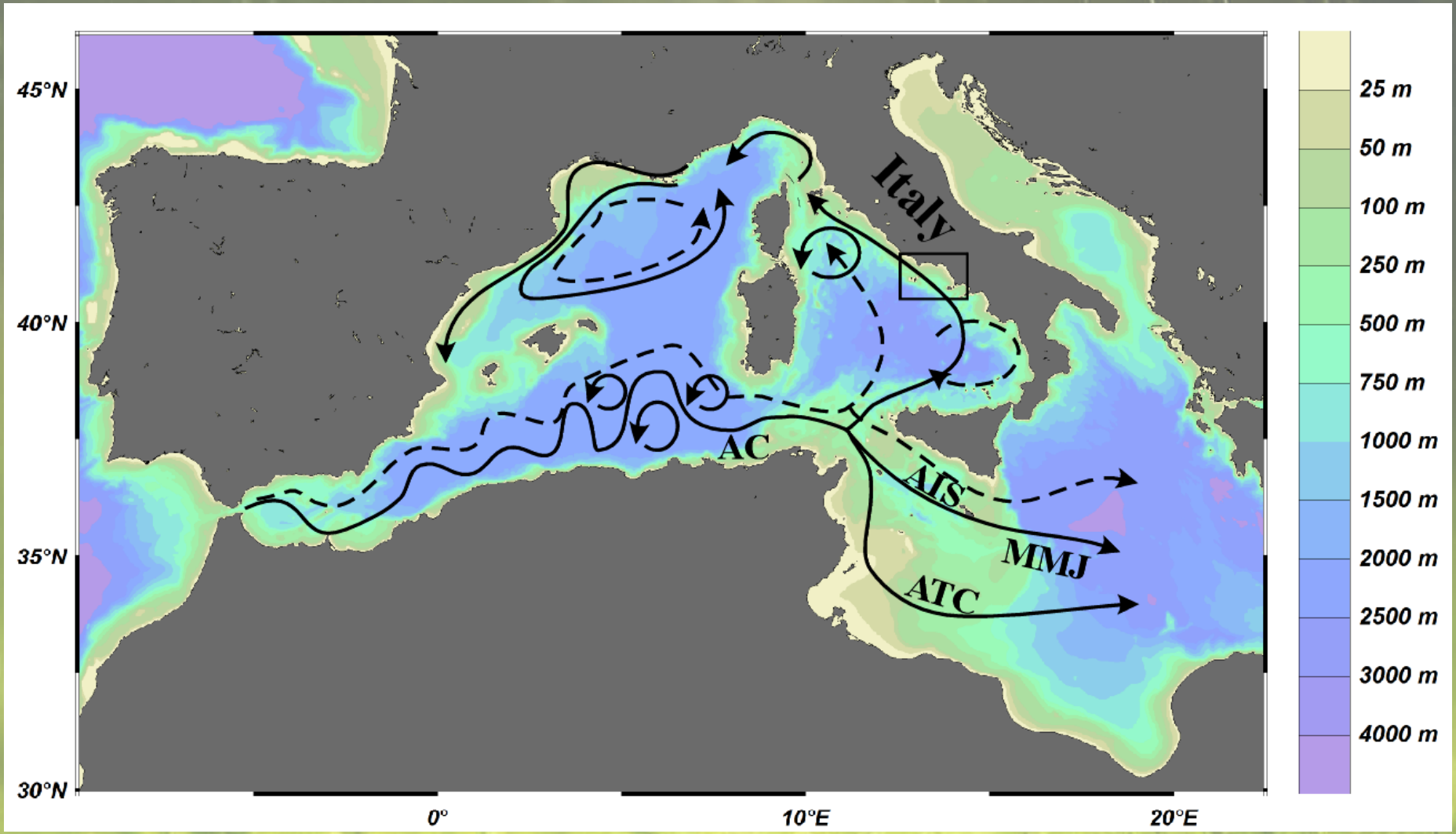
Project NEXTDATA WP–1.5 Paleoclimatic Data from Marine Sediments *(CNR-DTA, URT EvK2-CNR, INGV)*

Volturno - Garigliano hydrographic basins and location site of C5 SW104 and C5 gravity cores



Volturno-Garigliano surface basin = 12247 km^2

Map of the western Mediterranean Sea



Black and dashed lines follow
the path of surface water circulation respectively in winter and summer

Circulation pattern in the Gulf of Gaeta

Winter

Summer

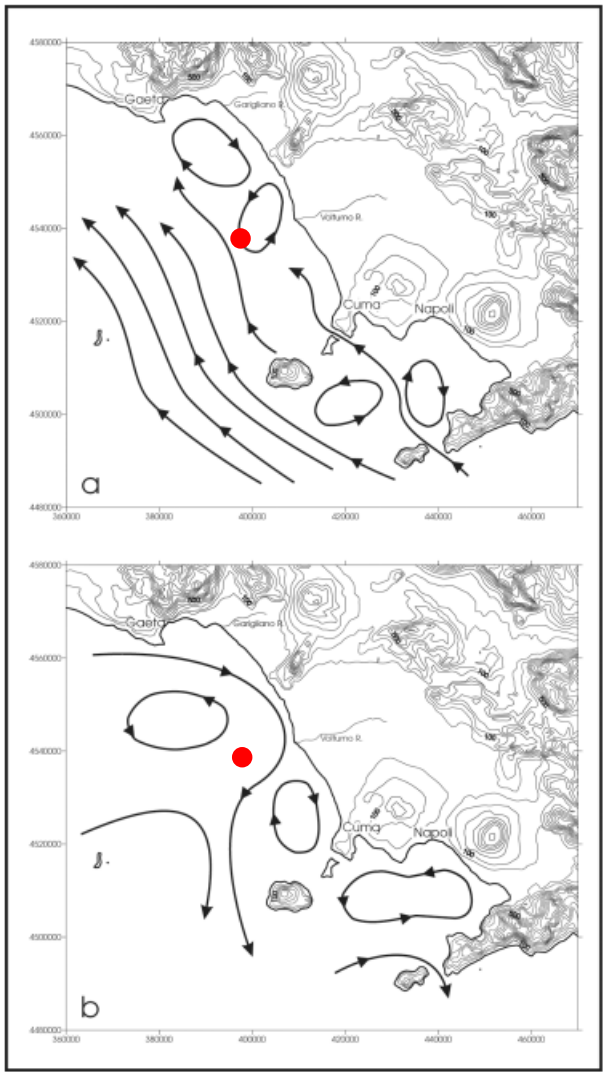
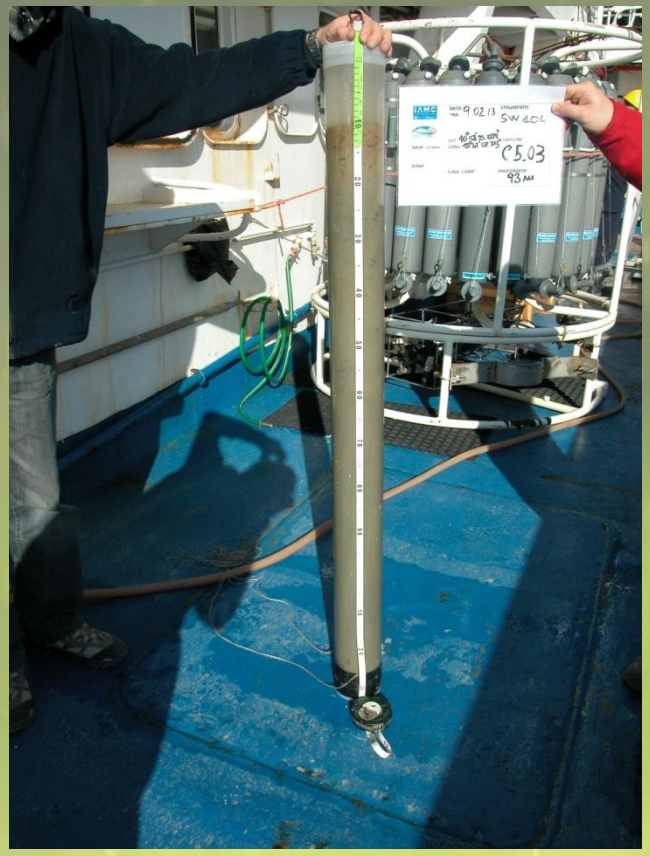


Fig. 3 - Circulation patterns of the Tyrrhenian Sea and their influence on the circulation in the Gulf of Gaeta. A cyclonic vortex interests both the superficial (MAW) and intermediate (LIW) layers. In winter (a) this type of circulation is more frequent, mainly with a NW seawater flow direction; in summer (b) the circulation preserves his cyclonic character but is interested by smaller cells and reduced dynamics, with S and SE-ward seawater movements.

(Modified from De Pippo et al. 2003)

C5 Cores

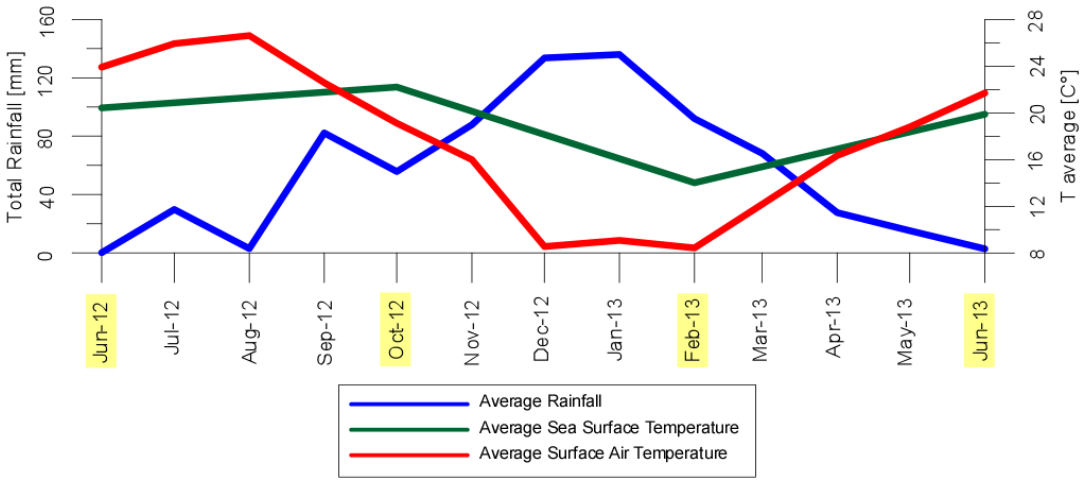


C5 - SW104 Core (108 cm)

Sedimentation rate: 0.3 cm*y^{-1}
(^{137}Cs and ^{210}Pb)

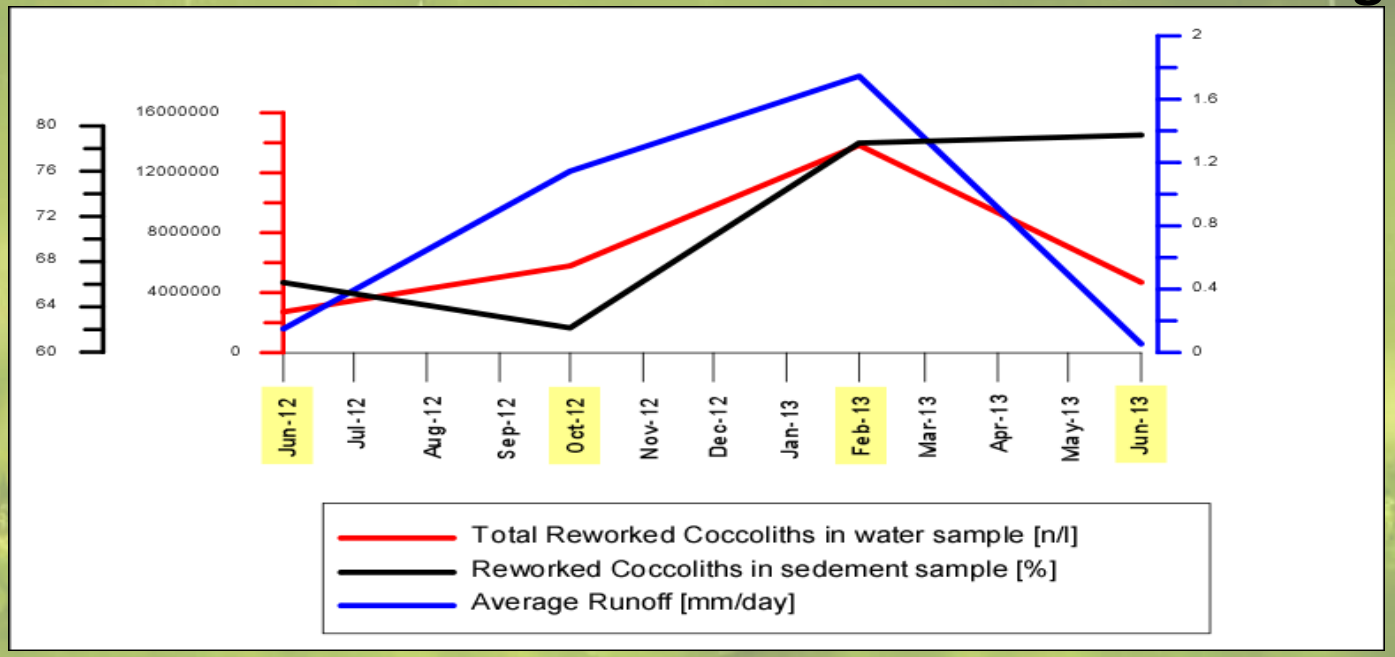
C5 - gravity Core (352 cm)

Environmental data



Environmental variables measured by means of CTD and 2 meteorological station. In yellow cruises sampling periods.

Water and surface sediment reworked Coccoliths *vs* average runoff

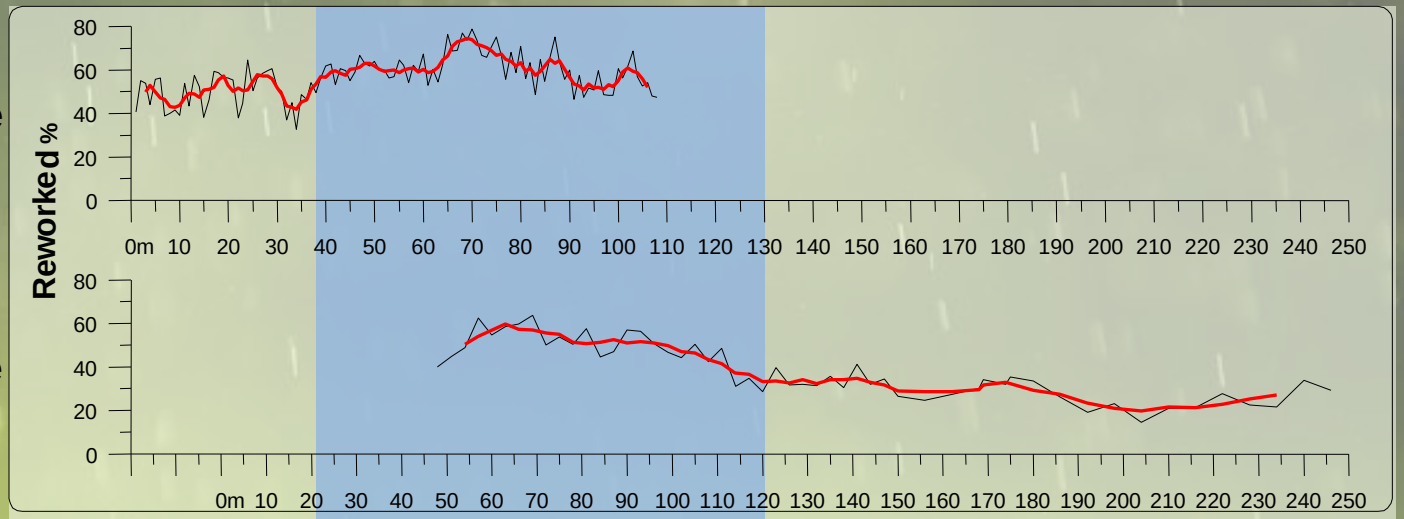


Site C5

Quantitative distribution data of reworked taxa and *Florisphaera profunda*

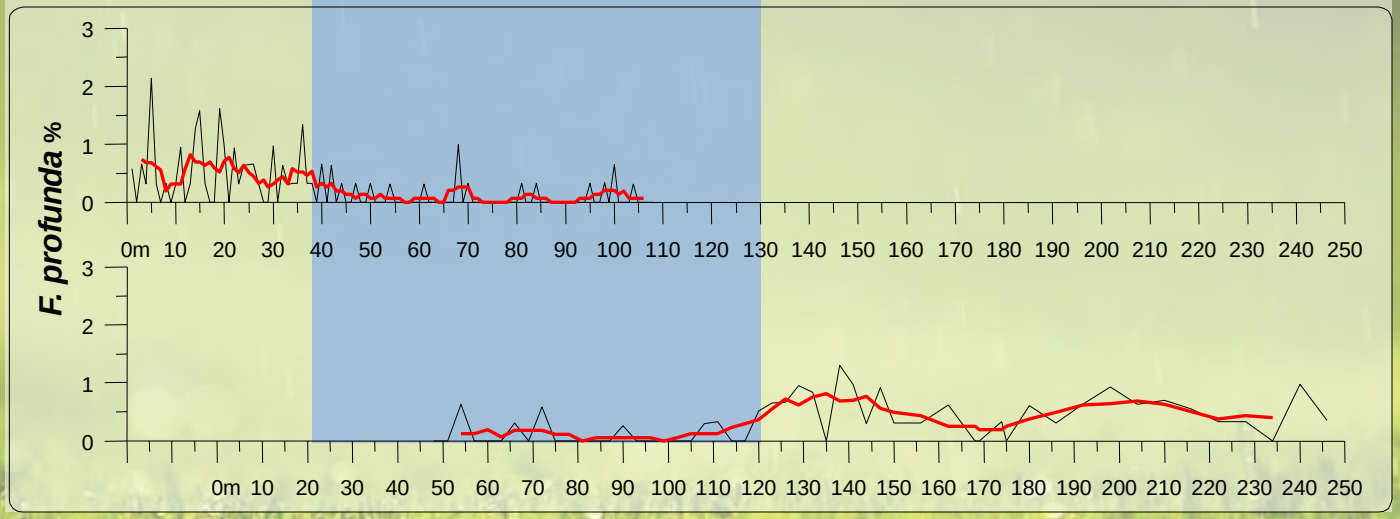
C5 - SW104 core

C5 - gravity core

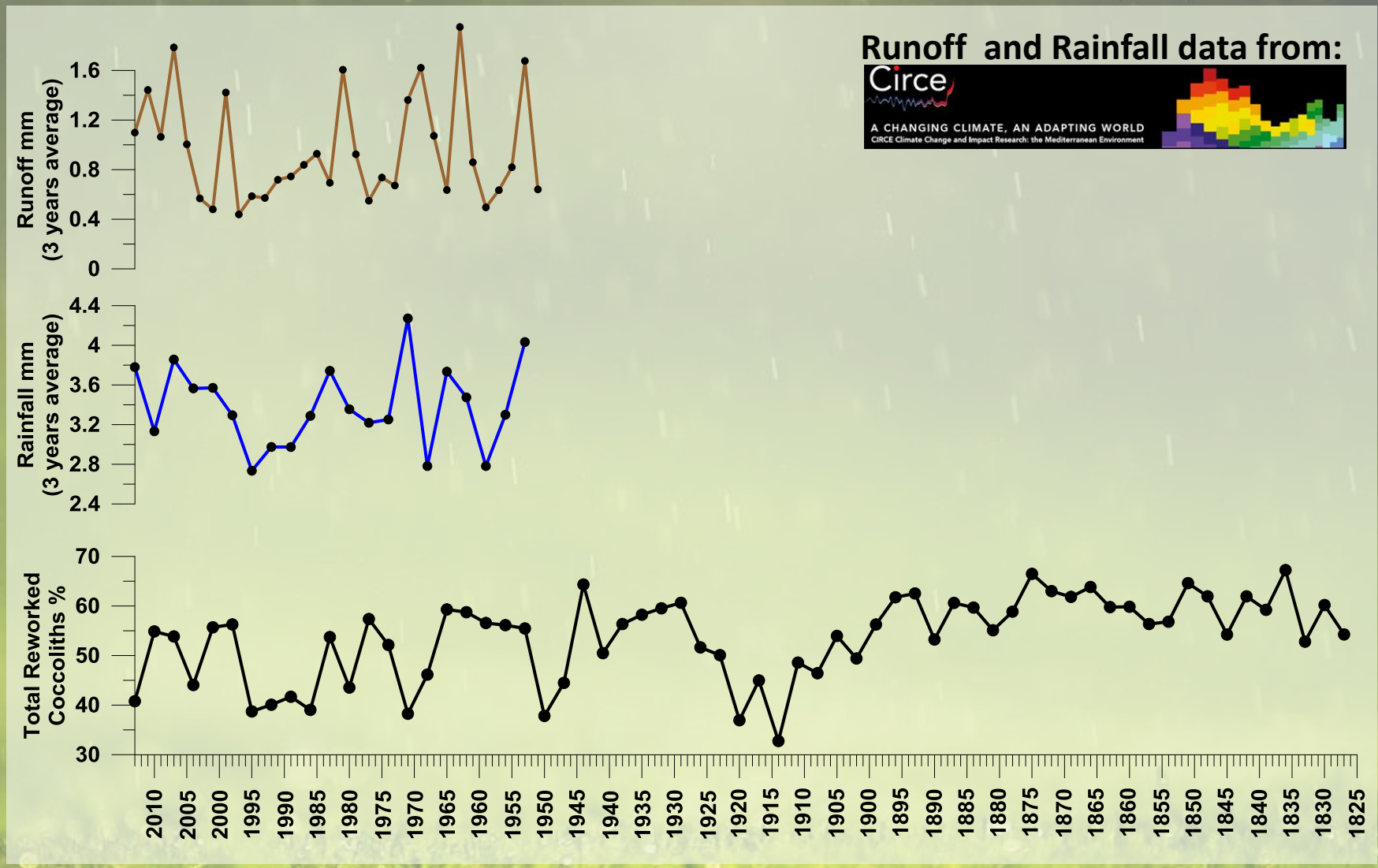


C5 - SW104 core

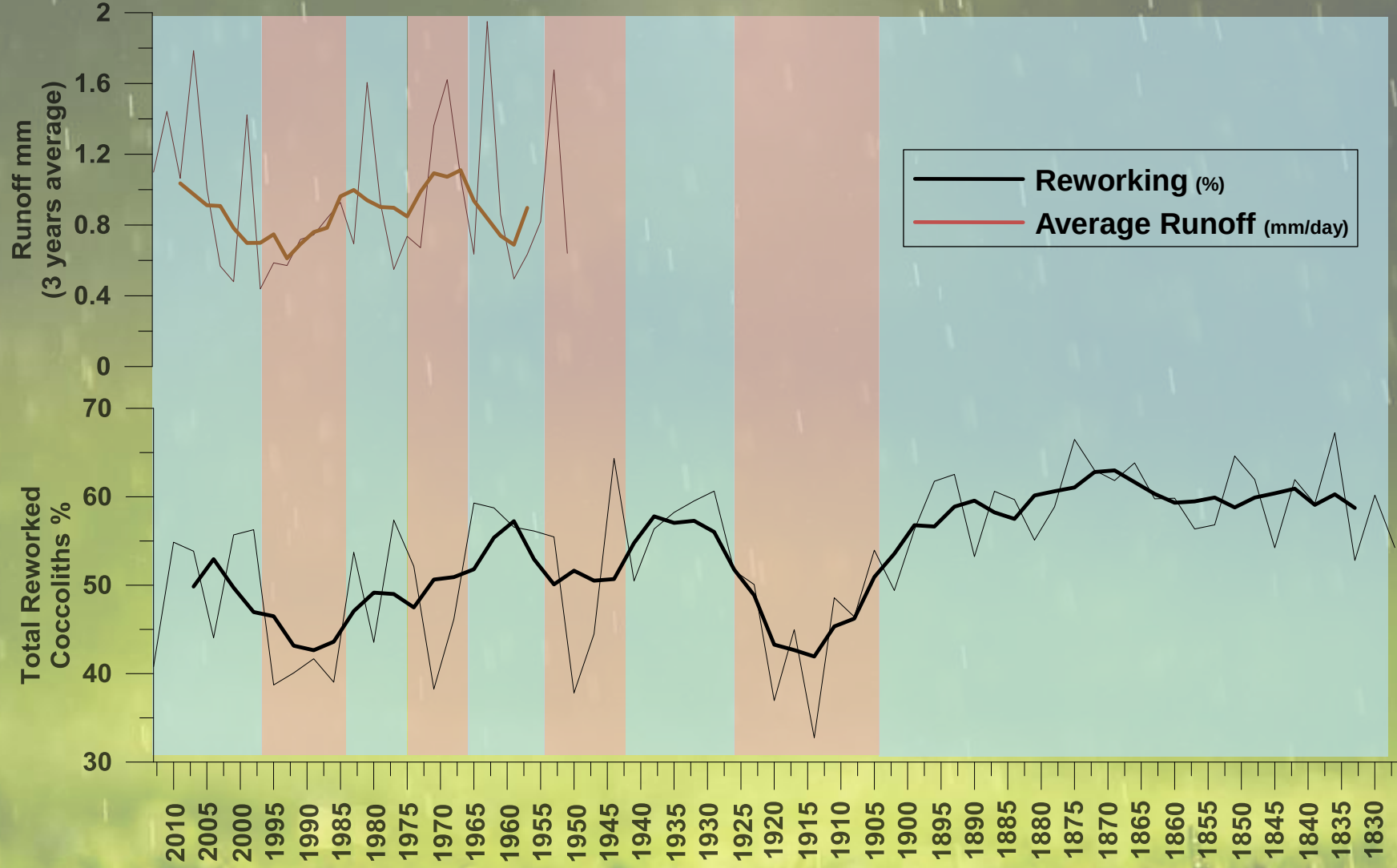
C5 - gravity core



C5 SW104 core - Reworked Coccoliths *vs* Runoff and Rainfall models



C5 SW104 core “Dry / Wey” periods reconstruction



“dry” period

“wet” period


THANKS