Abstract Submitted for the GEC12 Meeting of The American Physical Society

An Overview of Negative Ion Beams and Sources ROBERT WEL-

TON, Oak Ridge National Laboratory — This report will provide a broad introduction to the field of negative ion beams and sources first by summarizing their use in scientific research and industrial applications ranging from thermonuclear fusion, high energy physics, nuclear physics, neutron production, organic mass spectroscopy, accelerator mass spectroscopy, radioactive ion beam generation and others. Specific examples of important light and heavy ion negative sources will be discussed as well as the physics of negative ion formation. Finally, a summary of the recent 3rd International Symposium on Negative Ions, Beams and Sources in Jyvaskyla, Finland will be presented identifying some of the most important issues currently facing the field.

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Date submitted: 29 Jun 2012 Electronic form version 1.4