Abstract Submitted
for the MAR11 Meeting of
The American Physical Society

Using Python as a first programming environment for computational physics in developing countries GODFREY AKPOJOTOR, Physics Department, Delta State University, Abraka, Nigeria, LOUIS EHWERHEMUEPHA, Physics Department, University of Lagos, Lagos, Nigeria, MYRON ECHENIM, Physics Department, Delta State University, Abraka, Nigeria, FAMOUS AKPOJOTOR, Physics Department, University of Benin, Benin City, Nigeria — Python unique features such its interpretative, multiplatform and object oriented nature as well as being a free and open source software creates the possibility that any user connected to the internet can download the entire package into any platform, install it and immediately begin to use it. Thus Python is gaining reputation as a preferred environment for introducing students and new beginners to programming. Therefore in Africa, the Python African Tour project has been launched and we are coordinating its use in computational science. We examine here the challenges and prospects of using Python for computational physics (CP) education in developing countries (DC). Then we present our project on using Python to simulate and aid the learning of laboratory experiments illustrated here by modeling of the simple pendulum and also to visualize phenomena in physics illustrated here by demonstrating the wave motion of a particle in a varying potential. This project which is to train both the teachers and our students on CP using Python can easily be adopted in other DC.

Godfrey Akpojotor
Physics Department, Delta State University, Abraka, Nigeria

Date submitted: 17 Nov 2010 Electronic form version 1.4