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HQR011-08 Room: Exibition hall 7 subroom 3 Time: May 28 11:00-11:15

Post-glacial sedimentation and stratigraphy on the Niigata shelf

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Late Quaternary sediments in the coastal zone off Niigata are divided into 3 lithological units. Upper unit composed of sandy sediments, and corresponds to the uppermost acoustic unit in high resolution seismic profiles. Internal reflectors in this acoustic unit downlapped against a reflector correlated to lithological boundary between upper and middle units. Middle unit composed of muddy sediments intercalated with many thin sandy layers. Many parallel reflectors found in the acoustic profiles. Clear erosional surface is recognized at the base of this unit in the acoustic profiles, and is correlative to lithological boundary between middle and lower units. Mud clasts occurred frequently at the upper part of lower unit indicating the erosion of the bed. Radiocarbon age determinations suggest that depositional age of the lower part of middle unit is around 10 ka. Therefore, the erosional surface is correlated to the transgressive surface during the post-glacial sea-level rising. Late Quaternary sediments in the offshore area are divided into 2 lithological units (lower sandy and upper muddy units). Lithology changed from sandy to muddy at around 10 ka. Offshore transport of sandy materials related to coastal erosion during sea-level rising stopped at around 10 ka, and muddy sediments covered the sandy sediments.

Keywords: Holocene, sea-level rising, seismic reflection profile, Niigata, marine sediment, stratigraphy