May 16, 2023

Goal: Fe 2p STXM stacks for Figures S3 and S4 from Breier et al. 2012

Samples & Prep

* R/V Atlantis expedition [AT15-26](https://www.whoi.edu/science/B/atlantis-15-26/background.html) Nov 13 - Dec 3 2007 to East Pacific Rise (EPR) 9N
* Tica vent plume particulates collected by direct filtration at 80 m off-bottom
* Tica22 is one of the best (in terms of volume of seawater pumped) samples collected during the three day deployment
* Samples kept frozen, polycarbonate filter cut into 4 with clean razor
* ¼ placed in microfuge tube with 1 mL MQ water and tapped/shook by hand, this is sample Tica22 (+5000 position)
* ¼ placed in microfuge tube with 1 mL MQ water and tapped/shook by hand, then supernatant solution was filtered onto a new 0.2 micron PC filter (original filter, resuspended and shook another 2 times), this is sample Tica22-R (0 position)
* No problems with sea salts

Beamtime

* Advanced Light Source, STXM beamline 11.0.2.2
  + Files are .hdr
  + We use [axis2000](http://unicorn.mcmaster.ca/axis/aXis2000-download.html) (IDL) to work with the data
  + More recently, Matthew Marcus (ALS) also has LabView widgets for STXM data
  + File names (ex. 71214098): “7” for year 2007, “12” for month of Dec, and “14” day of Dec 14th, “098” is 98th data event of that 24 hr period
* Run Dec 13-16, 2007
  + **Breier et al. 2012 Fig.S3**
    - 71214098 (Fe 2p STXM stack)
    - Runnotes slides 45-52
  + **Breier et al. 2012 Fig.S4**
    - 71214078 (Fe 2p STXM stack)
    - Runnotes slides 35-38
* Run Feb 2-4, 2008
  + Some data from same sample set taken on this date