



PS80 processing log

OFOS (Ocean Floor Observation System) Navigation data

a) Original data

The original navigation data was measured by an IXSEA Posidonia USBL positioning system. The data was provided from the raw data telegram files created by the IXSEA Abyss software.

These data sets contain:

USBL position from IXSEA Posidonia
Timestamp
Immersion

b) Processing

I. Processing steps:

1. Extraction of raw position data from NMEA telegram stream
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 (using ADELIE GIS)
4. Linear interpolation of positions to get a 1 second interval navigation track
5. 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

Station Number	Start time	End time	Number of 1 s Positions
PS80/206-1	05.08.2012 20:21	05.08.2012 21:32:00	4261
PS80/228-1	10.08.2012 07:21	10.08.2012 11:45:50	15875
PS80/239-1	14.08.2012 15:17	14.08.2012 20:32:00	18901
PS80/257-1	20.08.2012 10:34	20.08.2012 14:30:00	14161
PS80/282-1	26.08.2012 07:32	26.08.2012 12:00:00	16081
PS80/327-1	04.09.2012 19:01	04.09.2012 23:09:50	14916
PS80/340-1	08.09.2012 11:43	08.09.2012 19:35:30	28330
PS80/356-1	19.09.2012 09:37	19.09.2012 12:31:40	10461
PS80/369-1	23.09.2012 06:08	23.09.2012 08:46:10	9480
PS80/392-1	29.09.2012 02:50	29.09.2012 04:00:30	4221

c) Station maps









