Abstract Submitted
for the MAS14 Meeting of
The American Physical Society

Exploring student understanding of the linkage between energy concepts in physics and chemistry BETH LINDSEY, MEGAN NAGEL, Pennsylvania State Univ - Greater Allegheny — Potential energy is a conceptually rich topic presenting many difficulties for students. One key feature of potential energy is that it is a function of the distance between interacting objects. This concept is relevant to understanding potential energy in both physical and chemical contexts. Data from student responses to written surveys and small-group interviews reveal that students do not spontaneously make connections between ideas they have about energy from physics classes and the understanding of energy that they develop in chemistry. I will describe data that provide insights into students' in-the-moment reasoning as they are confronted with and struggle to resolve the mismatch between their energy ideas from physics and chemistry. I will also describe the development and implementation of a sequence of questions that appears to aid students in drawing connections between energy concepts across the disciplines.

Beth Lindsey
Pennsylvania State Univ

Date submitted: 29 Aug 2014 Electronic form version 1.4