

Detecting to secret folded composite lamina package pairs in cores related slump dump structures and seismites with high resolution sampling of physical parameters

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The core retrieved from Lake Van consists of seismites that were possibly deposited during the earthquakes around the Van region. Deformed parts of the core sediments display folded laminations that can be attributed to seismites. The problem arises that if the fold axis is deposited perpendicular to the liner and, if the hinge line is far enough, describing the true laminations might be impossible related to real age of basin evolution because extra laminae seem deposited to the area. Scientist must pay attention such problem that dating method like varve counting and basin evolution estimates can totally change due to extra laminae that explained before. For eliminate to wrong interpretations considering reversal reflected anomalies even with angularity effects to one package of pair can show significant difference than other symmetric one due to angle of the hinge line or soft sediment deformation. Considering the situation explained, p-wave is not enough to support the idea however; chemical analyses (x-ray florescence), ICP-MS (asdasd) analysis can provide appropriate results to identify laminae that appear on the limbs of the reversed micro folds.

New easy designed extra U-Channel drive tray framework prepared by us. U-Channels are prepared well conditioned, saturated enough to well contact between sediment surface and plastic shield of u-channel samples from cores. Physical parameters are measured by Multi sensor core logger (MSCL) with high resolution step ratio fixed to 1mm.

At the p- wave and gamma ray results, we observed together stair upwards form and reverse reflected downward data graphics, thus our interpretation of identifying the fold limbs are now visible. We understand that laminae packages are exactly the same. XRF and MSCL are totally supporting to origin of pairs generated after their sedimentation age with mechanical forces. For this reason, in this study, we attended to solve such problem to analyze deformed folded laminations that must be documented for paleo-climate studies in Lake Van.

Keywords: P-Wave, folded laminae, earthquake, lake van, reverse composite lamina pair