Experimental and Theoretical Program Highlights from the University of Wisconsin IEC Program

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There are 7 main themes of the University of Wisconsin (UW) Inertial Electrostatic Confinement (IEC) program:

1) Theoretical analysis of gridded IEC devices.
2) Experimental physics investigations of IEC devices.
3) The study of advanced fusion fuels based on the ^{3}He cycle.
4) Near term applications of IEC technology for the detection of clandestine materials.
5) Production of PET radioisotopes in IEC devices
6) The use of IEC devices for materials surface damage studies.
7) Demonstration of IEC as a future fusion power source.

In the CY 2011 significant progress has been made in items 1-4 and 6-7. This overview will set the stage for six more detailed papers to follow in this workshop.