Daily Drilling and Scientific Report for IODP Expedition 347, Baltic Sea Paleoenvironment

10th Oct 00:00 – 10th Oct 24:00 GMT

1. Location
18° 15.250 E   58° 37.340' N
BSB-9 Landsort Deep

2. Activity Summary
Continue coring operations at BSB-9.

3. Science Report
Drilling of Hole M0063A in the Landsort Deep continued throughout the day and first recovered more than 30 m of core with high recovery. The sediment was a very uniform gray to light brown glacial clay with weakly visible, variable varves of one to several cm thickness. No foraminifera or other microfossils were detected. At 90 mbsf the sediment became slightly coarser and a horizon of clayey sand was found. A tentative estimate based on the visible varve thickness points toward a sequence of glacial varved clay cored at this hole that represents c. 2200 years of varve deposition.

A clayey, sandy, gravely diamicton was present in the core from 92 mbsf down to 102 mbsf where the sediment turned into well sorted silt with a light brown colour. At 105.8 mbsf a hammer core sample returned very well sorted gravel with no fines present that may be the result of transport by melt water from the ice sheet, i.e. a glaciofluvial gravel.

4. Core Recovery Details

<table>
<thead>
<tr>
<th>Hole</th>
<th>M0063A</th>
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<tbody>
<tr>
<td>Cores recovered</td>
<td>18</td>
</tr>
<tr>
<td>Drilled length (Coring)</td>
<td>31.80m</td>
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<tr>
<td>Drilled length (Open hole)</td>
<td>15m</td>
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<tr>
<td>Recovered length</td>
<td>29.28</td>
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<tr>
<td>Recovery</td>
<td>92.08%</td>
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<tr>
<td>Depth at Midnight</td>
<td>115.80m</td>
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</tbody>
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5. Weather
Overcast with occasional heavy rain showers, wave heights of 1 – 2 m; winds W swinging to NE, 5 - 15 kts, gusting to 24 kts; 14°C.
Next 24 hrs: Fair, wave heights of 0.4 – 1.1 m, winds NNE to N, 12 – 21 kts, gusting 15 -26 kts. 16°C. Fresh breezes diminishing as high pressure moves east over the Baltic Sea.

6. Planned Activity for the next 24 hours
Continue coring operations at BSB-9. Landsort Deep and log the hole.
7. Photo of the day

Anne-Sophie Fanget©ECORD_IODP
Extended coring system