AFRL’s Munitions Directorate Stands Up New, Unique Capability

The Air Force Research Laboratory’s Munitions Directorate is standing up a new capability, the High Pressure Particulate Physics (HP3) Facility, to enhance the role of science and technology in smart munitions development. This capability will include a 60-mm smooth bore gun, complemented with high-resolution, high-precision time-resolved diagnostics (interferometers, X-rays and photography). The gun will be able to launch a few kilogram mass far and fast and will address basic fundamental questions related to munitions weapon systems and weapon effects. This new capability will be operational by the end of 2011.

As part of a long term strategic goal, higher velocities are planned using an old Lawrence Livermore National Lab gun (a $1M asset). This will increase the understanding of dynamic material behavior at much higher engagement velocities that are relevant to Directed Energy and Space Vehicles Directorates. This capability is unique as a Department of Defense facility and will provide AFRL the technical leadership in munitions-related science and technologies.

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