

Data format and file naming convention for Fox data files

The two data files “nemo1997-1998-BPR-center-15sec-spotl-lpf.txt” and “nemo1997-1998-BPR-south-15sec-spotl-lpf.txt” contain:

Date, Raw depth, Temp, Spotl-detided depth, and LPF-detided depth

The LPF values were created with a 40-hr Low-Pass Filter, and they are only output once an hour (on the hour). The records in between have zeros in the LPF column (there is no LPF value). These files are the original data created and published by Chris Fox.

The file for **nemo1997-1998-BPR-center** (aka WC81 and VSM1) does not have any drift correction because it pre-dates the MPR measurements at Axial Seamount. The file contains data starting at 10/07/1997 11:00:00 and ending at 08/03/1998 12:00:00.

Reference:

Fox, C. G. (1999), In situ ground deformation measurements from the summit of Axial Volcano during the 1998 volcanic episode, *Geophys. Res. Lett.*, 26(23), 3437-3440

The file for **nemo1997-1998-BPR-south** (aka WC82 and VSM2 and “rumbleometer”) does not have any drift correction because it pre-dates the MPR measurements at Axial Seamount. This is the BPR instrument that was stuck in the 1998 lava flow at Axial Seamount and was later rescued. The file contains data starting at 10/07/1997 12:00:00 and ending at 09/28/1998 15:00:00.

References:

Fox, C. G., W. W. Chadwick, Jr., and R. W. Embley (2001), Direct observation of a submarine volcanic eruption from a sea-floor instrument caught in a lava flow, *Nature*, 412, 727-729

Chadwick, W. W., Jr. (2003), Quantitative constraints on the growth of submarine lava pillars from a monitoring instrument that was caught in a lava flow, *J. Geophys. Res.*, 108(B11), 2534, doi:2510.1029/2003JB002422

Chadwick, W. W., Jr., D. A. Clague, R. W. Embley, M. R. Perfit, D. A. Butterfield, D. W. Caress, J. B. Paduan, J. F. Martin, P. Sasnett, S. G. Merle, and A. M. Bobbitt (2013), The 1998 eruption of Axial Seamount: New Insights on submarine lava flow emplacement from high-resolution mapping, *Geochemistry, Geophysics, and Geosystems*, 14(10), 3939-3968, doi:10.1002/ggge20202.

Earlier BPR data from Axial Seamount are also available at the NOAA National Centers for Environmental Information with this link:

<http://www.ngdc.noaa.gov/nndc/struts/results?&t=102597&s=1&d=1>