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Holocene sediment marine deformation process on the Cuma outer shelf (Eastern Tyrrhenian sea, Italy): An integrated approach

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High resolution seismic profiles interpretation and sedimentological and petrophysical correlation of piston cores evidence a recent downward displacement, related to creep-type process in the HST Holocene unit, which crops out at the sea bottom offshore Cuma, Eastern Tyrrhenian Sea. The emplacement of the upper unit characterized by mud deposits is interpreted as controlled by high sediment supply, high water contents and shallow gas pockets, which could represent a principal triggering factor of the submarine instabilities.
In the upper sliding unit the undisturbed sedimentation and the high degree of correlation between sedimentological and petrophysical data observed, constitute evidences that the sedimentological body, interested by the deformation, preserves an internal geometry, testifying a slow sliding without reworking of such body. Finally by means of colour properties correlations with nearby dated marine sediment, a time interpretation of the upper unit involved in the sliding is furnished.