

DNP16-2016-000163

E

Abstract for an Invited Paper
for the DNP16 Meeting of
the American Physical Society

Barriers in the Physics Pipeline from K-12 to Tenure¹

MICHA KILBURN, Univ of Notre Dame

The lack of diversity in physics is a known problem, and yet efforts to change our demographics have only had minor effects during the last decade. I will explain some of the hidden barriers that dissuade underrepresented minorities in becoming physicists using a framework borrowed from sociology, Maslows hierarchy of needs. I will draw from current research at the undergraduate to faculty levels over a variety of STEM fields that are also addressing a lack of diversity. I will also provide analysis from the Joint Institute for Nuclear Astrophysics Center for the Evolution of Elements (JINA-CEE) outreach programs to understand the likelihood of current K-12 students in becoming physicists. Specifically, I will present results from the pre-surveys from our Art 2 Science Camps (ages 8-14) about their attitudes towards science as well as results from analysis of teacher recommendations for our high school summer program. I will conclude with a positive outlook describing the pipeline created by JINA-CEE to retain students from middle school through college.

¹This work was supported in part by the National Science Foundation under Grant No. PHY-1430152 (JINA Center for the Evolution of the Elements).