**PS78 processing log**

**ROV “Kiel 6000” Navigation data**

**a) Original data**

The original navigation data was measured by an IXSEA Posidonia USBL positioning system. The data was recorded and provided by the software OFOP (J. Greinert).

These data sets contain:

- USBL position from IXSEA Posidonia
- Timestamp
- Immersion

**b) Processing**

I. **Processing steps:**

1. Extraction of raw data from OFOP
2. Manual validation of erroneous positions by reviewing speed, time and distance jumps
3. Removing of invalid positions
4. Smoothing of the track using a Gaussian/9 filter (in ADELIE GIS)
5. Interpolating positions to get a 1 second interval navigation track
6. Conversion of data to files of 1 and 10 second resolution

II. **Processed data:**

Result of the processing is the verified navigation in 1 second and in 10 second interval, held in ASCII table files (tab delimited) with the following format:

Column 1: Latitude [decimal degree]
Column 2: Longitude [decimal degree]
Column 3: Date [Format: DD.MM.YYYY HH:MM:SS]
Column 4: Flag  
   1: Position measured by acoustic positioning system (USBL)
   0: No position from USBL, position is interpolated
Column 5: Immersion [metres]

**III. Statistic**

<table>
<thead>
<tr>
<th>Station Number</th>
<th>Starttime</th>
<th>Endtime</th>
<th>Number of 1 s Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS78/141-1</td>
<td>15.07.2011 11:02:06</td>
<td>15.07.2011 16:01:07</td>
<td>17942</td>
</tr>
</tbody>
</table>

**c) Dive maps**