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MS as a correlation tool on an isolated Oligocene–Miocene carbonate platform (Maiella, Abbruzzi, Italy)

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The Maiella (Abruzzi, S-Apennine, Italy) represents an isolated and tectonically relative stable oceanic platform in the central Mediterranean Sea. Due to its position this carbonate platform is well suited to identify local processes possibly overprinting regional or global signals in neritic carbonates. The 120-m-thick Decontra section is composed of bryozoan and corallinean limestones of Oligocene–Miocene age frequently representing contourites interlayered with distinct planktonic foraminiferal carbonates. Due to the small terrigenous influence, the recorded magnetic susceptibility (MS) values are very low. Nonetheless, the MS signal broadly reflects relative sea-level changes in a mostly outer neritic setting. Winnowing processes usually concentrate high-density magnetic minerals. However, the lowest MS values occur in the shallowest high energetic facies due to oxidation of magnetic particles in a well-aerated environment and/or increased biogenic carbonate sedimentation diluting the fine-clastic carriers of the MS signal. Apart from that the MS trends always correlates with relative sea-level changes. MS minima correspond to deep hemipelagic facies while the maxima coincide with slightly shallower contourite facies. The relative high MS values in the cross-bedded contourite facies display condensation processes on the proximal outer ramp. There, a low aphotic carbonate production and permanent sediment reworking prevented dilution effects and favoured the precipitation and concentration of iron-bearing glauconite.

ZOBODAT - www.zobodat.at

Zoologisch-Botanische Datenbank/Zoological-Botanical Database

Digitale Literatur/Digital Literature

Zeitschrift/Journal: [Berichte des Institutes für Geologie und Paläontologie der Karl-Franzens-Universität Graz](#)

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