**Metadata form for underway measurement systems**

Please submit this form to Benjamin Pfeil (benjamin.pfeil@bjerknes.uib.no)

<table>
<thead>
<tr>
<th>Investigator*</th>
<th>Name*</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Organization*</th>
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<table>
<thead>
<tr>
<th>Address*</th>
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<table>
<thead>
<tr>
<th>Phone*</th>
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<table>
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<tr>
<th>Email*</th>
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<table>
<thead>
<tr>
<th>Dataset_Info*</th>
<th>Dataset ID*</th>
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<tbody>
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**Submission Dates** (will be completed by the data management)

<table>
<thead>
<tr>
<th>Cruise_Info*</th>
<th>Experiment Name*</th>
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<thead>
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<th>Cruise ID</th>
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<thead>
<tr>
<th>Section (Leg)</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Geographical Coverage*</th>
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<table>
<thead>
<tr>
<th>Westernmost Longitude:</th>
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<table>
<thead>
<tr>
<th>Easternmost Longitude:</th>
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<table>
<thead>
<tr>
<th>Northernmost Latitude:</th>
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<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>Description of Variable: (E.g., in dry air)</td>
</tr>
<tr>
<td>Method Description*</td>
</tr>
<tr>
<td>Measurement Method</td>
</tr>
<tr>
<td>Manufacturer of Calibration Gas (E.g., Aire Liquide (France))</td>
</tr>
<tr>
<td>CO2 Sensors</td>
</tr>
<tr>
<td>Other Sensors</td>
</tr>
<tr>
<td>---------------</td>
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**Method References:** (Publication(s) describing method)

<table>
<thead>
<tr>
<th>Data set references</th>
<th>Citation</th>
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<table>
<thead>
<tr>
<th>Data Set Link</th>
<th>URL*</th>
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<table>
<thead>
<tr>
<th>Link Note: (Optional instructions or remarks)</th>
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<tbody>
<tr>
<td><strong>ay measurement systems</strong></td>
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<tr>
<td>---------------------------</td>
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<tr>
<td>bjerkes.uiib.no)</td>
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</tbody>
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<table>
<thead>
<tr>
<th><strong>Initial Submission:</strong> (YYYYMMDD)</th>
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<table>
<thead>
<tr>
<th><strong>Revised Submission:</strong> (YYYYMMDD)</th>
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<table>
<thead>
<tr>
<th><strong>Geographical Region</strong></th>
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<tbody>
<tr>
<td>Enter decimal fractions of degrees: (+ = E, - = W)</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>or Degrees, Minutes, Seconds: East West</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Enter decimal fractions of degrees: (+ = E, - = W)</th>
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</table>

<table>
<thead>
<tr>
<th>or Degrees, Minutes, Seconds: East West</th>
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</thead>
</table>

<table>
<thead>
<tr>
<th>Enter decimal fractions of degrees: (+ = N, - = S)</th>
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<table>
<thead>
<tr>
<th>or Degrees, Minutes, Seconds: North South</th>
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</thead>
<tbody>
<tr>
<td><strong>Enter decimal fractions of degrees:</strong> (+ = N, - = S)</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
</tr>
<tr>
<td><strong>or Degrees, Minutes, Seconds:</strong> North South</td>
</tr>
<tr>
<td><strong>Start Date:</strong> (YYYYMMDD)</td>
</tr>
<tr>
<td><strong>End Date:</strong> (YYYYMMDD)</td>
</tr>
<tr>
<td><strong>Vessel Name</strong></td>
</tr>
<tr>
<td><strong>Vessel ID</strong></td>
</tr>
<tr>
<td><strong>Country</strong></td>
</tr>
<tr>
<td><strong>Vessel Owner</strong></td>
</tr>
<tr>
<td><strong>Equilibrator Type</strong></td>
</tr>
<tr>
<td><strong>Equilibrator Volume (L)</strong></td>
</tr>
<tr>
<td><strong>Water Flow Rate (L/min)</strong></td>
</tr>
<tr>
<td><strong>Headspace Gas Flow Rate (L/min)</strong></td>
</tr>
<tr>
<td><strong>Vented</strong></td>
</tr>
<tr>
<td><strong>CO2 Sensor</strong></td>
</tr>
<tr>
<td><strong>Manufacturer</strong></td>
</tr>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td><strong>Environmental Control:</strong> (Describe any additional environmental control.)</td>
</tr>
<tr>
<td>Resolution</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td><strong>CO2 Sensor Calibration:</strong> (For each calibration gas, document traceability to an internationally recognized scale, including date and place of last calibration. Include uncertainty of assigned value.)</td>
</tr>
<tr>
<td>Manufacturer</td>
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<tr>
<td>Model</td>
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<tr>
<td>Resolution</td>
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<tr>
<td>Uncertainty</td>
</tr>
<tr>
<td><strong>Calibration:</strong> (For each sensor of pressure, temperature, and salinity, document traceability to an internationally recognized scale, including date and place of last calibration.)</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Name</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bernd Schneider</td>
<td><a href="mailto:bernd.schneider@io-warnemuende.de">bernd.schneider@io-warnemuende.de</a></td>
</tr>
</tbody>
</table>

Leibniz Institute for Baltic Sea Research  
D-18119 Warnemünde, Seestrasse 15, Germany  
+49-381-5197320

Germany

pCO2, in situ

glass cylinder, bubble type

0.3

0.1

0.3

yes

CO2 detection by IR in a partially dried gas stream

NOAA and secondary standards (Aire Liquide, Linde)

IR detection

LICOR

6262
0.1 ppm

overall uncertainty of the pCO2 determination: +/- 2 - 3 µatm
<table>
<thead>
<tr>
<th>( * =mandatory field)</th>
<th>to be filled out by the scientist</th>
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<tbody>
<tr>
<td></td>
<td>To be filled ou by the data management</td>
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