

Name \_\_\_\_\_  
PIXE Homework #1 - Physics 100  
Union College Fall 2014

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*Matriculation at the College is taken to signify implicit agreement with the Academic Honor Code, available at [honorcode.union.edu](http://honorcode.union.edu). It is each student's responsibility to ensure that submitted work is his or her own and does not involve any form of academic misconduct.*

*For the homework assignments, you may consult for guidance only, if needed; your instructors lecture notes, the physics department help center, the writing center, your instructor, other physics and astronomy department instructors, other textbooks, or the Internet. Any work that is not explicitly your own must be cited. You may not copy solutions from anywhere. If you are unclear on anything, you are expected to ask your instructor for clarification regarding, but not limited to, collaboration, citations, and plagiarism. Ignorance is not an excuse for breaching academic integrity.*

1. In your own words, explain the main components of the Pelletron particle accelerator and the significance of each.

2. In your own words, explain the charge exchange process that occurs for a helium ion on a 1.1MV Pelletron accelerator.

