



ARK-XVI/2 processing log

a) Original data

Original Parasound data were held on hard disk drive. A file structure of several "TapeXX" directories was given which contained PS3 files.

b) Processing

- Renaming:
PS3 files from tape directories were moved to one folder. Thereby wrong PS3 file names which were given by the data acquisition software during date changes were corrected manually.
- Corrupted files:
PS3 files from 08041052.ps3 to 08041422.ps3 (74 in total, 97 MB) are corrupt and therefore removed.
- Year 2000 and leap year problem:
Year values in all headers from each PS3 files have been changed from 1900 to 00. Otherwise programs like SeNT would not be able to read the PS3 file.
Due to a leap year problem of Parasound's data acquisition software all PS3 files from year 2000 which were recorded after February, 28th have a wrong date (1 day further than true). All PS3 files and all contained headers were corrected.
- Sorting:
Resulting PS3 files were archived 4-hour-wise in TAR archives.
- Meta navigation table for PANGAEA:
A navigation table was created using a 10 minute interval navigation extracted from the DShip 10-minute-database (dship.awi.de). Due to missing navigation data from DShip in the time 19.08.2011 11:10-15:10 navigation data from PS3 headers was used instead.
Afterwards all TAR archives were referenced to the navigation table accordingly.
Navigation rows without references to TAR archives were removed.

Some PS3 files contain wrong date/time headers and wrong latitude/longitude values. Their correction was not covered by this processing.

c) Statistics

Data volume:	2.8 GB
Total number of files checked:	2384
Total number of headers checked:	132821
Total number of files with invalid date/time:	18 (0.76 percent)
Total number of invalid date/time headers:	149 (0.11 percent)
Total number of files with wrong lat/longs:	8 (0.34 percent)
Total number of wrong lat/long headers:	160 (0.12 percent)

