

Chemical Oceanography
Problem Set 2A (5 pts)
February 28, 2018
Due 3 PM March 7, 2018

All answers are to be submitted by email to david_ryan@uml.edu in MS Word format. I will confirm receipt of your assignment by return email. Late submission will result in the loss of one point per day from the point total. This problem is designed to be open book and open notes, but you are expected to work individually to determine your answers. Essays or short answers must be in your own words. **You are expected to work independently to answer these problems.**

- (5.0) 1. Please read the paper by Caprara et al. (2016) *Frontiers in Mar. Sci.* 3, 158-164 entitled “A Compilation of Iron Speciation Data for Open Oceanic Waters” (contained in the posted handout link designated ‘TM’ for 2/27/18) and comment on the following concepts and terms with respect to class discussions and the information and data described in the paper. I am not looking for a detailed description of the fine points in the manuscript, but rather an indication that you understand the terms below and very briefly how they relate generally to the information being presented. You do not need to use other sources of information and please don’t provide Wikipedia definitions or Google search results. Just read the paper and review your class notes for 2/22 and 2/27, then provide brief 1 or 2 sentence descriptions of the following terms: Iron Speciation, C_L , α , conditional stability constant, CLE-CSV.

Why was some data excluded?

What is the interpretation of the averaged depth profile?

Which is greater the iron concentration or the ligand concentration?