Data format and file naming convention for Chadwick/Nooner data files

Each BPR (bottom pressure recorder) data file from Axial Seamount has a data record every 15-seconds, but many of the files have small data gaps. Any file that has a data gap is associated with a corresponding *data gaps* file (see files that end in "data-gap-notes").

Some of the BPR files have a drift correction applied (if it can be determined), and some do not. Those that do, have "drift-corr" in the file names; "spotl" indicates that predicted tides are subtracted in the files, and "lpf" indicates there is also de-tided data using a low-pass-filter.

The files start with one header record followed by data records, like this:

Date,RawDep,Temp,DriftCorrRawDep,SpotlDep,DriftCorrSpotlDep,LPFDep,DriftCorrLPFDep
09/06/2013 00:00:00,1513.896,2.7958,1513.896,1514.070,1514.070,1514.047,1514.047

RawDep = raw depth derived by converting from raw pressure in psi (includes tides)
Temp = temperature (°C) recorded by the pressure gauge (inside the instrument pressure case)
DriftCorrRawDep = RawDep with drift correction applied (if available)
SpotlDep = RawDep minus predicted tide from SPOTL using osu.tpxo72.2010 tide model
DriftCorrSpotlDep = SpotlDep with drift correction applied (if available)
LPFDep = Depths de-tided using a Low-Pass Filter with a 3-day period cut-off
DriftCorrLPFDep = LPFDep with drift correction applied (if available)

All depths are in meters. All date/times are GMT. Dates are in MM/DD/YYYY format.

The raw pressure data are recorded in psi, but we convert the pressure to "raw depth" using the following formula:

$$P \text{ (psi)} * 0.670 = \text{Depth (meters)}$$

To get back to the raw pressure divide the raw depth by 0.670.

The SPOTL software that we use to generate predicted tides is available on-line here:
http://igppweb.ucsd.edu/~agnew/Spotl/spotlmain.html