Physics in the international arms control effort: a history and introduction

WILLIAM MENDOZA, ANN GANZER, AMY WESTLING, Defense Trade Controls Policy, U.S. Department of State — The U.S. Government has regulations in place to control the international traffic in arms. The growth of science and engineering since the inception of this governmental effort has produced many remarkable military-related systems, some existing purely for information gathering and defensive purposes. Defense trade is now a multi-billion dollar multi-national industry. U.S. defense trade in particular is strongly influenced by national security and foreign policy rather than economic impact, unlike many of its competitors. A brief history of the International Traffic in Arms Regulations will be presented, followed by an overview of some of the categories on the United States Munitions List and the Missile Technology Control Regime Annex which have strong connections to physics in terms of theory, concepts, and measurement. Following this category overview, particular emphasis will be given to the existing radiation hardening standards for semiconductors, and the basic structure of night vision devices.