



Beta-gamma autoradiograph of a sandy Esk estuarine core sampled in September 1980 by Hamilton and Clarke 1984 using Kodax Industrex C No Screen X-ray film exposed for 200 days. Sedimentation rate 3.0-3.5 cm / yr. Because of the long exposure there is a slight blurring of the radiograph. The white zones represent deposition of radionuclides during the summer and the black zone that in the winter. Most of the radioactivity which is permanently retained by the sediments is deposited during the summer. For sediments deposited in 1977 the diffuse distribution is replaced by a hot particle distribution which for younger sediments is obscured by the diffuse distribution. This reflects the radioactive decay of a few short lived radionuclides, but predominantly the loss of radionuclides in the water column by bioturbation, mainly caused by the amphipod *Corphium v.*

"W" = winter deposition